



UNIVERSITY
OF MANITOBA

**Undergraduate Calendar
and Registration Guide
for the Academic Year
2006 - 2007**

**The University of Manitoba
Winnipeg, Manitoba
R3T 2N2**

Website: www.umanitoba.ca

Important Notice

The University of Manitoba reserves the right to make changes in the information contained in the *Undergraduate Calendar and Registration Guide* and the *Graduate Calendar* without prior notice. The University of Manitoba web site, www.umanitoba.ca is a source for updated information.

Not every course listed in the *Undergraduate Calendar and Registration Guide* or the *Graduate Calendar* will be offered in this academic year.

It is the responsibility of all students

- To familiarize themselves each year with the university's academic regulations and policy in general;
- To familiarize themselves with the regulations and policies applying specifically to their faculty, school, or program;
- To familiarize themselves with the specific graduation requirements of the degree, diploma, or certificate they are seeking; and
- To ensure that the courses they have selected are appropriate to their programs.

In the event of an inconsistency between the general academic regulations and policies published in the *Undergraduate Calendar and Registration Guide* and the *Graduate Calendar*, and such regulations and policies established by Senate and the councils of the faculties and schools, the version established by Senate and the councils of the faculties and schools shall prevail.

The regulations and policies contained in this year's editions of the *Undergraduate Calendar and Registration Guide* and the *Graduate Calendar* apply, subject to change, only for the academic year indicated on the cover page of each publication.

The material in the current editions of the *Undergraduate Calendar and Registration Guide* and the *Graduate Calendar* was submitted by the academic and administrative units concerned. The university neither represents nor warrants that all general information and course references used in these publications is accurate although reasonable efforts have been used to check the accuracy of the information.

Students also agree by the act of registration to be bound by the regulations, policies, and bylaws of the University of Manitoba that are in effect at the time of registration, including any amendments which may be enacted during the period of their registration. Students agree by the act of registration to be bound by the regulations, policies, and bylaws of the faculty or program in which they have registered, including any amendments which may be made during the period of their registration. Students also acknowledge that such amendments may have retroactive application.

No liability shall be incurred by the University of Manitoba for any loss or damage suffered or incurred by any student, or any party claiming through or under any student, as a result of delays in, or termination of, services, courses or classes by acts of God, fires, floods, riots, wars, strikes or lock-outs, damage to university property, financial exigency, or any occurrence beyond the reasonable control of the university. Further, the University of Manitoba shall not be liable for any losses or damage suffered by a student who discloses his/her personal identification number (PIN) to anyone other than a university employee in the course of registration.

The Freedom of Information and Protection of Privacy Act and The Personal Health Information Act at the University of Manitoba

The Freedom of Information and Protection of Privacy Act (FIPPA) and *The Personal Health Information Act* (PHIA) both apply to the University of Manitoba. Should any of the University's policies conflict with FIPPA or PHIA, the provisions of FIPPA or PHIA shall prevail unless otherwise expressly provided for at law.

Notice Regarding Collection, Use, and Disclosure of Personal Information by the University

The University collects personal information in the course of admission, registration and related activities. This personal information is collected under the authority of *The University of Manitoba Act*. It may be shared with other educational institutions, government departments, and co-sponsoring organizations and, for those students who are members of UMSU, it will be disclosed to the University of Manitoba Students' Union. Information regarding graduation and awards may be made public. Upon graduation, name and address together with information on degrees, diplomas, and certificates earned will be given to and maintained by the alumni records department in order to assist in the University's advancement and development efforts. All personal information is protected by the protection of privacy provisions of the *Freedom of Information and Protection of Privacy Act*. Questions about the collection of information should be directed to the FIPPA Coordinator's Office, University of Manitoba Archives and Special Collections, 331 Dafoe Library, University of Manitoba, Winnipeg, Manitoba, R3T 2N2 (telephone: 204 474 8339).

Notification of Disclosure of Personal Information to Statistics Canada

Statistics Canada is the national statistical agency. As such, Statistics Canada carries out hundreds of surveys each year on a wide range of matters, including education.

It is essential to be able to follow students across time and institutions to understand, for example, the factors affecting enrolment demand at post-secondary institutions. The increased emphasis on accountability for public investment means that it is also important to understand "outcomes." In order to carry out such studies, Statistics Canada asks all colleges and universities to provide data on students and graduates. Institutions collect and provide to Statistics Canada student identification information (student's name, student ID number, Social Insurance Number), student contact information (address and telephone number, student demographic characteristics, enrolment information, previous education, and labour force activity).

Under the Federal *Privacy Act*, individuals can request access to their own, individual information held on federal information banks, including those held by Statistics Canada.

The Federal *Statistics Act* provides the legal authority for Statistics Canada to obtain access to personal information held by educational institutions. The information may be used only for statistical purposes, and the confidentiality provisions of the *Statistics Act* prevent the information from being released in any way that would identify a student.

Students who do not wish to have their information used are able to ask Statistics Canada to remove their identifying information from the national database.

Further information on the use of this information can be obtained from Statistics Canada's web site: <http://www.statcan.ca> or by writing to the Postsecondary Section, Centre for Education Statistics, 17th Floor, R. H. Coates Building, Tunney's Pasture, Ottawa, Ontario, Canada, K1A 0T6.

Table of Contents

Part 1: Undergraduate Calendar Information

Important Notice	2
Table of Contents	3
The University of Manitoba	4
University Codes	9
Admissions	13
Registration and Fees	19
General Academic Regulations and Requirements	22
University Policies	29
Student Services	34
Libraries	43
University of Manitoba Colleges	47

Faculties and Schools

University 1	51	Graduate Studies	288
Agricultural and Food Sciences	60	Human Ecology	289
Architecture	81	I.H. Asper School of Business (see Management)	
Art	86	Law	302
Arts	94	Management, (I.H. Asper School of Business)	308
Clayton H. Riddell Faculty of Environment, Earth, and Resources (see Environment, Earth, and Resources)		Medical Rehabilitation	325
Dental Hygiene	203	Medicine	331
Dentistry	206	Music	350
Education	213	Nursing	359
Engineering	232	Pharmacy	372
Environment, Earth, and Resources, Clayton H. Riddell Faculty	251	Physical Education and Recreation Studies	377
Extended Education	283	Science	385
		Social Work	453

Part II: Registration Guide.....

The Registration System: Aurora Student	459
Fees, Payments and Refunds	464
Timetable Planning Form	467
Other Important Things To Do and Know	468
Campus Parking	472
Parking Application Worksheet	473

Registration Information

University 1	473	Distance and Online Education	501
Agricultural and Food Sciences	477	General Studies	503
Agriculture Diploma	479	Off-Campus Study	505
Faculty of Architecture	480	Human Ecology	506
Faculty of Arts	482	Management	509
School of Art	491	Music	511
Dental Hygiene	493	Nursing	512
Dentistry	494	Pharmacy	518
Education	495	Physical Education And Recreation Studies	519
Engineering	497	Science	522
Environment, Earth, and Resources, Clayton H. Riddell Faculty	499	Social Work	525

Index	531
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The University of Manitoba

As Manitoba's largest post-secondary institution, the only one that is research-intensive, and the only one that offers medical and doctoral degrees, the University of Manitoba plays an unrivaled role in contributing to the vitality of this province. It educates the majority of the province's professionals – whether they be nurses, architects, lawyers, pharmacists, teachers, engineers, dentists, or doctors. It also educates most of the province's community, political and business leaders.

More than 27,000 students, and 6,700 teaching and support staff combine to make the University of Manitoba a vibrant community committed to teaching, learning, and the search for new knowledge.

The location of the Fort Garry campus, nestled inside a loop of the Red River, is as unique a setting as that of any university in Canada. This campus is the location of most of the university's faculties and schools. There is also the Bannatyne Campus, adjacent to the Health Sciences Centre in central Winnipeg, where the faculties of Dentistry and Medicine are located. Other places where the University of Manitoba is visible include the Winnipeg Education Centre, the location for social work education for inner city residents; agricultural research farms at Glenlea and Carman; field stations at Delta Marsh on Lake Manitoba, Star Lake in the Whiteshell, and Wallace Lake in eastern Manitoba. In addition, a number of distance education programs provide a province-wide presence for the university throughout Manitoba.

The University of Manitoba is a coeducational, nondenominational, government-supported institution. It is a member of the Association of Commonwealth Universities and of the Association of Universities and Colleges of Canada.

The University of Manitoba was established in 1877 to confer degrees on students graduating from its three founding colleges: St. Boniface College, St. John's College, and Manitoba College. It was the first university to be established in western Canada.

In 1900 the Manitoba legislature amended the University of Manitoba Act so that it could begin teaching in its own right. In 1904 a building in downtown Winnipeg became the first teaching facility with a staff of six professors, all scientists. The U of M moved to its present permanent location in Fort Garry following the transfer of the Manitoba Agricultural College to the university.

In its early years the University of Manitoba expanded through the addition of colleges to its corporate and associative body. In 1882 the Manitoba Medical College, originally founded by physicians and surgeons in the province, became a part of the university. Other affiliations followed: the Methodist church's Wesley College joined in 1888; the Manitoba College of Pharmacy in 1902; the Manitoba Agricultural College in 1906; St. Paul's College in 1931; and Brandon College in 1938. St. Andrew's College, initially an associated college in 1964, became an affiliated college in 1981.

In 1967 two of the colleges of the University of Manitoba were given university status by the provincial government. United College, which was formed by the merging of Wesley College and Manitoba College, became the University of Winnipeg, and Brandon College became Brandon University.

St. Boniface College, now called Collège universitaire de Saint-Boniface, and St. John's College, two of the original founding colleges, are still part of the University of Manitoba.

St. Boniface, a Roman Catholic institution which traces its beginnings to 1818 and the earliest days of the Red River settlement, is the university's only French-speaking college.

St. John's College, which dates to 1820 and founded by the Anglican church, is situated on the Fort Garry campus and is committed to fostering a sense of community and belonging among its faculty, students and staff.

St. Paul's College was founded in 1926 by the Archdiocese of Winnipeg and became part of the University of Manitoba in 1931. In 1933 the Jesuit order assumed responsibility for the college and organized the college's academic program in accordance with its internationally recognized educational principles. The college moved into its Fort Garry Campus premises in 1958.

St. Andrew's College was established in 1946 by the Ukrainian Orthodox Church of Canada and moved to the Fort Garry Campus in 1964. It offers programs in Ukrainian Canadian heritage studies and, in addition, prepares candidates for the ordained ministry and lay leadership in the Ukrainian Orthodox church and other Orthodox churches.

The Mission and Vision of the University of Manitoba

Universities serve society by contributing to: the development of an educated and enlightened population, capable of informed judgment and responsible citizenship; the availability of persons who have the knowledge, skills and adaptability required by public and private enterprise, or by individuals seeking professional service; and the advancement of knowledge, skill and human creativity. It is within this context that the University of Manitoba has articulated the following statement concerning its mission, goals, distinctive role and accountability.

Mission

The mission of the University of Manitoba is to create, preserve and communicate knowledge and, thereby, contribute to the cultural, social and economic well-being of the people of Manitoba, Canada and the world.

Goals

In fulfilling its mission, the University of Manitoba seeks to:

- Provide the highest possible quality of undergraduate and graduate university teaching in the humanities, social sciences, natural and applied sciences, the fine and performing arts and the professions;
- Enhance student success by fostering an environment conducive to intellectual and personal growth;
- Conduct original scholarship and basic and applied research, and produce creative works of highest quality as judged by international standards;
- Serve the community directly by making its expertise available to individuals and institutions, and by providing as much access to the university's intellectual, cultural, artistic and physical resources as its primary teaching and research responsibilities permit;
- Preserve and protect academic freedom and intellectual independence, and provide a forum for critical inquiry and debate; and,
- Promote equity in access and employment and in the conduct of the university's affairs.

Role

The University of Manitoba as the largest and most comprehensive institution of higher learning in Manitoba plays a distinctive role within the province. In addition to offering undergraduate liberal education in arts, science and education, the University of Manitoba provides programs in a broad range of professional studies, applied sciences and fine and performing arts and is responsible for the vast majority of graduate education and research in Manitoba. The University of Manitoba serves all parts of the province, including inner city and suburban areas, rural and northern regions and attracts students from all population groups and from all walks of life.

It manages and delivers a comprehensive array of both degree and non-degree credit courses not only on its campuses but also by correspondence and other distance education modalities both throughout the province and beyond the province, thereby significantly increasing accessibility to university education.

The University of Manitoba is also distinctive among post-secondary institutions in the province by virtue of the multi-disciplinary activity within the university and through its participation in multi-institutional consortia and networks. It seeks to advance its traditional role in teaching and learning, research and community service through the establishment of new linkages with business, industry, arts organizations, social agencies, non-profit organizations and governments designed to contribute di-

rectly to the economic life of Manitobans and to provide lifelong learning opportunities for them. Through residential educational programs for seniors, Mini-University for youngsters, the summer ballet school, the music preparatory program, public lectures, concerts, recitals, theatrical productions, art exhibits, library and archival services, athletic and recreational programs and in many other ways, the university seeks to reinforce its role as an important part of the culture and heritage of Manitoba.

The university is an active contributor to national and international development by conducting educational programs and research under contract. It also contributes to international development through the opportunities provided to students and visiting scholars from other countries to study at the University of Manitoba. Recognizing that many of the intellectual and practical challenges facing society require an integrated disciplinary approach, the university has established a variety of centres, institutes and specialized research groups designed to tackle important problems in a number of areas.

Accountability

In recognition of its mission, goals and role, the University of Manitoba is accountable for:

- Facilitating access to its programs for as many students as meet its admission requirements and as can be accommodated and effectively educated within the available resources;
- Providing programs that meet accepted and appropriate standards for admission, evaluation and graduation of students and for curriculum content and teaching effectiveness;
- Facilitating research, scholarship and creative works that are of high quality as judged by international standards;
- Providing an exemplary environment for work and study with particular attention to policies and procedures designed to foster equity; and,
- Exhibiting responsible management of physical and human resources.

Vision

The following vision statement was articulated in Building on Strengths, the report of the Task Force on strategic planning in 1998:

We believe that the University of Manitoba will be a leader among Canadian universities as it becomes known for meeting challenges while it advances knowledge and understanding. We will not only be the oldest of western Canada's universities we will also be among the best of Canada's universities. We will be respected for our knowledge of the world and for our understanding of the complexities of our Prairie region in its cultural, socioeconomic and scientific dimensions, which we will articulate according to international standards of science and scholarship. We will be recognized for our centrality in the development of Manitoba's knowledge-based society in a knowledge-based global economy.

We will attain our vision by:

- Providing outstanding education in undergraduate and selected professional and graduate areas;
- Producing research, scholarship and creative work that is recognized internationally, nationally, and locally;
- Providing an equitable environment focused on learning; and
- Enhancing a strong tradition of community and professional service.

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2006-2007

Academic Schedule

Note: Admission Application Deadlines may be found on the web at www.umanitoba.ca/student/admissions

Chapter Contents

- Section 1: Orientation Sessions for Regular Session**
- Section 2: Start and End Dates for Regular Session**
- Section 3: Registration and Withdrawal Dates**
- Section 4: Fee Deadlines**
- Section 5: Dates of University Closure and Mid Term Break**
- Section 6: Regular Session Examination and Test Dates**
- Section 7: Challenge for Credit, Supplemental and Other Special Examinations and Tests**
- Section 8: Grade Appeal Dates**
- Section 9: University Convocation**
- Section 10: Other University Special Events**
- Section 11: Distance Education 2006-2007 Deadline Dates**
- Section 12: Summer Session 2006 Start and End Dates**
- Section 13: Spring Intersession and Summer Session 2007**

Section 1: Orientation Sessions for Regular Session

IDDP Year 1	May-June 2006
University 1	Sept. 5-6, 2006
Agriculture Diploma	Sept. 15, 2006
Education, Year 1	Sept. 6, 2006
Education, Year 2 and Year 5 Integrated	Aug. 31, 2006
Medicine, Year 1	Aug. 21, 2006
Medicine inaugural exercises for B.Sc.(med.)	Aug. 23, 2006
Music	Sept. 5, 2006
Nursing, Year 2 (218 and/or 219)	
Tuesday/Wednesday rotation clinical orientation	Aug. 29, 2006
Nursing, Year 2 (218 and/or 219)	
Thursday/Friday clinical orientation	Aug. 30, 2006
Nursing, Year 2 (218 and/or 219)	
Tues./Wed. rotation clinical orientation continues	Sept. 12, 2006
Nursing, Year 2 (218 and/or 219)	
Thurs./Fri. rotation clinical orientation continues	Sept. 7, 2006
Nursing, Year 3 clinical orientation	week of Sept. 19, 2006
Nursing, Year 4 clinical orientation	Sept. 7, 2006
Nursing Lectures in 049.212 (Health Assessment) and Nursing labs in 049.212 (Health Assessment and 049.213 (Skills) start week of Sept. 11, 2006	
NOTE: Immunizations/CPR due for all newly admitted Nursing students	Aug. 1, 2006
Physical Education	July 5 & July 8, 2006
Social Work, Year 1	Sept. 5, 2006
Social Work, Year 2 and 3 Field Orientation	Sept. 5, 2006

Section 2: Start and End Dates for Regular Session

(Classes, practica, experiences)

The following start and end dates are for students in **most** faculties and schools.

See Section 5 for mid term break and other university closures.

Students registering for **Distance Education** courses should consult the Distance Education Calendar available from Distance Education.

Education courses may have unique start and end dates. Students are referred to the Faculty of Education website.

Fall Term 2006 (including full courses)	Start	End
Most faculties and schools	Sept. 7, 2006	Dec. 6, 2006
Agriculture diploma	Sept. 18, 2006	Dec. 1, 2006
Dentistry, Years 1 and 2	Aug. 14, 2006	Dec. 1, 2006
Dentistry, Year 3	Aug. 8, 2006	Dec. 1, 2005
Clinics	NA	Dec. 8, 2006
Dentistry, Year 4	Aug. 8, 2006	Dec. 1, 2006
Clinics	NA	Dec. 15, 2006
Dental Hygiene, Years 1 and 2	Aug. 21, 2006	Dec. 1, 2006
Clinics		Dec. 8, 2006
Law	Sept. 5, 2006	Dec. 8, 2006
Medicine clinical clerkship	Sept. 27, 2006	Dec. 22, 2006
Medicine, Years 1, 2, 3 and 4	Aug. 28, 2006	NA
Medicine, B.Sc.	May 29, 2006	Aug. 25, 2006
Occupational Therapy Year 1	Aug. 28, 2006	Nov. 17, 2006
Basic Fieldwork	Nov. 20, 2006	Dec. 15, 2006
Occupational Therapy Year 2	Aug. 28, 2006	Dec. 15, 2006
Pharmacy, Year 4 (classes)	Sept. 5, 2006	Oct. 31, 2006
(Experiential rotations/electives)	Nov. 6, 2006	Dec. 22, 2006
Physical Therapy	Aug. 28, 2006	Dec. 15, 2006
Respiratory Therapy Years 1, 2, 3	Aug. 21, 2006	Dec. 15, 2006
Respiratory Therapy,		
Year 1 Basic Fieldwork	Sept. 22, 2006	Dec. 15, 2006
Year 2 Basic Fieldwork	Sept. 15, 2006	Dec. 15, 2006
Social Work, Field Instruction Years 2 & 3	Sept. 5, 2006	Dec. 8, 2006
Winter Term 2007 (including full courses)	Start	End
Most faculties and schools	Jan. 4, 2007	Apr. 11, 2007
Agriculture Diploma	Jan. 4, 2007	Mar. 28, 2007
Dental Hygiene, Years 1 and 2 classes	Jan. 4, 2007	Apr. 11, 2007
Year 1 clinic	Jan. 4, 2007	Apr. 11, 2007
Year 2 clinic	Jan. 4, 2007	Apr. 27, 2007
Dentistry, Years 1 and 2	Jan. 4, 2007	Apr. 20, 2007
Dentistry, Year 3 classes	Jan. 4, 2007	Apr. 27, 2007
Year 3 clinics	Jan. 4, 2007	May 11, 2007
Dentistry, Year 4 classes	Jan. 4, 2007	Feb. 9, 2007
Year 4 clinics	NA	Apr. 27, 2007
Medicine, Years 1 and 2	NA	May 25, 2007
Medicine, Year 4 Clerkship	Jan. 4, 2007	May 11, 2007
Occupational Therapy Year 1	Jan. 4, 2007	Apr. 27, 2007
Intermediate Fieldwork 1	April 30, 2007	June 22, 2007
Occupational Therapy Year 2		
Intermediate Fieldwork 2	Jan. 8, 2007	March 2, 2007
Occupational Therapy Year 2	March 12, 2007	June 29, 2007
Advanced Fieldwork	July 3, 2007	must end by
	(flexible start date)	Sept. 14, 2007
Pharmacy, Year 2, experiential rotations	April 30, 2007	May 11, 2007
Pharmacy, Year 3 Community Practice	Apr. 2, 2007	Apr. 27, 2007
Pharmacy, Year 4,		
experiential rotations/electives	Jan. 8, 2007	Apr. 13, 2007
Physical Therapy	Jan. 3, 2007	variable; depends on clinical placements
Resp. Therapy Year 1 Basic Fieldwork	Jan. 3, 2007	March 16, 2007
Resp. Therapy Year 2 Basic Fieldwork	Jan. 3, 2007	March 9, 2007
Respiratory Therapy Years 1 and 2	Jan. 3, 2007	Apr. 27, 2007
Respiratory Therapy Year 3	Jan. 3, 2007	June 29, 2007
Social Work Years 2 and 3 field instruction	Jan. 3, 2007	Apr. 11, 2007

Section 3: Registration and Withdrawal Dates

NOTES: 1. The fee refund schedule may be found in the Registration Guide in the chapter "Fees, Payments and Refunds"

2. Some courses have irregular Voluntary Withdrawal dates. Please refer to your faculty or school section of the Registration Guide.

Fall Term 2006 (including full courses)	Start	End
Nursing Clinical Courses: last date to register for Fall Term 2006 and Winter Term 2007	Aug. 23, 2006	
Last Date to register and pay fees without penalty for all programs (except Agriculture Diploma)	Sept. 6, 2006	
Agriculture Diploma	Sept. 15, 2006	
Law: Registration after this date requires Dean's approval	Sept. 5, 2006	
Registration revisions and late registration in all programs (except Agriculture Diploma). A financial penalty is assessed on all late registrations during this period	Sept. 7, 2006	Sept. 20, 2006
Agriculture Diploma	Sept. 18, 2006	Sept. 27, 2006
Last date in all programs (except Agriculture Diploma) to withdraw from Fall Term 2006 and full courses and not be assessed a "VW"		Sept. 20, 2006
Agriculture Diploma		Sept. 27, 2006
Last date in all faculties and schools to Voluntary Withdraw Fall Term 2006 courses. (See refund schedule in Registration Guide for implications).		Nov. 15, 2006
Winter Term 2007		
Registration and Revision period in Winter Term 2007 half-courses in all programs (except Agriculture Diploma)	Jan. 4, 2007	Jan. 17, 2007
Agriculture Diploma	Jan. 4, 2007	Jan. 16, 2007
Last date for registration in Winter Term 2007 half courses, including Challenge for Credit, and/or registration revisions in all programs (except Agriculture Diploma)		Jan. 17, 2007
Agriculture Diploma		Jan. 16, 2007
Winter Term 2007 half courses and full courses dropped after this date from any program (except Agriculture Diploma) are recorded as Voluntary Withdrawals		Jan. 17, 2007
Agriculture Diploma		Jan. 16, 2007
Last date for Voluntary Withdrawal from Winter Term 2007 half courses and full courses without academic penalty from all faculties and schools (except Agriculture Diploma). See refund schedule in Registration Guide for financial implications.		Mar. 19, 2007
Agriculture Diploma		Mar. 9, 2007

Section 4: Fee Deadlines

Last date for all students to pay Fall Term 2006 and 1 st instalment fees without late fee (except Agriculture Diploma)	Sept. 6, 2006
Agriculture Diploma	Sept. 15, 2006
Last date for all students to pay Winter Term 2007 and 2 nd instalment fees without late fee	Jan. 17, 2007

Section 5: Dates of University Closure and Mid Term Break

When the University is closed no classes/examinations will be held.	Start	End
Canada Day (Holiday Observed)	June 30, 2006	
Civic Holiday	Aug. 7, 2006	
Labour Day	Sept. 4, 2006	
Thanksgiving Day	Oct. 9, 2006	
Remembrance Day (Holiday Observed)	Nov. 10, 2006	
December Holidays	Dec. 22, 2006	Jan. 2, 2007
Mid-Term Break* for all faculties and schools (except Medicine, Education and Respiratory Therapy Yr. 3)	Feb. 12, 2007	Feb. 16, 2007
Medicine	Mar. 19, 2007	Mar. 23, 2007
Good Friday	April 6, 2007	

When the University is closed no classes/examinations will be held.	Start	End
Easter Monday (Respiratory Therapy department only)	April 9, 2007	
Victoria Day	May 21, 2007	
*The academic and administrative offices will be open during this period, but there will be no classes/examinations held for students		

Section 6: Regular Session Examination and Test Dates

Students are reminded that they must remain available until all examination and test obligations have been fulfilled.

Fall/Winter Session 2006-2007

Fall Term 2006(including full courses)	Start	End
Most faculties and schools	Dec. 8, 2006	Dec. 20, 2006
Agriculture Diploma*	Dec. 4, 2006	Dec. 11, 2006
Dentistry, Years 1, 2, and 3	Dec. 4, 2006	Dec. 15, 2006
Dentistry, Year 4	Dec. 11, 2006	Dec. 15, 2006
Dental Hygiene Year 1	Dec. 4, 2006	Dec. 15, 2006
Dental Hygiene Year 2	Dec. 11, 2006	Dec. 15, 2006
Law	Dec. 9, 2006	Dec. 21, 2006
Medicine, Year 1	Nov. 9, 2006	Nov. 9, 2006
Medicine, Year 2	Nov. 23, 2006	Nov. 24, 2006
Pharmacy, Year 4	Nov. 1, 2006	Nov. 3, 2006

Winter Term 2007(including full courses)

Most faculties and schools	Apr. 13, 2007	Apr. 30, 2007
Agriculture Diploma	Mar. 29, 2007	Apr. 9, 2007
Dental Hygiene, Years 1 and 2	Apr. 12, 2007	Apr. 17, 2007
Dentistry, Years 1 and 2	Apr. 25, 2007	May 5, 2007
Year 3	May 16, 2007	May 26, 2007
Year 4	Feb. 21, 2007	Feb. 24, 2007
Law	Apr. 12, 2007	April 25, 2007
Medicine, Year 1	Jan. 26, 2007	Jan. 26, 2007
	May 16, 2007	May 18, 2007
Medicine, Year 2	Mar. 15, 2007	Mar. 16, 2007
	May 24, 2007	May 25, 2007
Pharmacy, Year 3	Mar. 28, 2007	April 3, 2007
Respiratory Therapy		
Clinical Entrance Exams Year 2	Apr. 27, 2007	
Composite Exams year 3	June 11, 2007	

Section 7: Challenge for Credit, Supplemental and Other Special Examinations and Tests

Faculties and schools that extend supplemental examination privileges: last date for applications for autumn supplemental examinations	July 4, 2006
Language reading tests for graduate students	Sept. 9, 2006
Last date to apply for Challenge for Credit for courses offered in Fall Term 2006	Sept. 20, 2006
International Dental Degree Program on-site assessment	Dec. 11-15, 2006
Last date to apply for Challenge for Credit for courses offered in Winter Term 2007	Jan. 17, 2007
Agriculture Diploma	Jan. 4, 2007
Last date for applications for Fall Term 2006 supplemental examinations	
Fall term supplementary examinations	Jan. 8, 2007
Language reading tests for graduate students	Apr. 7, 2007
Agriculture Diploma	May 4, 2007
Last date for applications for Winter Term 2007 supplemental examinations	
Winter Term supplementary examinations	May 25, 2007
Last day to register for Challenge for Credit for examinations in June series	May 5, 2007
Medical Council of Canada examinations	Apr. 30-May 11, 2007

Section 8: Grade Appeal Dates

Appeal period for grades received for Fall Term 2006 courses	Jan. 4, 2007	Jan. 24, 2007
Appeal period for grades received for Winter Term 2007 courses and full courses	May 22, 2007	June 11, 2007

Section 9: University Convocation

Fall Convocation	Oct. 18 - 19, 2006
Last date to apply to graduate in Fall	Aug. 1, 2006
Last date to apply for graduation in February	Sept. 20, 2006
School of Agriculture graduation ceremony	May 4, 2007
Faculty of Medicine Convocation ceremony	May 10, 2007
Spring Convocation	June 5 - 7, 2007
Last date to apply to graduate in May	Jan. 17, 2007
Convocation ceremony at Collège universitaire de Saint-Boniface	June 11, 2007

Section 10: Other University Special Events

2006 School Counsellors Admissions Seminar	Sept. 21, 2006
Enrolment Services/Student Recruitment: Evening of Excellence	Oct. 16, 2006
Memorial events for 14 women murdered at l'École Polytechnique in 1989	Dec. 6, 2006
Information Days for high school students	Feb. 13-14, 2007
Annual traditional graduation Powwow in honour of Aboriginal students	May 5, 2007

Section 11: Distance and Online Education 2006-2007 Deadline Dates

Last date for registration and fee payment without fee penalty for students wishing to take Distance Education courses commencing in September.	Sept. 6, 2006
Last date for application to write examinations at a location other than the University of Manitoba in courses ending in December	First working day of October
Last date for registration for students wishing to take Distance Education courses commencing in January	Jan. 17, 2007
Last date for application to write examinations at a location other than the University of Manitoba in courses ending in April	First working day of February

Section 12: Summer Session 2006

Start and End Dates

For more detailed information, please consult the Summer Session Calendar available from the Summer Session Office, 166 Extended Education Complex. The Summer Session Calendar is available on-line at umanitoba.ca/summer.

Spring Intersession	Start	End
Classes	May 1, 2006	Jun. 20, 2006
Examinations		
Term 1	May 26, 2006	May 27, 2006
Term 2 and Full	June 22, 2006	June 23, 2006
Spring/Summer Evening		
Classes	May 1, 2006	Aug. 3, 2006
Examinations		
Term 1	June 16, 2006	June 17, 2006
Term 2 and Full	Aug. 4, 2006	Aug. 5, 2006

Summer Day

Classes	July 3, 2006	Aug. 23, 2006
Examinations		
Term 1	July 27, 2006	
Term 2 and Full	Aug. 25, 2006	Aug. 26, 2006
Other		
Nursing Summer Term	Apr. 24, 2006	July 27, 2006

Section 13: Summer Session 2007

Class Start Dates

Nursing summer term begins	April 23, 2007
Summer Session Start Date	May 7, 2007

The other summer session dates are not available yet.

Section 14: Faculty of Graduate Studies Submission Dates for 2006-2007

For reports on theses/practica (and the corrected copies of the theses/practica), comprehensive examinations and M.Eng. projects to be submitted to Graduate Studies by students expecting to graduate in October	Aug. 31, 2006
For receipt in Graduate Studies Office of Ph.D. theses (for distribution) from graduate students expecting to graduate in February	Oct. 10, 2006
For distribution of Master's theses/practica (to examining committee) by students expecting to graduate in February	Oct. 23, 2006
For reports on theses/practica (and the corrected copies of theses/practica), comprehensive examinations and M.Eng. projects to be submitted to Graduate Studies by students expecting to graduate in February.	Jan. 4, 2007
For receipt, in Graduate Studies Office, of Ph.D. thesis (for distribution) from graduate students expecting to graduate in May.	Jan. 22, 2007
For distribution of Master's theses/practica (to examining committee) by students expecting to graduate in May	Jan. 29, 2007
For reports on theses/practica (and the corrected copies of theses/practica), comprehensive examinations and M.Eng. projects to be submitted to Graduate Studies by students expecting to graduate in May	April 4, 2007
For receipt by the Faculty of Graduate Studies, of Annual Progress Reports for Master's and Ph.D. students	June 14, 2007
For receipt, in Graduate Studies Office, of Ph.D. thesis (for distribution) from students expecting to graduate in October	June 18, 2007
For distribution of Master's theses/practica (to examining committee) by students expecting to graduate in October	June 25, 2007

University Codes

Section 1: Faculty/School, Department and Subject

Note: Codes for Faculties/Schools, Departments and Subjects are shown in brackets.

Faculty/School	Department	Subject	
Agricultural and Food Sciences (Faculty 07; School 24)	Agribusiness and Ageconomics (061)	Agribusiness and Ageconomics (ABIZ)	
	Animal Science (035)	Animal Science (ANSC)	
	Biosystems Engineering (034)	Biosystems Engineering (BIOE)	
	Entomology (038)	Entomology (ENTM)	
	Food Science (078)	Food Science (FOOD)	
	General Agriculture (065)	Agroecology (AGEC) Diploma in Agriculture (DAGR) General Agriculture (AGRI)	
	Plant Science (039)	Plant Science (PLNT)	
	Soil Science (040)	Soil Science (SOIL)	
	Architecture (09)	Architecture (050)	Architecture (ARCH)
		Architecture Interdisciplinary (166)	Architecture Interdisciplinary (ARCG)
City Planning (073)		City Planning (CITY)	
Environmental Design (079)		Environmental Architecture (EVAR) Environmental City Planning (EVCP) Environmental Design (EVDS) Environmental Interior Environment (EVIE) Environmental Landscape (EVLA)	
Interior Design (051)		Interior Design (IDES)	
Landscape Architecture (031)		Landscape Architecture (LARC)	
Art (15)		Fine Arts (054)	Art History (FAAH) Fine Art (FA) Fine Art Diploma (FNDP) Studio Courses (STDO)
	Arts (01)	Anthropology (076)	Anthropology (ANTH)
		Arts Interdisciplinary (099)	Arts Interdisciplinary (ARTS)
		Asian Studies (150)	Asian Studies (ASIA)
Canadian Studies (151)		Canadian Studies (CDN)	
Catholic Studies (160)		Catholic Studies (CATH)	
Classics (003)		Classics (CLAS) Greek (GRK) Latin (LATN)	
English (004)		English (ENGL)	
French, Spanish and Italian (044)		French (FREN) Italian (ITLN) Spanish (SPAN)	
German and Slavic Studies (008)		German (GRMN) Polish (POL) Russian (RUSN) Slavic Studies (SLAV) Ukrainian (UKRN)	
Global Political Economy (157)		Global Political Economy (GPE)	
History (011)		History (HIST)	
Icelandic (012)		Icelandic (ICEL)	
Labour and Workplace Studies (153)		Labour and Workplace Studies (LABR)	
Linguistics (126)	Linguistics (LING)		
Native Studies (032)	Native Studies (NATV)		
Near Eastern and Judaic Studies (055)	Judaic Studies (JUD) Near Eastern Studies (NE) Semitic Studies (SEM) Yiddish (YIDD)		
Philosophy (015)	Philosophy (PHIL)		
Political Studies (019)	Political Studies (POLS)		
Psychology (017)	Psychology (PSYC)		

Faculty/School	Department	Subject
	Religion (020)	Religion (RLGN)
	Sociology (077)	Sociology (SOC)
	Theatre (154)	Theatre (THTR)
	Ukrainian Canadian Heritage Studies (155)	Ukrainian Canadian Heritage Studies (UCHS)
	Women's Studies (156)	Women's Studies (WOMN)
Dental Hygiene (20)	Dental Hygiene (070)	Dental Hygiene (HYGN)
Dentistry (17)	Dental Diagnostic and Surgical (103)	Dental Diagnostic and Surgical (DDSS)
	Dentistry (066)	Dentistry (DENT)
	Oral Biology (100)	Oral Biology (ORLB)
	Preventive Dental Science (101)	Preventive Dental Science (PDSO)
	Restorative Dentistry (102)	Restorative Dentistry (RSTD)
Education (08)	Curriculum, Teaching and Learning (132)	Curriculum, Teaching and Learning (EDUB)
	Educational Administration, Foundations and Psychology (129)	Educational Administration, Foundations and Psychology (EDUA)
	Education Ph.D. (124)	Education Ph.D. (EDUC)
Engineering (03)	Civil Engineering (023)	Civil Engineering (CIVL)
	Electrical Engineering (024)	Electrical Engineering (ECE)
	Engineering - Preliminary Year (130)	Engineering Preliminary Year (ENG)
	Mechanical and Manufacturing Engineering (025)	Mechanical Engineering Undergraduate (MECH)
		Mechanical Engineering Graduate (MECG)
Environment, Earth, and Resources, Clayton H. Riddell (028)	Geological Sciences (007)	Geological Sciences (GEOL)
	Environment and Geography (128)	Environment (ENVR)
		Geography (GEOG)
	Resource Management (056)	Resource Management (NRI)
Extended Education (26)		
Graduate Studies (016)	Disability Studies (162)	Disability Studies (DS)
	Graduate Studies (069)	Graduate Studies (GRAD)
		Graduate Term Registration (GRTR)
	Mauro Centre for Peace Studies (170)	Peace Studies (PEAC)
Human Ecology (04)	Family Social Sciences (062)	Family Social Sciences (FMLY)
	General Human Ecology (028)	General Human Ecology (HMEC)
	Human Nutritional Sciences (030)	Human Nutritional Sciences (HNSC)
	Textile Sciences (064)	Textile Sciences (TXSC)
Law (10)	Law (045)	Law (LAW)
Management, I. H. Asper School of Business (06)	Accounting and Finance (009)	Accounting (ACC)
		Finance (FIN)
		Management Information Systems (MIS)
	Business Administration (027)	General Management (MGMT)
		Human Resources Management/Industrial Relations (HRIR)
		International Business (INTB)
	Interdisciplinary Management (098)	Interdisciplinary Management (IDM)
	Marketing (118)	Entrepreneurship/Small Business (ENTR)
		Marketing (MKT)
	Supply Chain Management (164)	Management Science (MSCI)
		Operations Management (OPM)
		Production (PROD)
		Supply Chain Management (SCM)
Medical Rehabilitation (19)	Medical Rehabilitation (068)	Medical Rehabilitation (REHB)
	Occupational Therapy (168)	Occupational Therapy (OT)
	Physical Therapy (167)	Physical Therapy (PT)
	Respiratory Therapy (169)	Respiratory Therapy (RESP)
Medicine (05)	Anesthesia (096)	Anesthesia (ANES)
	Biochemistry and Medical Genetics (137)	Biochemistry and Medical Genetics (BGEN)
	Community Health Sciences (093)	Community Health Sciences (CHSC)
	Human Anatomy and Cell Science (080)	Anatomy (ANAT)
	Immunology (072)	Immunology (IMMU)
	Interdisciplinary Medicine (165)	Interdisciplinary Medicine (IMED)
	Medical Education (888)	Post Graduate Medical Education (PGME)
		Undergraduate Medical Education (UGME)
	Medical Microbiology (097)	Medical Microbiology (MMIC)
	Medicine (083)	Medicine (MED)
	Pathology (088)	Pathology (PATH)
	Pharmacology (089)	Pharmacology (PHAC)

Faculty/School	Department	Subject
	Psychiatry (091)	Psychiatry (PCTY)
	Physiology (090)	Physiology (PHGY)
	Surgery (094)	Surgery (SURG)
Music (21)	Music (033)	Musis (MUSC)
Nursing (13)	Nursing (049)	Nursing (NURS)
Pharmacy (11)	Pharmacy (046)	Pharmacy (PHRM)
Physical Education and Recreation Studies (22)	Physical Education (057)	Physical Education (PHED)
	Recreation Studies (123)	Recreation Studies (REC)
Science (02)	Biology (071)	Biology (BIOL)
	Botany (001)	Botany (BOTN)
	Chemistry (002)	Chemistry (CHEM)
	Computer Science (074)	Computer Science (COMP)
	Mathematics (136)	Mathematics (MATH)
	Microbiology (060)	Microbiology (MBIO)
	Physics and Astronomy (016)	Physics and Astronomy (PHYS)
	Statistics (005)	Statistics (STAT)
	Zoology (022)	Zoology (ZOOZ)
Social Work (12)	Social Work (047)	Social Work (SWRK)
University 1 (27)		

Section 2: Alphabetical Listing of Subjects

Subject	Code	Faculty/School
Accounting	ACC	Management
Agribusiness and Ageconomics	ABIZ	Agricultural and Food Sciences
Agroecology	AGEC	Agricultural and Food Sciences
Anatomy	ANAT	Medicine
Anesthesia	ANES	Medicine
Animal Science	ANSC	Agricultural and Food Sciences
Anthropology	ANTH	Arts
Architecture	ARCG	Architecture
Architecture Interdisciplinary	ARCH	Architecture
Art History	FAAH	Art
Arts Interdisciplinary	ARTS	Arts
Asian Studies	ASIA	Arts
Biochemistry and Medical Genetics	BGEN	Medicine
Biology	BIOL	Science
Biosystems Engineering	BIOE	Engineering
Botany	BOTN	Science
Canadian Studies	CDN	Arts
Catholic Studies	CATH	Arts
Chemistry	CHEM	Science
City Planning	CITY	Architecture
Civil Engineering	CIVL	Engineering
Classics	CLAS	Arts
Community Health Sciences	CHSC	Medicine
Computer Science	COMP	Science
Curriculum, Teaching and Learning	EDUB	Education
Dental Diagnostic and Surgical	DDSS	Dentistry
Dental Hygiene	HYGN	Dental Hygiene
Dentistry	DENT	Dentistry
Diagnostic Cytology	CYTO	Medical Rehabilitation
Diploma in Agriculture	AGRI	Agricultural and Food Sciences
Disability Studies	DIS	Disability Studies
Education Ph.D.	EDUC	Education
Educational Administration, Foundations and Psychology	EDUA	Education
Electrical Engineering	ECE	Engineering
Engineering - Preliminary Year	ENG	Engineering
English	ENGL	Arts
Entomology	ENTM	Agricultural and Food Sciences
Entrepreneurship/Small Business	ENTR	Management
Environment	ENVR	Environment, Earth, and Resources
Environmental Architecture	EVAR	Architecture
Environmental City Planning	EVCP	Architecture
Environmental Design	EVDS	Architecture
Environmental Interior Environment	EVIE	Architecture
Environmental Landscape	EVLA	Architecture
Family Social Sciences	FMLY	Human Ecology
Finance	FIN	Management
Fine Art	FA	Art
Fine Art Diploma	FNDP	Art
Food Science	FOOD	Human Ecology
French	FREN	Arts
General Agriculture	AGRI	Agricultural and Food Sciences
General Human Ecology	HMEC	Human Ecology
General Management	GMGT	Management
Geography	GEOG	Environment, Earth, and Resources
Geological Sciences	GEOL	Science
German	GRMN	Arts
Global Political Economy	GPE	Arts
Graduate Studies	GRAD	Graduate Studies
Greek	GRK	Arts
History	HIST	Arts
Human Nutritional Sciences	HNSC	Human Ecology
Human Resources Management/Industrial Relations	HRIR	Management
Icelandic	ICEL	Arts
Immunology	IMMU	Medicine
Interdisciplinary Management	IDM	Management
Interdisciplinary Medicine	IMED	Medicine
Interior Design	IDES	Architecture
International Business	INTB	Management
Italian	ITLN	Arts

Subject	Code	Faculty/School
Judaic Studies	JUD	Arts
Labour and Workplace Studies	LABR	Arts
Landscape Architecture	LARC	Architecture
Latin	LATN	Arts
Law	LAW	Law
Linguistics	LING	Arts
Management Information Systems	MIS	Management
Management Science	MSCI	Management
Marketing	MKT	Management
Mathematics	MATH	Science
Mechanical Engineering Graduate	MECG	Engineering
Mechanical Engineering Undergraduate	MECH	Engineering
Medical Imaging	IMAG	Medical Rehabilitation
Medical Laboratory Science	MLSC	Medical Rehabilitation
Medical Microbiology	MMIC	Medicine
Medical Rehabilitation	REHB	Medical Rehabilitation
Medicine	MED	Medicine
Microbiology	MBIO	Science
Music	MUSC	Music
Native Studies	NATV	Arts
Near Eastern Studies	NE	Arts
Nursing	NURS	Nursing
Occupational Therapy	OT	Medical Rehabilitation
Operations Management	OPM	Management
Oral Biology	ORLB	Dentistry
Pathology	PATH	Medicine
Peace Studies	PEAC	Graduate Studies
Pharmacology	PHAC	Medicine
Pharmacy	PHRM	Pharmacy
Philosophy	PHIL	Arts
Physical Education	PHED	Physical Education and Recreation Studies
Physical Therapy	PT	Medical Rehabilitation
Physics and Astronomy	PHYS	Science
Physiology	PHGY	Medicine
Plant Science	PLNT	Agricultural and Food Sciences

Subject	Code	Faculty/School
Polish	POL	Arts
Political Studies	POLS	Arts
Post Graduate Medical Education	PGME	Medicine
Preventive Dental Science	PDSO	Dentistry
Production	PROD	Management
Psychiatry	PCTY	Medicine
Psychology	PSYC	Arts
Radiation Therapy	REHB	Medical Rehabilitation
Recreation	REC	Physical Education and Recreation Studies
Religion	RLGN	Arts
Resource Management	NRI	Environment, Earth, and Resources
Respiratory Therapy	RTT	Medical Rehabilitation
Restorative Dentistry	RSTD	Dentistry
Russian	PRSN	Arts
Semetic Studies	SEM	Arts
Slavic Studies	SLAV	Arts
Social Work	SWRK	Social Work
Sociology	SOC	Arts
Soil Science	SOIL	Agricultural and Food Sciences
Spanish	SPAN	Arts
Statistics	STAT	Science
Studio Courses	STDO	Art
Supply Chain Management	SCM	Management
Surgery	SURG	Medicine
Textile Sciences	TXSC	Human Ecology
Theatre	THTR	Arts
Ukrainian	UKRN	Arts
Ukrainian Cdn. Heritage	UCHS	Arts
Undergraduate Medical Education	UGME	Medicine
Women's Studies	WOMN	Arts
Yiddish	YIDD	Arts
Zoology	ZOOL	Science

University of Manitoba

Admissions

Application deadline dates may be found on the web at umanitoba.ca/admissions

General Office

424 University Centre

Telephone: (204) 474 8808

Fax: (204) 474 7554

E-mail for general admission inquiries: admissions@umanitoba.ca

E-mail for special events/tours: student_recruitment@umanitoba.ca

Director: Iris Reece Tougas

Chapter Contents

SECTION 1: Welcome

SECTION 2: An Overview of Undergraduate Admission

SECTION 3: Admission from High School

- 3.1 Entrance requirements for Manitoba high school graduates
- 3.2 Certificates equivalent to Manitoba high school Standing
- 3.3 Advanced standing for high school students

SECTION 4: Applicants with Prior University/College Study

- 4.1 Faculty and school requirements and performance levels
- 4.2 Readmission, continuing and returning students
- 4.3 Transit to Arts or Science from University 1
- 4.4 Applying to all other faculties or schools from University 1 or another program
- 4.5 Transfer students from other post-secondary institutions
- 4.6 Advanced standing for transfer students
- 4.7 Graduates of diploma schools of nursing (R.N.)
- 4.8 Graduates of diploma schools of psychiatric nursing (R.P.N.)
- 4.9 Graduates of the Canadian Coast Guard College
- 4.10 Graduates of Extended Education certificate programs

SECTION 5: Other Admission Categories

- 5.1 Mature student status
- 5.2 Special students
- 5.3 Visiting students
- 5.4 Auditing students

SECTION 6: English Language Proficiency

- 6.1 English Language Proficiency Requirement
- 6.2 English Language Proficiency Options
- 6.3 English Language Proficiency Waiver

SECTION 7: Application Procedure

- 7.1 Application forms, deadlines and documents
 - 7.2 Appeals of admission decisions
 - 7.3 Application fraud or misconduct
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SECTION 1: Welcome

You are joining a vibrant community of nearly 25,000 students and 4,500 academic and support staff members that emphasizes excellence in teaching, learning, and research.

The University of Manitoba is a community of people who study, teach, conduct research, and create music and art, and whose ideas and accomplishments have an impact on our society and culture both here in Manitoba and in the wider world.

The University of Manitoba is the province's largest university and the first to be established in western Canada. In February 2002, the University of Manitoba celebrated its 125th birthday.

The majority of new University of Manitoba students will enter University 1, an innovative program that was specially designed to provide choice and flexibility. University 1 gives you the opportunity to begin your university studies with a year of personal and academic exploration. Advisors are always available to provide academic advice and assistance. During the University 1 Orientation that begins your first academic year, you will be introduced to the wide range of campus support services that can help you with all aspects of student life.

If you are joining the University of Manitoba after completing some college or university courses at another institution, you are equally welcome as you continue your studies.

This book, the *Undergraduate Calendar and Registration Guide*, provides the basic information you require to apply, register, and complete your programs. More specific information on admission requirements and the application process can be found in the applications themselves and their accompanying guides and/or bulletins. These can be downloaded from our website at www.umanitoba.ca/admissions. In addition, there are advisors in the general offices of all academic units who are ready to answer your questions and to help you understand policies and regulations that affect you.

Again, welcome to the University of Manitoba. You are joining a large community of students and scholars, and when you graduate you will be joining an even larger community of graduates.

SECTION 2: An Overview of Undergraduate Admission

Students are admitted to the University of Manitoba on the basis of high school standing or on the basis of previous studies at other universities or colleges. Applicants who do not meet the normal academic requirements of the University of Manitoba may qualify for admission with mature student status. Students may also apply as Special, Visiting, or Auditing students. (See Section 5, Other Admission Categories.)

Most students applying to the University of Manitoba on the basis of high school standing will be admitted to University 1, a first year program designed to provide a foundation for studies in Arts, Science, and the professional disciplines. Exceptions to the University 1 pathway exist for applicants to the Faculty of Engineering, the diploma program of the Faculty of Agricultural and Food Science, the School of Art (Studio programs), the Faculty of Music and General Studies (Extended Education).

Mature status students who meet the criteria outlined in Section 5.1 and who plan to complete degree programs at the University of Manitoba will be admitted to University 1.

Students who have completed 24 credit hours or more of university level courses in University 1, or at other institutions, and students who have completed at least one year at recognized community or technical colleges, may apply directly to the faculty or school of their choice.

Students who have completed less than 24 credit hours of course work at another institution will normally apply for admission to University 1 based on high school standing.

Enrolment Limitations

Most faculties and schools in the University of Manitoba have enrolment limitations, and a process of selection is applied by the university. The main criterion for admission is the scholastic achievement of the student. In instances such as the Faculty of Music and the School of Art, additional criteria designed to assess the student's suitability for education are applied. These criteria are summarized in the chapters of this *Calendar* of each faculty and school, and are described in detail in applicant information bulletins available from Enrolment Services, 424 University Centre.

In some programs the number of students applying for admission greatly exceeds the number which the university is able to admit. Selection, therefore, is based upon scholastic achievement and suitability for the discipline. In some faculties and schools first consideration is given to residents of Manitoba who are Canadian Citizens or Permanent Residents. A limited number of places may be assigned to Canadian Citizens or Permanent Residents who are resident outside Manitoba or to those who are not Canadian citizens/permanent residents. The William and Catherine Booth College (approved teaching centre) and College universitaire de Saint-Boniface (an affiliated college) are not limited in their enrolment, and interested students are directed to those colleges for information.

SECTION 3: Admission from High School

All candidates for admission must meet both the general entrance requirements of the University of Manitoba and the specific subject and performance requirements of University 1 or the faculty/school of their choice.

For information about admission to University 1, or to a specific faculty or school, refer to its chapter in this *Calendar*.

3.1 General Entrance Requirements for Manitoba High School Students Effective for 2006-2007

To meet the General Entrance Requirements of the University, candidates must present:

- (1) Standing in 28 credits which satisfy Manitoba Education and Training's description of the high school program with:
- (2) Five credits at the Senior 4 level, so that these five credits:
 - (a) Cover four different subject areas, AND
 - (b) Include a minimum of three subjects from the list of Academic Subjects Approved for Selection (below) in three different subject areas.

Anglais 40S and Français 40S together may be used as a substitute for English 40 (2 credits) to satisfy a specific requirement of a faculty or school.

The remaining two credits may be selected from Manitoba Education and Training's approved courses at the Senior 4 level designated A (Advanced), G (General), or S (Specialized) in any subject area.

Academic Subjects Approved for Selection

(Equivalent courses in French are also acceptable)

Applied Math 40S	Hebrew 40S
Art 40S	History 40S
Biology 40S	Icelandic 40S
Canadian Aboriginal Language 41G	Italian 40S
Chemistry 40S	Japanese 40S
Chinese (Mandarin) 40S	Latin 40S
Clothing, Housing & Design 40S*	Music: Band, Choral, Guitar, Jazz, or Strings/Orchestra 40S, or Private Music Option 42S
Computer Science 40S	
Consumer Math 40s or	
Consumer Math V and V I 45S	
Deutsch 40S	Physics 40S
English/Anglais 40S	Polish 40S
Family Studies 40S*	Portuguese 40S
Filipino 40S	Pre-Calculus Math 40S
Foods and Nutrition 40S*	Social Studies: World Issues 40S
French/Français 40S	Spanish 40S
Geography 40S	Ukrainian 40S
German 40S	

*1 subject area

42S credit granted for IB (Higher Level), AP Courses, and with Senate approval, 42U credits, are considered acceptable within this list and may also qualify for advanced credit.

Certificates usually accepted as equivalent to Manitoba high school standing are listed in Section 3.2.

Candidates must also meet **Specific Subject and Performance Requirements** as set out by the faculty or school to which they are seeking admission. These specific subject and performance requirements may be found in the chapter for each faculty and school in this *Calendar*.

Average for Selection

Manitoba and northwest Ontario (Thunder Bay and west) high school students will be selected on the basis of an average calculated on three courses specified by each faculty or school. Although the remaining courses offered will not be used in the computation of the average, each must bear at least a passing grade. Applicants presenting high school records from other provinces or countries will be selected on the basis of an average calculated from the complete record in their graduating year, or as specified under the following section, 'Certificates Equivalent to Manitoba High School Standing'.

3.2 Certificates Equivalent to Manitoba High School Standing

Applications on the basis of certificates from outside the province of Manitoba will be considered on their merits. In general, students must meet:

- The minimum requirements for admission to the university in their own locality; and
- The academic requirements of the faculty or school to which they are seeking admission at the University of Manitoba.

The following certificates are usually accepted as equivalent to Manitoba high school standing and will, therefore, meet the university's general entrance requirements for students from that region. Students must also meet any specific subject requirements of the faculty or school of application.

3.2.1 Other Provinces and Territories in Canada

Alberta: Grade 12 with a minimum overall average of 60 per cent on five credits.

British Columbia: Grade 12 with a minimum overall average of 60 percent or better on a minimum of four credits.

New Brunswick: Grade 12 with a minimum overall average of 60 percent on six credits.

Newfoundland: Grade 12 with a minimum overall average of 60 percent on ten credits.

Northwest Territories: Grade 12 with a minimum overall average of 60 percent on five credits.

Nova Scotia: Grade 12 with a minimum overall average of 60 percent.

Nunavut: Grade 12 with a minimum overall average of 60 percent on five credits.

Ontario: Ontario Secondary School Diploma (OSSD) and six Ontario Academic Courses (OACs), including Specific Subject and Performance Requirements for program of application. A minimum 60% average over the top six OACs must be presented; or

Completion of the Ontario Secondary School Diploma (OSSD), including a minimum of six Grade 12 U or M courses, and the Specific Subject and Performance Requirements for program application. A minimum 60% average over the top six Grade 12 U or M courses must be presented.

Prince Edward Island: Grade 12 with a minimum of 60 per cent in a university entrance program.

Quebec: First-year CEGEP with satisfactory standing (normally a GPA of 2.0 or better or 65 per cent or better).

Saskatchewan: Grade 12 with a minimum overall average of 65 per cent on seven credits.

Yukon Territory: Same requirements as applicants from British Columbia.

3.2.2 International Baccalaureate

Three courses at the higher level and three courses at the standard level, with a minimum score in each subject of 4 and an overall minimum score of 24. Credit may be granted for higher level courses with minimum scores of 4 in specific subject areas; see section 3.3 Advanced Standing for High School Students.

3.2.3 Countries and Regions Outside Canada

The academic qualifications acceptable for admission to a direct entry faculty such as University 1 are listed below:

NOTE: The asterisk (*) indicates requirements under review and/or subject to university Senate approval.

British-patterned education: (United Kingdom and most Commonwealth countries except as noted separately below) General Certificate of Education, with two subjects at Advanced Level and three at Ordinary Level, or three subjects at Advanced Level and one at the Ordinary Level, with a C overall average; no subject accepted below a D grade. Acceptable alternative: U.K. Higher National Diploma or Certificate.

French-patterned education: (Algeria, Cote d'Ivoire, Cambodia, France, French Guinea, Haiti, Laos, Morocco) Diplôme de Bachelier de l'Enseignement du Second Degré (Baccalaureate Parts I and II)

Latin America: (Costa Rica, Guatemala, Honduras, Nicaragua, Peru, Venezuela: all others see individual listings below) first year at a recognized university in the same country

**Middle East:* (Bahrain, Iran, Iraq, Jordan, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Syria, Sudan, United Arab Emirates, Yemen): all others see individual listing below: national secondary school certificate

Russian-patterned education: (Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Uzbekistan) Maturity Certificate

Yugoslavian-patterned education: (Bosnia-Herzegovina, Croatia, Macedonia, Serbia, Slovenia, Yugoslavia) Matura/Secondary School Leaving Diploma

International Baccalaureate: 3 courses at the Higher level and 3 courses at the Subsidiary level with a minimum score in each subject of 4 with an overall minimum score of 24. Advanced credit may be granted for Higher level courses with minimum scores of 4 in specific subject areas.

**Argentina:* Bachillerato or Bachillerato Especializada with a minimum 6 average or the examination Ciclo Basico Comun with a 5 average

Australia: matriculation as defined by the home state university

Bangladesh: Higher Secondary Certificate (HSC) in at least the second division

**Brazil:* Certificado de Conclusão de Grau or a Diploma de Técnico de Nível Médio with a minimum 6.5 average or the examination Concurso Vestibular with a minimum 5 average

China: Senior Middle School Diploma

Czech Republic: Maturitní Zkouška (Maturita)

**El Salvador:* Bachillerato in the academic specializations only with a minimum 6.5

Ethiopia: first year standing at a recognized university in the same country

Germany: Reifezeugnis

Greece: Apolytirion

Hong Kong: General Certificate of Education as described above (see British-patterned education) or the University of Hong Kong Matriculation Certificate assessed as the G.C.E.

India: second division or higher in one of: All-Indian Senior School Certificate, Higher Secondary Certificate (Pre-Degree, Pre-Professional or Pre-University), Intermediate Certificate, Higher Secondary Certificate Part 2

Indonesia: Sekolah Menengah Atas (S.M.A.); pre 1993: S.M.A.

Ireland: (Republic of) Leaving Certificate

Israel: Bagrut Certificate

Italy: Maturita Classica Diploma or Maturita Scientifica Diploma

Japan: Upper Secondary School Diploma

Kenya: Kenya Certificate of Secondary Education (KCSE)

Malaysia: Sijil Tinggi Persekolahan Malaysia (STPM) or MICSS Unified Examination Certificate (UEC)

Mexico: Bachillerato certificate with a minimum 7.0 average

**Nigeria:* Senior School Certificate with a maximum 5.0 average

Pakistan: Higher Secondary School Certificate (HSC) in at least the second division

Philippines: second year standing at a recognized institution of higher learning

Poland: Maturity/Swiadectwo Dojrzalosci Certificate

Portugal: first year standing at a recognized university in the same country

Singapore: Government Higher School Certificate (Chinese) with two subjects at the Principal Level and three subjects at the Subsidiary Level

Slovak Republic: Maturity Certificate (Maturitnej Skuske)

Somalia: First year university standing

South Korea: Academic Upper Secondary School Certificate (Immungye Kodung Hakkyo Choeupchang)

South Africa: Matriculation Certificate of the Joint Matriculation Board in the first or second class with a minimum standing of C or one of the following certificates in the first or second class providing that exemption from the Matriculation Examination of the Joint Matriculation Examination of the Joint Matriculation Board has been granted: Cape Senior Certificate of the Department of Public Education, Natal Senior Certificate of the Department of Education, Orange Free State School Leaving Certificate of the Department of Education

Spain: Titulo de Bachillerato or University Orientation Year

Taiwan: Senior High School Leaving Certificate

**Thailand:* Mathayom /Maw 6

Ukraine: Atestat pro Povnu Zagalnu Sersdniu Osvitu (Grade 12)

United States of America (and Puerto Rico): complete Grade 12 with a minimum average of C or better on a minimum of five academic Grade 12 subjects

Not Acceptable: The following qualifications by themselves are not acceptable as a basis of admission: GCE (O) levels only; West African School Certificate; Hong Kong Certificate of Education; Ordinary Diploma and Technician Diploma; Malaysian Technical Diploma; U.K. City and Guilds Certificate; U.K. College of Preceptors Licentiate; U.K. Ordinary National Certificate or Diploma; West Indies CXC.

Admission requirements for applicants from countries not included above can be obtained from Enrolment Services.

Graduates from international schools overseas will be considered for admission only if they are eligible for admission to a major university of their country of citizenship; or they have successfully completed an internationally examined curriculum such as the GCE or IB diploma, or they have successfully completed the formal graduation requirements of a Canadian provincial ministry of education in an approved institution. (See above for minimum requirements.)

3.3 Advanced Standing for High School Students

Students who have completed courses in the *Advanced Placement* program (Advanced Placement College Board) examinations with a minimum score of 4 in specific areas or the *International Baccalaureate* program (higher level courses with minimum scores of 4 in specific subject areas), or who have completed university level courses while in high school (including Challenge for Credit), may apply for transfer of credit to the program they are entering. Students should consult Enrolment Services/Admissions for information.

Students admitted on the basis of high school graduation may be denied transfer of credit for any university studies completed between the filing of the application and subsequent registration at the University of Manitoba.

SECTION 4: Applicants with Prior University/College Study

4.1 Faculty and School Requirements and Performance Levels

Each faculty and school has its own admission requirements. With a few exceptions, the first year of most faculty and school programs will be completed in University 1. The introductory section of each faculty or school chapter provides information on the minimum courses required for admission, as well as prescribing a “focused approach” for degree completion in the shortest possible time.

Following University 1 (or the equivalent from another program or at another university or college), students seek admission to a faculty or school program.

Students are advised that selection processes are competitive and in many cases applicants must present adjusted grade point averages greater than the minimum level stated. Applicants who satisfy the minimum requirements are also advised that while they are eligible for consideration, selection will be based on the program specific criteria. Additional specific information regarding the selection process is available from the general offices of all faculties or schools, or from Enrolment Services, 424 University Centre.

4.2 Readmission, Continuing and Returning Students

All students who were admitted and who did not follow through with registration must apply to Enrolment Services for re-admission.

All students who voluntarily withdrew from their first-year programs in faculties other than Agricultural and Food Sciences, Arts, Human Ecology or University 1, must reapply.

Former students who have attended other institutions since their last registration at the University of Manitoba must apply to Enrolment Services, for re-admission, unless the other institution was attended on a letter of permission.

All students who initially registered in Agricultural and Food Sciences, Arts, Extended Education, Education, or Human Ecology but have not been in attendance for up to five years, may automatically re-register if they are in good academic standing and have not attended another institution since their last attendance at the University of Manitoba.

Students whose past registration was in these faculties but who have not been in attendance for more than five years, and students registered in Engineering, University 1 or Science who have not attended for one year or more, and have not taken courses in another faculty or school subsequently may register without going through admissions. However, formal permission to re-register should be sought from the dean’s office of the faculty concerned, to ensure that work previously completed complies with current program requirements.

All students who were admitted to the Asper School of Business, Dental Hygiene, Environmental Design, School of Art, Nursing, Music, Physical Education and Recreation Studies, where there is limited enrolment, and who have not been in attendance for one year or more, must make formal application to re-register to the office of the dean or director before June 1. Their acceptance back into the program will be subject to quota restrictions and compliance with existing program requirements.

Students who wish to change to a different faculty or school, or who are no longer eligible to continue in one program of studies at the University of Manitoba, may apply for admission to another faculty or school by the deadline date indicated in the academic schedule, and must meet the entrance requirements of the faculty of choice.

Graduates who wish to take further courses in their own faculty, but not towards a degree, must apply for readmission as a “special student.”

4.3 Transit to Arts or Science from University 1

University 1 students intending to transit to the Faculty of Arts or Science may do so at any time prior to their next regular session registration subject to the following conditions:

- Students who have completed at least 24 credit hours may choose to transit to the Faculty of Arts or Science.
- Students who have completed 30 credit hours or more in University 1 must choose to transit to Arts or Science, if not admitted to another faculty or school, prior to the next regular session registration.
- Upon entry to the Faculty of Arts or Science, a student’s performance in University 1 will be assessed according to the standards required in Arts and Science. Students will then be allowed to enter the faculty of their choice either in clear standing or on probation. See the chapters for the faculties of Arts or Science in this *Calendar* for further details.

4.4 Applying to All Other Faculties or Schools from University 1 or Another Program

All applicants seeking admission to professional or selective faculties or schools where enrolment is limited must obtain the applicant information bulletin for that program from Enrolment Services before completing their application. The faculty or school bulletin is the only document which describes all the specific prerequisites for eligibility and selection.

4.5 Students Applying from Other Post-Secondary Institutions

Including community colleges, technical colleges, Bible colleges* and other accredited college study.

- a. Applicants who have completed less than 24 credit hours of course work and who do not meet either the general university entrance requirements or mature student status will not be considered for admission.
- b. Applicants who have completed at least 24 credit hours of course work will be considered for admission and transfer credit.
- c. Applicants who have completed less than 24 credit hours of course work but who meet either the general university entrance requirements or mature student status will be considered for admission and transfer credit.
- d. Transfer credit for each individual course will be evaluated by the appropriate University of Manitoba department and transfer credit will be granted subject to program applicability.

Students who are on academic suspension as a result of work completed elsewhere will not normally be considered for admission to the University of Manitoba.

*Students who have attended a Bible college will be considered for admission/transfer credit, providing that:

- The Canadian Bible college is a member institution of the Association of Universities and Colleges of Canada (AUCC) or is affiliated with an AUCC member institution (other than as an approved teaching centre), or is accredited by the American Association of Bible Colleges (AACE).
- The U.S. Bible college holds regional accreditation in the U.S., or is accredited by AABC.

Students from Bible colleges may not be considered for admission as second degree applicants.

4.6 Advanced Standing for Transfer Students

Advanced standing may be granted in compliance with the residence requirements, provided the work completed is part of the requirements of the degree program in which the student wishes to enrol. Some faculties and schools may consider only courses completed within ten (or fewer) years. Credit will be granted only for courses taken at a recognized institution. Standing cannot be determined until official transcripts and complete course descriptions have been received. Since it takes considerable time to have courses evaluated for transfer credit, students are urged to submit their results and course descriptions as early as possible in order that the evaluation process can be completed in time for registration. Students who do not have evaluations completed prior to registration should consult their faculty or school for guidance in selecting courses.

Further information on transfer of credit and residence requirement is found in the chapter, General Academic Regulations and Requirements.

Some faculties and schools may have limitations on possible credit taken beyond a specified period, this information is described in their chapters or in the applicant information bulletin.

4.7 Graduates of Diploma Schools of Nursing (R.N.)

Graduates of diploma schools of nursing may be considered admissible as regular students to the University of Manitoba. Admission to specific faculties and schools will be with the consent of the dean or director and will be conditional upon the presence of specific subject fields within the program completed. Applicants in this category may be granted advance standing not exceeding the residency policy of the faculty concerned (grades of "C+" or equivalent in individual courses have the potential for credit in a degree program).

4.8 Graduates of Diploma Schools of Psychiatric Nursing (R.P.N.)

Diploma programs in Manitoba may receive credit transfer for professional work completed.

4.9 Canadian Coast Guard College

Graduates of the Canadian Coast Guard College diploma programs with a minimum 2.5 ("C+") average will be considered for admission as regular students to the University of Manitoba, and may be granted up to one year of advance standing, as appropriate to faculties and schools.

4.10 Graduates of Extended Education Certificate Programs

Graduates of certificate programs offered under the auspices of the University of Manitoba Extended Education which require a minimum of 180 contact hours, may be eligible to receive credit towards an undergraduate degree providing they have been admitted to a faculty or school in which transfer of credit is appropriate. A minimum overall average of 2.5 or better must have been achieved to qualify for consideration. The maximum amount of credit which may be transferred will be determined by Extended Education in consultation with the relevant faculty or school.

SECTION 5: Other Admission Categories

5.1 Mature Student Status

Mature student status is granted to one who:

- Does not meet the normal entrance requirements;
- Is at least 21 years of age (before May 1 for admission to Intersession or Summer Evening Session; before July 1 for Summer Day Session; and before September 30 for the Regular Session; and before January 31 for admission in January; or for admission based on the recommendation of the dean); and,
- Is either a Canadian citizen, or a permanent resident of Canada.

Applicants seeking admission under mature student status are advised to seek further information from Enrolment Services, 424 University Centre.

Because faculties and schools vary in their definition of mature student status, applicants are advised to consult the relevant *Calendar* chapter for additional information. Some faculties and schools may admit students with mature student status directly into their first-year program, while others do so after University 1.

A student may qualify for admission under mature student status for full-time or part-time study. Applicants who have completed course work at another post-secondary institution are not normally eligible for mature student status admission.

A student with mature student status whose primary language is other than English must satisfy the English proficiency requirement.

5.2 Special Students

Special students are those who wish to enrol in a degree credit course for professional or personal interest and who are not seeking to complete a degree. These students apply to the faculty or school offering the course, or to General Studies (Extended Education). See the faculty or school chapters for information regarding special students.

5.3 Visiting Students

Visiting students are students who are registered at another institution who are taking one or more courses at the University of Manitoba on a Letter of Permission from their home university.

5.4 Auditing Students

Auditing students are those admitted for the purpose of attending one or more courses for personal or professional interest, and not for any academic credit. No documentation other than the information requested in the application form is required for admission. Auditing students are not entitled to examination or other evaluation privileges, and in no instance may credit standing be obtained for a course which has been audited. Once admitted, the written consent of the instructor of the course(s) which the student wishes to audit must be presented at the time of registration for approval by the faculty or school. (Students admitted in a category other than auditor may audit courses with the approval of the dean or director, provided written permission of the instructor is presented at registration.)

SECTION 6: English Language Proficiency

6.1 English Language Proficiency Requirement

English is the language of instruction and communication at the University of Manitoba. Accordingly, an applicant whose primary language is not English, or whose previous education was in another language, must demonstrate a command of English sufficient to meet the demands of classroom instruction, written assignments, and participation in tutorials and discussions.

Canadian Citizens, Permanent Residents and others whose primary language is English are deemed to be proficient in English by virtue of having lived and been educated in a country where English is the primary language (country as determined by Enrolment Services).

Canadian Citizens and Permanent Residents and International (study permit) applicants whose primary language is NOT English must provide evidence of proficiency in English by meeting the University of Manitoba standards as outlined in the following section.

6.2 English Language Proficiency Options

Any applicant who is asked to demonstrate proficiency in the English language may do so by meeting any one of the following options.

- Achieve a minimum score of 550 with no less than 50 (unscaled) in each of the component scores on the paper-based Test of English as a Foreign Language (TOEFL); or
- Achieve an equivalent level of performance on the computer-based Test of English as a Foreign Language (TOEFL); i.e., 213 total score with a minimum of 17 (unscaled) in each component score; or

Achieve an equivalent level of performance in the new Internet-based TOEFL; i.e., 80 total score with a minimum of 19 in each component score.

- Achieve minimum scores of 4.5 in Reading, 4.5 in Listening and 4.0 in Writing on the Canadian Test of English for Scholars and Trainees (CAN-TEST).
- Achieve a minimum score of 6.5 based upon module A, or module B, on the International English Language Testing System (IELTS).
- Achieve a minimum score of 80 on the Michigan English Language Assessment Battery (MELAB).
- Achieve a grade of A, B, or C on the University of Cambridge Certificate of Proficiency in English.
- Achieve a score of 60 or more in the Canadian Academic English Language Assessment (CAEL).
- Achieve a minimum of 65% in the direct-entry English program, also known as the Academic English Program for University and College Entrance (AEPUCE), as taught by the English Language Centre at the University of Manitoba.

Requests for waivers from individuals who do not meet any of the above criteria but whose command of the English language is apparent will be considered on an individual basis. Information and waiver application forms are available from Enrolment Services/ Admissions, 424 University Centre.

6.3 English Language Proficiency Waiver

An English language proficiency waiver may be granted to anyone who is a Permanent Resident, Naturalized Canadian, or who is in Canada on a study permit.

Students seeking this exemption must provide supporting documentation and have the information assessed as satisfactorily meeting one of the following:

- Ten consecutive years of residency in Canada, which may include years of study.
- Successful completion of a three-year secondary (high school) program in Canada, or three years of post-secondary education in Canada, or any combination of three years of successful secondary and post-secondary education in Canada.
- Graduation from a Manitoba high school with 5 credits at the Senior 4 level which include two credits of English at the 40 level with an average grade of 75 per cent.
- Verify conditions equivalent to the above in a country where English is the primary language.
- Achieve a grade of 5 or better on the International Baccalaureate Higher Level English course, or a grade of 4 or better on the Advanced Placement English Composition: Literature and Composition.

Requests for waivers from individuals who do not meet any of the above criteria but whose command of the English language is apparent will be considered on an individual basis.

Information and application forms for the waiver of English language proficiency are available from Enrolment Services, 424 University Centre.

SECTION 7: Application Procedure

7.1 Application Forms, Deadlines and Documents

Application forms are available either from Enrolment Services, 424 University Centre; telephone (204) 474 8808, or from the general office of the faculty or school to which application is made. Application forms for all undergraduate programs are also available at: www.umanitoba.ca/application_forms. The application deadlines for all programs can be found at: www.umanitoba.ca/admissions.

Students are encouraged to submit their applications as early as possible to Enrolment Services. Students cannot register until an admission decision has been made. Generally faculties and schools do not consider nor issue acceptances to students awaiting supplemental or summer session results. In those faculties and schools which do, applications must be filed in time to meet the deadline date. An admission decision will only be made upon receipt of final examination results.

Application to live in a campus residence is made separately (see the Student Affairs chapter).

Transfer student applicants are required to submit official transcripts of all previous work completed. Transcripts should be submitted with the application, or as soon as final results are available, but no later than the deadline date for submission of documents.

Transfer student applicants who register for further university/college courses subsequent to their application to the University of Manitoba (unless on a Letter of Permission from the University of Manitoba) *must* submit an official transcript of final grades. Admission status will be reassessed, and unless prior permission has been obtained from Enrolment Services, transfer of credit may be denied.

Information on the entrance requirements, application procedure, selection criteria, application fee and required documentation for a specific faculty or school, is available from Enrolment Services, 424 University Centre, and is also part of the applicant information bulletin that accompanies the application. This material is also available on the university website.

7.2 Appeals of Admission Decisions

Individuals who wish to have their applications reconsidered should direct their request within ten days to the chair of the faculty/school selection committee; or in the case of Agricultural and Food Sciences, Arts, Human Ecology, Engineering, Education, Fine Arts, Science, and University 1 to the respective general office. Additional information on appeals is avail-

able from these general offices. Advice on appeals is available from the Office of Student Advocacy, 519 University Centre, telephone (204) 474 7423.

If applicants wish to appeal the reconsidered decision of the selection committee, they should direct their request to the Secretary of Senate for transmission to the Senate Committee on Admission Appeals, within ten days following the mailing of the results of the selection committee's reconsideration.

Information and appeal forms for the Senate Admission Appeals Committee are available from, Enrolment Services, 424 University Centre, or the University Secretary, 312 Administration Building.

7.3 Application Fraud or Misconduct

Application fraud or misconduct includes:

- Failure to declare attendance at another post-secondary institution;
- Presenting falsified academic documentation or causing or encouraging another person to falsify records through translation or data changes;
- Presenting falsified personal documentation, e.g. using a false name, date of birth, country of origin, etc.;
- Presenting falsified or fictitious reference documentation;
- Cheating on, or having another person write, a standardized entry exam such as, TOEFL, MCAT, LSAT, DAT or GMAT;
- Presenting another person's standardized test score as one's own to falsify a test result; and
- Failure to report suspensions from another post-secondary institution.

Declaration

All persons seeking admission to the University of Manitoba must sign the following declaration on the Application for Admission Form: "I hereby certify that I have read and understood the instructions and information sheet accompanying any part of this application form and that all statements made in connection with this application are true and complete."

The commission of applicant fraud or misconduct may result in acceptance and registration being withdrawn and the applicant disqualified from consideration, not only in the year of application, but in subsequent sessions. If discovered in a subsequent session it may result in dismissal from the university.

Financial Aid

For Manitoba residents, the Manitoba Student Aid Branch is your contact when applying for federal and provincial loans, grants and bursaries. Assistance is based on an assessment of financial need and is provided primarily in the form of repayable Canada and Manitoba Student Loans. Non-repayable grants and bursaries are also available.

You should apply well in advance of your program start date. You can obtain information about student financial assistance and apply on-line at: www.studentaid.gov.mb.ca. With the interactive on-line application, you will receive an estimate of Canada Student Loan and Manitoba Student Loan assistance within minutes of submitting your application. You will receive a letter notifying you of the actual assistance within two weeks. You can also obtain a paper application at the Financial Aid and Awards Office, 422 University Centre. Applications for the 2006-2007 academic year are available in early June 2006.

Manitoba Student Loans and Canada Student Loans are interest-free and payment-free while you are in full-time studies. For Canada Student Loans, interest begins to accumulate once you cease to be a full-time student and the first payment is due six months after your end of study date.

Effective August 1, 2003, the interest-free and payment-free period for Manitoba Student Loans is extended from six months to twelve months from your end of study date. To be eligible, you must be a resident of Manitoba on the eligibility date and provide confirmation of residency to your lender. The eligibility date is the first day of the seventh month after your end of study date.

Manitoba Student Aid has two offices to serve you:

- In Winnipeg at 409-1181 Portage Avenue, call (204) 945-6321
- In Brandon on the 3rd floor, 340-9th Street, call (204) 726-6592
- If you are not a Manitoba resident, your application for financial assistance must be made through your home province or country.

Registration and Fees

Registrar's Office

400 University Centre
Telephone: (204) 474 9423
Fax: (204) 269 1065
Registrar: Neil Marnoch

Chapter of Contents

SECTION 1: Introduction and Overview

- 1.1 Academic Sessions
- 1.2 Orientation

SECTION 2: Registration

- 2.1 Registration Eligibility
- 2.2 Classification of Students
- 2.3 Student Status: Full-time and Part-time
- 2.4 Payment of Fees
- 2.5 Late Payment of Fees
- 2.6 Non-Payment of Fees
- 2.7 Challenge for Credit Fee
- 2.8 Acceptance Deposits
- 2.9 Property Damage Assessment
- 2.10 Provisionally Registered Students
- 2.11 Age Exemption
- 2.12 Student Organization Fees
- 2.13 Health Requirements
- 2.14 Identification Cards
- 2.15 Fee Schedule Information

SECTION 3: International Students

SECTION 1: Introduction and Overview

Registration is the process of selecting and enrolling in courses using the registration system (Aurora Student), and paying fees.

Students new to the University of Manitoba will receive a Certificate of Acceptance that includes a student number as well as other information relating to registration. Unless advised otherwise, new students will also receive by mail a copy of the *Undergraduate Calendar* which includes a guide to registration. Students who have applied to a University of Manitoba faculty or school following a qualifying program of university study (such as University 1, or at another institution) will also receive an acceptance letter with information specific to the program they are entering.

Registration consists of:

- Selecting courses;
- Obtaining, where necessary, approval for the courses selected from the dean, director, or other faculty/school representative;
- Preparing a timetable and obtaining space in courses selected;
- Having fees assessed and making a payment of fees to the comptroller; and,
- Obtaining a student identification card.

Part II, entitled "Registration Guide," of the *Undergraduate Calendar* describes in detail the registration system (Aurora Student), fee payment procedures, and obtaining identification cards, as well as providing registration information specific to each faculty and school.

New editions of the *Undergraduate Calendar* are published each spring and distributed to current students at the end of the spring term.

Individuals who are not current students and who would like details on admission and registration for the next session should write to: The Registrar's Office, University of Manitoba, Winnipeg, Manitoba R3T 2N2; telephone (204) 474 9420. Graduate Student information is published in the *Graduate Calendar*.

1.1 Academic sessions

The academic year is divided into two sessions: Regular Session and Summer Session. Regular Session is comprised of Fall Term and Winter Term. Summer Session is comprised of Summer 1 and Summer 2 Terms. All faculties and schools offer courses during Fall and Winter Terms, and some faculties and school offer courses in Summer 1 and Summer 2 Terms.

A limited number of courses are also offered by distance education. Distance Education is an option for students whose personal circumstances make it difficult to attend classes on campus. Distance Education Courses are offered in Fall, Winter and Summer Terms.

Information on Summer Session and Distance Education courses is available from the Extended Education Division, 188 Extended Education Complex; telephone (204) 474 9921.

1.2 Orientation

Students new to the University of Manitoba must participate in a two-day orientation program organized by University 1. In addition, most faculties and schools organize orientation programs for their new students. Information on these events is included in the registration material mailed to the students eligible for participation.

Students who plan to enrol in one of the university's affiliated colleges may obtain college orientation information directly from the college general office.

SECTION 2: Registration

2.1 Registration Eligibility

Students in Manitoba and North America will normally enrol in courses on line using the University of Manitoba Registration System (Aurora Student). Access to registration through Aurora Student begins in July of each year and continues throughout the summer. Access times are available on line and in the *Registration Guide* section of this *Calendar*. Students in Law, Medicine, and Medical Rehabilitation will be mailed information on registration. Students must ensure that their registration is processed in accordance with the registration procedure and dates stipulated for their faculty or school in the *Registration Guide* part of this book.

After enrolling for the courses selected, students must complete registration by making fee payment before the published deadline. The *Registration Guide* provides fee payment information.

2.2 Classification of Students

The classification of a student at the University of Manitoba is determined on admission. See the chapter, Admission to the University of Manitoba.

Undergraduate Students

Undergraduate students are those who are enrolled in University 1, or in a degree, diploma, or certificate program other than those offered by the Faculty of Graduate Studies or the Continuing Education Division.

Special Student Registration

Special students are those who are admitted to a faculty or school with the permission of that dean or director to take one or more courses which are not to be included as credit toward a degree, diploma, or certificate. At the discretion of the dean or director, courses completed by a special student may subsequently be accepted as credit toward a degree program. Special students are allowed to register in courses the dean and/or director approves. The fee charged to each special student will be the fee normally

associated with the course(s) when such course(s) is/are taken as a portion of a program by undergraduate students. Special students will be bound by the examination regulations and the withdrawal dates of the faculty or school in which they are registered. (Students admitted to the university in a category other than special, may with the permission of the dean or director take courses as a special student depending upon faculty/school regulations.)

Visiting Student Registration

Visiting students are those who enrol in one or more courses at the University of Manitoba with the purpose of having credit transferred to their home university.

Prior to being admitted for the first time, visiting students must present a Letter of Permission from the registrar, or appropriate dean, of their home university granting permission for enrolment in the specific course(s) desired. The Letter of Permission must be submitted to the Admissions Office along with their application to the University of Manitoba. Registration is not permitted until the Admissions Office has recorded the specific course permission and finalized the admission.

Once registered as a visiting student at the University of Manitoba, such students are eligible to reregister in subsequent sessions without reapplying through the Admissions Office provided: they have not changed their home university since their last registration at the University of Manitoba; they are registering in the same faculty/school at the University of Manitoba; and they have the Letter of Permission from their home university indicating the specific course(s) desired. If all of these requirements are met, visiting students must merely present their Letter of Permission along with their latest student history from the University of Manitoba, to the appropriate faculty/school representative prior to registration.

Auditing Student Registration

Students auditing course(s) are doing so for personal interest and not for academic credit and, as such, are not entitled to examination or other evaluation privileges. In no instance may degree credit be obtained for a course which has been audited. Students auditing any course must register and will be charged a fee equal to one half of the fee normally associated with that course when taken for credit purposes. See chapter, Admission to the University of Manitoba.

2.3 Student Status: Full-time and Part-time

Registered students fall into one of two categories based upon their credit hour course load.

Full-time students are those students registered in at least 60 per cent of the credit hours of the full year program for their faculty or school.

Part time students are students who are registered in less than 60 per cent of the credit hours of the full year program for their faculty or school.

Students who begin the year as full-time students and who in the course of the session withdraw from courses such that their credit hour level falls below 60 per cent of the full year program will automatically be classified as part-time students.

Eligibility

To be eligible for participation in Canadian Interuniversity Sport (CIS) competition, a student must be registered in at least 60 per cent of the credit hours of a normal full year's program in the term of competition.

2.4 Payment of Fees

Your registration is complete only when the university receives your payment. Payments made after published fee deadlines will be considered late and a late registration fee will be assessed.

Fee payment deadline dates are published in the *Registration Guide* and are available at website: www.umanitoba.ca/regguide.

Students are responsible for paying their fees regardless of whether or not a fee statement is mailed to them. Information on your fee balance is available through the registration system.

The preferred method of fee payment is to use PC/WEB (Online) banking or telephone banking. If you are not already using Online or telephone banking, sign up by contacting your financial institution or visit the following website for links:
www.umanitoba.ca/admin/financial_services/revcap/fees/online.shtml

Fee payments may also be made by cheque, draft, money order, debit card (Interac) or cash. Cheques, drafts, and money orders must be made payable to: The University of Manitoba. Payments should include student number, address, and telephone number. If cheques are postdated for after the fee deadline, applicable late fees will be assessed. A \$30 charge, plus applicable late fees, will apply to all returned cheques.

You can pay your fees at: Fort Garry Campus, Cashier's Office, 138 University Centre or Bannatyne Campus, P001 Pathology Building. For questions related to payment of fees call 474-9433 or visit the web site at www.umanitoba.ca/financial_services/revcap/fees/index.shtml.

Students whose academic fees are being paid by an outside agency must make arrangements for this method of payment with Revenue, Capital and General Accounting, 315 Administration Building in **advance** of the fee deadline date. A letter from the agency detailing the arrangements **must** be submitted or the student's registration may be cancelled.

Students whose fee payment is dependent upon the receipt of government sponsored student financial aid must make arrangements with the university's Financial Aid and Awards Office if this aid is not available at the deadline date for payment of fees.

2.5 Late Payment of Fees

If you pay your fees after the fee deadline, you will be assessed a late payment fee.

2.6 Non-Payment of Fees

Students with outstanding balances after the published fee payment deadlines may be placed on Hold Status or have their registrations cancelled.

Students who are cancelled will have a reinstatement fee of \$40.00 added to their fee balance.

Cancelled students must apply for reinstatement as soon as possible; reinstatement will not be granted following the voluntary withdrawal deadline in each term. Reinstatement, if granted, applies to **ALL** courses on your record at the date of cancellation. Payment for reinstatement (tuition fees owing and penalty fees) must be made by cash, debit card (Interac), certified cheque or money order.

Students who are placed on Hold Status will be denied access to most academic and administrative services until full payment is received.

If after registering for courses, you decide not to attend, it is your responsibility to withdraw.

2.7 Challenge for Credit Fee

Students challenging a course(s) must register and will be charged a fee equal to one half of the fee normally associated with the course(s).

2.8 Acceptance Deposits

Students who apply to for admission to the following programs, and who are accepted into the program, must confirm their acceptance by a deposit by the date specified in their letter of acceptance: Dentistry, Dental Hygiene, Education, 4 Yr. B.Ed., Certificate and After Degree Programs, Environmental Design, Law, Management, Medicine, Music, Nursing, Pharmacy, Physical Education, Recreation Studies, Social Work, and Medical Rehabilitation.

Students who are offered a place in more than one program may only accept one offer of admission. The amount of the deposit is non refundable but is credited to academic fees upon registration in program.

2.9 Property Damage Assessment

The university may levy an assessment against a student or students for damage to, or loss of, university property, equipment, or materials.

2.10 Provisionally Registered Students

Students whose registration is cancelled after being allowed to register provisionally pending receipt of documentation or clarification of their academic status are responsible for academic fees for the period during which they were provisionally registered.

2.11 Age Exemption

Academic fees will be waived for Canadian citizens or permanent residents who reach age 65 by September 1 for the Fall and Winter Terms, or May 1 for the Summer Terms, provided they have been admitted and are eligible for registration. Proof of age and citizenship status may be required.

2.12 Student Organization Fees

Student organization fees, with the exception of the fee for the University of Manitoba Students' Union Student Accident Plan, are assessed on a prorated, per credit hour basis and depend upon the faculty/school, the program, and the course load of the individual student.

2.13 Health Requirements

While health examinations are not required for registration at the University of Manitoba, students registering in the following are advised to undergo a health examination with their physicians or the University Health Service: Nursing, Physical Education, as well as all students who are participating in organized intercollegiate or intramural sports.

Immunizations are considered essential in health science programs and information on specific requirements is included in the chapter pertaining to the program and is also available from the faculty or school general office.

All Canadian students must carry health insurance through their home provinces. All international students not covered by a provincial plan must purchase the medical insurance plan provided by the University of Manitoba. It is also recommended that international students undergo a health examination prior to their arrival in Canada.

Health and immunization services required for occupational or educational institutions are not covered under provincial insurance plans and will be provided on a fee for service basis either by the student's own physician or the University Health Service.

2.14 Identification Cards

Photo identification cards are necessary for access to major student services. The initial card is provided at no charge the first time a student registers. There is a fee for replacement cards. ID cards are provided by Student Records, 400 University Centre.

2.15 Tuition Fee Information

Tuition and other fees associated with registering as a student are reviewed in the spring of each year. At the time of printing this edition, the fee schedules for 2006-2007 were not yet decided.

As soon as 2006-2007 fees have been set, they will be available in print from the Registrar's Office, 400 University Centre, and will also be posted on the university's website: www.umanitoba.ca/registrar/.

In the meantime, the fees that were in place for 2005-2006 are available on the website to give students an indication of program costs.

SECTION 3: International Students

Language Proficiency

All students whose primary language is not English, or whose previous education was in another language, must demonstrate a command of English sufficient to understand and participate in classroom instruction, and to complete written assignments. The English language proficiency requirement is described in the *Undergraduate Calendar*, in the chapter, Admissions.

Student Authorization to Enter Canada

All international students must obtain a Student Authorization before entering Canada. The application for a student authorization must be processed through the nearest Canadian embassy or consulate. The following documents are required: valid passport; Certificate of Acceptance to the University of Manitoba; evidence of adequate financial support to live and study in Canada; and a letter from a relevant sponsoring agency if applicable.

International Student Differential Fee

All international students will pay a 100% international student differential fee for the courses in which they register. Refer to the 2006-06 fee information on the website: www.umanitoba.ca.

Health Insurance

All nontechnical students, who have been granted a Student Authorization are required by university regulations to obtain complete health insurance coverage through the purchase of a health insurance plan arranged for by the university. This plan, which the university has arranged for its international students is the only plan acceptable.

Proof of coverage in this plan must be presented before registration at the university can be accepted. (See *Registration Guide* or University website for further details). The fee assessment for all international students includes a charge for "single" health insurance coverage. The first term minimum payable will include this charge and must be paid prior to registration.

International students who are claiming exemption based on coverage by Manitoba Health Services Commission, the Canadian International Development Agency, or other provincial or international scholarship plans must present proof of coverage to have the charge removed.

Work Permit for Study Purposes

International students who are registering for courses or programs that require work placement must obtain a valid Work Permit, in addition to maintaining a valid Study Permit. Work placement includes, but is not limited to, any paid or unpaid practicum, internships, work experience, field placement, and co-op programs that are a required component for the completion of their degree, diploma or certificate. Please contact your program advisor or the International Centre for Students for further information.

General Academic Regulations and Requirements

Chapter Contents

SECTION 1: Introduction

SECTION 2: Residence and Written English/Mathematics Requirements

- 2.1 Residence Requirements for Graduation
- 2.2 University Written English and Mathematics Requirement for Undergraduate Students

SECTION 3: Grades and Grade Point Average Calculation

- 3.1 The Letter Grade System
- 3.2 Calculation of Grade Point Average
- 3.3 Academic Honours

SECTION 4: Academic Evaluation

- 4.1 Methods of Evaluation
- 4.2 Examinations
- 4.3 Other Forms of Earning Degree Credit

SECTION 5: Appeals of Grades

- 5.1 Appeals of Grades Received for Term Work
- 5.2 Appeal of Final Grades
- 5.3 Academic Appeals

SECTION 6: Attendance and Withdrawal

- 6.1 Attendance at Class and Debarment
- 6.2 Withdrawal from Courses and Programs

SECTION 7: Academic Integrity

- 7.1 Plagiarism and Cheating
- 7.2 Personation at Examinations

SECTION 8: Graduation and Convocation

- 8.1 Graduation
- 8.2 Application for Graduation
- 8.3 Convocation

APPENDIX A: List of Approved Written English and Mathematics Courses

APPENDIX B: Course Identification

SECTION 1: Introduction

This chapter contains the regulations and requirements that apply to all students, regardless of their faculty or school.

Each faculty and school has its own supplementary regulations and requirements. These are published in the faculty or school chapters of this *Calendar*. Some faculties and schools also have additional regulations and requirements governing their programs; these are available from their general offices.

It is the responsibility of each student to be familiar with the academic regulations and requirements of the University of Manitoba in general and of the specific academic regulations and requirements of their faculty or school of registration. Accordingly, students are asked to seek the advice of advisors in faculty and school general offices whenever there is any question concerning how specific regulations apply to their situations.

SECTION 2: Residence and Written English and Mathematics Requirements

2.1 Residence Requirements for Graduation

Each faculty and school recommends to the Senate the number of credit hours each student must complete in order to graduate from its programs. Senate also requires each student to complete a minimum number of credit hours at the University of Manitoba – this is called the “residence requirement.”

Unless otherwise stated in faculty and school chapters, the minimum residence requirement of the University of Manitoba is the work normally associated with one year in the case of programs of three years’ duration, and two years for programs of four years’ duration. Some faculties and schools may have additional residence requirements specified in their program regulations. However, in all cases, the residence requirement is assessed following an appraisal of the educational record of the student applying to transfer credits from another institution or applying to earn credits elsewhere on a letter of permission. The residence requirement is not reduced for students whose “challenge for credit” results in a passing grade.

2.2 University Written English and Mathematics Requirement for Undergraduate Students

All students are required to complete, within the first 60 credit hours of their programs, a minimum of one three credit hour course with significant content in written English, and a minimum of one three credit hour course with significant content in mathematics.

Some degree programs have designated specific Written English and mathematics courses to fulfil this requirement. See the program descriptions in the faculty and school chapters of this *Calendar* for details.

Courses, and sections of courses, that satisfy the Written English requirement and the Mathematics requirement are identified by the letters “W” and “M” beside course numbers in this *Calendar* and in the Registration Guide at the end of this book. (On the web, students may search Course Attributes for courses that satisfy the written English and Mathematics requirements). A complete list of courses fulfilling the written English and Mathematics requirements is published in Appendix A of this chapter.

Exemptions to the Written English and Mathematics Requirement:

- All students with completed baccalaureate degrees and who transfer into any program to which these requirements apply.
- Registered Nurses entering the Bachelor of Nursing Program for Registered Nurses.
- Students admitted before the 1997-98 Regular Session.
- Written English exemption only: Students transferring from Collège universitaire de Saint-Boniface who have completed a written French requirement (at the college before transferring to the University of Manitoba shall be deemed to have met the written English requirement.

SECTION 3: Grades and Grade Point Average Calculation

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

Final grades in most courses are expressed as letters, ranging from D, the lowest passing grade, to A+ the highest. Each letter grade has an assigned numerical value which is used to calculate grade point averages.

Some courses are graded on a pass/fail basis and because no numerical value is assigned to these courses, they do not affect grade point averages. Courses graded in this way are clearly identified in course descriptions and program outlines.

3.1 The Letter Grade System

Letter Grade	Grade Point Value	
A+	4.5	Exceptional
A	4.0	Excellent
B+	3.5	Very Good
B	3.0	Good
C+	2.5	Satisfactory
C	2.0	Adequate
D	1.0	Marginal
F	0	Failure
P		Pass
S		Standing

The grade of "D" is regarded as marginal in most courses by all faculties and schools. It contributes to decreasing a term, degree or cumulative Grade Point Average to less than 2.0. The course in which "D" standing is obtained need not be repeated except by probationary students in certain faculties or where a minimum grade of "C" is required in a prerequisite subject. Courses graded "D" may be repeated for the purpose of improving a GPA. Students in doubt as to the status of their record should consult an advisor in their faculty or school.

For minimum grade levels, especially as they affect progression requirements, see the faculty or school regulations or consult an advisor.

3.2 Calculation of Grade Point Average

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

Quality Points

The quality points for a course are the product of the credit hours for the course and the grade point obtained by the student; e.g., 3 credit hours with a grade of "B" (3.0 points) = 3 credit hours x 3.0 = 9.0 quality points.

Quality Point Total

The quality point total is the sum of quality points accumulated as students proceed through their program of studies.

Grade Point Average (GPA)

The grade point average (GPA) is the quality point total divided by the total number of credit hours.

Cumulative Grade Point Average

The Cumulative GPA is the quality point total divided by the total number of credit hours attempted at the University of Manitoba and courses transferred from other institutions.

Degree Grade Point Average

The Degree grade point average is the Quality Point total divided by the total number of credit hours attempted at the University of Manitoba and courses transferred from other institutions for courses that are acceptable for credit in the current faculty or school.

Term Grade Point Average

The Term GPA is calculated on the basis of all final grades received in the term (eg. Fall, Winter, or Summer terms).

Repeated Courses

When a course has been repeated, the last grade achieved is that which will be used in the calculation of the GPA. (Students are normally permitted to repeat the same or equivalent course once).

NOTE: Information on credit hours, courses, prerequisites and corequisites, is found in Appendix B of this chapter, entitled Course Identification.

3.3 Academic Honours

Students qualify for the Dean's Honour List when they achieve qualifying grade point averages as specified in the faculty and school chapters of this *Calendar* or in program regulations.

In addition, outstanding academic achievement will qualify students for other honours and awards. These include the University Gold Medal which is awarded at graduation in each faculty or school to the student with the most outstanding academic record; program medals which are awarded by faculties and schools to the best student graduating from a specific program; graduation "with distinction," which is recorded on the transcripts of all students who attain a qualifying grade point average; and other medals and prizes that are specific to programs or disciplines.

SECTION 4: Academic Evaluation

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

4.1 Methods of Evaluation

Within the first week of lectures, instructors must inform the class of the method of evaluation to be used in each course. See the Responsibilities of Academic Staff to Students Policy, in the chapter University Policies. In departments where a course is offered in more than one section, the department offering the course endeavours to provide instruction so that all sections cover similar topics and that all students achieve a similar level of competency in the topic. However, there will be differences in evaluation as well as in teaching style, readings and assignments from one section to another. Students may contact the department for additional information before registration.

4.1.1 Credit for Term Work

In subjects involving written examinations, laboratories, and term assignments, a student may be required to pass each component separately. If no final examination is scheduled in a course, the student's final grade will be determined on the basis of the method of evaluation as announced in the first week of lectures.

If credit is not given for term work, the student's final grade will be determined entirely by the results of the final written examination. Where the final grade is determined from the results of both term work and final examinations, the method of computing the final grade will be as announced within the first week of classes. Should a student write a deferred examination, term grades earned will normally be taken into account as set out in the immediately preceding paragraph.

4.1.2 Incomplete term work

A student who is unable to complete the term work prescribed in a course may apply to the instructor prior to the end of lectures for an incomplete grade and time extension for work completion. It is understood that the student is to write the final examination if one is scheduled for the course.

Taking into account the results of the final examination, the value of the term work completed, and the extent of the incomplete term work, the instructor shall calculate the temporary grade using a zero value for incomplete work. In no case will the satisfaction of the incomplete requirements cause a grade to be lowered.

The following maximum time extensions are allowed: August 1, for courses terminated in April; December 1, for courses terminated between May and August; April 1, for courses terminated in December. If a final grade is not reported within one month of the extension deadline, the letter "I" will be dropped, and the grade will remain as awarded. The student's opportunity to improve the grade will have lapsed.

4.1.3 Repeating a Course

Subject to faculty or school regulations, required courses graded "F" or "D" must be repeated, usually at the next opportunity. Elective courses graded "F" may either be repeated or another elective substituted. All electives in a program must be approved by the faculty or school.

When a course has been repeated, the last grade achieved is that which will be calculated in the GPA.

4.1.4 Probation and Academic Suspension

Failure to meet minimum levels of performance as specified in the regulations of the faculty or school will result in a student being placed either on probation or academic suspension in accordance with the faculty or school regulations.

A student's status is determined, following final examinations, at the end of each term (Fall, Winter or Summer terms) or at the end of an academic session as specified in faculty regulations. A student placed on probation is advised to discuss his/her program prior to the next registration with a representative of the dean or director to determine which courses, if any, should be repeated.

A student placed on academic suspension will normally be permitted to apply for re-entry to the faculty or school after one year has elapsed, but reinstatement is not automatic and individual faculty or school regulations must always be consulted.

While on suspension, students are not normally admissible to another faculty or school.

4.2 Examinations

4.2.1 Examination General Regulations

Any test(s) which have an aggregate value of more than 20% of the total value of the course may not be scheduled to take place during the 14 calendar days ending with the last day of classes in the term during the Regular Sessions as defined in the *Calendar*, or during the last two classes of Summer Evening and the last three classes of Summer terms.

No project or assignment may be announced during the periods outlined above, unless contained in the information required to be provided to all students during the first week of classes (See the Responsibilities of Academic Staff to Students in the chapter on Policies and Guidelines of the University).

4.2.2 Final Examinations

No final examinations or term or take home examinations shall be scheduled to occur prior to the examination periods as described in the *Calendar* except with the expressed consent of the deans and directors involved.

The weight of each question shall be clearly indicated on the examination paper.

The name of the instructor or the examination committee shall be clearly indicated on the examination paper

Students (with the exception of students auditing courses) are required to write all final examinations. Those who absent themselves without an acceptable reason will receive a grade classification of "NP" accompanied by a letter grade based on term work completed for the course using a zero value for incomplete term work and for the final examination. If no credit for term work is involved, a grade of "F" will be assigned. Under certain conditions a student may apply for a deferred examination; see Deferred Examinations.

Examinations are scheduled:

Examinations are scheduled at the end of each term of registration.

Students are not permitted to leave an examination within the first 30 minutes and any student arriving more than 30 minutes after the commencement, but before the end, of a final examination scheduled by the Registrar's Office, might not be permitted to write that examination on the authority of the chief invigilator of the examination room.

Provided fairness is guaranteed beforehand, miniature electronic calculators shall be allowed during examinations, with the consent of the department.

Students are not permitted to bring in any unauthorized materials to an examination. This includes, but is not limited to, calculators, books, notes, or any electronic device capable of wireless communication and/or storing information (e.g. translator, cell phone, pager, PDA, MP3 units, etc.). However, students may bring in such material or devices when permission has been given by the instructor and/or the department or faculty.

The use of audio visual supports (including, but not limited to overhead or slide projectors, and audio/visual tape players) to display examination or test questions shall be prohibited except where arrangements have been made to display all questions simultaneously for the entire examination/

test period or in courses where time limited identification is a legitimate and specified part of the examination/test process.

Answers to examination questions shall not be posted prior to the conclusion of the examination.

Final grades must be posted by faculties and schools (identifying students by student number only) as soon as the grades have been approved by the faculty/school/department (as appropriate) and have been submitted to the Registrar's Office. (This policy is under review).

4.2.3 Student Access to Final Examinations

In order to allow proper feedback, each student shall have an opportunity to read his/her own final examination script and any comments on it, but only in the presence of the instructor or a department-appointed staff member. Such access will be permitted normally upon reasonable notice from the day following the deadline for formal appeal or from the date of the resolution of an appeal, whichever is later, until the date on which scripts are, by these regulations, to be destroyed. Informal consultation, provided both instructor and student are available and willing, may take place during the period in which access to the scripts is not required.

Notwithstanding the above, there is no obligation upon departments to make machine-scored answer sheets available for consultation by students. It is expected that departments will provide appropriate means of feedback to students in such circumstances and, where appropriate, will encourage instructors to discuss selected questions and answers.

Access to answer scripts of external examinations are governed by the regulations of the institution whose examination has been written.

4.2.4 Special Examination - Religious Reasons

A student who, because of religious obligations, is unable to write a final examination when scheduled, shall be given an opportunity to write a special examination. The student is required to give reasonable notice (approximately three weeks) to the head of the department concerned prior to the examination series and to present evidence concerning the religious obligations involved.

4.2.5 Deferred Examinations

A student may file an application for a deferred examination with the dean of the faculty or the director of the school of registration, for reasons of illness or other disability, or for compassionate reasons, setting out the reasons for deferral. The application must normally be filed within seven working days of the end of the examination series in which the examination was scheduled to be written and must be accompanied by a medical certificate or other appropriate documentation certifying the reason for the deferral, the inability of the student to write the examination at the regular scheduled time and, where possible, indicating the period of disability. Based on the evidence, the dean or director shall decide whether the application is approved.

A student requesting a deferred examination on the grounds of participation in an inter-university, inter-provincial, national or international scholastic or athletic event(s) shall be granted a deferral provided an application and appropriate documentation is filed with the dean or director of the faculty or school or registration well in advance (normally 20 days) of the scheduled examination, and that the dean or director is satisfied, based on the evidence, that the application should be granted.

No deferred examinations shall be granted on the basis of conflict(s) with vacation or holiday plans.

Any student leaving an examination early for reasons of illness, or other disability, or for compassionate reasons must notify the chief invigilator before leaving the room. The chief invigilator must report all such notifications. Students leaving an examination early in compliance with this section are eligible to apply for deferred examinations.

No faculty or school shall have regulations that compel students to accept deferral for any or all examinations in any examination series.

When an application for a deferred examination is approved by the faculty or school office, the head of the department in which the course is offered, in consultation with the instructor, shall schedule the deferred examination to take place normally within 30 working days from the end of the examination series from which the examination was deferred. The foregoing does not limit the ability for heads of departments, instructors and students from reaching mutually satisfactory arrangements for the scheduling of a deferred examination.

In the event that a student is unable to write the examination as outlined above, they shall write the deferred examination at the next scheduled examination series in which the course is offered, unless the head of the department, in consultation with the instructor concerned, chooses to assign a grade without examination. In such cases the grade(s) shall be assigned on the basis of term work following procedures established by faculty or school councils.

If the progression rules of a faculty or school require the successful completion of an entire academic year before a student is eligible to proceed into the next academic year, the deferred examination must be written within a time frame that enables the examination to be written and graded, and, if necessary, a supplemental examination to be written and graded, before the start of the next academic year.

A student who accepts standing in a course without examination may not, at a later date, request permission to write a deferred examination.

A student who, for medical reasons, withdraws from a program or receives deferred examination for all final examination series shall be informed by the faculty or school that re-registration will not be possible until it has established, through proper medical consultation, fitness to resume studies.

4.2.6 Supplemental Examinations

A limited number of faculties and schools permit a supplemental examination when a student has failed a course or failed to achieve a satisfactory result. Please refer to the section of the Calendar for your faculty or school for its policy on supplemental examinations. Where a faculty's or school's regulations permit supplemental examinations, students are normally notified of this privilege on their grade statements or by their faculty or school following publication of the grades. Students who are granted supplemental privileges are normally required to sit the examination within 30 working days from the end of the examination series in which the supplemental grade was received unless the progression rules of a faculty or school require the successful completion of an entire academic year before a student is eligible to proceed into the next. In this case, students are obliged to sit the examination at the next ensuing examination period.

The passing grade in supplementals must be at least "C." Students are normally required to carry a full-time program in order to be eligible. Accordingly, students who are granted incomplete or deferred status may not be eligible. A student may only write a supplemental once in any course; otherwise the course must be repeated.

Students are advised to check with faculty or school offices or consult an advisor as to specific regulations that may apply.

To write a supplemental examination an application must be made to the office of the dean or director and the appropriate fee paid. The application form will be forwarded to the Registrar's Office and the supplemental grade will be submitted following completion of the examination.

4.2.7 Special Supervision of Off-Campus Examinations:

Students who have been given permission to write deferred or supplemental examinations off-campus may apply to the Registrar's Office to write at an approved centre outside of Winnipeg.

4.2.8 Examinations: Personations

A student who arranges for another individual to undertake or write any nature of examination for and on his/her behalf, as well as the individual who undertakes or writes the examination, will be subject to discipline under the university's Student Discipline Bylaw, which could lead to suspension or expulsion from the university. In addition, the Canadian Criminal Code treats the personation of a candidate at a competitive or qualifying examination held at a university as an offence punishable by summary conviction. Section 362 of the code provides:

Personation at Examination

362. Every one who falsely, with intent to gain advantage for him/herself or some other person, personates a candidate at a competitive or qualifying examination held under the authority of law or in connection with a university, college or school or who knowingly avails him/herself of the results of such personation is guilty of an offence punishable on summary conviction. 1953- 54,c.51, s.347.

Both the personator and the individual who avails him/herself of the personation could be found guilty. Summary conviction could result in a fine being levied or up to two years of imprisonment.

4.3 Other Forms of Earning Degree Credit

4.3.1 Letter of Permission for Transfer of Credit

Students in degree programs at this university may take courses at other recognized colleges or universities for transfer of credit provided such courses are approved at least one month prior to the commencement of classes at the other institution by the faculty or school in which they are currently registered. The approval is subject to individual faculty/school regulations and is granted in the form of a Letter of Permission. The student must obtain a Letter of Permission whether or not the course/s being taken are for transfer of credit to the University of Manitoba. Failure to obtain a Letter of Permission may have serious academic implications.

To obtain a Letter of Permission, application must be made to the Registrar's Office as early as possible and at least one month prior to when required at the other institution.

Each application must be accompanied by the appropriate fee. The fees are for each application and a separate application is required for each session and institution regardless of the number of courses being considered. Students planning to seek permission to take courses elsewhere for transfer of credit to the University of Manitoba are cautioned to check the current *Calendar* for the residence and degree requirements of the degree programs in which they are enrolled.

Transferred courses will be given assigned credit hour values and grades. The transferred grade will be included in the student's degree and cumulative GPA.

4.3.2 Challenge for Credit

The purpose of Challenge for Credit is to provide students of the university with some means of obtaining academic credit in University of Manitoba courses (not otherwise obtainable as a transfer of credit from other institutions) for practical training and experience, or reading and study previously completed. Students who have registered to challenge would normally not attend classes or laboratories. Courses which have previously been taken at the University of Manitoba may not be challenged for credit.

To be eligible to challenge for credit a student must first be admitted to a faculty or school of the University of Manitoba. Eligible students will be required to demonstrate their competence in the courses which they are challenging for credit. Where formal, written examinations are required, these will be generally scheduled during the regular examination sessions in April/May, June, August, or December.

For information regarding requirements, procedures, applications and fees a student should contact the office of the faculty or school in which the student is enrolled, or in the case of new students, the faculty or school to which the new student has been admitted.

4.3.3 Transfer of Credit Between Programs Within the University of Manitoba

When students transfer credits into their programs from another faculty or school within the University of Manitoba, the credit hour value used by the faculty or school offering the course is used. That is, there can only be one credit weight designated for a course with a particular course number.

All students are asked to note that this procedure is under review and is subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

SECTION 5: Appeals of Grades

5.1 Appeals of Grades Received for Term Work

The appeal of term work returned or made available to students before the last day of classes shall be subject to the policies and procedures established by faculty or school councils.

Students may formally appeal a grade received for term work provided that the matter has been discussed with the instructor in the first instance in an attempt to resolve the issue without the need of formal appeal. Term work grades normally may be appealed up to ten working days after the grades for the term work have been made available to the student.

Students may obtain the form "Application for Appealing a Grade Given for Term Work" from the general office of the department which offered the course. The fee which is charged for each appealed term work grade will be refunded for any grade which is changed as a result of the appeal.

5.2 Appeal of Final Grades

If a student has good reason to believe a mistake has been made in the assessment of the original grade, an appeal of the assigned grade may be made. A student may enter an appeal, through the Registrar's Office, for assessment of one or more grades following the posting of grades by the faculty/school/department. Grades are released by the Registrar's Office as they are received from faculties and schools. A student wishing to make a final grade appeal on a first term course grade must do so within 15 working days of the first day of classes for second term. For second term courses and full courses, the appeal must be made 15 working days following the Victoria Day Holiday.

The fee which is charged for each appealed grade will be refunded for any grade which is changed. It should be noted that an appealed grade may not be lowered. Appeal forms may be obtained from the Registrar's Office. Students should note that the deadline for appeal of assigned grades will not be extended for students who are on "hold status" nor will official grades be released by the Registrar's Office until the "hold" has been cleared. (This policy is under review).

5.3 Academic Appeals

With the exception of decisions on admissions or disciplinary matters, all academic appeals from decisions of faculty or school appeals committees at the University of Manitoba or by the Comité d'appels at Collège universitaire de Saint-Boniface shall be heard by the Senate Appeals Committee regardless of the institute of registration of the student concerned.

The complete terms of reference for the Senate Committee on Appeals as well as an Appeal Form may be obtained from the Office of the University Secretary, 312 Administration Building or Student Advocacy/Student Resource Services, 519 University Centre.

SECTION 6: Attendance and Withdrawal

6.1 Attendance at Class and Debarment

Regular attendance is expected of all students in all courses.

An instructor may initiate procedures to debar a student from attending classes and from final examinations and/or from receiving credit where unexcused absences exceed those permitted by the faculty or school regulations.

A student may be debarred from class, laboratories, and examinations by action of the dean/director for persistent non-attendance, failure to produce assignments to the satisfaction of the instructor, and/or unsafe clinical practice or practicum. Students so debarred will have failed that course.

6.2 Withdrawal from Courses and Programs

6.2.1 Voluntary Withdrawal

The registration revision period extends two weeks from the first day of classes in both Fall and Winter terms. Courses dropped during this period shall not be regarded as withdrawals and shall not be recorded on official transcripts or student histories. The revision period is prorated for Summer terms and for parts of term.

After the registration revision period ends, voluntary withdrawals (VWs) will be recorded on official transcripts and student histories.

The following dates are deadlines for voluntary withdrawals:

- The Voluntary Withdrawal deadline shall be the 48th teaching day in both Fall and Winter term for those half-courses taught over the whole of each term;
- The Voluntary Withdrawal deadline for full-courses taught over both Fall and Winter term shall be the 48th teaching day of the Winter term; and
- The Voluntary Withdrawal deadline for full-and-half courses taught during Summer terms or during some other special schedule shall be calculated in a similar manner using a pro-rated number of teaching days.

The exact Voluntary Withdrawal dates that apply to courses offered in the current academic session are published in the Academic Schedule at the front of this *Calendar*.

Limited Access to Courses Following VW

A Limited Access Policy restricting registration for students who have withdrawn from or previously completed a course shall be determined by the faculty or school offering the course. Normally the enforcement of Limited Access Policies shall apply to the two sessions following the session in which the course was taken.

The Limited Access Policy is designed to give registration preference to students who have not previously registered in the course. Limited access prevents students from re-registering until a specified date; see the Registration Guide section at the end of this book for information.

Normally limited access shall apply to the two terms following the term in which the course was originally taken.

Limited access is applied to high enrolment courses. Please refer to the website (www.umanitoba.ca) for information about courses to which limited access is applied.

6.2.2 Authorized Withdrawal

Subject to the provision of satisfactory documentation to the faculty of registration, Authorized Withdrawals (AWs) may be permitted on medical or compassionate grounds.

6.2.3 Required Withdrawal from Professional Programs

Senate, at the request of some faculties and schools, has approved bylaws granting them the authority to require a student to withdraw on the basis of unsuitability for the practice of the profession to which the program of study leads.

This right may be exercised at any time throughout the academic year or following the results of examinations at the end of every year.

This right to require a student to withdraw prevails notwithstanding any other provisions in the academic regulations of the particular faculty or school regarding eligibility to proceed or repeat.

Where Senate has approved such a bylaw, that fact is indicated in the *Calendar* chapter for that faculty or school. A copy of the professional unsuitability bylaw may be obtained from the general office of the faculty or school.

SECTION 7: Academic Integrity

7.1 Plagiarism and Cheating

Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university). Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room (e.g., crib notes, pagers or cell phones). Exam cheating can also include exam impersonation. (Please see Section 4.2.8 on Exam Personation). A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty.

To plagiarize is to take ideas or words of another person and pass them off as one's own. In short, it is stealing something intangible rather than an object. Plagiarism applies to any written work, in traditional or electronic format, as well as orally or verbally presented work. Obviously it is not necessary to state the source of well known or easily verifiable facts, but students are expected to appropriately acknowledge the sources of ideas and expressions they use in their written work, whether quoted directly or paraphrased. This applies to diagrams, statistical tables and the like, as well as to written material, and materials or information from Internet sources.

To provide adequate and correct documentation is not only an indication of academic honesty but is also a courtesy which enables the reader to consult these sources with ease. Failure to provide appropriate citations constitutes plagiarism. It will also be considered plagiarism and/or cheating if a student submits a term paper written in whole or in part by someone other than him/herself, or copies the answer or answers of another student in any test, examination, or take-home assignment.

Working with other students on assignments, laboratory work, take-home tests, or on-line tests, when this is not permitted by the instructor, can constitute Inappropriate Collaboration and may be subject to penalty under the Student Discipline By-Law.

An assignment which is prepared and submitted for one course should not be used for a different course. This is called “duplicate submission” and represents a form of cheating because course requirements are expected to be fulfilled through original work for each course.

When in doubt about any practice, ask your professor or instructor.

The Student Advocacy Office, 519 University Centre, 474-7423, is a resource available to students dealing with Academic Integrity matters.

7.2 Personation at Examinations

See section 4.2.4, Personation: Examinations

SECTION 8: Graduation and Convocation

8.1 Graduation

Students may graduate from the University of Manitoba in May, October, and February of each year.

Students are eligible to graduate when they have completed all of the requirements for their degree program in accordance with the regulations described in the *Undergraduate Calendar* and the regulations available from the general offices of their faculties and schools.

It is the responsibility of each student to be familiar with the graduation requirements of the program in which they are enrolled. Consultation with academic advisors is advised to ensure that graduation requirements are met.

8.2 Application for Graduation

Every candidate for a degree, diploma or certificate must make formal application at the beginning of the session in which the student expects to complete graduation requirements.

Application is to be made through the registration system. See *Registration Guide* for details.

8.3 Convocation

Convocation ceremonies are held in May and October of each year.

February graduates are included in the May ceremonies.

Graduating students are encouraged to attend with their families and friends because it is the one ceremonial occasion that marks the successful conclusion of their program of studies.

All prospective graduating students who apply for graduation will be asked to confirm their intention to attend Convocation.

Complete details of the time, location, and ceremony arrangements will be included in the material from the Convocation Office of Registrar’s Registrar’s.

Students who, for any reason, do not attend Convocation will receive their degrees in absentia.

8.3.1 Academic Dress

Academic gowns, hoods, and caps are provided by the university as part of the Convocation arrangements.

8.3.2 Convocation Information

Information on Convocation may be obtained from the Registrar’s Office, 400 University Centre.

APPENDIX A: List of Approved Written English and Mathematics Courses

A complete list of all courses which satisfy the university written English and mathematics requirement is provided below.

List of Approved Written English Courses

AGRI 2030	Technical Communications (3)
ANTH 2360	Ethnohistory of Sub-Saharan Africa (B) (3)
ARTS 1110	Introduction to University (3)
ARTS 1140	European Literature 1 (3)
ARTS 1150	European Literature 2 (3)
ASIA 1410	Asian Civilization (6)
ASIA 1420	Asian Civilization to 1500 (3)
ASIA 1430	Asian Civilization from 1500 (3)
ASIA 2070	South Asian Civilization (6)
BOTN 1000	Economic Plants
CDN 1130	Introduction to Canadian Studies (6)
CATH 1190	Introduction to Catholic Studies (3)
ECON 2270	European Economic History (6)
ECON 2580	Economics of the European Union (3)
ENG 2010	Technical Communication (3)
ENGL 0930	English Composition (3)
ENGL 0940	Writing about Literature (3)
ENGL 1200	Representative Literary Works (6)
ENGL 1300	Literature Since 1900 (6)
ENGL 1310	Literary Topics 1 (3)
ENGL 1340	Introduction to Literary Analysis (3)
ENGL 2000	Intermediate Writing and Research (6)
GEOG 3480	Canadian Problems (A) (3)
GEOG 3510	Agricultural Geography (^)
GEOG 3580	Landforms (6)
GRMN 2120	Introduction to German Culture 1 (3)
GRMN 2130	Introduction to German Culture 2 (3)
HIST 1XXX	All History courses at 100 level
HIST 2XXX	All History courses at 200 level
HMEC 1030	Human Ecology: Perspectives and Communication (3)
HYGN 1340	Communication (2) and
HYGN 1350	Community Health (4) and
HYGN 1240	Pre-clinical and Clinical Dental Hygiene (9)
(All three courses taken as a sequence satisfy the university written English requirement.)	
LABR 4510	Labour Studies Field Placement Seminar (3)
LAW 1470	Legal Methods (5)
LAW 2570	Introduction to Advocacy (4)
NATV 2020	The Métis of Canada (3)
PHIL 2150	Mind and Body (3)
PHIL 2610	The History and Philosophy of Science (6)

PHIL 2790	Moral Philosophy (6)
PHIL 3220	Feminist Philosophy (3)
POLS 1500	Introduction to Politics (6)
POLS 2000	Introduction to Comparative Politics(6)
POLS 2040	Introduction to International Relations (6)
POLS 2070	Introduction to Canadian Government (6)
POLS 2510	Great Political Thinkers (6)
PSYC 2300	Advanced General Psychology (6)
PSYC 2500	Elements of Ethnology (3)
REHB 1520	Principles of Occupational Therapy (4)
RLGN 1320	Introduction to World Religions (6)
RLGN 1420	Ethics in World Religions (3)
RLGN 1440	Evil in World Religions
RLGN 2160	Introduction to Hebrew Scriptures (3)
RLGN 2170	Introduction to New Testament (3)
RLGN 2590	Religion and Social Issues (3)
RUSN 2280	Russian Culture 1 (3)
RUSN 2290	Russian Culture 2 (3)
RUSN 2350	Russian Women’s Writing From the 1950’s to the Present Day (3)
RUSN 2740	Literature and Revolution (6)
RUSN 2750	Contemporary Russian Literature and Film (3)
RUSN 3770	Tolstoy (3)
RUSN 3980	Women and Russian Literature (3)
UKRN 2590	Ukrainian Literature & Film (3)
UKRN 3970	Women and Ukrainian Literature (3)
WOMN 1530	Introduction to Women’s Studies in the Humanities (3)
WOMN 1540	Introduction to Women’s Studies in the Social Sciences (3)
WOMN 2560	Women, Science and Technology (3)

List of Approved Mathematics Courses

Any course offered in the subject areas of Statistics (STAT), and Mathematics (MATH) will satisfy the mathematics requirement.

FA 1020	Math in Art (3)
GEOG 3680	Research Methods in Geography (6)
MUSC 3230	Acoustics of Music (3)
PHYS 1020	General Physics 1 (3)
PHYS 1030	General Physics 2 (3)
PSYC 2260	Introduction to Research Methods (3)
PSYC 230W0	Advanced General Psychology (6)
REHB 2460	Statistics (3)
SOC 2290	Introduction to Research Methods (6)

APPENDIX B: Course Identification

Credit Hours (Cr.Hrs.)

Each faculty and school develops courses for its degree credit programs, subject to Senate approval, and assigns a credit hour value to each course.

The credit hours for a course are expressed as a number associated with the course which indicates its relative weight. There is a correlation between class hours and credit hours (i.e., full course: 6 credit hours = 3 hours a week, both terms; and half course: 3 credit hours = 3 hours a week, one term).

For the purposes of registration, full courses have been divided into two parts. Students registering for a full course will receive one grade for the course and only when the second part is completed. Check the *Registration Guide* for registration instructions.

Prerequisite and Corequisite Courses

Where the sequence in which courses are taken is important, one course is stipulated as being prerequisite to another (e.g., Mathematics 1 may be prerequisite to Mathematics 2). Unless otherwise specified in the regulations of any faculty or school, the prerequisite requirement is met if at least a passing grade (D) is earned in the course. If the course is failed, permission may be granted to repeat it concurrently with the course for which it is prerequisite.

Where a course is specified as a corequisite course, it must be taken at the same time as (or prior) to the course requiring it as a corequisite.

Course Numbers

First Two to Four Characters

The two, three or four characters in every course number are a shortened version of the subject of the course.

Last Four Digits

At the University of Manitoba the last four digits of the course number reflect the level of contact with the subject.

For example:

ECON 1200 Principles of Economics Cr.Hrs. 6

ECON is the code for Economics.

1200 indicates that it is a introductory or entry level course.

If the course requires a laboratory, this will be shown following the credit hours immediately following the title.

For example:

BOTN 3070 Vascular Flora of Manitoba Cr.Hrs. 3 (Lab Required)

The 2000, 3000, 4000 course numbers indicate the second, third, and fourth levels of university contact with a subject.

Numbers in the 5000 range are normally associated with pre-Master's work or courses in the Faculty of Education, e.g., Post Baccalaureate Diploma and the Post-Graduate Medical Education program.

Courses numbered 6000-8000 are graduate courses of the Faculty of Graduate Studies.

Course numbers in the 9000 series are used to identify courses taken at the University of Winnipeg by students in the University of Manitoba/University of Winnipeg Joint Master's Programs. The 9000 numbers do not indicate the level of the course taken (see *Graduate Calendar* or *University of Winnipeg Calendar*).

In most cases, some correlation exists between the course number and a student's year of study; that is, students in the third year of a program will generally carry course loads comprised primarily of 3000-level courses.

Other Course Information

Courses with numbers that end in 0 or an even number are taught in English usually on the Fort Garry or Bannatyne campuses.

Courses with numbers that end in odd numbers are taught in French at College Universitaire de Saint-Boniface.

★ before the course number indicates that the course is part of the Canadian studies program.

♀ before the course number indicates that the course is part of the Women's Studies Program.

W before the course number indicates that the course satisfies the written English requirement.

M before the course number indicates that the course satisfies the Mathematics requirement.

U1 before the course number indicates that the course is suitable for students registering in University 1.

University Policies

Chapter Contents

PART ONE:

SECTION 1: Policy on the Responsibilities of Academic Staff with Regard to Students

SECTION 2: Policy on Respectful Work and Learning Environment

SECTION 3: Accessibility Policy for Students

SECTION 4: Disclosure and Security of Student Academic Records

SECTION 5: Language Usage Guidelines

SECTION 6: Conflict of Interest Between Evaluators and Students Due to Close Personal Relationships

SECTION 7: Other Policies of Interest to Students

- 7.1 Campus Alcohol Policy
- 7.2 HIV/AIDS Policy
- 7.3 Parking Regulations

PART TWO:

SECTION 1: Student Discipline Bylaw

SECTION 2: Inappropriate and Disruptive Student Behaviour

SECTION 3: Hold Status

● *The Freedom of Information and Protection of Privacy Act (FIPPA)* and *The Personal Health Information Act (PHIA)* both apply to the University of Manitoba. The Board of Governors appointed the president as the designated head under the act. The president, in turn, has delegated her duties to the FIPPA coordinator and the FIPPA Review Committee. Should any of the University's policies conflict with FIPPA or PHIA, the provisions of FIPPA or PHIA shall prevail unless otherwise expressly provided for at law. For access to university information, including personal information, apply under the appropriate act (FIPPA or PHIA). Application forms can be accessed at: www.umanitoba.ca/libraries/archives/fippa

● The University of Manitoba Policy and Procedure Manual is currently under revision. Students encountering difficulty locating documents on the website should contact the Office of the University Secretary, 312 Administration Building.

PART ONE:

SECTION 1: Policy on the Responsibilities of Academic Staff with Regard to Students

1.1. Objectives

The objectives of this policy are to identify the responsibilities of academic staff with regard to students; to promote harmonious relations between academic staff and students; and to promote fair and equitable treatment of students.

1.2 Definitions

For purposes of this document, the following terms shall be defined as provided by this article:

A. Academic staff shall include all individuals holding full- or part-time appointments at the rank of Instructor I, Instructor II, senior instructor, lecturer, assistant professor, associate professor or professor. The term shall include also academic administrators, academic librarians, counsellors, adjunct professors, professional associates, research associates, research assistants, student research assistants, and student teaching assistants, insofar as such persons perform duties within the ambit of the policy.

B. Student shall mean any person who is registered as a student in the university. The current terms of reference of the Office of Student Advocacy follows this section.

1.3 Statement of Responsibilities

Some of the responsibilities of academic staff with regard to students rest with the individual staff member, while others are collective responsibilities, to be exercised through the actions of department and faculty/school administrators and councils.

A. Individual Responsibilities

The individual responsibilities of academic staff members with regard to students are primarily instructional and scholarly, and secondarily administrative. They may include:

1. Undergraduate, graduate, and continuing education instruction, including the organization, preparation and delivery of course material, the evaluation of student academic progress, the reporting of such evaluation in accordance with approved policies and schedules, consultation with students out of class or laboratory hours, and supervision of student research and thesis preparation;

2. Scholarly attainment through personal study and research, including study for purposes of academic self-improvement or course improvement, keeping abreast of new developments, and research that leads to a useful or original contribution toward the advancement of knowledge and understanding; and,

3. Administrative work as required for instructional and scholarly activities, including committee work at various levels departmental, faculty, university as it pertains directly or indirectly to students.

B. Collective Responsibilities

The collective responsibilities of the academic staff belonging to an academic unit are to provide an effective learning environment and to endeavour to ensure fair and consistent treatment of students. They include:

1. Periodically reviewing and updating all courses and programs;

2. Ensuring that academic regulations and policies provide fair and consistent treatment of students; and,

3. Providing for convenient student access to information on policies, regulations and procedures that may affect their academic progress, including the provision of names of instructors assigned to teach particular courses and sections at the earliest possible opportunity.

1.4 Discharge of Responsibilities

A. Individual Responsibilities

1. Academic staff members shall discharge their instructional responsibilities with academic integrity, scholarly competence, and pedagogic effectiveness.

2. Academic staff members shall maintain their familiarity with current university faculty/school and/or department policies regarding plagiarism and cheating, examination impersonations, student access to final examination scripts, student discipline, grade appeals, and the university policy regarding sexual harassment.

3. In discharging their instructional responsibilities, academic staff members shall adhere to regulations pertaining to the format, content and conduct of courses and laboratories, including regulations pertaining to examinations, term work, grades, and related matters.

4. A course outline or syllabus shall be provided in each course section, within the first week of classes:

4.1 The academic staff member responsible for that section shall provide in writing to every member of the class: name of instructor; office number and telephone number; a list of textbooks, materials and readings that the student is required to obtain including the appropriate referencing style guide(s) acceptable to the instructor and/or discipline in courses where it is relevant; an outline of the topics to be covered; a description of the evaluation procedure to be used, including the weighting of the components that will contribute to the final grade and whether evaluative feedback will be given to the student prior to the voluntary withdrawal date (see note); an indication of instructor availability for individual student consultation; a tentative schedule of term assignments and tests; and a statement of the practice to be following regarding late submission of assignments.

NOTE: It is understood that the provision of this information is not intended to affect the question of equity in multi-sectioned courses in any way.

4.2 The academic staff member shall provide in writing to every member of the class information regarding academic integrity which shall include: a reference to statements on academic dishonesty including “plagiarism and cheating” and “examination personation” found in the *Calendar*; and, where appropriate, a reference to specific course requirements for individual work and group work. Students should be made aware that a group project adheres to the principles of academic integrity. Students should also be made aware of any specific instructions concerning study groups and individual assignments. The limits of collaboration on assignments should be defined as explicitly as possible.

5. Academic staff members shall teach their courses with due regard to *Calendar* descriptions.

6. It is the responsibility of academic staff members to specify textbooks and materials in accordance with announced purchasing deadlines.

7. In their dealings with students, academic staff shall:

7.1 not deny registration for instruction in those courses for which the permission of the instructor is required, except where the student lacks appropriate qualifications or where an approved policy on limited enrolment is in effect;

7.2 comply with existing human rights legislation, and refrain from differential treatment of individual students on the basis of their actual or presumed membership in, or association with, some class or group of persons;

7.3 not accept money or other goods or services from students for assistance with any course offered by the university. This clause, however, shall not prevent student teaching assistants or other part-time instructors from accepting payment for tutoring in courses/sections which do not fall within the scope of their university employment;

7.4 be available for a reasonable amount of time, on a known and posted basis, for individual consultation with students registered in their courses or laboratories;

7.5 evaluate student academic performance in a fair and reasonable manner, and by means of appropriate academic criteria only;

7.6 where appropriate, provide written evaluative feedback prior to the voluntary withdrawal deadlines specified in the *Calendar*;

7.7 foster a free exchange of ideas between themselves and their students in the classroom and allow students the freedom to take legitimate exception to the data, views, or methods presented;

7.8 respect the confidentiality of documentary information about students;

7.9 keep confidential any information about the academic performance of a student, unless release is authorized by the student, required by the instructional team, or requested by an administrative officer in accordance with the university policy on the release of information;

7.10 explicitly acknowledge in written or oral presentations any indebtedness to student research or assistance;

7.11 not obtain any improper personal advantage from a student or student work; and,

7.12 academic staff members shall not retaliate against a student who has filed a complaint, whether the complaint was substantiated or unsubstantiated.

8. Academic staff members shall not cancel, miss, terminate or shorten scheduled instruction except for good reason. Whenever a scheduled period of instruction is cancelled, the academic staff member shall:

8.1 inform the class at the earliest possible time;

8.2 inform the administrative head of the academic unit; and,

8.3 where possible, ensure that appropriate substitution or make-up instruction is provided.

9. Academic staff members who provide instruction shall comply with the schedules and formats for reporting student grades, as established by departments and the Registrar’s Office. Where such grades are reviewed by departmental committees, instructors should be available for the duration of the committees’ work. An instructor who learns of an error, which if corrected would raise an assigned grade, should correct it without requiring the student affected to appeal the grade.

10. Academic staff members shall adhere to the relevant university, faculty/school, and/or departmental policy regarding professor-course evaluation.

B. Collective Responsibility

1. Through their faculty/school and department councils, academic staff members should review program and course descriptions periodically to ensure that the material to be presented is current and appropriate and that the *Calendar* information is clear and accurate.

2. The following material must be kept on file in faculty/school or departmental general offices and made available to students:

2.1 University, faculty/school or departmental regulations regarding class attendance and penalties, if any, for noncompliance;

2.2 The information described in Section 4.A.4, that is provided in writing to the class by the academic staff member for each course section;

2.3 University, faculty/school, and/or departmental regulations and procedures, if any, regarding the evaluation of professors and courses by students;

2.4 University, faculty/school, and/or departmental policy regarding student access to final examination scripts;

2.5 University policy on student discipline;

2.6 University, faculty/school, and departmental procedures regarding grade appeals;

2.7 University policy on the responsibilities of academic staff with regard to students; and,

2.8 University policy regarding sexual harassment.

3. Where necessitated by large class sizes or other circumstances, academic units shall ensure that course instructors and/or designated substitutes are available for individual consultation with students for a reasonable amount of time on a known and posted basis.

1.5 Cautionary Notice

Students are reminded that the initiation of a frivolous or vexatious complaints may result in disciplinary action being taken against them by the university.

SECTION 2: Policy on Respectful Work and Learning Environment

Approved by: Board of Governors: June 2004

2.1 Reason for Policy

To support a climate of respect in the workplace and in the learning environment where individuals or groups of individuals are free from harassment and discrimination.

2.2 Policy Statement

1. The University of Manitoba supports equity, diversity and the dignity of all people. The University promotes equity in our learning programs and employment and in the conduct of the University’s affairs.

2. The University recognizes the following:

- (a) a richly diverse society in Manitoba, as well as beyond;
- (b) a duty to act in a manner consistent with existing legislation regarding human rights;
- (c) a commitment to academic freedom and freedom of thought, inquiry, and expression among its members which may result in respectful disagreements regarding beliefs or principles.

3. Each individual has the right to participate, learn, and work in an environment that promotes equal opportunities and prohibits discriminatory practices.

4. The University of Manitoba does not condone behaviour that is likely to undermine the dignity, self-esteem or productivity of any of its members and prohibits any form of discrimination or harassment whether it occurs on University property or in conjunction with University-related activities. Therefore, the University of Manitoba is committed to an inclusive and respectful work and learning environment, free from:

- (a) human rights discrimination or harassment;
- (b) sexual harassment; and
- (c) personal harassment.

5. These types of discrimination or harassment are defined in the Procedures document which relates to this Policy.

6. The University of Manitoba and all members of the University community, particularly those in leadership roles, share the responsibility of establishing and maintaining a climate of respect within this community and to address any situations in which respect is lacking.

7. Harassment and discrimination violate an individual's human rights and run contrary to the University's fundamental values. The University of Manitoba will act promptly and efficiently to deal with these behaviours. It will endeavour to ensure that individuals who believe that they have been subjected to harassment or discrimination are able to express concerns and register complaints without fear of retaliation or reprisal. The University will exercise care to protect and respect the rights of both the complainant and the respondent.

8. The University of Manitoba will establish mechanisms to give effect to the Policy including:

- (a) the appointment of an equity services advisor whose duties shall include the investigation of informal complaints and the provision of advice and assistance to staff members, students and administrative officers in connection with concerns and complaints;
- (b) the appointment of an investigation officer whose duties shall include the investigation of formal complaints and the provision of advice and assistance to staff members, students and administrative officers in connection with concerns and complaints;
- (c) training for staff related to harassment and discrimination;
- (d) the University of Manitoba will establish and implement educational programs designed to enhance awareness of the Respectful Work and Learning Environment Policy and procedures relating to it.

9. Each year a report will be prepared by Equity Services and made available to the University community concerning the number, type and disposition of cases and on educational and other activities related to the Policy.

10. While the University of Manitoba supports the informal resolution of problems associated with such behaviour, it considers harassment and discrimination in all its forms to be serious offences. Normally the President shall delegate authority to the Vice-President (Administration) to take disciplinary action, where appropriate, against individuals who have violated this Policy.

11. Discipline may range from a reprimand to dismissal or expulsion. Where Collective Agreement provisions require that the President obtain the approval of the Board of Governors for a suspension or dismissal, the finding of the Vice-President (Administration) shall be referred to the President in the form of a recommendation for action.

2.3 This Policy supersedes:

- (a) all previous Board/Senate Policies and resolutions on the subject matter herein;

- (b) all previous Administrative Policies and directives on the subject matter contained herein;

- (c) 223 Sexual Harassment Policy; and

- (d) 236 Human Rights Policy.

SECTION 4: Accessibility Policy for Students with Disabilities

The University of Manitoba is committed to reasonable accommodation of the needs of persons with documented disabilities by making efforts to create a barrier-free campus and provide other supports and services within the limits of available resources. The University will endeavour to meet the identified needs of each student by adapting services, courses, and programs as feasible and as resources allow, while maintaining appropriate academic standards. The University expects that the responsibility for making reasonable accommodations will be shared by the students, instructors and support staff.

In applying the accessibility policy for students with disabilities, the University of Manitoba will use reasonable efforts to:

- Ensure that students with disabilities are considered for admission to programs for which they are academically qualified;
- Make appropriate disability-related accommodations for students with disabilities to assist these students in meeting the academic requirements of their programs of study, while maintaining a commitment to appropriate academic standards;
- Make facilities safe and accessible for such students;
- Foster a supportive university community by working to remove attitudinal barriers and to inform and educate community members;
- Implement delivery structures within the limits of available resources.

Printed copies of this policy are available from the Office of the University Secretary, 312 Administration Building, the Student Advocacy/Student Resource Services, 519 University Centre, and at the University of Manitoba Policy and Procedure Manual (Policy 1211) on the website at www.umani-toba.ca

SECTION 5: Disclosure and Security of Student Academic Records

The University and its constituent units have a clear obligation to the student and to society concerning the disclosure and security of information about a student's academic record.

The Student's Academic Record - A Definition

For the purposes of this document, the student's academic record refers to the information accumulated on a student in relation to the student's admission to and registration and academic activity at The University of Manitoba. (The student's academic record also may be referred to as the student's academic file or simply the student's file.)

The student record described in this document does not ordinarily include detailed information held by University Health Services, Counselling Services or the University Discipline Committee. Separate records are maintained by each of these units which have developed their own set of guidelines on security and disclosure. A general statement from a physician or counsellor which is relevant to the student's academic performance and which has been furnished at the request or with the consent of the student may be included in the student's file. Similarly if a student is suspended or expelled for disciplinary reasons, only the fact of the suspension or expulsion shall ordinarily be entered on the student's academic record and only for as long as specified in accordance with the Student Discipline By-Law.

It is recognized that throughout the course of a student's academic career there are many types of records kept on the student within the University. The student's academic record or versions of it may be in the form of hard-copy files, in the form of information recorded on a computerized database, or other forms such as microfiche or microfilm. Files on an individual student are often kept in a variety of locations, e.g., Admissions, Registrar's, Faculty and Departmental Offices.

A complete copy of this policy is available in the University of Manitoba Policy and Procedure Manual (Policy 423) on the web site at www.umanitoba.ca

NOTE: This policy is currently undergoing revision to comply with *The Freedom of Information and Protection of Privacy Act* (FIPPA). Students who have any questions about the status of Policy 423 should contact the Office of the University Secretary, 312 Administration Building.

SECTION 6: Language Usage Guidelines

The University of Manitoba, as an institution of higher learning, has a commitment to high standards in all communications, both written and oral as well as a prominent role in promoting desirable social change. As an employer, it is especially sensitive to the fair treatment of individuals and groups. The University of Manitoba therefore follows guidelines which are designed to avoid communicating in a manner that reinforces questionable attitudes and assumptions about people and sex roles. Often the problem is one of word choices which maybe interpreted as biased, discriminatory, or demeaning, even though they were not intended to be. These guidelines will assist administrators in choosing words which are accurate, clear, and free from bias.

Guidelines

Sexism in communications may be divided into two conceptually different categories:

- Problems of designation, and
- Problems of evaluation.

Problems of Designation

In the case of sexism, long-established cultural practice can exert a powerful, insidious influence over even the most conscientious person. Nouns, pronouns, and adjectives that designate persons can be chosen to eliminate, or at least to minimize, the possibility of ambiguity in sex identity or sex role. In the following examples, problems of designation are divided into two sub-categories: ambiguity of referent, where it is unclear whether the communicator means one or both sexes, and stereotyping, where the communication conveys unsupported or biased connotations about sex roles and identity.

Problems of Evaluation

By definition, communications should be free of implied or irrelevant evaluation of the sexes.

Difficulties may derive from the habitual use of clichés or familiar expressions such as “man and wife.” The use of “man and wife” together implies differences in the freedom and activities of each. “Husband and wife” are parallel, “man and wife” are not. In the examples that follow, problems of evaluation, like problems of designation, are divided into ambiguity of referent and stereotyping.

Problems of Designation

Ambiguity of Referent:

Example: The student is usually the best judge of the value of his counselling. Options might include deleting the referent “his,” changing to a plural subject (Students are...value of the counselling service they receive), or rephrase (The best judge of the value of counselling is usually the student).

Example: Man or mankind (people, human beings, etc.) the average man (average person, people in general), manpower (workforce, personnel, human resources).

Stereotyping:

Example: Research scientists often neglect their wives and children. Solution: Acknowledge that women as well as men are research scientists (Research scientists often...neglect their families).

Example: Mothering. Solution: substitute - parenting, nurturing.

Example: Woman doctor, male nurse, lady lawyer. Solutions delete sex description unless necessary to the discussion, then use female doctor, female lawyer.

Problems of Evaluation

Ambiguity of Referent:

Example: The authors acknowledge the assistance of Mrs. John Smith. Solution: Use given names in acknowledgements, e.g., Ms., Miss or Mrs. Jane Smith.

Stereotyping

Example: men and girls. Solution: Use parallel terms - men and women, girls and boys, unless specifically wishing to denote adult and child relationship).

Example: woman driver. Solution: Specify only if necessary and then use female driver.

Example: Staff members and their wives. Solution: Staff members and their spouses/friends/guests.

Example: The girls in the office. Solution: Substitute - secretaries, staff, office assistants).

A more detailed list of examples of the sexist use of language can be obtained by contacting the Office of the President and the University of Manitoba Policy and Procedure Manual (Policy 231) on the website at www.umanitoba.ca

SECTION 7: Conflict of Interest Between Evaluators and Students Due to Close Personal Relationships

The purpose of this policy is to ensure that the relationship between an evaluator and the person being evaluated is and is seen to be impartial.

An evaluator includes any person who participates, whether at first instance or on appeal, in the process of admitting or selecting a student to a course or program, determination of a student's progress or academic standing, or the receipt by a student of a prize, award or university financial support.

A conflict of interest means a close personal relationship between an evaluator and a student or applicant or between evaluators, that gives rise to a reasonable apprehension of bias and, in any event, such relationships shall include that of: parent/child, spouses, grandparent/grandchild; siblings, in-laws or persons living in the same dwelling unit.

A complete copy of this policy may be obtained from Student Advocacy/ Student Resource Services, 519 University Centre or the University Policy and Procedure Manual (Policy 1306) on the website at www.umanitoba.ca

SECTION 8: Other Policies of Interest to Students

8.1 Campus Alcohol Policy

The purpose of this policy is to explicitly establish the general means by which alcohol abuse on the University of Manitoba campuses can be reduced or perhaps eliminated.

The University shall meet the policy's objective by: offering an alcohol education and awareness program within the scope of programs offered by or through Student Affairs; maintaining University guidelines with respect to the serving and consumption of alcohol on campus; requiring that events and facilities at which alcohol is served on campus be managed effectively and in accordance with the University guidelines and Manitoba Liquor Control Commission regulations; and monitoring the application and effectiveness of the policy and guidelines through an Alcohol Beverage Committee, which also will provide to the Vice-President (Administration) on relevant problems and on proposed changes to the policy and guidelines.

This policy applies broadly, and covers all activities, events, locales and facilities on the University of Manitoba campuses at which alcohol is served or is available.

A complete copy of this policy may be obtained from Student Advocacy/ Student Resource Services, 519 University Centre or The University of

Manitoba Policy and Procedure Manual (Policy 240) on the website at www.umanitoba.ca

8.2 HIV/AIDS Policy

The University and the University community shall not discriminate against any individual for the reason that he/she has AIDS or has tested positive for the HIV antibody.

This undertaking applies broadly across University services, programs, admissions, employments, facilities and accommodations.

A complete copy of this policy may be obtained from Student Advocacy/ Student Resource Services, 519 University Centre or The University of Manitoba Policy and Procedure Manual (Policy 509) on the website at www.umanitoba.ca

8.3 Parking Regulations

All members of the University community and persons attending on property, owned and occupied or under the charge or control of the University, including roadways (the "University property") are required to familiarize themselves and comply with the Regulations.

The Regulations are in addition to any by-laws of the City of Winnipeg and any legislation and regulations of the Province of Manitoba regulating the operation or use of motor vehicles or regulating the crossing of or walking upon roadways by pedestrians.

A complete copy of the University Parking Regulations is found in the *Registration Guide* and The University of Manitoba Policy and Procedure Manual (Policy 206) on the website at www.umanitoba.ca

PART TWO:

Students are expected to conduct themselves responsibly with due regard for the rights of others and to maintain a high level of personal and academic integrity. Students who transgress these standards, whether expressed in policy or implied in generally accepted codes of conduct, can expect disciplinary action. Penalties arising from disciplinary actions may include fines, withholding of student privileges, suspension or expulsion from programs, or some other action specific to the situation. Penalties may also affect student eligibility to continue in their programs or to graduate.

The following are some of the policies and regulations relating to student discipline and behaviour.

SECTION 1: Student Discipline Bylaw

A primary responsibility of the University is to provide its students with the opportunity for inquiry and freedom to discuss and express views openly and freely without fear of retaliation, or abuse of person or property. These attributes are the foundation of good citizenship.

To this end, students have an obligation to act in a fair and reasonable manner towards their peers, the faculty, staff, administration and the physical property of the university. Academic integrity and personal conduct, both on-campus and off-campus, are critical elements in achieving these goals. Violations of university regulations which have been adopted to protect the university community will be subject to disciplinary action. This may include, but is not limited to, violations of regulations governing plagiarism, cheating, examination impersonation, academic fraud and acts of personal behaviour such as sexual harassment, violation of human rights, vandalism and substance abuse. The Student Discipline Bylaw provides guidance to those individuals charged with administering disciplinary action while, at the same time outlining the protection to be afforded students through their right of appeal. Disciplinary authorities are encouraged, whenever possible and appropriate, to settle findings of violation by informal resolution.

Students may request information from their faculty or school offices, the Office of Student Advocacy, or may obtain a copy of the bylaw from the office of the Secretary of Senate or obtain a copy of the By-Law from the Office of the University Secretary, 312 Administration Building, Student

Advocacy/Student Resource Service, 519 University Centre or the University of Manitoba Policy and Procedure Manual (Policy 1202) on the website at www.umanitoba.ca

SECTION 2: Inappropriate and Disruptive Student Behaviour

Although this policy is directed to dealing with students who exhibit inappropriate or disruptive behaviour, there are some general statements which should be made:

1. The vast majority of students will complete their academic life at the University acting appropriately and without causing disruption to their fellow students or to the University.

This policy is not directed towards individual students who have a mental illness provided their behaviour is neither inappropriate or disruptive.

A staff member may notice that an individual student is exhibiting stress, even though he/she is not acting disruptively. In that case, the observation should be addressed with the student and, if appropriate, the student should be referred for voluntary counselling.

2. "In appropriate or disruptive behaviour is behaviour which persistently interferes with the academic or administrative activities of the University (and/or) which inhibits the ability of other students to learn and of instructors to teach" – Amanda G. "Dealing with the Disruptive College Student: Some Theoretical and Practical Considerations," *College Health*, April 1986.

Such behaviours would include, but are not limited to the following: threats to the physical safety of the individual or others; verbal threats or abuse of students or University personnel; recurring and wilful damage of University property; and actions which habitually interfere with the learning environment or requires the inordinate time and attention of faculty and staff.

The majority of students engaging in such behaviour will accept personal responsibility and appropriate referral for voluntary counselling. Additional action is detailed in the policy.

A complete copy of this policy may be obtained from Student Advocacy/ Student Resource Services, 519 University Centre or the University of Manitoba Policy and Procedure Manual (Policy 1210) on the website at www.umanitoba.ca

SECTION 3: Hold Status

Students will be placed on "Hold Status" if they incur any type of outstanding obligation (either financial or otherwise) to the university or its associated faculties, schools, colleges or administrative units.

Some typical reasons for holds are:

- Outstanding fees or other unpaid university fees
- Outstanding library books and/or fines
- Parking fines
- Outstanding transcripts or documents required from other institutions
- Students records pending disciplinary action.

No administrative or academic services will be provided to students on Hold Status until the specific obligations have been met.

Students who have not cleared their Hold Status from previous registrations will not be permitted to register again until the hold has been cleared or permission to register has been obtained from the Office of the Vice-President (Administration).

Student Services

Chapter Contents

STUDENT AFFAIRS:

SECTION 1: Introduction to the Services Offered by Student Affairs

SECTION 2: Enrolment Services

- 2.1 Admissions
- 2.2 Career and Employment Services
- 2.3 English Language Centre
- 2.4 Financial Aid and Awards
- 2.5 Student Recruitment

SECTION 3: Registrar's Office

SECTION 4: Student Services

- 4.1 Aboriginal Student Centre
- 4.2 International Centre for Students
- 4.3 Resource Services
- 4.4 Chaplains Association
- 4.5 Disability Services
- 4.6 The Playcare Centre
- 4.7 Student Advocacy
- 4.8 Student Counselling
- 4.9 University Health Service

SECTION 5: Housing and Student Life

OTHER SERVICES FOR STUDENTS:

SECTION 1: Book Store

SECTION 2: Bison Sports

SECTION 3: Campus Parking

SECTION 4: Food Services

SECTION 5: Recreation Services

SECTION 6: Answers Information

SECTION 7: University of Manitoba Students' Union

SECTION 8: Office of the Ombudsman

SECTION 1: Introduction to the Services Offered by Student Affairs

Vice Provost Office

208 Administration Building

Telephone: (204) 474 8279

Website: www.umanitoba.ca/student/

Vice Provost (Student Affairs): David Morphy

The mandate of Student Affairs is twofold: providing services and programs to students of an academic, personal and developmental nature, and providing administrative support to the university community.

The mission of Student Affairs is to enhance the quality of student life and promote the intellectual and personal growth of students within a diverse student population. Through its constituent units, Student Affairs:

- promotes the University to prospective students and the public;
- promotes a student-centred view of education;
- facilitates an understanding of the student experience;
- provides educational and developmental services and opportunities for students;
- provides administrative support and services to students and to faculties and schools as they relate to students; and
- supports an academic environment that is conducive to learning.

Student Affairs coordinates the functions of the Registrar's Office, Enrolment Services, Student Services and Housing and Student Life. Enrolment Services includes Admissions, Career and Employment Services, the English Language Centre, Financial Aid and Awards and Student Recruitment. Student Services includes the Aboriginal Student Centre, the International Centre for Students, Student Advocacy/Resource Services (Student Advocacy, Chaplains, Disability Services and PlayCare), Student Counselling Centre and University Health Service.

The Vice-Provost (Student Affairs) works in liaison with all student groups and academic and administrative units that provide services and functions that affect students. The office provides an important link for students with the total university community. Students are encouraged to contact the office with issues or concerns, or positive initiatives of a general nature that affect the quality of student life at the university.

SECTION 2: Enrolment Services

421 University Centre

Telephone: (204) 474 8820

Executive Director: Peter Dueck

2.1 Admissions Office

424 University Centre

Telephone: (204) 474 8808; Fax: (204) 474 7554

E-mail: admissions@umanitoba.ca

Website: www.umanitoba.ca/student/admissions

Director: Iris Reece Tougas

Application forms and information on the application deadlines, entrance requirements, and admission process may be obtained from the Enrolment Services office or the university website at www.umanitoba.ca/student/admissions.

Admissions officers are available to give advice and assistance, particularly with respect to prerequisite courses and admission requirements to professional faculties and schools.

2.2 Career and Employment Services

474 University Centre

Telephone: (204) 474 9456

Website: www.umanitoba.ca/student/employment/

Acting Director: Dr. Donald Stewart

Career and Employment Services (CES) assists students in career planning and with their employment searches. This is accomplished through the On-Campus Recruitment Program, permanent, summer and part-time job listings, volunteer opportunities in the community, individual consultations and workshops on resume writing, interview techniques and job search strategies. CES posts all job openings including volunteer on the workopolisCampus.com website. Complete postings, including job descriptions and duties, are input daily and are available 24 hours a day, 7 days a week. Students can link to workopolisCampus.com through the CES website, but first they must obtain the access code from 474 University Centre, which allows them to register and take advantage of the many options.

Co-operative Education and Internship at the University of Manitoba

Co-op education and internships provide students with a unique educational experience by enabling students to relate classroom studies to experience in the working world. Students benefit from their work experience by: developing practical work skills and expanding their network of contacts in the working world; developing skills in communication and responsibility; earning money to help defray their university expenses; making career decisions with the benefit of on-the-job work experience and, upon graduation, being able to fill positions which involve greater responsibility.

CES directly helps co-op and internship students with their employability by assisting them to improve their resume writing, interview and job search skills through group sessions and one-on-one appointments. It also provides support to academic departments with co-op or internship programs by promoting the program to employers. The **sixteen** programs participating in Co-op Education, along with the primary contact person for each program, are listed below.

Agricultural and Food Sciences (Co-op) Degree and Diploma:
Gordon Mushey, (204) 474 6943

Biochemistry (Co-op): Diane Kunec, (204) 474 7396

Biosystems Engineering (Co-op): Derek Inglis, (204) 474 7964

Civil Engineering (Co-op): Kathie Anderson, (204) 474 6251

Computer Science (Co-op): Gerri Acorn, (204) 474 8695

Ecology (Co-op): Diane Kunec, (204) 474 7396

Electrical and Computer Engineering (Internship): Cindy Gregoire,
(204) 474 9099

Environmental Science (Co-op): Leslie Goodman, (204) 474 6225

Environmental Studies (Co-op): Leslie Goodman, (204) 474 6225

Genetics (Co-op): Diane Kunec, (204) 474 7396

Manufacturing Engineering (Co-op): Bernice Ezirim, (204) 474 7358

Master in Public Administration (Co-op): Cathy Dunlop, (204) 474 9521

Mechanical Engineering (Co-op and Internship): Bernice Ezirim,
(204) 474 7358

Microbiology (Co-op): Diane Kunec, (204) 474 7396

Physical Geography: Leslie Goodman (204) 474 6225

Zoology (Co-op): Diane Kunec, (204) 474 7396

2.3 English Language Centre

520 University Centre

Telephone: (204) 474 9251

Email: elc@umanitoba.ca

Website: www.umanitoba.ca/elc

Director: Garry Dyck

The English Language Centre provides English language instruction for international students enrolled at the University of Manitoba and for individuals preparing to study at the university. The focus of all the courses is on the English required in an academic setting at both graduate and undergraduate levels. ELC courses are offered in fall, winter and summer sessions. The Centre provides the following:

Homestay Program

The Centre offers Homestay where students may practice English and learn about Canadian culture.

Intensive Program

The two Intensive Programs are offered three times a year in 14 week sessions.

- Academic English Program for University and College Entrance (AEPUCE)
- This course is designed to prepare students for admission to the University of Manitoba. Individuals who have achieved a TOEFL score of 500 (173 Computer Version), CanTEST band 3.5 or equivalent are eligible to take the course. Upon successful completion, students have met the English requirements for admission to the University of Manitoba.
- Intensive Academic Program (IAEP)

This course is designed to prepare intermediate and advanced students for academic study. At the end of each IAEP session, students write the CanTEST. These test results may be used to meet the English requirements of the University of Manitoba.

NOTE: In addition to providing courses, the centre is an official testing site for the Canadian Test of English for Scholars and Trainees (CanTEST), an English proficiency test, the results of which are accepted by the University of Manitoba admissions.

Part Time Courses

The English Language Centre offers short term courses four times a year for University of Manitoba students and potential students as well.

Courses include:

- Oral English for Academic Purposes: conversation and discussion; seminars and presentations.
- Academic Writing Courses: Complex sentences and paragraphs and practice; critical reading and summary writing; essay writing.
- For Graduate Students: Research writing (Fort Garry campus).

2.4 Financial Aid and Awards

422 University Centre

Telephone: (204) 474 9531 Fax: (204) 474 7554

E-mail: awards@umanitoba.ca

Website: www.umanitoba.ca/student/fin_awards

Director: Jane Lastra

Students seeking information about scholarships, bursaries, prizes, loans or the food bank should inquire at the general office. The Financial Aid and Awards Office administers numerous awards in trust with, or offered annually to, the university by individuals, organizations, and businesses. It maintains a close liaison with the Student Aid Branch of Manitoba Advanced Education and Training and, as a cooperating agency, carries out numerous detailed procedures for the government's student aid programs. It also acts as a channel for grants and loans provided to students from other provinces and jurisdictions and for scholarships and bursaries provided by other organizations.

2.5 Student Recruitment

424 University Centre

Telephone: (204) 474 8805 Fax: (204) 474 7554

E-mail: student_recruitment@umanitoba.ca

Director: Lianne Paturel

The Student Recruitment section of Enrolment Services coordinates and delivers informational services to prospective students, their parents/families, and their schools. Requests for school visits, participation in career fairs, or on-campus tours should be directed to this office.

SECTION 3: Registrar's Office

400 University Centre

Telephone: (204) 474 9423; Fax: (204) 2752589

Email: registrar@umanitoba.ca

Website: www.umanitoba.ca/registrar

Registrar: Neil Marnoch

Major services of the office which directly concern students are: address changes, application and information for graduation, application for Letters of Permission, Convocation ceremonies, fee assessment (charges and refunds), external examinations, examination timetable, fee appeals, final examinations, final grade reporting, graduation parchment replacement, international student health insurance, name changes, Photo ID cards, registration, transcripts, and T2202A education tax forms.

The *Registration Guide* section of this publication and the Registrar's Office website contain up to date information on these services.

SECTION 4: Student Services

Executive Director: Dr. Lynn Smith

519 University Centre

Telephone: 480-1498 Fax: 474-7567

Email: Lynn_Smith@umanitoba.ca

Student Services is responsible for providing a broad range of student programs and activities offered by the individual units of Aboriginal Student Centre, International Centre for Students, Student Advocacy and Resource Services [Advocacy, Chaplains, Disability Services and PlayCare], Student Counselling Centre, and University Health Service. Dr. Smith, the Student Services Directors and staff are committed to fostering an environment that is conducive to the intellectual and personal growth of students. In order to assist with the development and assessment of Student Affairs' programs, Dr. Smith is responsible for the Research portfolio for Student Affairs. Dr. Smith is a member of the Student Affairs' Executive and, as such, undertakes Student Affairs initiatives as assigned by the Vice-Provost, Stu-

dent Affairs and university special projects as assigned by the Vice-President (Academic) and Provost. If you have any issues or concerns about Student Services or your experience as a student please contact Dr. Smith.

4.1 Aboriginal Student Centre

Office: 537 University Centre

Telephone: (204) 474 8850; Fax: (204) 275 3142

E-mail: ASC@UManitoba.CA

Website: www.umanitoba.ca/student/asc/

Director: Kali Storm

Mission Statement

"Providing student support in a manner consistent with the cultures and values of Aboriginal Peoples for the purpose of increasing/enhancing the accessibility and retention of Aboriginal students. The Aboriginal Student Centre is dedicated to the creation of an educational environment that includes the affirmation of Aboriginal cultures, values, languages, history, and way of life by increasing the knowledge foundation offered at the University of Manitoba."

Services Provided

Academic Assistance: Application, course selection and registration assistance, tutorial referrals, advocacy and assistance dealing with professors and the university system (e.g. appeals, voluntary withdrawals and special consideration).

Cultural Support: Cultural supports and Elder-In-Residence, Traditional Teachings, sharing circles, Annual Traditional Graduation Powwow, elders and traditional peoples gathering.

Emotional/Personal Supports: Advocacy and support, someone to talk to in a family environment, on and off campus resource information and referrals, peer supports and an Aboriginal Student Lounge, (541-0 University Centre).

Financial/social information: Funding information and applications (First Nations, Metis, student aid, bursaries), job postings, social activities, Volunteer Initiative Program(VIP).

University of Manitoba Aboriginal Students Association (UMASA)

The University of Manitoba Aboriginal Students Association provides support and information on Aboriginal issues. The student association plans and organizes recreational, political and cultural events throughout the year. All registered U of M students who support these initiatives are encouraged to join. The UMASA lounge in 113 Helen Glass is open from 8:30 a.m. to 10 p.m. for student use.

4.2 International Centre for Students (ICS)

541 University Centre

Telephone: (204) 474 8501 Fax: (204) 474 7562

Website: www.umanitoba.ca/student/ics/

Director: Tony Rogge

The mission of the International Centre for Students (ICS) is to facilitate the success of University of Manitoba students in their international learning experiences. ICS has a three-fold mandate:

- to assist and support international students.
- to facilitate student participation in international exchanges and provide information on other international opportunities.
- to promote intercultural understanding and internationalization of the student body.

Services and programs for international students include pre- and post-arrival materials, campus and city orientation sessions, a welcome family program, student advising, and a variety of workshops and events designed to facilitate adjustment to life in Canada.

The World W.I.S.E. Resource Centre, located within ICS, contains information on study, work, and volunteer opportunities abroad. ICS also coordinates a number of international student exchange programs which are open to all UM students.

ICS sponsors a number of activities and events to promote intercultural understanding, such as the Campus Buddy Program, World Opportunities Week, Starlake Intercultural Days, Volunteer English Practice Program, Welcome Family Program.

4.3 Resource Services

Director: Brandy Usick

520 University Centre

Telephone: (204) 474 9251 Fax: (204) 275 8098

Website: www.umanitoba.ca/student/resource

The director has administrative responsibility for the Chaplains' Association, Disability Services, and the PlayCare Centre.

4.4 Chaplains' Association

Website: www.umanitoba.ca/student/resource/chaplains

The chaplains at the university are appointed by religious bodies, but offer support to all students regardless of religious preference. They provide a wide variety of services to students and staff. The chaplains are located on the first floor of University Centre and can be reached at the following numbers:

Chaplains' Secretary	(204) 474 8721
Jewish	(204) 474 9325
Lutheran	(204) 474 8386
Mennonite	(204) 474 9691
Pentecostal	(204) 474 8389

In addition, religious programs and worship services take place at St. Andrew's College (Ukrainian Orthodox (204) 474 6514); St. John's College (Anglican, (204) 474 8363); and St. Paul's College (Roman Catholic Director of Chaplaincy (204) 474 9784). Students may contact the colleges for more information.

4.5 Disability Services

155 University Centre

Telephone: (204) 474 6213

Fax: (204) 261-7732

TTY: (204) 474 9790

Website: www.umanitoba.ca/student/resource/disability_services

Hours of Operation:

Sept - Apr: Monday - Thursday, 8:30am - 9:00pm,

Friday 8:30 am - 4:30 pm

May - Aug: Monday - Friday, 8:30 - 4:30

Mission Statement: Disability Services is the office responsible for assigning, verifying, and providing accommodations to students with disabilities at the University of Manitoba. Disability Services works to ensure a responsive and accessible post-secondary environment through providing information and services to: students with disabilities; instructors; academic departments; faculties; and administrative units on campus.

Disability Services provides accommodations such as alternate format materials, priority registration, transportation on campus, equipment for loan, elevator lift keys, volunteer note-takers, ASL/English interpreters, private space for tests/exams, extended time, scribe/reader, screen-reader software, etc. These services are provided free of charge to students who qualify.

Disability Services provides assistance to students with the following: acquired brain injuries, attention deficit disorders, blindness, chronic illness, deafness, exam anxiety, hearing, learning, medical, mental health, mobility, physical, and visual disabilities. Students with temporary disabilities, such as breaks and sprains, are also eligible to use our services.

4.6 The PlayCare Centre

109 University College

Website: www.umanitoba.ca/student/resource/playcare

This facility is licensed as a full-time daycare. The centre provides care for full days or half days for children between two and five years of age and for ages 6-12 on school in-service days. For information, telephone (204) 474 6949 or visit the facilities.

4.7 Student Advocacy

Director: Brandy Usick

519 University Centre

Telephone: (204) 474 7423 Fax: (204) 474 7567

Email: student_advocacy@umanitoba.ca

Website: www.umanitoba.ca/student/advocacy/

The mission of the Student Advocacy office is to ensure that students are treated fairly in their dealings with the University. The Student Advocacy

office is dedicated to educating the University community concerning student rights and responsibilities and assisting students in the resolution of conflicts arising from actions or decisions taken by the University.

While serving the University, Student Advocates maintain a student focus by providing information, investigating complaints, resolving conflict through alternative and formal systems, representing students at hearings, and reviewing policies and recommending change.

The following services are provided by the director, student advocates, and peer advocates:

Resolution of student concerns:

- Information, advice, consultation, mediation and referrals.
- Assistance with request and appeal letters and communications with faculty and administrative staff.
- Preparation of and appearance with students at meetings and hearings.
- Follow up with students and administrative staff about request and appeal outcomes.

Advocacy services are available for students at the Fort Garry, Bannatyne and St. Boniface campuses.

Education:

Another major component of the office falls under the mandate of educational activities. Student Advocacy offers workshops and orientations to students, staff and faculty on a number of student issues

Resources:

Material available from the office includes: final grade appeal, term work grade appeal, cheating plagiarism and fraud and inappropriate collaboration.

Student Advocacy also maintains resources on a number of student matters including academic dishonesty and incivility.

Peers: Students Helping Students

150 University Centre

Telephone: (204) 474 6696

E-mail: peer@umsu.ca

Website: www.umanitoba.ca/student/peers

Peers are student volunteers committed to providing support to fellow students. Peers are supportive listeners and may be approached on any academic, health or personal concern. All Peer services are free of charge and completely confidential.

4.8 Student Counselling and Career Centre

Fort Garry Campus: 474 University Centre; telephone (204) 474 8592

Bannatyne Campus: S207 Medical Services Building; (204) 789 3857

Website: www.umanitoba.ca/student/counselling/

Director: Don Stewart

Personal Counselling

We offer a wide range of services to help students achieve personal, career and academic success including group programs, individual counselling, workshops (career, personal and educational), consultation and assessment. We help students deal more effectively with a wide variety of issues, such as career and academic indecision, adjusting to life transition, stress, depression, loss, family issues, relationship difficulties, abuse, academic performance, self confidence, motivation and procrastination, and finding meaning in life.

Our staff includes professionals from Clinical Psychology, Counselling Psychology, Educational Psychology and Social Work.

Fort Garry Campus

Students interested in seeing a counsellor at the Fort Garry Campus may drop in for a brief introductory meeting between 9:30 - 11:00 and 1:30 - 3:00, Monday to Friday (hours may be reduced during the summer months - please call for summer hours). Students are usually seen on a first-come, first-served basis. Following a case review, referral is made to a counsellor, group program or career service within the Student Counselling and Career Centre, or to services elsewhere.

Bannatyne Campus

The Bannatyne counselling team is available for noon-hour, late afternoon, and early evening appointments Monday, Wednesday and Thursday (hours may be reduced during the summer months **or in response to staffing changes** - please call for updated information). Appointments may be booked through the SCCC receptionist at 474-8592. Drop-in contacts are welcome whenever the door is open between 12:00 and 5:00 pm.

Group Programs

A variety of group programs are offered throughout the academic year. Groups have addressed assertiveness, graduate student support, depression, procrastination, single parent support, stress management, men's issues, women and self esteem, exploration of self, eating disorders, Aboriginal healing and exam anxiety. Group program information is posted regularly throughout the University and on the web.

Career Services

The Student Counselling and Career Centre provides a comprehensive program to assist in career decision-making and planning. The following resources are available to all students:

Career Counselling

The starting point for most students seeking help with career planning decisions, questions and concerns is the Career Planning Workshop. This workshop is facilitated by a career counsellor and consists of two 2-hour sessions involving a host of interactive activities and discussions. During session 1, students will discuss career planning strategies, career planning beliefs and myths and individual career planning needs. Students will also begin the process of career self-assessment. In session 2, students will use self-assessment information to identify and evaluate potential career options. An overview of career resources will be included. Upon completion of session two, interested students can receive up to three individual career counselling sessions with the facilitating counsellor. As well, students completing the workshop may choose to complete one of two career inventories. Career inventories currently offered by the Student Counselling and Career Centre are the Myers-Briggs Type Indicator (personality instrument) and the Strong Interest Inventory (interest instrument). A modest fee will apply for each of these instruments.

Career Planning Workshops are held throughout the year with a new session starting each week during the regular academic year. Students should pre-register at the Student Counselling and Career Centre. A nominal fee will apply. Prospective students may also be eligible for this service.

Career Resource Centre

The Career Resource Centre houses the combined career resources of the Student Counselling and Career Centre and Career and Employment Services. Exploring occupational options? Searching for educational alternatives? Planning a comprehensive job search? Thinking of starting your own business? If you need career information, stop by the Centre. Career Resource Assistants are available to help you, Monday – Friday, 8:30 a.m. - 4:30 p.m. No appointment is necessary. Visit us on-line at www.umanitoba.ca/student/counselling/crc.html.

Career Mentor Program

Students are invited to explore the world of work through the Career Mentor Program. Hundreds of mentors, many of them University of Manitoba alumni, are eager to meet with students for informational interviews and workplace tours. A short orientation is provided to ensure that students are prepared for the visit.

For over a decade, students have been making professional connections, exploring occupational options and receiving practical career advice through the Career Mentor Program. Start turning your career dreams into reality. Sign up for the Career Mentor Program today!

The Career Mentor Program runs from September – April. A nominal, one-time fee applies.

Visit us on-line at www.umanitoba.ca/student/counselling/mentor.html

Referral and Consultation

Counsellors are also able to provide a confidential referral and consultation service to other members of the university community.

4.9 University Health Service

104 University Centre

Telephone: (204) 474 8411; **Fax:** (204) 474 7573

Website: www.umanitoba.ca/student/health/

Director: Wade Glew

The University Health Service is available to all university students. To assist students in maintaining a high level of personal and community health, the University Health Service is available for episodic and continuing care during regular university hours. Doctors also provide emergency after-hours care.

All Canadian students must carry health insurance through their home province. All international students not covered by a provincial health plan must purchase insurance through the special plan provided for by the university (see the *Registration Guide* section for specific details).

Health examinations are not required for registration at the University of Manitoba. However, students registering in the following programs are advised to undergo a health examination with their family physicians or University Health Service:

- All students registered in the health sciences (Nursing, Medicine, Dentistry and Pharmacy)
- All students registered in the Bachelor of Physical Education degree program
- All students who are participating in intercollegiate and/or organized intramural sports competition programs
- All students from countries other than Canada.

Immunizations are considered essential in some faculties or schools (e.g., School of Nursing). Students are advised to contact their own faculties or schools for specific regulations and immunization schedules.

Services required for occupational and educational institutions are not covered under provincial health insurance plans and will be provided on a fee for service basis.

The University Health Service provides travel health advice and required immunizations to students of the University of Manitoba on a fee for service basis.

SECTION 5: Housing and Student Life

101 Arthur V. Mauro Residence

Telephone: (204) 474 9922

Website: www.umanitoba.ca/student/housing/

Director: Joe Danis

E-mail: residence@umanitoba.ca

Residence (On Campus Accommodation)

The six residences on the University's Fort Garry campus (Arthur V. Mauro Student Residence, Mary Speechly Hall, Tache Hall, University College, St. John's College, and St. Andrew's College) provide accommodation for 1260 students. Each residence has its own unique personality and living options. Living on-campus can be an important part of being a student. For information about on-campus housing contact the Residence Office, 101 Arthur V. Mauro Residence, University of Manitoba, Winnipeg, Manitoba R3T 6B3; telephone (204) 474 9922 or toll free 1 800 859 8737.

Website: www.umanitoba.ca/student/housing/

E-mail: residence@umanitoba.ca

Arthur V. Mauro Student Residence

For students in their 2nd year of University or higher, the Arthur V. Mauro Student Residence offers an alternative to traditional residence living. This residence accommodates 310 students in 2 bedroom suites. Each suite includes 2 furnished bedrooms with telephone, cable television, and high speed Internet connections. It also includes a kitchenette and its own wash-room.

Facilities in the building include a games room, fitness centre, convenience store, laundry and storage. Meal plans for residents of Arthur V. Mauro Student Residence are optional.

Mary Speechly Hall and Tache Hall Residences

Speechly/Tache is characterized by a commitment to unity and diversity. Though the Speechly and Tache residences are administered jointly, each building retains its own character. Tache Hall boasts antique oak trim, open fireplaces and expansive stairwells; Speechly Hall, with bright rooms and friendly lounges, provides a modern complement to Tache's old world charm. Together, they house almost 600 students in a choice of single and double rooms on both non-co-ed and co-ed floors.

In addition, Speechly/Tache offers a number of residence life options for needs and interests of specific student groups that offer programs and activities tailored to suit a particular lifestyle. The special interest communities include: Architecture/Interior Design, Engineering/Sciences; Graduate House; International House; and Scholars House.

Residents' meals are served in Pembina Hall, a large dining hall. Enclosed walkways from residence halls to the dining hall provide protection from Winnipeg's weather.

Residents of Speechly/Tache also enjoy easy access to: an in-house computer lab; piano practice areas; comfortably furnished lounges with fireplaces; furnished study/hospitality lounges on most floors; two gymnasiums (with stationary bicycles, rowing and weight machines); large multipurpose areas (for social, cultural or recreational events); student-run coffee shop (with a large screen TV, video games, board games, a pool table and refreshments); and kitchen for use on special occasions when Food Service is not in operation (i.e., during holiday periods).

The Resident Student Association Council (RSAC) works with residence administration to provide the students with many exciting programs, activities, and services. In order to ensure that residents are able to maintain a balance between social and academic activity, evening quiet hours are scheduled.

University College Residence

University College is a constituent college of the University of Manitoba. Its residence offers a smaller more personal atmosphere where students, both day and residence, can interact with each other and with academics in an informal setting. The residence accommodates 250 men and women in mostly single rooms. Tunnels connect the college residence to most buildings on campus. The residence package includes a "declining balance" meal card which can be used at any food service outlet.

University College provides comfortable accommodation with a central lounge on each floor with a TV, a VCR, and a microwave. Each floor has separate wings for men and women, connected by the lounge. Special interests are served by the Scholars' and Professional/Graduate student floors. The residence also houses recreation areas (with fitness equipment, pool table, and grand piano), a study hall, computer lab, and laundry room.

The student government organizes residence social activities throughout the year including intramural sports, as well as on-campus and off-campus activities. In addition to personal development and academic success programs which are provided by the on-site student staff, the college offers guest speakers to enable students to expand their knowledge outside the classroom. Courtesy hours are in effect during exam preparation and writing periods.

St. John's College Residence

St. John's College was founded in 1849, but its origins date back to the early days of the Red River settlement. In 1877 St. John's together with St. Boniface and Manitoba colleges founded the University of Manitoba. This record is evidence of St. John's historical commitment to higher education.

St. John's College Residence embodies a unique blend of the social and the academic. Residence provides opportunities for students to participate in college and residence social and athletic programs, to take advantage of both formal and informal tutorial and study sessions, and to live and study in the context of a small, personal community. Other events provide students opportunities to socialize and meet with college professors outside of the confines of the classroom. In addition, a regular schedule of study hours ensure residents of the quiet necessary for academic work.

Located in the centre of the Fort Garry Campus, St. John's Residence provides accommodation for 100 men and women. Residence student affairs are governed through the Residence Student Association, which works in close cooperation with the four student dons and the dean of residence. St. John's Residence includes the following features: single occupancy, fully furnished, carpeted rooms (14' x 8') with storage space; excellent buffet style full meal plan of 19 meals per week, plus complimentary snack on Sunday night and during exam periods; newly renovated dining hall; housekeeping service includes cleaning, vacuuming, dusting, and garbage removal; one big TV lounge with big screen TV and a smaller TV lounge; large residence study room; games room with table tennis and foosball table; "The Buttery," a fully equipped student kitchen; laundry room with state of the art washers and dryers; two fully furnished, 2-bedroom suites for graduate or senior students; one fully furnished single bedroom suite for graduate or senior students; regular schedule of quiet/study hours; ongoing

social and educational programs. All residents become members of the College and have access to all College facilities and services: St John's University Library, Daily Bread Café Restaurant, computer lab, Chapel and Chaplaincy services, student lounges, study carol room, lockers, storage room for residents; and College classrooms are available for late night study sessions. In addition to what is offered by the University, resident may apply for over \$60,000 in scholarships, bursaries, awards and prizes.

For information, contact: Dean of Residence, St. John's College, 92 Dysart Road, Winnipeg, Manitoba R3T 2M5; telephone (204) 474 8363; Fax: (204) 474 7610; E-mail: plampman@ms.umanitoba.ca
Website: http://www.umanitoba.ca/colleges/st_johns/

St. Andrew's College Residence

St. Andrew's College, an affiliated college, was established in 1964 on the University of Manitoba campus. It presently houses the Centre for Ukrainian Canadian Studies and the Theology Faculty of the Ukrainian Orthodox Church of Canada. Students in any faculty, however, may live in residence as long as they hold membership in St. Andrew's College.

Residence is available for 38 women and men in small single, large single, and double rooms. Special facilities include a library, TV lounge area, multipurpose room, seminar rooms, dining hall and storage space. St. Andrew's College also has a Ukrainian Orthodox Chapel. The kitchen provides 19 meals per week which are characterized by home style cooking, including Ukrainian cuisine.

The residence is administered by the residence supervisor and residence assistants along with an active Residents' Council. An attractive feature of the residence life is the rich Ukrainian cultural program whereby the students have the opportunity to participate in choral music, folk dance, and theatre. In addition, St. Andrew's students participate in an interuniversity exchange program each year.

For information, contact: Residence and Property Supervisor, St. Andrew's College, 29 Dysart Road, Winnipeg, Manitoba R3T 2M7; telephone (204) 474 8895; Fax: (204) 474 7624

Off-Campus Accommodation

The University of Manitoba maintains lists of accommodation available in all areas of Winnipeg. Students may consult these listings 24 hours a day at the Website: www.rentingspaces.ca

Living arrangements listed include room and board, rooms with kitchen privileges, suites, apartments, houses and townhouses. The university does not approve, license or inspect housing, but lists accommodation for referral only. Landlords are required to offer their accommodation in accordance with existing housing legislation and on the same basis as the university offers its facilities; i.e., without regard to race, colour, religion, nationality, sex, age, marital status, ethnic origin, or source of income.

OTHER SERVICES FOR STUDENTS

SECTION 1: Book Store

The Book Store is owned and operated by the University of Manitoba. The university Book Store has two locations: The main Book Store in University Centre on the Fort Garry Campus, and a health sciences book store in the Brodie Centre on the Bannatyne Campus. Both locations provide services in textbooks, reference books, special orders, computers and software, art supplies, stationery, crested clothing and giftware.

Computers on Campus, located at both stores, offers educational prices on computer hardware and software and is an authorized IBM and Apple repair centre.

Lists of required textbooks and course materials are available in August so that course materials may be purchased before classes begin. The Book Store also "buys back" reconfirmed textbooks for cash.

Mail order service is also provided by writing, phoning or faxing the Book Store, University of Manitoba, Winnipeg, Manitoba, R3T 2N2. Payment can be made by credit card or ordered COD within Canada. Total charges will include COD fees, postage and handling.

Textbooks can be ordered on-line at: www.umanitoba.ca/bookstore.

Fort Garry Campus

Store Hours Information Line: (204) 474 8178

Book Store: (204) 474 8321, or Toll free:1-800 310 3331

Fax: (204) 474 7555

Website: www.umanitoba.ca/bookstore

Fall and Winter Hours: September to March

Monday and Tuesday: 9 a.m. - 7 p.m.

Wednesday, Thursday and Friday: 9 a.m. - 5 p.m.

Saturday: 11 a.m. - 4 p.m.

Summer Hours: April to August

Monday, Wednesday, Thursday and Friday: 9 a.m. - 5 p.m.

Tuesday: 9 a.m. - 7 p.m.

Saturday: 11 a.m. - 4 p.m.

Extended hours for the last week of August and the first two weeks of September will be announced.

Bannatyne Campus

Telephone: (204) 789 3601

Fax: (204) 789 3901 or Toll Free Fax: 1 800 361 2005

Fall and Winter Hours:

Monday to Friday: 9 a.m. - 5 p.m.

Saturday: Noon - 4 p.m.

(closed Saturdays, April to August)

SECTION 2: Bison Sports

The University of Manitoba is a member of Canada West Universities Athletic Association, a regional association within Canadian Interuniversity Sport (CIS).

Bison teams include basketball, football, golf, cross country, hockey, soccer, swimming, track and field and volleyball. To be eligible for CIS and Canada West competition, a student must be registered in at least 18 credit hours, with a minimum of nine credit hours in each term of competition.

Information on all activities including schedules is available by telephoning (204) 474 9611 or (204) 474 9243, or from 124 Frank Kennedy Physical Education Centre. Visit our website at www.umanitoba.ca/bisons

SECTION 3: Campus Parking

General office: 125 University Centre

Telephone: (204) 474 9483 Fax: (204) 261 8884

Approximately 3000 parking spaces are available for purchase by students. These spaces are situated in lots around the campus and assigned to students for long-term parking. The parkade, meters and ticket-dispenser areas supply an additional 1,500 spaces for short-term or casual parking. Motorcycles are accommodated in two convenient locations.

Parking permits go on sale in June through our Online Application System. Detailed instructions are included the *Registration Guide* section of this publication or visit our web site at www.umanitoba.ca/parking.

On weekends, holidays and after 4:30 p.m. on weekdays, free parking is available in most parking lots except 24-hour reserved areas, areas designated for accessible parking, the Parkade and other restricted areas. Fines are levied for parking violations.

For information regarding parking, contact Parking and Shuttle Services.

The complete text of the Parking Regulations as authorized by the university Board of Governors is published in the *Registration Guide* section of this publication.

SECTION 4: Food Services

General office: 207 Pembina Hall

Telephone: (204) 474 9916 Fax: (204) 474 7538

Food Services is operated by ARAMARK Canada, which is responsible for providing the food requirements for students and staff as well as catering university special functions. Cafeterias, canteens and national branded franchises are located throughout the Fort Garry Campus.

Flexible meal plans are available to both residence and non-residence students. These plans provide regular meals at economical prices.

Information on food service locations and meal plans is available from the Food Services office.

SECTION 5: Recreation Services

General office: 145 Frank Kennedy Centre

Telephone: (204) 474 6100

Fax: (204) 474 7503

Website: www.umanitoba.ca/student

Facilities

To encourage recreation on campus, the university has a wide variety of recreation facilities. On the Fort Garry campus, the Frank Kennedy Physical Education Centre, the Max Bell Centre, and the Investors Group Athletic Centre contain indoor jogging tracks, a swimming pool, indoor and outdoor tennis courts, weight and fitness areas, a combatives room, a dance studio, gymnasium for basketball and volleyball, squash and racquetball courts, and an international-size year round ice arena. The Joe Doupe Recreation Centre, in the Brodie Centre, Bannatyne Campus, provides recreation facilities and programs to students and staff. Access to these facilities requires a membership available from the customer service desks in Frank Kennedy, Max Bell and Joe Doupe locations. An eight-month student membership is \$94.

Intramural Competition and Sports Clubs

Intramural sports give students and staff an opportunity to participate and compete in recreational activities of their choice. There are men's, women's and co-ed divisions. Basketball, ice hockey, floor hockey, soccer, ultimate frisbee and volleyball are examples of the sports available. In addition, more than a dozen sport clubs give opportunity to get more involved in a particular sport. Some examples include squash, kayaking, wall climbing, ringette, figure skating, synchro skate and badminton.

Adult Recreation Instructional Programs

Recreation Services offers instruction on a fee per course; some examples include the martial arts, dance, weight training, outdoor recreation, relaxation, kayaking, CPR and first aid.

Fitness

Recreation Services is a provincial leader in fitness assessment and counselling, fitness programming and fitness leadership development. Fitness is currently divided into two operational units:

Fitness Assessment and Counselling: Fitness assessment and counselling services range from general fitness assessment to body composition analysis; sport training to nutrition counselling. Staff are prepared to help set up a fitness program tailored to individual needs, interests and goals.

Fitness Programs: There are more than 35 classes weekly in such activities as bench stepping, tae box, aquafitness, and low impact. Access to all regular fitness classes is included with a membership. Specialty classes include older adult classes.

Children's Camps

The year-round program includes sport, skill and fitness development, creative dance, Mini University and computer camps for children 3-16 years of age. University students can gain practical work experience conducting these camps or assisting in coaching clinics. Call 474 6100 for information.

Joe Doupe Recreation Centre, Bannatyne Campus

Located in the lower level of the Brodie Centre, the Joe Doupe Recreation centre provides a full sized gymnasium with an elevated walking/running track, weight training and aerobic exercise equipment and an aerobics studio. For information, call Customer Service Desk at 789-3858, or visit the centre on the lower level. For more detailed program information please visit the web site at www.recreationservices.ca or phone 474-6100.

Section 6: Answers Information

General Office: 1st floor University Centre

Telephone: 204 474 8211

If you have a question, there's no better place to go than Answers. Answers can provide you with information on nearly everything on campus, from registration to directions to anywhere you could possibly want to go. Answers also sells tickets to most campus and off-campus events, as a Ticketmaster outlet. It is also the place to go for Transit post-secondary discounted bus passes, as well as any other transit tickets and information

you require. Add in free phones, sales of long distance phone cards, campus lost and found and staff that will even give out change and you've got the campus service to beat all others.

Section 7: University of Manitoba Students' Union (UMSU)

General Office: 101 University Centre

Telephone: 204 474 6822

Fax: 204.269.1299

Website: www.umsu.ca

What is UMSU?

The University of Manitoba Students' Union is a student-run organization that aims to represent and advance the diverse needs of University of Manitoba students. Every student pays fees to UMSU and is considered a member of the organization, and thus has a say in how it is run.

Established in 1919, UMSU comprises more than 28,000 student members. It represents you to the administration and all levels of government, funds student groups, and provides services to students like a health and dental plan, campus radio station and travel grants.

UMSU is also Local 103 of the Canadian Federation of Students (CFS), a provincial and national organization that provides representation and cost-saving services for its members. You can find out more about CFS at www.cfs-fcee.ca.

Student Representation within the University

One of UMSU's fundamental roles is representing students to the University. The President and Vice-President Advocacy of UMSU, along with 23 student senators representing all of the faculties on campus, sit on the University Senate. The University Senate looks into all academic matters, such as course appeals and professor evaluations. A complete list of your student Senate representatives can be found on the UMSU website.

UMSU also has a voice on the University Board of Governors (BOG), the highest governing body of the University, which deals with matters such as tuition fees and the University's budget. The UMSU President and Vice-President Advocacy both sit on the BOG as student members, and two additional students are appointed by the UMSU Council.

The Student Lobby

UMSU represents students' interests to the municipal, provincial and federal governments, as well as to the University administration. The Executive works with a number of universities and colleges in the province and across the country to lobby for goals and policies that the Student Union has taken. UMSU tackles issues including the right to an accessible education and lower tuition fees for all students, restoration of federal funding for education, alleviating student debt, transit discounts, and academic issues including advanced exam schedules and online professor/course evaluations.

UMSU also conducts research to present to key decision makers in an attempt to influence policy decisions and provide background information to its members.

Action

Of course, regular meetings with government and the very best research will have little impact unless the government believes a message has widespread support. UMSU demonstrates this support through the active participation of its members and the general public in activities ranging from petition drives to mass mobilizations. These campaigns raise public awareness of the issues, and correspondingly affect the decisions and policies of government.

UMSU Structure

Your Students' Union is governed by an elected UMSU Council. It is comprised of representatives (one rep for every 1000 students) from each faculty, school, college and residence, as well as 5 student community representatives. Council meetings are held every two weeks, and students are encouraged to attend the meetings to find out what their representatives are up to and to provide input. Students have full speaking rights at Council meetings.

There are also a number of committees that guide policy and procedure for UMSU on a yearly basis, including the Policy & Bylaws, Campaigns and Government Relations and Finance committees.

A full list of council and committee members can be found on the UMSU website or by contacting the UMSU office. Meeting minutes and reports are also available online.

The UMSU Executive (President and four Vice-Presidents) are elected during the general election in the spring and a list of portfolios and reports can be found on the UMSU website.

Get Involved with UMSU!

Getting involved with your Students' Union is a great way to meet people and shape your time at school. As those involved can attest, you often learn more out of class on campus than in class. Below are a few of ways to get involved with UMSU. Please contact the UMSU Office for more information.

VOLUNTEERING – If you are new to the University or not, the quickest way to get involved is to volunteer for one of the many events or campaigns the Students' Union runs. These opportunities can range from putting up posters to helping run parties or planning events.

UMSU COMMITTEES & COUNCIL- If you want to get more involved with UMSU, join an UMSU committee or working group. Committees work with the UMSU executive and council, with meetings often occurring once or twice a month depending on the committee, and discuss issues such as policy for the Students' Union and environmental initiatives. To participate in the governing process, you can also attend council meetings.

STUDENT GROUPS & SERVICES- If you want to get involved with a particular issue or activity, there is bound to be a student group to meet your needs. Most groups meet regularly and plan activities for the year. Visit www.umsu.ca to see a listing of all UMSU recognized student groups on campus.

UMSU Businesses

Answers Information Booth

1st Floor University Centre
Phone: 474 8211

Answers provides information about registration, exams, maps, and will give you directions. It also sells tickets for almost all campus events and socials and is an official Ticket Master outlet. Answers also has bus tickets and bus passes (including the discounted bus pass for university students).

Archives Used Bookstore

107 Helen Glass Centre
Phone: 474 6511

Whether you are looking to buy or sell textbooks, Archives is the place to go! Archives sells textbooks on consignment – students wanting to sell their old textbooks can set their own prices and get 80% back for any books that sell, and those wanting to buy textbooks can choose from a great selection of affordable used textbooks. Archives is also available online for you to search for textbooks you might need and to enter any textbooks you have for sale.

G.P.A.'s Convenience Store

1st Floor University Centre
Phone: 474 6964

G.P.A.'s offers beverages, chocolate bars and bulk candy at the lowest prices on campus. G.P.A.'s also sells newspapers and tobacco. Stop by for a quick munchie fix!

Degrees Restaurant

3rd floor University Centre
Phone 474 7370

At UMSU's Degrees Restaurant you can experience "real people serving real food". Degrees is a licensed restaurant offering an eclectic array of fast but healthy range of food including such items as Italian to Indian cuisine blended with traditional hamburgers and falafel. The taste, quality and friendliness of Degrees will surprise you!

Digital Copy Centre

118 University Centre
Phone 474 6533 E-mail: umsucc@ms.umanitoba.ca

UMSU's Digital Copy Centre offers high speed, high quality printing and photocopying as well as a wide range of finishing services. We have state-of-the-art printers that can print at speeds of up to 110 impressions per minute. Documents can be brought to us on hard copy or by e-file. High quality colour printing from hard copy or e-file is also available. Self-serve

copiers are available 24hrs at only \$0.05 per copy and wide format printing is available.

IQ's Internet Café and Billiards

3rd Floor University Centre
Phone: 474 9449

IQ's is a massive pool hall located on the 3rd floor of University Centre. IQ's is open late into the evening and rates on pool tables are cheap! IQ's sells munchies and drinks and students are welcome to come use the free internet and relax on the couches. IQ's is also your stop for Starbuck's coffee on campus!

UMSU Services

UMFM 101.5 FM

3rd floor University Centre
Phone: 474 7027 or 474 6518
Website: www.umfm.com

CJUM-FM 101.5 is your Campus and Community radio station at the University of Manitoba. We offer musical depth and diversity and intelligent talk to the City of Winnipeg 24 hours a day, 7 days a week, from our state-of-the-art studios overlooking the heart of the Fort Garry Campus. Jazz, Scratch, Hip Hop, Electronic, avant-garde, Pop, Punk, Latin, Funk and Folk all have homes on UMFM. We are always looking for people with a passion for music, or are passionate about their point of view, so feel free to contact us to get involved.

Food Bank

UMSU provides a student food bank in partnership with the University of Manitoba. Students who are in need of food can drop into the Financial Aid Office (422 University Centre) where they will be treated with respect and confidentiality. Students and groups who are able are asked to support the Food Bank by donating non-perishable food products at the UMSU office or at any UMSU programming event.

Health and Dental Plan

UMSU provides its members with a health and dental benefits plan, which was approved by referendum in 2001. The plan is a group benefit, providing many services and benefits to students without coverage, and is mandatory for full-time students unless there is proof of an existing plan for health and/or dental. The plan costs \$197 per year (for 12 months of coverage), though students may add their family (spouse and dependants) for an additional fee. Details of the plan and opt-out deadlines are available online and at the UMSU Health and Dental Office in 110 University Centre (474-6666).

UMSU Living (Off-Campus Housing)

UMSU Living (108A University Centre) is a service to help you rent, sublet, carpool, and buy/sell furniture. For hours of operation and the online housing registry please visit the UMSU website. Also feel free to contact UMSU Living at 474.9717 or umsuliving@umsu.ca

Gallery of Student Art (GOSA)

The Gallery of Student Art is a student-run and student-funded gallery space centrally located in University Centre. The gallery's mandate is to promote student art and design work at the University of Manitoba. The gallery is run by a coordinator and oversight committee. Proposals for shows are encouraged for submission from any student or group of students. The Gallery Coordinator can be reached through the UMSU office at 474-9600 or gallery@umsu.ca

Bison Grocery Run

The Bison Grocery Run is a service offered to students that require groceries. A van runs between University Centre and Superstore each Saturday during regular session and students can just show up between the designated times and hop a ride to get groceries and return to campus. Contact the UMSU office at 474-6822 or umsu@umsu.ca to find out times of operation.

Bison Patrol

On those cold days or dark nights, look for the Bison Drive Patrol to transport you safely to your vehicle. UMSU provides a safe, warm method of getting around the campus in a minivan that shuttles around campus in the evening. Regular routes throughout the U of M will help you get from point A to point B. For route information, see www.umsu.ca.

Student Advocacy

If you ever run into academic difficulties and are in need of support, the UMSU Vice-President Advocacy is the student advocate for the students'

union. If you have a problem with a grade or a professor please do not hesitate to contact us. UMSU will take up your case with the University and defend your right to fair treatment.

Peers

Peers are dedicated student volunteers and trained listeners who can provide referral to both on and off campus resources. Whether your problems are of a personal or an academic nature, Peers are there to help you get through them. They are available in room 150 University Centre, or by calling 474.6696.

Carpool Registry

Looking for a carpool? Want to save money and be environmentally friendly? The UMSU Carpool Registry connects you with other University of Manitoba students in your area to provide alternative methods of transportation to and from university. It is available for both the Fort Garry and Bannatyne campuses. Join free of charge at www.umsu.ca.

Tutor Registry

Each year UMSU accepts submissions from students who wish to become a tutor in a specific field of study and provides these contacts to students in need of additional help with a tough course. These names are readily available at the UMSU office or by accessing our online tutor registry at www.umsu.ca.

Annual Daytimer

UMSU provides all students with a free daytimer during the first week of fall orientation. The daytimer contains a yearly calendar, information about UMSU including its businesses and services, important phone numbers, and brief information from all student councils and recognized UMSU student groups. Stop by the UMSU Office to pick up yours!

UMSU Programming

In addition to the advocacy work done by the Union, UMSU strives to provide students at the University of Manitoba outstanding cultural, social, political and academic events throughout the year. The UMSU Vice-President Student Services is responsible for overseeing these events at both the Fort Garry and Bannatyne campuses in conjunction with the many students' associations and groups across campus. Past UMSU events have featured David Suzuki, the Weakerthans, Buffy Sainte-Marie, and SUM 41, UMSU is always looking for volunteers to help put on the many events that happen during the year. Contact us to get involved!

Some of the major events to look out for during the year include:

Orientation Week (September)
Malpractice Hallowe'en Social (October)
EBC Charity Ball (December)
Celebration Week (January)
Concerts (various months)

UMSU Student Fees

The UMSU Student Fees are separate from your tuition, and are also known as your Students' Union Fees. Fees at UMSU are set based on a fee per credit hour basis.

NOTE: Where a fee is noted as XX/YY, it denotes a variance of fees from the Fort Garry to the Bannatyne Campus respectively. UMSU Contribution: \$42.00 / \$18.50: Goes towards the general expenses of operating UMSU. It is a prorated fee.

Scholarship and Bursary Fund \$30.00: All students, full and part time, pay this fee. It is not prorated fee.

Faculty Fees \$7.75-\$27.75: Students pay a faculty fee to their respective faculty students' association to UMSU. UMSU simply collects and distributes these fees. They are established and set by the faculty students' associations.

Capital Fund \$6.00 / \$11.50: All students pay into the building fund to pay the capital costs of either the University Centre or the Brodie Centre.

UMFM Radio Fund \$5.00: All students pay to operate the FM Radio station which opened in the fall of 1998. This fee is not prorated.

Capital Sinking Fund \$1.00 / \$0.75: All full-time students pay into this non-prorated fund. It is used by UMSU to purchase or repair fixed assets in University Centre.

Faculty Fee Reallocation Fund \$0.75: Every student pays this fee. It is used to subsidize smaller college and faculty based students' associations.

Manitoban Fee \$6.00: All students pay this fee to assist in the operation of a student newspaper at the U of M. This fee is not prorated.

University of Manitoba Recycling and Environmental Group (UMREG) Fee \$2.00: All students pay this fee to assist in the operation of the beverage container recycling program at the U of M and with promotion and education related to environmental awareness.

World University Services of Canada Fee \$0.50: All students pay to support the efforts WUSC to bring refugee students to the U of M.

World Wise \$0.50: All students pay this fee to support student exchange / study programs.

UMSU Annex Building Fee \$0.50 / credit hour - max. 22 credit hours: A \$0.50 per credit hour per student to a maximum of 22 credit hours per student for all students to allow UMSU to build an additional new space in the Helen Glass Building for Nursing erected in 1998.

UMSU Health & Dental Plan

\$197.00: Full-time graduate and undergraduate students (enrolled in 18 credit hours or more) are automatically members of UMSU's Health & Dental Plan. The fee schedule is:

Health - \$85,
Dental - \$107,
Administration - \$5

Students who choose to and can show evidence of existing coverage, may opt out of either or both plans and will have their student record amended. The administration fee will be used to cover the costs associated with the plan and includes such items as office space, staffing and opt-out administration. Details of the plan and opt-out deadlines are available online and at the UMSU Health and Dental Office in 110 University Centre (474-6666).

SECTION 8: Office of the Ombudsman

Ombudsman: Evelyn Bernstein

406 University Centre

Telephone: (204) 474-8439 Fax: (204) 474-7526

www.umanitoba.ca/staff/ombudsman

The Ombudsman is a designated neutral person who provides confidential and informal assistance for resolving university-related concerns, especially those that are not being adequately addressed through usual procedures. The Ombudsman is independent of the University's formal administrative structure and will consider all sides of an issue in an impartial and objective manner. The Ombudsman cannot impose solutions, but will identify options and strategies for resolution. The Ombudsman also has the power to conduct investigations, and to make recommendations with regard to policies, procedures, or other systemic issues.

When should you go to the Ombudsman?

When you have a situation requiring help in communication or negotiation with faculty, staff, or others.

When you are unsure which policies, procedures, or regulations apply in your situation.

When you feel a policy, procedure, or regulation has been unfairly or erroneously applied to you.

When you have a complaint about an office or a service at the University of Manitoba.

When you want to discuss a sensitive issue in confidence.

When you are uncertain of where to go or what options are available to you.

University of Manitoba Libraries

General Office

Libraries – Director's Office, 156 Elizabeth Dafoe Library

Telephone: (204) 474 9881

Fax: (204) 474 7583

Taped recording of hours for all Libraries: 474 9770

Website: www.umanitoba.ca/libraries/

Director: Carolynne Presser

E-mail: carolynne_presser@umanitoba.ca

Chapter Contents

SECTION 1: Introduction

SECTION 2: Using the Libraries

SECTION 3: University Libraries - Resources and Locations

SECTION 1: Introduction

The Libraries, as an essential partner in the mission of the University of Manitoba, provides access to knowledge in support of the university's teaching, research, and community service programs. Its vision is to be recognized as an essential resource of information within the University and the Province of Manitoba, providing a learning environment which fosters scholarship, creativity, and skill-based learning.

The Libraries' collections have been intertwined with the history of the university since its beginning. The first gift of 4,958 books to the University of Manitoba came in 1883 from Alexander Kennedy Isbister. Over one hundred years later, the Libraries' system continues to maintain and preserve noteworthy collections. It offers students, faculty, staff, and Manitobans access to more than two million books and bound periodicals, a rapidly expanding system of networked databases and full text electronic resources, and a variety of other materials such as audiotapes, videotapes, phonorecords, slides, product catalogues, sheet maps, and microforms.

The University of Manitoba Libraries consists of nine unit libraries and eleven satellite information centres located on the Fort Garry and Bannatyne Campuses and at the Concordia, Grace General, Seven Oaks General, St. Boniface General and Victoria General Hospitals, the J.W. Crane Memorial Library, and Misericordia Health Centre Library.

Academic Librarians

Director of Libraries

Presser, C., (A.B. (Hunter College), M.L.S. (Pratt).

Associate Director, Collections

Breyfogle, D.H., B.A.(Hons.) (Winnipeg), M.L.S. (Toronto), M.A. (Manitoba).

Associate Director, Information Services and Systems

Miller, S.R., B.Sc.(Hons.) (UBC), M.Sc. (London).

Information Literacy Coordinator

Braaksmas, E., B.A.(Hons) (Brock), M.L.S. (Toronto).

Libraries Electronic Technologies and Services (LETS),

BISON Coordinator

Nicholls, P., B.A.(Hons.) (Waterloo), M.A., M.L.S. (Western)

Libraries Systems Librarian, LETS

(vacant)

Collections Management, Coordinator

Horner, J.C., B.A.(Hons.), M.A. (Manitoba), M.L.S. (Toronto).

Preservation Librarian

Lewis, G., B.A., M.A. (Manitoba), M.S.L.S. (Syracuse).

Collections Librarian

Barrett, P., B.A. (Winnipeg), M.I.St. (Toronto).

Bibliographic Control, Head

Partington, L.E., B.A. (Manitoba), M.L.S. (Toronto).

Cataloguers

Bone, C., B.A. (Manitoba), M.L.I.S. (Dalhousie); Gray, M.E., B.A. (Saskatchewan), B.L.S. (UBC), M.L.S. (Toronto), M.A. (Manitoba); O'Hara, L., B.A. (Manitoba), M.L.S. (Toronto); Talbot, G.O., B.A., M.L.S. (Oklahoma).

SECTION 2: Using the Libraries

Assistance in using the Libraries' resources is available at all libraries and information centres throughout the university. These resources include BISON (the online public catalogue), NETDOC (Networked Databases), the general collections, periodical and bibliographical indexes and abstracts, government publications, microforms, etc. BISON may be accessed from terminals in the Libraries, as well as from computer workstations throughout the university, and from off campus by 24-hour dial-in access via UMinet. Many library services are available electronically through the Libraries' web site or UMinfo, the university's campus-wide information system.

Computerized bibliographic search services and CD-ROM databases are available in most library units. Access to equipment and services for students with disabilities is also available.

Distance Education students are provided with document delivery services and other library services primarily through the Elizabeth Dafoe Library, the D.S. Woods Education Library, and the Neil John Maclean Health Sciences Library.

Students are bound by the Libraries' policies, copies of which are available at the circulation desks in all unit libraries.

Library Cards

The Photo ID card issued by Registrar's Registrar's to students is required for library privileges, and the cards are **not** transferable. Students are responsible for all items charged to the Photo ID. Adult residents of Manitoba may become borrowers for an annual fee of \$50. The fee for university Alumni is \$25.

Library Notices and Fines

Loan periods and the number of items that may be borrowed will vary depending on the library used. Fines are imposed on overdue material and charges are levied for damaged or lost items. Library notices regarding overdue items and holds are sent *only by e-mail*. The Libraries will endeavour to telephone borrowers when an item has been recalled and the due date has been changed.

Library Security and Damage

An electronic security system is in operation at all library exits to detect material that is not properly charged out to a borrower. The turnstile will lock and sound an alarm when it detects material that has not been charged out and will remain so until the reason for the alarm has been determined and

remedied. The university reserves the right to examine an individual's personal possessions and record the individual's name and student ID number in such an instance.

The university considers mutilation or theft of library materials to be a serious offence and offenders will be subject to penalties sanctioned by the director of Libraries and the president of the university. Although book return bins are provided for the convenience of borrowers when libraries are closed, the Libraries assumes no responsibility for loss or mutilation of any library material returned through the book bins.

Reciprocal Borrowing Privileges

The Libraries takes part in reciprocal borrowing programs that provide borrowing privileges at other academic libraries for students and faculty. For information, contact the Libraries – Director's office at (204) 474 9881.

Document Delivery

The Libraries will attempt to obtain articles or request interlibrary loans for books and scholarly materials not held in its own collections. The service is free, thanks to federal funding through an Indirect Costs of Research grant. Orders by fax, e-mail or Web forms are preferred. Information on these services is available at all circulation desks.

Photocopying

Photocopy machines, which take coins or vendacards, are available in all libraries. Vendacards can be purchased at most libraries.

Laser Printing

At a charge of 10 cents per page, laser printing is available in all libraries on the Fort Garry and Bannatyne campuses, and the library at St. Boniface General Hospital. Colour printing is available at \$1.00 per page at the Technology Resource Centre in the Elizabeth Dafoe Library. Word processing and laser printing for theses, resumes, term papers, graphs, and spread sheets are offered from computer labs in the following libraries: Elizabeth Dafoe, D.S. Woods Education, E.K. Williams Law, William R. Newman Agriculture, Neil John Maclean Health Sciences, and Sciences and Technology.

Copyright Warning

• Duplication of copyrighted material is governed by the *Copyright Act*, (RSC 1985, c.C-42 as amended), and by the terms of a license between the University of Manitoba and the Canadian Copyright Licensing Agency (Access Copyright). Unless prior written permission has been obtained from the copyright owner, the use of photocopy machines to make any copy which contravenes *The Canadian Copyright Act*, or the provisions of the license between the university and Access Copyright, is strictly forbidden.

• Access Photocopy has granted the university a license which permits making copies of published works for use by students, and academic and administrative staff, provided:

• the published work is not on the Access Copyright exclusions list (see circulation desk of libraries, general offices of faculties/schools, UMinfo online); and

• the following copying limits are observed:

• Copying shall not exceed 10 per cent of a published work (15 per cent where the copies are made for the purpose of resale) or the following, whichever is greater:

- an entire newspaper article or page;
- an entire single short story, play, poem, essay or article from a book or periodical issue containing the works;
- an entire single item of print music from a book or periodical issue containing other kinds of work;
- an entire entry from an encyclopedia, dictionary, annotated bibliography or similar reference work;
- an entire reproduction of an artistic work (including drawing, sculpture, painting, prints, architectural works or art, or works of artistic craftsmanship) from a book or periodical issue containing other works;
- an entire chapter which is 20 percent or less of a book.

If there is doubt as to the copyright status of the material to be copied, further information is available from the brochure *Copying Right*, available at all circulation desks, or by calling the university's copyright information number at (204) 474 7499. Copyright information is also available online from UMinfo.

SECTION 3: University Libraries Resources and Locations

Albert D. Cohen Library (Management)

208 Drake Centre; telephone: (204) 474 8440

This library consists of materials on accounting and finance, actuarial and management sciences, business administration, and marketing. Its specialized collection includes company annual reports, trade directories, and investment and marketing update services. ABI Power Pages, a full image/text management journal database, is also available from the library. The library's reserve collection is now partially available on the World Wide Web.

Academic Librarians

Head

Felbel, D.T., B.A.(Hons.) (Manitoba), M.L.S. (Western).

Reference

Dakshinamurti, G., B.A., M.A. (Madras), M.L.S. (CUNY), Ph.D. (Manitoba).

Architecture and Fine Arts Library

John A. Russell Building; telephone: (204) 474 9216

This library contains resources on architecture, fine arts, landscape architecture, environmental design, city and regional planning, facility management, interior design, and photography. Library holdings include a vertical file, art reproductions, maps and architectural drawings, selected government publications, and the slide collection of more than 100,000 images.

Academic Librarians

Head

Lochhead, M.E., B.A.(Mount Allison), M.L.S.(Alberta).

Reference

Valmestad, L., B.F.A. (Saskatchewan), M.A. (Queen's), M.L.I.S. (Western).

Archives & Special Collections

331 Dafoe Library; telephone: (204) 474 9986

This department of the library supports the university's courses, programs and research with a wide-ranging archival collection, including Canadian prairie literary manuscripts, the archives of the agricultural experience, the *Winnipeg Tribune* photographs and clippings, as well as the university's own archives. The department contains rare books and an extensive photography and sound and moving image collection. It also coordinates the application of the Freedom of Information and Protection of Privacy Act (FIPPA) and the Protection of Health Information Act (PHIA) for the university. Applications for access are available at the archives office.

Academic Librarians

Archives and Special Collections, University Archivist and Head

Sweeney, S., B.A., M.A. (UBC), Ph.D. (Texas).

Acquisitions and Access Archivist

Hubner, B., B.A., M.A. (Saskatchewan), M.A. (Manitoba).

Rare Books Cataloguer

Divay, G., B.A., M.A., Ph.D. (Laval), M.L.S. (McGill), M.A. (Manitoba).

Carolyn Sifton-Helene Fuld Library

409 Taché Avenue; telephone (204) 237 2807

The Carolyn Sifton-Helene Fuld Library at the St. Boniface General Hospital is a satellite information centre of the Neil John Maclean Health Sciences Library. It provides health sciences information resources to support patient care, education, management, research, and outreach services to staff and students at the hospital. The collection includes reference material, about 400 current periodical subscriptions, and an extensive monograph collection.

Academic Librarian

Head

Rabnett, M., B.A.(Hons.), M.L.S. (Toronto).

Concordia Hospital Library

Room 308, 1095 Concordia Ave., R2K 3S8; telephone (204) 661 7163

This library at the Concordia Hospital is a satellite information centre of the Neil John Maclean Health Sciences Library. It provides health sciences information resources to support patient care education, management, research and outreach services to staff and students at the hospital.

Academic Librarian

Raynard, M., B.A. (Winnipeg), M.L.S. (McGill).

D.S. Woods Education Library

100 Education Building; telephone: (204) 474 9976

This library features special collections, including the instructional materials collection (K-12 textbooks and audiovisual teaching aids), child and adolescent literature collections, the history of education in Manitoba archives, and current education periodicals. General collections in child development, education, and higher education are housed in the Elizabeth Dafoe Library. The library has a computer lab with a total of 15 computers for student use.

Academic Librarian

Head

Aho, V., B.Ed. (Calgary), Pre-M.Ed. (Manitoba), M.L.I.S. (UBC).

Donald W. Craik Engineering Library

351 Engineering Building; telephone: (204) 474 6360

The reference, reserve, engineering standards, and electronic information collections enable this library to serve as the primary source of engineering information of engineering students and practising professionals in the province. Additional engineering resources are held in the Sciences and Technology Library.

Academic Librarians

Godavari, S.N., B.A. (Winnipeg), B.L.S. (UBC).

Elizabeth Dafoe Library

25 Chancellors Circle, telephone: (204) 474 9544

The Elizabeth Dafoe Library is considered the main university library. It serves the faculties of Arts, Education, Human Ecology, Nursing, Physical Education and Recreation Studies, Social Work, and the Natural Resources Institute. Its holdings include books and periodicals as well as government publications, microforms, sheet maps and varied audiovisual materials. The Icelandic and Slavic collections, as well as archival and manuscript materials relating to Western agricultural history and prairie literature, are of special interest. Data Resource and Geographical Information Systems (GIS) services are offered at this library. The library has wireless access, a computer lab and a Technology Resource Centre with a total of 32 computers for student use.

Academic Librarians

Head

Michaud-Ostryk, N.R., B.A. (Collège universitaire de Saint-Boniface), M.L.S. (Montreal), M.A. (Manitoba).

Reference Head

Blanchard, J., B.A. (Brandon), M.A. (Manitoba), M.L.I.S. (Western).

Reference Librarians

Andrich, S.E., B.A. (Manitoba), B.A.(Hons.) (Winnipeg), M.L.S. (Western); Budnick, C., B.A. (Manitoba), B.L.S. (UBC), M.A. (Manitoba); Ellis, R., B.A. (Windsor), B.L.S. (Toronto), M.A. (Oregon); Johnson, J., B.A. (UBC), M.L.S. (UBC); Laliberte, L., B.A.(Hons.), (Guelph), M.L.I.S. (Western), Larimer, H.C., B.S. (Western Kentucky), M.L.S. (Pittsburgh); Steer, C.E., B.A., B.L.S. (Alberta), B.F.A.(Hons.), M.A. (Manitoba); Strike, G.W., B.Sc., B.A. (Winnipeg), M.L.I.S. (McGill); Yoshida, A., B.A., M.L.S. (Toronto).

Off Campus Librarian, Continuing Education

Ford, L., B.A. (Adv.), M.A. (Manitoba), M.L.I.S. (Alberta).

Icelandic Collection, Head

Johnson, J.S., B.A. (Manitoba), B.L.S. (Alberta).

Slavic Collection

Kominowski, J., B.A., M.A. (Manitoba), M.L.I.S. (Western).

E.K. Williams Law Library

401 Robson Hall; telephone: (204) 474 9995

This collection is comprised of legal textbooks, case reports, statutes, periodicals, and related government publications from Canada, the United Kingdom, other commonwealth countries, and the United States. The library has wireless access for student use.

Academic Librarians

Head

Eaton, J., B.A.(Hons.) (Victoria), LL.B. (Toronto), M.L.S. (Maryland).

Reference

St. John, M., B.A. (Prince Edward Island), B.Ed., B.L.S., (Ottawa).

Technical Services

Sirko, A., B.A., M.A. (Carleton), M.L.S. (Western).

Eckhardt-Gramatté Music Library

223/4 Music Building; telephone (204) 474 9567

In addition to books and periodicals, the Music library is home to an extensive collection of music scores, performance music, phonorecords, compact discs, audio tapes, and video cassettes.

Academic Librarian

Simosko, V.N., B.A., M.L.S. (Rutgers).

Father Harold Drake Library

119 St. Paul's College; telephone: (204) 474 8585

The college library gives special attention to philosophy, Catholic theology, English literature, Canadian history, and medieval history. The library supports the Arts and Science courses taught by the college, as well as its Catholic studies and Christian ministries programs.

Academic Librarian

Head

Lewis, G., B.A., M.A. (Manitoba), M.S.L.S. (Syracuse).

Grace General Hospital Library

300 Booth Drive, R3J 3M7; telephone (204) 837 0127

This library at the Grace General Hospital is a satellite information centre of the Neil John Maclean Health Sciences Library. It provides health sciences information resources to support patient care education, management, research and outreach services to staff and students at the hospital.

Academic Librarian

Demczuk, L., B.A. (Guelph), M.A., M.L.S. (Toronto).

J.W. Crane Memorial Library

Deer Lodge Centre, 2109 Portage Ave., R3J 0L3; telephone (204) 831 2107

This library at the Deer Lodge Centre is a satellite information centre of the Neil John Maclean Health Sciences Library. It provides health sciences information resources to support patient care education, management, research and outreach services to staff and students at the hospital.

Acting Academic Librarian

Gottschalk, T., B.A. (Alberta), M.L.S. (Illinois).

Misericordia Health Centre Library

99 Cornish Ave., R3C 1A2; telephone (204) 788 8109

This library at the Misericordia Health Centre is a satellite information centre of the Neil John Maclean Health Sciences Library. It provides health sciences information resources to support patient care education, management, research and outreach services to staff and students at the hospital.

Academic Librarian

Osterreicher, A., B.Sc. (Toronto), M.L.S. (Toronto).

Neil John Maclean Health Sciences Library

Brodie Centre, Bannatyne Campus; telephone: (204) 789 3464

This library supports the teaching, research and patient care requirements of Medicine, Dentistry, Dental Hygiene, and Medical Rehabilitation. It also serves health care professionals at the teaching hospitals in Winnipeg and throughout the province. Its holdings include clinical and basic science books and periodicals, audiovisual and electronic media, as well as a small but valuable collection of medical classics in the Ross Mitchell Rare Book Room. There are also two learning resource centres and approximately 60 computer workstations, and wireless access for student use.

Academic Librarians

Head, Health Sciences Librarians

Ducas, A.M., B.A.(Hons.) (Montreal), M.L.S. (McGill).

Aboriginal Health Librarian

Linton, J., B.A. (Trent), M.L.I.S. (UBC).

Resources Development Librarian

Cooke, C.A., B.A. (Toronto), M.L.I.S. (Western).

HSC Hospital Librarian

Giles-Smith, L., B.A.(Hons.) (Memorial), M.L.I.S. (Alberta).

Education Services Librarian

Hodgson, A., B.Sc., M.L.I.S. (Western);

Outreach Librarian

Chan, A, B.A. (Manitoba), M.L.S. (Emporia).

Medical Rehabilitation Librarian

Loewen, H., B.A. (Concordia), M.L.I.S. (Missouri)

Neilson Dental Librarian

Thornton-Trump, A.L., B.A. (Manitoba), M.L.S. (Missouri).

Information Technology Librarian

Tennenhouse, M., B.Sc.(Hons.) (Manitoba), M.L.S. (Alberta).

St. John's College Library

321 St. John's College; telephone: (204) 474 8542

The library supports the college's undergraduate curriculum. Library holdings are strong in Anglican church theology and history, Old and New Testament studies, pastoral theology, and Canadian studies (history, political studies, English and French-Canadian literature).

Academic Librarian

Head

Ellis, R., B.A. (Windsor), B.L.S. (Toronto), M.A. (Oregon).

Sciences and Technology Library

211 Machray Hall; telephone: (204) 474 9281

This multi-disciplinary library serves the faculties of Science, Pharmacy, Agricultural and Food Sciences and Engineering. The library includes materials in the natural and biological sciences, all areas of mathematics and statistics, computer science, pharmacy, agricultural economics, animal science, entomology, food science, plant science, soil science, and all engineering disciplines. The library has wireless access for student use.

Academic Librarians

Head

Harper, J.A., B.Sc.(Hons.) (Trent), M.L.S. (Western).

Reference

Poluha, W.A., B.Sc. (Winnipeg), M.Sc. (McMaster), M.L.I.S. (Western); Schultz, R., B.Sc. (Manitoba), M.L.I.S. (Western); Speare, M., B.A. (Brandon), B.Sc. (Manitoba), M.L.S. (Dalhousie), Sutherland, J., B.Sc., M.Sc. (Saskatchewan), M.L.I.S. (Western).

Seven Oaks General Hospital Library

2300 McPhillips St., R2V 3M3; telephone (204) 632 3107

This library at the Seven Oaks General Hospital is a satellite information centre of the Neil John Maclean Health Sciences Library. It provides health sciences information resources to support patient care education, management, research and outreach services to staff and students at the hospital.

Academic Librarian

Cohen Baker, A., B.A. (Manitoba), M.L.S. (Emporia State)

Victoria General Hospital Library

2340 Pembina Highway, R3T 2E8; telephone (204) 477 3307

This library at the Victoria General Hospital is a satellite information centre of the Neil John Maclean Health Sciences Library. It provides health sciences information resources to support patient care education, management, research and outreach services to staff and students at the hospital.

Academic Librarian

Shaw-Daigle, C., B.A. (Manitoba), M.L.S. (Emporia State, Kansas).

William R. Newman Library (Agriculture)

236 Agriculture Building; telephone (204) 474 8382

This library is an electronic information resource centre with a small physical collection that includes reserve material, reference material, and the latest two years of current agricultural periodicals. The library's computer resources give patrons access to agricultural databases, Internet home pages, and other electronic information resources. Other agriculture resources are held in the Sciences and Technology Library.

Academic Librarian

Gregg, M., B.A. (Michigan), M.L.I.S. (Western).

University of Manitoba Colleges

SECTION 1: St. Andrew's College

General Office

29 Dysart Road, Winnipeg, MB R3T 2M7

Telephone: (204) 474-8895

Fax: (204) 474-7624

Email: St_Andrews@umanitoba.ca

Website: www.umanitoba.ca/colleges/st_andrews

Acting Principal: Father Roman Bozyk

1.1 The History of St Andrew's College

St. Andrew's College in Winnipeg, affiliated with the University of Manitoba, is a Ukrainian Canadian academic institution sponsored by the Ukrainian Orthodox Church of Canada. The College in Winnipeg traces its beginnings to the Ukrainian Greek Orthodox Seminary which was established in Winnipeg in 1932. Previously, pastoral courses in Theology had been conducted in Saskatoon and Regina since 1918.

The concrete plan for the establishment of a College, a higher institution of learning, was presented to and approved by the Clergy Conference of the Ukrainian Greek-Orthodox Church of Canada on June 25, 1943. Subsequently, St. Andrew's College was incorporated under its charter in September 1946 on the premises of the former St. John's College (Anglican) on Church Avenue in Winnipeg.

In 1960, negotiations were initiated with the University of Manitoba, culminating on June 14, 1962 when St. Andrew's College became an associated College with the University. Construction of the building was completed in the spring of 1964.

1.2 Religious Affiliation

St Andrew's College welcomes all qualified students who are attracted to the setting of a small college with special emphasis on the Ukrainian Canadian heritage and the Orthodox Christian faith.

1.3 College Membership

Students who are registered at the University of Manitoba in any faculty (Arts, Engineering, etc.), or any program of studies both undergraduate and graduate have the option of joining a college and being a college member. On the University registration form to become a member of St. Andrew's College, the student simply selects code 08 as the college of membership. Our students who live in residence are required to be code 08 students, but both day students and residents can be members of St. Andrew's College. Membership is not restricted to residence students. There is no additional cost involved.

1.4 Benefits of Membership

St. Andrew's College is a small warm community which provides a Ukrainian Orthodox environment. Our students have an opportunity to learn about their Ukrainian heritage, worship in our chapel, deepen their faith and participate in our Ukrainian cultural program. All students have access to our chaplain and participation in a full cycle of Ukrainian Orthodox liturgical services throughout the academic year.

St. Andrew's College is home to the Centre for Ukrainian Canadian Studies. The Centre provides undergraduate courses and interdisciplinary programs of study in areas relating to Ukraine and to the life of Ukrainians in Canada. The Centre also encourages and promotes research and scholarship in all areas relating to Ukrainian Canadian Heritage Studies.

St. Andrew's College offers programs of study in the Faculty of Theology which, along with the Centre for Ukrainian Canadian studies, constitute the heart of the Institution's endeavours.

The College Library has over 40,000 volumes in its collection. Through the acquisition of the late Metropolitan Harion (Dr. Ivan Ohienko) Library in 1971, the collection is unique in the field of Ukrainian Studies. It is also well provided in the area of Eastern Christianity. The library offers exceptional resources to both Theology and Arts students.

The College Chapel is the liturgical centre for the Orthodox students on campus. Guests are always cordially welcomed. The Chapel is always open for both personal prayer and individual meditation.

1.5 Academic Programs

The College's academic pursuits entail two areas of study. First, the Faculty of Theology exercises a unique responsibility for the academic preparation of candidates for the priesthood and lay leadership of the Ukrainian Orthodox Church of Canada and other countries and churches. Second, the Centre for Ukrainian Canadian Studies offers programs with a major or minor at the undergraduate level in Ukrainian Canadian Heritage Studies.

1.6 Residence Information

St. Andrew's College also offers residence accommodation for approximately forty students, male and female, enrolled in its programs as well as those of the University of Manitoba. For more information about the Residence, please contact the Housing Officer of St. Andrew's College at (204) 474-8895.

1.7 Contact Information

For more information on the benefits of membership, or on how to register, please contact the General Office.

SECTION 2: St John's College

General Office

92 Dysart Road, Winnipeg MB R3T 2M5

Telephone: (204) 474 8531

Manitoba Toll Free: 1 800 432 1960 ext. 8531

Fax: (204) 474 7610

Email: Stjohns_College@umanitoba.ca.

Website: www.umanitoba.ca/colleges/st_johns

Warden & Vice-Chancellor: Janet Hoskins

Dean of Studies: George Baldwin

Registrar: Erin McShane

Chaplain/Dean of Residence: Paul Lampman

Student Council Office (room 126): (204) 474 9583

2.1 The History of St John's College

St John's College is the oldest Anglophone institution of higher learning in Western Canada and is a founding and affiliated college of the University of Manitoba. The College has its roots in the early days of Manitoba's Red River Settlement and its origins can be traced to the 1820s. The College was officially founded on November 1, 1866 by Bishop Robert Machray

to provide instruction in higher education and training for the ministry in the Anglican tradition. In 1877, St John's joined with St Boniface College and Manitoba College to found the University of Manitoba. In 1958, St John's moved to its present location on the U of M Fort Garry Campus.

2.2 Religious Affiliation

St John's College is affiliated with the Anglican Church of Canada. Students need not be Anglican to join and religious participation is not a necessary requirement of membership. All are welcome to participate in weekly Chapel services and to find spiritual and secular support in the work of the College Chaplain.

2.3 College Membership

St John's College membership is open to all University of Manitoba students.

The College has a yearly membership of approximately 500 students, 100 of whom live in residence, representing a wide variety of faculties and schools, both at the undergraduate and graduate levels.

At St John's, our goal is to create a small community atmosphere in a large university setting. We make the transition into university as comfortable as possible for first-year students and work hard to make university a positive experience for each of our members.

2.4 Benefits of Membership

After you have registered as a member, bring your student card to the General Office for your yearly membership sticker. You can use the sticker to get a 10% discount at the Daily Bread Café, to book empty classrooms in the College, and to get your free lunch at the opening and end of term barbecues.

St John's College offers members the opportunity to participate in a small community on campus, made up of students, Fellows (faculty members), and staff. Members are encouraged to participate in events such as an orientation for new members at the end of August, intramurals, barbecues, socials, formal banquets, and a graduation dinner.

Scholarships and Bursaries: St John's offers its members more than 50 scholarships, bursaries, and prizes totalling over \$75,000 (in 2004). Information on awards, including entrance scholarships, is posted on our website.

Facilities: College facilities include the Daily Bread Café, a Chapel, computer lab, library, classrooms, and a student lounge. Members can rent study carrels and lockers from the student council

2.5 Academic Programs

Students can meet the requirements for University 1 by selecting University of Manitoba courses timetabled at the College and identified in course timetables by the entry "S John" as the location. St John's College has organized several timetables for popular combinations of Arts and

Science courses that are scheduled at the College. One of these is for students interested in applying to professional faculties such as Medicine, Dentistry, or Pharmacy. Contact the College Registrar for more information on these timetables by calling (204) 474-8520.

Students can often select many of their upper-level degree requirements from courses offered within the College.

St John's College is home to the Canadian Studies program at the University, supporting conferences, public lectures, and the Canadian Studies reading room. Many of the courses in the Canadian Studies option are available through the College.

St John's College students who have identified themselves to Aurora Student will have special access to St John's College sections.

2.6 Registering as a Member

You can apply to become a member of St John's College on the University of Manitoba application form, or through the Aurora Student registration system.

A mailout will be sent to new members in the summer, but if you register later in the year, you may not receive it. Please stop by the General Office any time to get a copy of the information.

Unless you change it yourself, the registration system will normally retain your membership until you graduate. However, if you change faculties or make other significant changes to your program, the registration system may remove your membership. Please check at the beginning of each school year to make sure you are still registered.

2.7 Membership Fees

The cost of membership is minimal and is based on your faculty and course load. This fee is assessed at the time of registration and will appear on your fee statement along with your tuition. Fall Term tuition fees are due in September. You can pay the fees at the Cashier's Office in University Centre (or wherever you pay your tuition fees). You cannot pay the fee directly to the College.

2.8 Residence Information

If you are looking for on-campus housing, consider St John's College Residence. Our residence has single rooms for 100 men and women, an excellent meal plan, and very reasonable rates. We pride ourselves on an excellent residence program and an active student body, while maintaining a quiet atmosphere in which to study and live. All residence students are required to be members of St John's College. Visit the College website for more detailed information or to download an application form.

2.9 Contact Information

For more information on the benefits of membership, or on how to register, please contact our General Office.

Section 3: St. Paul's College

General Office

70 Dysart Road, Winnipeg, MB R3T 2M6

Telephone: (204) 474-8575

Fax: (204) 474-7620

Email: stpauls@umanitoba.ca

Website: www.umanitoba.ca/stpauls

Rector: Dr. John Stapleton

Dean of Studies: Dr. Christine Butterill

Information Officer: George Hakim

Director of Chaplaincy: Sr. Elaine Baete, sgm

Student Council Office: (204) 474-9262

3.1 The History of St. Paul's College

St. Paul's College on the University of Manitoba campus is the major Catholic institution of higher education in the Province of Manitoba. In 1926 Archbishop Sinnott helped initiate and open St. Paul's College as the first English Catholic High School for boys in the Province of Manitoba. In 1933, the College became affiliated with the University of Manitoba. At this same time, the Jesuits took direction of the College and in 1958 moved St. Paul's College to the Fort Garry campus where it became co-educational. By 1970, the College's academic programs became fully integrated into the University of Manitoba Curriculum. Presently St. Paul's College is under the direction of the St. Paul's College Corporation and an 18-person board of Governors. The Archbishop of Winnipeg is the College Chancellor and the College continues to value its commitment to be a College in the Ignatian tradition.

3.2 Religious Affiliation

St. Paul's College is a Catholic College in the Ignatian Tradition. Students of all faiths and cultures are encouraged to join and participate in St. Paul's College. All members of our community are welcome to take part in our Sunday/weekday liturgies, and our spiritual, outreach, social, and secular activities sponsored by the College, the Student Council, and the Chaplaincy program.

3.3 College Membership

St. Paul's College membership is open to all University of Manitoba students.

The College has a yearly membership of approximately 1000 students, representing a wide diversity of faculties and schools, at both the undergraduate and graduate levels.

The College serves as a comfortable home base for students as they explore the multitude of opportunities and resources available within both the College and the University of Manitoba. St. Paul's College strives to promote academic excellence, to form mature and responsible citizens, and to represent the Catholic heritage and ideals within the university setting.

3.4 Benefits of Membership

Members of St. Paul's College are offered a variety of services, organized by the College, the Student Council, and the Chaplaincy team. Benefits range from a multitude of services and activities, including support for the spiritual life of the College, student retreats, social events, film and speaker series, intramural sports activities, student day timers, free lockers for members, free courtesy phone in the cafeteria, free student lounge, free BBQ's and pancake breakfasts, graduation dinners, and a small community to get involved in.

Scholarship and Bursaries: St. Paul's College offers its members more than 70 scholarships, bursaries, prizes, and awards totalling over \$65,000 in 2003 for both undergraduate and graduate students. Please visit St. Paul's College or our website for more information www.umanitoba.ca/stpauls

Facilities: College facilities include a cafeteria, SPCSA Student Lounge, computer lab, library, chapel, study carrel rooms, locker area, arcade room, and classrooms.

3.5 Academic Programs

Students of the University of Manitoba can take University courses at the College, in which some space is reserved for College members.

St. Paul's College is also home to the B.A. Minor in Catholic Studies and is developing a Ph.D. program in Peace and Conflict Resolution in its Arthur V. Mauro Centre for Peace and Justice.

3.6 Registering as a Member

Membership at St. Paul's College is open to all students of the University of Manitoba regardless of their chosen field of study or religious persuasion.

To become a member, you select St. Paul's College (Code 04) as your college membership on the University of Manitoba Application for Undergraduate or Graduate Admission or on the Aurora Student registration system. There is a small fee for membership which will be assessed along with your University fees.

Students can become members at any time of the year. A reminder, if you change faculties or make other significant changes to your program, the registration system may unintentionally remove your membership. Please check at the beginning of each school year to make sure you are still registered.

3.8 Contact Information

For more information on benefits, membership, or how to register, please contact:

George Hakim, Information Officer
70 Dysart Road, Winnipeg, MB R3T 2M6
Telephone: (204) 474-8752 Fax: (204) 474-7620
Email: stpauls@umanitoba.ca
Website: www.umanitoba.ca/stpauls

SECTION 4: University College

General Office

203-220 Dysart Road, Winnipeg MB R3T 2M8

Telephone: (204) 474 9751

Fax: (204) 261-0021

Email: ucsecr@cc.manitoba.ca

Website: www.umanitoba.ca/colleges/uc/

4.1 What is University College?

University College is a non-denominational constituent college of the University of Manitoba without religious, ethnic and/or linguistic affiliations or requirements.

Founded in 1964, University College provides a small, friendly environment for study within the larger university setting. The mission of University College, now, as when it was founded, is to provide students from a wide variety of backgrounds a home in which they can grow intellectually as well as socially, by participating with other College members in interesting academic and social pursuits that maximize the benefit they receive as students of the University of Manitoba.

University College is a lively place to meet people and exchange ideas. The College hosts a number of lectures and talks every year, including the Morton Distinguished Lecture. The Black Hole Theatre produces a number of plays throughout the academic year – in the evenings as well as during the day at its Lunch Bagg presentations.

University College also promotes community responsibility through several volunteering programs, including the University College Giving Tree Community Outreach Project which provides Christmas gifts to underprivileged children in the Winnipeg area.

4.2 College Membership

Approximately 500 students are members of University College, including both residence and dayside students.

Membership in University College is free of charge and can be obtained at any time during the year. Students who wish to join can do so on the University of Manitoba application form or through the Aurora Student registration system.

4.2 Benefits of Membership

University College has a residence wing which provides comfortable accommodations for 250 students and which is known for its strong sense of community. Application for rooms may be made through the Housing and Student Life office.

The academic wing of the College includes 16 classrooms and over 60 faculty offices as well as offices for about forty graduate students and organizations. Faculty members from a number of departments and faculties across campus have their offices and offer a number of their courses in the College. Additionally, Classics, Philosophy, Film Studies, Theatre and Drama, Labour and Workplace Studies and Icelandic Studies have their departmental offices in the building.

University College is also home to a number of research centres including the Centre for Defence and Security Studies, the Centre for Professional and Applied Ethics, the Centre for Hellenic Civilization and the Arctic Research Lab.

There is a general purpose Microcomputer Centre with Internet access and printing facilities for student papers. The Department of English also has the Multimedia Lab in the building.

If you are enrolled in astronomy courses, you will be studying at University College's Lockhart Planetarium.

The Junior Common Room is a well-stocked, food service centre with hot and cold meals and a congenial eating area.

The Concourse Lounge is where extracurricular lectures and colloquia are regularly held; students also gather here to talk and relax.

University College hosts the English Language Studies (ELS) which offers instruction in Canadian culture and oral and written English to students from Asia, Europe and South America.

The Playcare Centre, with both indoor and outdoor facilities, provides full day care for pre-school children.

Lockers are provided free of charge to College members.

University College is connected by tunnels to most other buildings on campus.

4.3 Student Assistance

University College offers a number of scholarships and bursaries to College members, including the Irene Anderson and Endowment Fund Scholarships. A number of these provide \$1,000 per award.

4.4 Contact Information

If you require more information, please contact our office by phone, fax or e-mail (numbers are listed at the beginning of this section), or visit or write to University College at 203-220 Dysart Road, Winnipeg, MB R3T 2M8

SECTION 5: St. Boniface College/ Le Collège universitaire de Saint-Boniface

General Office

200 Cathedrale Avenue, Winnipeg, MB R2H 0H7

Registrar's Office Telephone: (204) 235-4408

Email: registrar@ustboniface.mb.ca

Website: www.cusb.ca

5.1 About St. Boniface College

St. Boniface College holds the distinction of being the first university established in Western Canada, incorporated in 1871. The College is easily accessible from downtown Winnipeg, and is situated in the heart of Old St. Boniface.

The College is a francophone institution with all programs and services offered in French.

5.2 Study at the College

The admission procedure to the College is separate from that of the University of Manitoba. Students wishing to complete a program, taught in French, at the College must apply directly to the College. Information about procedures may be found on the website listed above.

A student, admitted to the University of Manitoba, who wishes to take one or more courses at St. Boniface College, will not need a Letter of Permission, but will need to contact a student advisor in his/her home faculty or school as well as the Registrar's Office at the College before registration will be permitted.

5.3 Academic Programs

The College offers degrees in Arts, Business Administration, Science, Education and Translation.

5.4 Services and Facilities

St. Boniface College has a full range of university services including lecture halls, laboratories, a fitness centre, multi-media centre, counselling and support services, cafeteria, library and student council.

5.5 Residence Information

An off-campus residence is available which accommodates up to thirty students. For more information, please contact the College directly.

University 1

University 1 Student Help Centre

205 Tier Building

Telephone: (204) 474 6209

Fax: (204) 474 7659

E-mail: university_1@umanitoba.ca

Website: umanitoba.ca/U1

Director: Christine Blais

Academic Advising Services Coordinator: Michael O'Brien-Moran

Academic Advisors: Christine Adams, Lesley Friesen, Soon Kong, Carla Loewen, Wendy McLean, Karin Nowak-Bailey, Kristin Suffield, Kathy Synkiw, Ashley Tolton

Communication Specialist: Jackie Stoesz

Chapter Contents

SECTION 1: University 1 Overview

- 1.1 Transition to University
- 1.2 The Freedom to Choose
- 1.3 The Student Help Centre
- 1.4 The Learning Assistance Centre

SECTION 2: Admission to University 1

- 2.1 First Year Study in University 1
- 2.2 Admission Based on Manitoba High School
- 2.3 Admission Based on High School in Other Canadian Provinces
- 2.4 Admission Based on International High School
- 2.5 Additional Information for All High School Applicants
- 2.6 Mature Students
- 2.7 Transfer Students

SECTION 3: University 1 Course Requirements

- 3.1 Course Requirements
- 3.2 Transfer to Faculties and Schools Following University 1
- 3.3 University Written English and Mathematics Requirement
- 3.4 Guide to Course Selection
- 3.5 Prerequisites and Corequisites
- 3.6 Courses Available to University 1 Students

SECTION 4: University 1 Regulations

- 4.1 Maximum Course Load
- 4.2 Withdrawal from Courses
- 4.3 Incomplete Term Work
- 4.4 Final Examinations
- 4.5 Missed Examinations
- 4.6 Grade Appeals
- 4.7 Repeating Courses
- 4.8 Laboratory Exemptions
- 4.9 Limited Access
- 4.10 Academic Performance
- 4.11 University 1 Honour List
- 4.12 Challenge for Credit
- 4.13 Taking Courses at Another University

APPENDIX: University 1 Course List

SECTION 1: University 1 Overview

1.1 Transition to University

The concept of “student success” is one of the highest priorities of the University of Manitoba, and University 1 is one of the main contributors to the

fulfilment of this objective. Its three main pillars are academic advising, academic support and orientation. But University 1 is also much more. Built on the premise of “the freedom to choose”, it helps smooth out the normally difficult transition from high school to university. In short, University 1 is designed to give entering students the opportunity to adjust to university life and its academic demands, explore options, and gain experience before they make definitive decisions on their academic and career goals. Through one-on-one and group academic advising and programming, University 1 provides entering students with the opportunity and information to make informed choices.

1.2 The Freedom to Choose

University 1 is an approach to first year university education that provides students with choice and flexibility within an environment that allows them to achieve their educational objectives. University 1 students can take courses required for admission to one or more faculty or school and, at the same time, sample courses related to several disciplines or programs. At the end of University 1, students should be eligible to apply for admission to their faculty, school or professional program of choice.

Three Approaches to Course Selection

Students with clear academic and career choices can base University 1 course choices on the *Focused Approach*, a full-course load that allows students to complete their programs in the shortest time. Students trying to decide between two or more programs may base their University 1 course choices on the *Balanced Approach*, where entrance requirements to more than one faculty can be completed at the same time. The widest exploration of options is found in the *Sampling Approach*, in which students select University 1 courses according to individual interests. Students following this approach may require additional courses to qualify for admission to the target faculty that they choose.

Detailed information on the University 1 course selection approaches is available in the University 1 *STARTbook*. New University 1 students will receive their copy of the *STARTbook* at Start@U1 registration information sessions (see Section 3.4 in this chapter). Returning University 1 students can pick up their copy of the *STARTbook* at the University 1 Student Help Centre in early May.

University 1 offers Start@U1 and Orientation to help students make a successful transition to university and make more informed program choices. Start@U1 registration information sessions are required for all new students. These sessions guide students through the process of course selection and registration. Start@U1 sessions are offered in June and July. Sessions will be offered for late applicants throughout August as required. Start@U1 teaches students what they need to know when choosing courses, planning a timetable and using the Aurora Student registration system (Aurora Student). See Section 3.4 in this chapter for information on Start@U1 for students starting in different terms. University 1 Orientation is the first two days of the Fall Term. University 1 Orientation is also offered one evening in mid-December for students admitted for the Winter Term. University 1 Orientation highlights the range of university services available to new students, and offers workshops to help students make the transition to university. Information concerning Start@U1 and University 1 Orientation will be sent to all University 1 students as appropriate.

1.3 The Student Help Centre

The Advisors at University 1 help students become actively responsible for their education. Students are expected, among other things, to choose courses according to program requirements, build a timetable, register using Aurora Student, attend classes, complete assignments on time, be aware of deadlines and have a social life. Should difficulties arise in any area that would affect academic success the Advisors at the University 1 Student Help Centre are there to help ease the transition.

Academic Advisors are available to assist students with program planning, registration difficulties, personal issues or concerns, and to connect them to other campus resources. Students are seen on a drop-in basis throughout the year in the University 1 Student Help Centre, 205 Tier Building. Newly admitted students should attend a Start@U1 registration information ses-

sion (see Section 3.4 in this chapter) prior to consulting with a University 1 Academic Advisor.

1.4 The Learning Assistance Centre

201 Tier Building

Telephone: (204) 480-1481

Website: www.umanitoba.ca/U1/lac

The Learning Assistance Centre (LAC) offers academic support to University of Manitoba students to facilitate learning and improve writing skills. Areas of support include time management, goal setting, textbook reading, note taking, preparing for multiple choice and essay exams, motivation, memory and concentration as well as writing papers.

Workshops

Free, 50-minute study skills and writing workshops are offered throughout the year on a variety of topics. View the updated schedule and brief descriptions on the LAC website.

One-to-One

Drop by to meet with a learning specialist or tutor for help with study skills, learning, memory, and reading issues, or writing. Our staff is available Monday to Friday by appointment and drop-in. See the LAC website for current hours.

Writing Tutor Program

Peer tutors work with students in the Elizabeth Dafoe Library's reference section. Tutors assist students on a variety of writing related issues during the academic year.

Web Resources

The LAC website is continually growing. In addition to updated information about LAC hours, the writing tutor program, and workshops, you can:

Print handouts available in pdf format that provide tips on writing, learning, and studying.

Access related websites including University of Manitoba resources and other university links providing useful help with time management, test anxiety, writing various types of papers, grammar etc.

Blog with the LAC! Find out what topics are hot with students and what exactly terms like "critical reading" and "bibliography" mean.

The LAC also provides writing support online. Submit your written work with questions, and our Online Tutor will provide a written response via email.

SECTION 2: Admission to University 1

2.1 First Year Study in University 1

University 1 is the first 30 credit hours of most University of Manitoba programs, and depending on choice of target faculty, may be completed through either full-time or part-time study. Most high school graduates, mature students, and transfer students with less than 24 credit hours are admitted to University 1. Exceptions are students admitted to the School of Art (Studio programs), the Faculty of Music, the School of Agriculture (the Agriculture Diploma program), and students who qualify for direct entry to the Faculty of Engineering. The courses taken in University 1 are introductory university level courses that may qualify students to enter the target faculty of their choice. When students have completed 30 credit hours in University 1, they must transit to the Faculty of Arts or the Faculty of Science or apply to another faculty or school where they complete its program requirements in order to graduate. (See Section 3.2 in this chapter).

2.2 Admission Based on Manitoba High School

Manitoba high school graduates must meet the University of Manitoba general entrance requirements with five credits at the Senior 4 level (covering four different subject areas), including three subjects at the 40S level from the list of 40S subjects approved for selection (see Section 3.1 in the Admissions chapter of this *Calendar*, for the complete list).

In addition, students must meet Option 1, Option 2 or Option 3 as outlined below:

Option 1:

Two credits in English/Anglais 40S (minimum 60 per cent), or one credit in English/Anglais 40S (minimum 60 per cent) and one credit in French/Français 40S (minimum 60 per cent), AND one credit in Pre-Calculus or Applied Mathematics 40S, or Consumer Mathematics V and VI 45S. A selection average of 63 per cent is required based upon the three highest grades attained in subjects included on the approved list in Section 3.1 in the Admissions chapter of this *Calendar*.

or

Option 2:

One credit in English/Anglais 40S (minimum 60 per cent), or one credit in French/Français 40S (minimum 60 per cent), AND Pre-Calculus Mathematics 40S (minimum 60 per cent). A selection average of 63 per cent is required based upon the three highest grades attained in subjects included on the approved list in Section 3.1 in the Admissions chapter of this *Calendar*.

or

Option 3:

Have a standing of 80 per cent or higher in three different 40S courses chosen from three of the following five subject areas:

Area 1: English/Anglais or French/Français 40S

Area 2: Pre-Calculus Mathematics 40S

Area 3: Science 40S (Biology, Chemistry, or Physics)

Area 4: Humanities or Social Science 40S (Geography, History, Social Studies, a 40S language, or a 41G Canadian Aboriginal language)

Area 5: Art 40S, Music 40S, or any other course from the approved list in Section 3.1 in the Admissions chapter of this *Calendar* except for Consumer Mathematics 45S and language courses.

Note: 42S credits granted for IB (Higher Level) or AP can be substituted for the 40S courses listed in the five areas in Option 3. With Senate approval 42U credits can also be used.

Option 4:

You must meet one of the following descriptions:

a) you have a high school average of 63-69% and meet the English and Mathematics requirements of either Option 1 or 2, or

b) you have a high school average of 70% or higher but are missing one or more of the English and mathematics requirements of either Option 1 or 2.

Note:

i) The average for admission will be calculated over three different subjects from the list of 'Academic Subjects Approved for Selection.'

ii) Admission under Option 4 is considered a limited admission to University 1; some registration restrictions and performance standards will apply, and additional academic supports and services will be provided.

2.3 Admission Based on High School in Other Canadian Provinces

All applicants applying with credentials from other Canadian provinces must meet the general entrance requirements as listed in Section 3.2.1, in the Admissions chapter of this *Calendar*. To qualify for University 1 they must also meet the requirements outlined below. Within the requirements outlined below students require a minimum of 60 per cent in their Grade 12 English or French credit and a minimum of 50 per cent in their Grade 12 Mathematics credit, with the exception of applicants from Ontario (see below for details).

Alberta, New Brunswick, Newfoundland, Northwest Territories, Nova Scotia, Nunavut, Prince Edward Island: Completion of Grade 12 in a university entrance program with an overall average of 70 per cent or better including Grade 12 Mathematics and Grade 12 English or French.

British Columbia, Yukon Territory: Completion of Grade 12 in a university entrance program with an overall average of 70 or better including Grade 12 Mathematics and Grade 12 English or French.

Saskatchewan: Completion of Grade 12 in a university entrance program with an overall average of 70 per cent or better including Grade 12 Mathematics and Grade 12 English or French.

Quebec: Completion of first year CEGEP with an overall average of 70 per cent or better including CEGEP Mathematics and CEGEP English or French.

Ontario: Completion of six Grade 12U or 12M courses, and either Option 1 or Option 2 outlined below:

Option 1:

English (or French) 12U with a minimum 60%, AND
One 12U, 12C or 11U Math
70% average over the top six Grade 12U or 12M courses

or

Option 2:

Six 12U or 12M courses with a minimum 80% in three different 12U or 12M courses chosen from three of the following five subject areas:

Area 1: English or French

Area 2: Mathematics

Area 3: Science

Area 4: Humanities or Social Science (Geography, History, Social Studies, or a language)

Area 5: Fine Art, Music, or any other non-language

Or completion of six OACs with an overall average of 70 per cent or better including OAC Mathematics and OAC English or French.

Note: Students may be eligible for a limited admission to University 1 if they meet the following:

a) have a high school average of 63-69% (65% from Saskatchewan and Quebec) and meet the English and mathematics requirement, OR

b) have a high school average of 70% or higher but are missing one or more of the English and mathematics requirements.

2.4 Admission Based on International High School

All applicants applying with credentials from outside Canada must meet the equivalent of the general entrance requirements as listed in Section 3.2.3, in the Admissions chapter in *Part 1* of this calendar, plus any one of the following options outlined below:

Option 1: Senior-level English and Math and a minimum 70% (B) overall average.

Option 2: Honours standing (80% or A) in senior-level courses in three of the following five subject areas: English or French; Math; Science; Humanities or Social Sciences; any non-language area.

Option 3: Senior-level English and Math and an overall average 63-69% (C+).

Option 4: A minimum of 70% (B) average but lacking English and/or mathematics.

Note: Admission under Option 3 or 4 is considered a limited admission to University 1. Some registration restrictions and performance standards will apply, and additional academic supports and services will be provided.

2.5 Additional Information for High School Applicants

The courses listed in Section 2.2 and 2.3 of this chapter are required for admission to University 1. Some introductory university courses require specific high school courses as prerequisites, which are specified in the course descriptions of this *Calendar*.

English 40G, core, is considered equivalent to English 40S for selection purposes.

Courses completed in Advanced Placement and International Baccalaureate programs are considered as 40S level courses for admission and selection purposes and may be eligible for transfer credit. See Section 3.3 of the Admissions chapter of this *Calendar* for more details.

Manitoba and Northwest Ontario (Thunder Bay and west) students will be selected on the basis of an average calculated on the best three different courses from the approved list as specified in Section 3.1 in the Admissions chapter in *Part 1* of this calendar. Although the remaining required courses will not be used in the computation of the average, each must bear at least a passing grade.

Applicants presenting academic records from other provinces or countries will be selected on the basis of an average calculated from their entire high school graduating year, or as specified under the section Certificates Equiv-

alent to Manitoba High School Standing in Section 3.2 in the Admissions chapter in *Part 1* of this calendar.

2.6 Mature Students

Students who are at least 21 years of age (before May 1 for admission to Summer Term 1; before July 1 for admission to Summer Term 2; before September 30 for admission to Fall Term; and before January 31 for admission to Winter Term), who do not meet the high school or transfer requirements, and are Canadian citizens or permanent residents of Canada, may qualify for admission as mature students. Although students admitted in this category are not required to have specific courses for admission, they must meet normal course prerequisites, which are listed in the course descriptions in *Part 1* of this calendar. See Section 5.1 in the Admissions chapter in *Part 1* of this calendar for more details on Mature Student Status.

2.7 Transfer Students

Students who have completed less than 24 credit hours of studies at a post-secondary institution will normally be assessed on the basis of their high school record for admission to University 1, and must meet the high school requirements or the mature student requirements listed in Section 2.6 of this chapter. Students who have completed 24 credit hours or more of university level courses at another institution, and students who have completed a two year diploma program at a recognized community or technical college, may apply directly to a faculty or school. See Section 4 of the Admissions chapter in *Part 1* of this calendar for more details.

SECTION 3: University 1 Course Requirements

3.1 Course Requirements

The University 1 curriculum includes a breadth requirement to ensure that students are exposed to a representative sample of courses. To that end University 1 students are governed by the following regulation: students are required to take 6 credit hours of courses from the Faculty of Arts, 6 credit hours of courses from the Faculty of Science, and 6 credit hours of courses from the Faculty of Arts or the Faculty of Science or the Clayton H. Riddell Faculty of Environment, Earth, and Resources and 12 further credit hours of courses from any other faculty or school that are on the list of courses acceptable for credit in University 1. This curriculum will normally be fulfilled through the completion of courses that are required for admission to faculties and schools. Students who are admitted to faculties and schools after University 1 and who have not completed the University 1 curriculum will complete the remaining requirements as part of their degree program. Additionally, students may be eligible to move to a faculty or school program with 24 credit hours, but must complete remaining University 1 coursework in their intended degree program. (See Section 3.2 in this chapter.)

The list of courses available to University 1 students follows in the Appendix at the end of this chapter. With special permission, students may be permitted to take courses not on this list.

Students with less than 24 credit hours remain in University 1 for their next registration and may register for a full course load.

The University 1 *STARTbook* (available at Start@U1) describes the courses and course selection options available to University 1 students. (See Section 3.4 of this chapter.)

3.2 Transfer to Faculties and Schools Following University 1

Target faculties and schools that students may enter after University 1 have established minimum admission or "transit" requirements. It is strongly advised that students pay attention to these requirements when choosing their courses in University 1. Many target faculties and schools have also established a *Focused Approach* for choosing courses in University 1 that will allow students to complete their degree in the shortest possible time.

Target faculties and schools that admit students directly from University 1 require, for admission, the completion of either 24 or 30 credit hours, depending on the program. There are often alternative courses that will fulfil admission requirements and, with careful planning, the University 1 course selection can qualify students for admission to more than one program. The basic course requirements for admission to faculties and pro-

grams after University 1 are summarized in each faculty or school section in *Part 1* of this calendar and in the University 1 *STARTbook*. Detailed information on admission requirements can be found in the *Applicant Information Bulletin* available for each program from the Admissions Office, 424 University Centre.

Students who have completed 30 credit hours or more must exit University 1 before registering in the next Fall/Winter Terms. Students may remain in University 1 for registration in summer courses following the completion of 30 to 51 credit hours. Students who have completed more than 51 credit hours at the end of a Fall/Winter Term must exit University 1 before registering in summer courses. Students who must exit University 1 and do not qualify for admission to their target faculty or school may transit to the Faculty of Arts or the Faculty of Science.

Students who have completed 24 credit hours or more may “transit” to either the Faculty of Arts or the Faculty of Science or may apply for admission to another faculty or school to which they may be eligible. See the admission requirements section in each faculty or school chapter in *Part 1* of this calendar and the *STARTbook*. See the *Part 2* of this calendar for instructions on how to transit. Students may elect to remain in University 1 if they have completed between 24 and 29 credit hours. Students with less than 30 credit hours who remain in University 1 for their next registration may register for a full course load.

Note: School of Art (Studio programs), the Faculty of Music, the School of Agriculture (the Agriculture Diploma program), and the Faculty of Engineering continue to admit students directly from high school, providing specific entrance requirements are met. Students may also apply for admission to these programs from University 1. See the chapters of these faculties and schools in *Part 1* this calendar for program information.

3.3 University Written English and Mathematics Requirement

All students admitted to the University of Manitoba are required to successfully complete, within the first 60 credit hours of their programs, a minimum of one three credit hour course with significant content in written English, and a minimum of one three credit hour course with significant content in mathematics.

Some target faculties and schools require that the written English and mathematics requirements be completed within University 1. Other target faculties and schools may have designated specific written English and mathematics courses in Year 2 of their programs that fulfil this requirement. Students should refer to the admission requirements outlined by individual target faculties in *Part 1* of this calendar and in the *STARTbook* for further information.

A complete list of all courses that satisfy the university written English and mathematics requirements is provided in Appendix A in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar.

3.4 Guide to Course Selection

Start@U1 and the STARTbook

All new University 1 students are **required to attend a Start@U1** registration information session **before registering for courses**. Alternate arrangements will be made for students who live more than 250 km from Winnipeg.

Start@U1 sessions are offered in June and July for students beginning classes in September. Start@U1 details will be mailed in mid-May to all University 1 applicants. Detailed information will also be available online in mid-May at umanitoba.ca/u1. Sessions will be offered for late applicants throughout August as required.

University 1 applicants who plan to begin classes in January will be sent information about Start@U1 sessions offered in the Fall. University 1 students who begin in Summer Term 1 or Summer Term 2 will not be required to attend a Start@U1 session before they register in summer courses, but they will have to attend one of the sessions offered in June or July before they will be able to register for the Fall/Winter Terms.

Course selection information for University 1 students is found in the University 1 *STARTbook*, which is distributed at Start@U1 sessions.

Returning University 1 students may pick up their copy of the *STARTbook* at the University 1 Student Help Centre in early May.

Refer to Section 3.1 in this chapter for course requirements in University 1. Students should choose courses that are appropriate for entry to their desired target faculties or schools. Information about course requirements for each target faculty or school can be found in the admission section in the chapter pertaining to each faculty or school in *Part 1* of this calendar, the *STARTbook*, and in the *Applicant Information Bulletin* available from the Admissions Office, 424 University Centre.

3.5 Prerequisites and Corequisites

Prerequisite: If a course is prerequisite for a second course, the prerequisite must be met in order to begin the second course. To determine a course’s prerequisite, see the course descriptions in the Faculty chapters in *Part 1* of this calendar. Normally, a minimum grade of “C” is required in all courses listed as prerequisites, except as otherwise noted in the course descriptions.

Corequisite: If a first course is a corequisite for a second course, the first course (unless previously completed) must be taken concurrently with the second course. To determine if a course has a corequisite, see the course descriptions in the Faculty chapters in *Part 1* of this calendar. Normally, a minimum grade of “D” is required in all courses listed as corequisite, except in the Faculty of Arts where normally a grade of “C” is required.

3.6 Courses Available to University 1 Students

Courses available to University 1 students are listed in the Appendix at the end of this chapter. The University 1 course list includes all introductory courses offered by the Faculty of Arts and the Faculty of Science, as well as introductory level courses offered by many other faculties and schools. All courses required for entry to target faculties and schools are included, as well as courses that may be taken to sample programs to which University 1 students may apply.

Courses appearing on the University 1 course list are approved for credit in University 1 and are acceptable for credit in all target faculties and schools, with the exceptions of English: ENGL 0930 and ENGL 0940, which are not acceptable for credit in Engineering, Nursing, or Pharmacy; and Interdisciplinary: ARTS 1110 and Mathematics: MATH 1520 and MATH 1680, which are not acceptable for credit in Engineering. Biology: BIOL 1110 may not be used as a Science course (for admission purposes) for the Faculty of Nursing. Mathematics in Art: FA 1020/MATH 1020 may not be used as a Science course (for admission purposes) for Environmental Design.

SECTION 4: University 1 Regulations

The provisions of the General Academic Regulations and Requirements chapter, and the University Policies chapter in *Part 1* of this calendar, apply to all students. In addition, University 1 and the faculties and schools offering University 1 courses have regulations and requirements that apply specifically to its students.

4.1 Maximum Course Load

University 1 students are normally restricted to a maximum of 30 credit hours during the Fall/Winter Terms, with a maximum of five courses in each term. A credit hour overload may be considered for Winter Term based on Fall Term performance. Contact the University 1 Student Help Centre to discuss course overload requests.

4.2 Withdrawal from Courses

See Section 6.2 in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar.

Voluntary Withdrawals (VWs) are incurred when students drop courses after the normal registration revision period. Students are strongly encouraged to speak to a University 1 Academic Advisor prior to dropping a course to discuss the consequences of the VW decision and to create a recovery plan. Students’ registration in a course in which they have voluntarily withdrawn may be subject to Limited Access (see Section 4.9 in this chapter). Dropping a course may adversely affect eligibility to transfer to a target faculty.

VW deadline dates can be found in *Part 2* of this calendar. VW deadlines are final. Students may not withdraw from a class after the deadline, except as described under the heading ‘Authorized Withdrawal’. Students enrolled after the deadline must complete the remaining term work and write the final exam. Students who do not will receive a grade classification of

“NP” (No Paper) accompanied by a letter grade based on term work completed for the course using a zero value for any incomplete term work and for the final examination.

Authorized Withdrawal: Students with valid and documented reasons for withdrawal, such as medical illness or compassionate circumstances, may be authorized to withdraw from a course(s) without academic penalty. These “authorized withdrawals” (AWs) may only be approved by the University 1 Student Help Centre. Limited Access (see Section 4.9 in this chapter) does not apply to courses that have been granted as AWs. However AWs, do not result in a greater fee refund. Students seeking a greater refund of tuition fees must submit a fee appeal to the Registrar’s Office. For more information on AWs see Section 6.2.2 in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar.

4.3 Incomplete Term Work

Students who are unable to complete the term work prescribed in a course may apply to the instructor prior to the end of lectures for an incomplete grade and time extension for work completion. The student is expected to write the final examination if one is scheduled for the course. See Section 4.1.2 in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar.

4.4 Final Examinations

See Section 4.2 in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar.

Students (with the exception of those auditing a course) are required to write all final examinations. Those who are absent without acceptable reason will receive a grade classification of “NP” (No Paper) accompanied by a letter grade based on term work completed for the course using a zero value for incomplete term work and for the final examination. If no credit for term work is involved, a grade of “F” will be assigned. Under certain conditions a student may apply for a deferred examination (see Section 4.5 in this chapter).

It is each student’s responsibility to remain available during the entire examination period. Travel is not accepted as a reason for a deferred examination.

The Academic Schedule published at the front of this calendar indicates the examination period for each academic term. The time, date, and location of examinations are available, about half way through the term, online at umanitoba.ca/student/records/, as well as in a master timetable that is available in the University 1 Student Help Centre and throughout the campus on Student Affairs bulletin boards.

Students must be available for all examinations scheduled during these periods.

4.5 Missed Examinations

University 1 students who miss a final examination for medical or compassionate reasons may be granted a deferred examination. Travel plans are not an acceptable reason to miss examinations. The University 1 Student Help Centre is the only place that can arrange a deferred examination for University 1 students who miss an exam scheduled by the Registrar’s Office. To make this arrangement, University 1 students must report to the Student Help Centre, normally no later than seven working days after the end of the examination series in which the examination was scheduled to be written, and provide written proof (such as a medical certificate) supporting the reason for missing an examination. The dates of the illness or affliction must correspond to the dates of the examination. If the request for a deferred examination is approved, the student will, in most cases, be offered the opportunity to write another examination within 30 working days from the end of the examination series from which the examination was deferred. More information about this may be found in Section 4.2.5 in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar.

If a University 1 student misses a mid-term examination or a final examination, not scheduled by the Registrar’s Office, for personal or medical reasons, the student must report to the instructor as soon as possible and provide written proof supporting the absence. Missing an examination is serious. There are many ways that the instructor can accommodate the student, and these options are up to the instructor and the department. Writing a makeup test at the student’s convenience may not be an option.

4.6 Grade Appeals

University 1 students who do not agree with a grade assigned to term work (lab assignments, essays, term tests, etc.) or their final grade should discuss this with their instructor and attempt to resolve the issue without the need to submit a formal appeal. If an agreement is reached, an appeal is not necessary. If an agreement is not reached, it is necessary to either appeal term grades, or appeal final grades.

A formal appeal of a grade assigned for term work (lab assignments, essays, term tests) normally must be submitted within 10 working days after the grade has been made available. Students may obtain the form “Application for Appealing a Grade Given for Term Work” from the general office of the department that offered the course.

A formal appeal of the final grade assigned will only result in the re-marking of the student’s final exam. Final grade appeal applications are available from the Registrar’s Office. Students have 21 days after the release of final grades by the Registrar’s Office to submit a grade appeal application.

For more information on grade appeals, see Section 5 in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar.

4.7 Repeating Courses

University 1 students may repeat a course they have previously taken, but they are **not required** to do so because of a low grade or a VW, unless it is a course required for admission or required once in their target faculty. University 1 students who wish to repeat a course in which they have received a grade of “D” or better must consult with a University 1 Academic Advisor prior to registration. Students may be eligible for a laboratory exemption in classes they are repeating with a laboratory component (see Section 4.8 in this chapter). Students may be subject to Limited Access in courses they are repeating (see Section 4.9 in this chapter).

For courses that have been repeated (i.e. 2nd attempt) only the last grade achieved will be counted towards the students’ Cumulative Grade Point Average. However the transcript will reflect the grades of all courses attempted. Students must refer to each faculty or school’s *Applicant Information Bulletin* to determine how repeating a course may affect admission eligibility.

4.8 Laboratory Exemptions

University 1 students who are repeating a course with a laboratory component may qualify for a laboratory exemption, if they have previously passed the laboratory component. Only certain courses (usually courses in the Faculty of Science) offer laboratory exemptions. Students should see the general office of the department offering the course to determine if they are eligible for a laboratory exemption. It is a student’s responsibility to ensure that they are eligible for an exemption. See the instructions for registering in a laboratory exemption in Section 1.11 in the University 1 chapter in *Part 2* of this calendar. University 1 students who are eligible for a laboratory exemption in a course that they have a VW in must bring written permission from the department offering the course to the University 1 Student Help Centre prior to registration.

4.9 Limited Access

Students who wish to repeat a course that they have previously completed or from which that have voluntarily withdrawn, may be subject to Limited Access in that course for the two terms (including Summer Terms) following the term in which the original course was taken. Registration in courses in which students are subject to Limited Access will only be allowed following the Initial Access Period of registration. Please consult with a University 1 Academic Advisor regarding which courses are subject to Limited Access. Laboratory exemptions do not exempt a student from Limited Access.

4.10 Academic Performance

Grades obtained in University 1 become a part of the student’s permanent record and will appear on the official transcript. Grades earned while in University 1 will determine admission to most target faculties or schools. Students may qualify for the University 1 Honour list (see Section 4.11 in this chapter for details).

University 1 students who have completed 12 credit hours or more of attempts will have their academic performance assessed as part of an Early Warning Program. Students with a cumulative Grade Point Average of less than 2.00 qualify for the Early Warning Program which is designed to assist students at the earliest sign of academic difficulty by providing academic

advising, support services, and strategic referrals designed to return the student to "good standing". University 1 students who have completed 24 credit hours or more of attempts will have their academic performance assessed at the end of each term and will be determined to be in "good standing", "on probation" or on "academic suspension".

Performance Level

The first formal assessment occurs when a student has attained 24 credit hours of attempts. University 1 students who have completed 24 credit hours or more of attempts must maintain a cumulative Grade Point Average of 2.00 or greater in order to remain in "good standing" in University 1. Students who fail to meet this standard will be placed "on probation".

The notation "On Probation" will be recorded on the student's transcript. Once "on probation", a student will be allowed to register for another term. Students "on probation" must achieve a Term Grade Point Average of 2.00 in order to proceed and a cumulative GPA of 2.00 to clear probation. If the term includes 6 credit hour courses that will not be completed until the end of the following term, assessment will take place at the completion of the six credit hour courses. Students must consult with a University 1 Academic Advisor prior to registration and once a month until probation is cleared. Support services and referrals may be suggested in order to improve their performance. Some restrictions on course load may apply. If the student does not succeed, he/she will be placed on "academic suspension" for one calendar year.

Probation

Students with a cumulative GPA of less than 2.00 who have completed 24-29 credit hours of attempts are eligible to either remain in University 1 or to transit to the Faculty of Arts or the Faculty of Science. Students with 30 credit hours or more must transit to the Faculty of Arts or the Faculty of Science.

Academic Suspension

A student on academic suspension in University 1 is normally not allowed to register in any other faculty or school at the University of Manitoba or to attend any other post-secondary institution during the time of the suspension. The student should contact the Faculty of choice in order to get information about what they need in order return to the University of Manitoba.

4.11 University 1 Honour List

Students enrolled in 24 credit hours or more for the Fall/Winter Terms and who achieve a Grade Point Average of 3.50 or higher after the completion of those terms, will be placed on the University 1 Honour List.

The University 1 Honour List designation will appear on the student's transcript of marks.

4.12 Challenge for Credit

Challenge for credit is a method of establishing university credit based on previous, non-U of M, experiences. The faculty that offers the course will determine whether the student is eligible to challenge for credit. See the faculty or school chapters in both *Part 1* and *Part 2* of this calendar for information specific to each faculty. For additional information on challenging a course for credit see Section 4.3.2 in the General Academic Regulations and Requirements chapter in *Part 1* of this calendar. For registration instructions see Section 1.12 of the University 1 chapter in *Part 2* of this calendar.

4.13 Taking Courses at Another University

Students wishing to complete courses at another institution for credit at the University of Manitoba must obtain written permission from the Registrar's Office prior to registering at the other institution or the transfer of credit will not be permitted. All courses completed on a Letter of Permission, along with the grades obtained, will be transferred and become part of the student's permanent record at the University of Manitoba. Students with questions regarding the transfer credit should consult with a University 1 Academic Advisor.

Students who attend other post-secondary institutions without a Letter of Permission must reapply for admission to the University of Manitoba before the application deadline. The penalty for unauthorized or undisclosed attendance may be disciplinary withdrawal.

See Section 4.3.1 in the General Academic Regulations and Requirements chapter in *Part 1* of this *Calendar*.

APPENDIX: University 1 Course List

Refer to Section 3 in this chapter for information about choosing courses in University 1. Course descriptions can be found by: first turning to the Faculty or School chapter in which the course is taught, found in *Part 1* of this calendar; and then turning to the section for the department that offers the course. Faculties and schools are listed in alphabetical order, with school chapters following faculty chapters. Departments are listed alphabetically within each faculty or school chapter. Courses are listed in the department sections and sorted in numerical order.

Note that not all courses listed in this section are offered every year. To determine which courses are offered in the 2006-2007 Fall and Winter Terms refer to umanitoba.ca/calendar and the *STARTbook*. Students may be permitted to take courses not on this list with permission of the teaching faculty or school and University 1.

Course No.		Credit Hours
Faculty of Agricultural and Food Sciences		
Agribusiness		
ABIZ 1000	Introduction to Agribusiness Management	3
ABIZ 1010	Economics of World Food Issues and Policies	3
Entomology		
ENTM 1000	World of Bugs	3
Food Science		
FOOD 1000	Food Safety and Tomorrow	3
General Faculty		
AGRI 1500	Natural Resources and Primary Agricultural Production	3
AGRI 1510	Production, Distribution and Utilization of Agricultural Products	3

In addition to the courses listed above, students who are registering in University 1 for a second year to complete courses required for entry to Agricultural and Food Sciences may request permission to register in any advanced level Agricultural and Food Sciences courses for which they have the prerequisites, subject to space limitations. Students must first consult a University 1 Academic Advisor. Caution: Agricultural and Food Sciences courses not on the University 1 course list may not be transferable to programs other than Agricultural and Food Sciences.

Faculty of Architecture

EVDS 1600	Introduction to Environmental Design	3
EVDS 1660	History of Culture, Ideas and Environment 1	3
EVDS 1670	History of Culture, Ideas and Environment 2	3

Faculty of Arts

In addition to the 100 level courses listed below, University 1 students may take any 200, 300 and 400 level Arts courses for which they have the prerequisite, subject to space limitations.

Anthropology		
ANTH 1210	Human Origins and Antiquity	3
ANTH 1220	Cultural Anthropology	3
ANTH 1520	Critical Cultural Anthropology	3
Asian Studies		
ASIA 1420	Asian Civilizations to 1500	3
ASIA 1430	Asian Civilizations from 1500	3
ASIA 1760	Introduction to Chinese (Mandarin)	6
ASIA 1770	Introduction to Japanese	6
ASIA 1780	Basic Sanskrit	6
ASIA 1790	Basic Hindi-Urdu	6
ASIA 2360	Mandarin Comprehension	6
ASIA 2760	Intermediate Chinese (Mandarin)	6
ASIA 2770	Intermediate Japanese	6
Canadian Studies		
CDN 1130	Introduction to Canadian Studies	6
Catholic Studies		
CATH 1190	Introduction to Catholic Studies	3
Classics		
Classical Studies		
CLAS 1270	Introduction to Ancient Greek Culture	3
CLAS 1280	Introduction to Ancient Roman Culture	3
Greek		
GRK 1010	Introduction to the Reading of Ancient Greek 1	3
GRK 1020	Introduction to the Reading of Ancient Greek 2	3
GRK 1030	New Testament Greek	6
GRK 1060	Introductory Modern Greek 1	3
GRK 1070	Introductory Modern Greek 2	3

GRK 1310	Intermediate Readings in Ancient Greek	3	HIST 1360	An Introduction to the History of Western Civilization from 1500	3
GRK 1330	The Acts of the Apostles Latin	3	HIST 1370	An Introduction to Modern World History: 1500-1800	3
LATN 1080	Introduction to the Reading of Latin 1	3	HIST 1380	An Introduction to Modern World History: 1800-Present	3
LATN 1090	Introduction to the Reading of Latin 2	3	HIST 1390	History of Colonial Canada: 1500-1885	3
LATN 1320	Intermediate Readings in Latin	3	HIST 1400	History of the Canadian Nation Since 1867	3
Drama - see Theatre			HIST 1410	Asian Civilizations	6
Economics			HIST 1420	Asian Civilizations to 1500	3
ECON 1200	Principles of Economics	6	HIST 1430	Asian Civilizations from 1500	3
ECON 1210	Introduction to Canadian Economic Issues and Policies	3	HIST 1440	History of Canada	6
ECON 1220	Introduction to Global Environmental Economic Issues and Policies	3	HIST 1500	An Introduction to Modern World History: 1500 - Present	6
English			HIST 2050	South Asia since 1947	3
ENGL 0930	English Composition (Note: This course is not acceptable for credit in the Faculties of Engineering, Nursing and Pharmacy).	3	HIST 2080	The Byzantine Empire and the Slavic World	3
ENGL 0940	Writing About Literature (Note: This course is not acceptable for credit in the Faculties of Engineering, Nursing and Pharmacy).	3	HIST 2130	Emergence of Modern South Asia: 1757-1947	3
ENGL 1200	Representative Literary Works	6	HIST 2140	Colonial Latin America	3
ENGL 1300	Literature since 1900	6	HIST 2150	Independent Latin America	3
ENGL 1310	Literary Topics 1	3	HIST 2180	The History of Catholicism to 1540	3
ENGL 1340	Introduction to Literary Analysis	3	HIST 2210	History of Britain, 1485 to the Present	6
Film Studies			HIST 2230	History of the United States from 1607	6
FILM 1290	The Art of the Film 1	3	HIST 2240	History of Antisemitism and the Holocaust	6
FILM 1300	The Art of the Film 2	3	HIST 2280	Aboriginal History of Canada	6
French, Spanish and Italian			HIST 2370	History of Europe since the French Revolution	6
French			HIST 2380	The Twentieth-Century World	6
FREN 1150	Introductory French	6	HIST 2410	History of India	6
FREN 1190	Franais	6	HIST 2420	The Medieval World	6
FREN 1200	French 1	6	HIST 2490	History of Russia	6
FREN 1250	Franais Oral 1 Spanish	6	HIST 2520	A History of Germany since the Reformation	6
SPAN			HIST 2550	History of Ukraine	6
SPAN 1180	Introductory Spanish	6	HIST 2570	Nationalism in Modern Times	3
SPAN 1260	Intermediate Spanish Language Review	3	HIST 2580	A History of Fascism: The Politics and Culture of the Radical Right	3
SPAN 1270	Spanish Oral 1 Italian	3	HIST 2650	Modern China and Japan	6
ITLN 1080	Introductory Italian	6	HIST 2660	History of the Soviet Union	3
German and Slavic Studies			HIST 2670	History of Capitalism	3
German			HIST 2680	A History of Socialism from the French Revolution to the Present	3
GRMN 1110	Elementary German	6	HIST 2690	The Common People in Industrial Society	6
GRMN 1120	Beginning German	6	HIST 2710	Women in History	6
GRMN 1240	German for Reading Knowledge	6	HIST 2720	The World Since 1945	6
GRMN 2100	Intermediate German Russian	6	HIST 2760	History of the United States from 1877	3
RUSN 1300	Introductory Russian	6	HIST 2820	An Introduction to Historical Method	6
RUSN 1330	Introductory Russian 2	3	HIST 2840	A History of Russia to 1917	3
RUSN 2810	Intermediate Russian	6	HIST 2890	Imperialism	6
RUSN 2820	Intermediate Russian 2 Ukrainian	3	HIST 2900	Topics in Social History	6
UKRN 1230	Language Seminar in Ukraine 1	3	HIST 2930	The History of the British Isles, 412-1485	6
UKRN 1270	Conversational Ukrainian	6	HIST 2950	Early Canada: from the Earliest Settlement to 1867	6
UKRN 1310	Introductory Ukrainian	6	HIST 2960	The New Dominion: 1867 to 1921	6
UKRN 1320	Introductory Ukrainian 2	3	HIST 2970	Modern Canada: 1921 to the Present	6
UKRN 2720	Intermediate Ukrainian	6	HIST 2990	The History of Catholicism since 1540	3
UKRN 2730	Intermediate Ukrainian 2 Polish	3	Icelandic		
POL 1890	Introductory Polish	6	ICEL 1220	Introduction to Icelandic Culture and Civilization	6
History			ICEL 1240	Modern Icelandic 1	6
HIST 1200	An Introduction to the History of Western Civilization	6	Interdisciplinary		
HIST 1260	New Directions in History: Inquiries into the Cultural Basis of the Modern World	3	ARTS 1110	Introduction to University (Note: This course is not acceptable for credit in the Faculty of Engineering.)	3
HIST 1270	New Directions in History: Inquiries into the Power Relations of the Modern World	3	ARTS 1120	Reading and Writing Across the Disciplines	6
HIST 1310	Canada-United States: Contemporary Problems in Perspective: Initial Problems	3	ARTS 1140	European Literature 1	3
HIST 1320	Canada-United States: Contemporary Problems in Perspective: Current Problems	3	ARTS 1150	European Literature 2	3
HIST 1350	An Introduction to the History of Western Civilization to 1500	3	Labour Studies		
			LABR 1270	Introduction to the Political Economy of Labour	3
			LABR 1290	Introduction to the Canadian Labour Movement	3
			Linguistics		
			LING 1200	Introduction to Linguistics	6
			LING 1340	Semantics	3
			LING 1360	Languages of Canada	3
			LING 1380	General Phonetics	3
			LING 1420	Language and Gender	3
			LING 1440	Rules of English Grammar	3
			Native Studies		

NATV 1000	Orientation Course: The Colonizers and the Colonized	3
NATV 1200	The Native Peoples of Canada	6
NATV 1220	The Native Peoples of Canada, Part 1	3
NATV 1240	The Native Peoples of Canada, Part 2 Native Languages	3
NATV 1250	Introductory Cree 1	3
NATV 1260	Introductory Cree 2	3
NATV 1270	Introductory Ojibway 1	3
NATV 1280	Introductory Ojibway 2	3
NATV 1290	Introductory Inuktitut	3
Near Eastern and Judaic Studies		
	Semitic Languages and Literature	
SEM 1120	Biblical Hebrew	6
SEM 1250	Hebrew 1	6
SEM 1260	Hebrew 2 Yiddish	6
YIDD 1220	Yiddish	6
Philosophy		
PHIL 1200	Introduction to Philosophy	6
PHIL 1290	Critical Thinking	3
PHIL 1320	Introductory Logic	6
PHIL 1330	Introduction to Symbolic Logic	6
PHIL 1510	Historical Introduction to Philosophy	6
Political Studies		
POLS 1500	Introduction to Politics	6
Psychology		
PSYC 1200	Introduction to Psychology	6
Religion		
RLGN 1120	Biblical Hebrew	6
RLGN 1320	Introduction to World Religions	6
RLGN 1350	The History of Eastern Christianity	6
RLGN 1390	Readings in Biblical Hebrew 1	3
RLGN 1400	Readings in Biblical Hebrew 2	3
RLGN 1410	Death and Concepts of the Future	3
RLGN 1420	Ethics in World Religions	3
RLGN 1430	Food: Religious Concepts and Practices	3
RLGN 1440	Evil in World Religions	3
RLGN 1450	Religion and The Media	3
Sociology		
SOC 1200	Introduction to Sociology	6
Theatre		
THTR 1220	Introduction to Theatre	6
Women's Studies		
WOMN 1530	Introduction to Women's Studies in the Humanities	3
WOMN 1540	Introduction to Women's Studies in the Social Sciences	3
WOMN 2560	Women, Science and Technology	3
Asper School of Business		
Accounting & Finance		
ACC 1100	Introductory Financial Accounting	3
Business Administration		
GMGT 2030	Administrative Theory	3
GMGT 2070	Introduction to Organizational Behaviour	3
GMGT 2080	Introduction to Management and Organization Theory	3
Marketing		
MKTG 2210	Fundamentals of Marketing	3
In addition to the courses listed above students may register in any advanced level Business course for which they have the prerequisites, subject to space limitations. Caution: Business courses that are not on the University 1 course list may not be transferable to programs other than Business, Arts and Science.		
Faculty of Engineering		
ENG 1460	Introduction to Thermal Sciences	3
ENG 1450	Introduction to Electrical and Computer Engineering	3
ENG 1440	Introduction to Statics	3
ENG 1430	Design in Engineering	3

In addition to the courses listed above, students who are registering in University 1 for a second year to complete courses required for entry to Engineering may request permission to register in any advanced level Engineering courses for which they have the prerequisites, subject to space limitations. Students must first consult the Faculty of Engineering and a University 1 Academic Advisor. Caution: Engineering courses that are not on the University 1 course list may not be transferable to programs other than Engineering.

Faculty of Environment, Earth, and Resources

In addition to the 100 level courses listed below, University 1 students may take any 200, 300 and 400 level Environment, Earth, and Resources courses for which they have the prerequisite, subject to space limitations.

Environmental Science

ENVR 1000	Environmental Science 1: Concepts	3
ENVR 2000	Environmental Science 2: Issues	3

Geography

GEOG 1200	Introductory Geography	6
GEOG 1280	Introduction to Human Geography	3
GEOG 1290	Introduction to Physical Geography	3

Geological Sciences

GEOG 1340	The Dynamic Earth	3
GEOG 1350	The Evolving Earth	3
GEOG 1360	Environmental Earth Science	3
GEOG 1370	The Earth in Space	3
GEOG 1440	Introduction to the Dynamic Earth	3

Faculty of Human Ecology

Textile Sciences

TXSC 1600	Textiles for Living	3
TXSC 1610	Textiles, Product, and Consumers	3

Family Social Sciences

FMLY 1010	Human Development in the Family	3
FMLY 1020	Family Issues Across the Lifespan	3
FMLY 1420	Family Management Principles	3
FMLY 1900	Families, Housing and Community: An Introductory Perspective	3

Human Nutritional Sciences

HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3

In addition to the courses listed above, students who are registering in University 1 for a second year to complete courses required for entry to Human Ecology may request permission to register in any advanced level Human Ecology courses for which they have the prerequisites, subject to space limitations. Students must first consult the Faculty of Human Ecology and a University 1 Academic Advisor. Caution: Human Ecology courses that are not on the University 1 course list may not be transferable to programs other than Human Ecology.

Faculty of Music

MUSC 1050	The Well-Tempered Concert-Goer	3
MUSC 1070*	Introduction to the History of Music	3
MUSC 1080*	History of Music 2	3
MUSC 1110*	Music Theory 1	3
MUSC 1120*	Music Theory 2	3
MUSC 1280*	Musical Style and Structure 1	3
MUSC 1290*	Musical Style and Structure 2	3
MUSC 1930*	Rudiments of Music	3
MUSC 3020	History and Performance of Jazz	3

* Contact the Faculty of Music for permission to register.

Faculty of Nursing

NURS 1260	Human Growth and Development	3
NURS 1280	Introduction to Nursing	3

Students in University 1 will not normally be permitted to take advanced level Nursing courses. With permission from University 1, students may be able to take Faculty of Nursing courses that are on the list of courses from other faculties acceptable for credit in the Faculty of Arts and in the Faculty of Science. For specific courses see Section 9 in the Faculty of Arts chapter or Section 4.18 in the Faculty of Science chapter in *Part 1* of this calendar.

Faculty of Physical Education and Recreation Studies

Physical Education

PHED 1200	Physical Activity, Health and Wellness	3
PHED 1500	Foundations of Physical Education and Exercise Science	3

Recreation Studies

REC 1200	Introduction to Leisure Travel	3
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REC 1400 Concepts of Recreation and Leisure 3
 In addition to the courses listed above, students who are registering in University 1 for a second year to complete courses required for entry to Physical Education and Recreation Studies may request permission to register in any advanced level Physical Education and Recreation Studies courses for which they have the prerequisites, subject to space limitations. Students must first consult the Faculty of Physical Education and Recreation Studies and a University 1 Academic Advisor. Caution: Physical Education and Recreation Studies courses that are not on the University 1 course list may not be transferable to programs other than Physical Education and Recreation Studies.

Faculty of Science

In addition to the 100 level courses listed below, University 1 students may take any 200, 300 and 400 level Science courses for which they have the prerequisite, subject to space limitations.

Biology

BIOL 1000 Biology: Foundations of Life 3
 BIOL 1010 Biology: Biological Diversity and Interactions 3
 BIOL 1110 Health and the Health Professions 3
 (Note: This course will not be acceptable as part of the 6 credit hours of Faculty of Science electives for admission to the Faculty of Nursing.)
 BIOL 1020 Biology 1 Principles and Themes 3
 BIOL 1030 Biology 2 Biological Diversity, Function and Interaction 3
 BIOL 1340 The State of the Earth's Environment: Contemporary Issues 3

Botany

BOTN 1010 Economic Plants 3

Chemistry

CHEM 0900 Preparatory Chemistry 0
 CHEM 1000 Understanding the World through Chemistry 3
 CHEM 1030 Carbon Chemistry in Nature and Society 3
 CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry 3
 CHEM 1310 University 1 Chemistry: An Introduction to Physical Chemistry 3
 CHEM 1320 University 1 Chemistry: An Introduction to Organic Chemistry 3

Computer Science

COMP 1010 Introductory Computer Science 1 3
 COMP 1020 Introductory Computer Science 2 3
 COMP 1260 Introductory Computer Usage 1 3
 COMP 1270 Introductory Computer Usage 2 3
Mathematical Sciences
 MATH 1010 Applied Finite Mathematics 3
 MATH 1020 Mathematics in Art (Note: This course will not be acceptable as part of the 6 credit hours of Faculty of Sciences courses for admission to the Faculty of Architecture.) 3
 MATH 1190 Topics in Mathematics 6
 MATH 1200 Elements of Discrete Mathematics 3
 MATH 1300 Vector Geometry and Linear Algebra 3
 MATH 1310 Matrices for Management and Social Sciences 3

MATH 1500 Introduction to Calculus 3
 MATH 1510 Applied Calculus 1 3
 MATH 1520 Introductory Calculus for Management and Social Sciences (Note: This course is not acceptable for credit in the Faculty of Engineering.) 3
 MATH 1530 Calculus with Computers 3
 MATH 1680 Mathematics for Agriculture and Related Sciences (Note: This course is not acceptable for credit in the Faculty of Engineering.) 6
 MATH 1690 Calculus 6
 MATH 1700 Calculus 2 3
 MATH 1710 Applied Calculus 2 3
 MATH 1730 Calculus 2 with Computers 3
Microbiology
 MBIOL 1220 Essentials of Microbiology 3
Physics and Astronomy
 Astronomy
 PHYS 1810 General Astronomy 1: Lights, Stars and Planets 3
 PHYS 1820 General Astronomy 2: Exotic Stars, Galaxies and Cosmology 3
 PHYS 1830 Perspective on the Universe 3
 Physics
 PHYS 0900 Preparing for University Physics 0
 PHYS 1020 General Physics 1 3
 PHYS 1030 General Physics 2 3
 PHYS 1050 Physics 1: Mechanics 3
 PHYS 1070 Physics 2: Waves and Modern Physics 3
 PHYS 1300 Energy and the Environment 6
 PHYS 1410 The New Physics 3
 PHYS 1420 More New Physics 3
Statistics
 STAT 1000 Basic Statistical Analysis 1 3
 STAT 2000 Basic Statistical Analysis 2 3
Zoology
 ZOOL 1320 Anatomy of the Human Body 3
 ZOOL 1330 Physiology of the Human Body 3
Faculty of Social Work
 SWRK 1310 Introduction to Social Welfare Policy 3
 SWRK 2080 Interpersonal Communication Skills 3
School of Art
 FA 1020 Mathematics in Art 3
 FA 1030 Introduction to Art 1A 3
 FA 1040 Introduction to Art 2A 3
 FA 1050 Introduction to Art 1B 3
 FA 1060 Introduction to Art 2B 3
 FA 1200 Fundamentals of Drawing 9
 FA 1220 Basic Design 9
 FA 1260 Drawing for Non-Majors 6

Faculty of Agricultural and Food Sciences

General Office

256 Agriculture Building

Telephone: (204) 474 9295

E-mail: agfoodsci@umanitoba.ca

Website: www.umanitoba.ca/afs/

Dean: Michael Trevan

Associate Deans: Bernie Dronzek, Rachael Scarth

Manager of Finance and Administration: Harminder Dhanjal

Student Services Office

160 Agriculture Building

Telephone: (204) 474 9295

Student Advisor: Meg Brolley

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Introduction to Agricultural and Food Sciences

SECTION 3: Admission to Agricultural and Food Sciences

- 3.1 Degrees and Diploma offered
 - 3.1.1 Minors in the Faculty
- 3.2 Admission and Course Requirements: All Agriculture degree programs

SECTION 4: Academic Regulations

SECTION 5: Program Requirements

- 5.1 Faculty Core
- 5.2 Bachelor of Science (Agriculture)
 - 5.2.1 Agronomy Program
 - 5.2.2 Animal Systems Program
 - 5.2.3 Plant Biotechnology Program
 - 5.2.3.1 Minor in Plant Biotechnology
- 5.3 Bachelor of Science (Agribusiness)
- 5.4 Bachelor of Science (Agroecology)
- 5.5 Bachelor of Science (Food Science)
 - 5.5.1 Minor in Food Science
- 5.6 Biosystems Engineering
- 5.7 Cooperative Education Program
- 5.8 Pre-Veterinary Program
- 5.9 Minors

SECTION 6: Course Descriptions

- 6.1 Agriculture
- 6.2 Agribusiness and Agricultural Economics
- 6.3 Agroecology
- 6.4 Animal Science
- 6.5 Biosystems Engineering
- 6.6 Entomology
- 6.7 Food Science
- 6.8 Plant Science
- 6.9 Soil Science

SECTION 7: School Of Agriculture -- Diploma Program

- 7.1 Preface
- 7.2 Core Learning Objectives

- 7.3 Admission to the Diploma in Agriculture
 - 7.4 Academic Regulations for the Diploma in Agriculture
 - 7.5 Program Requirements
 - 7.5.1 Business Management, Crop Management, Livestock Management and General Agriculture Options
 - 7.5.2 Agricultural Finance Option
 - 7.5.3 Additional Courses
 - 7.6 Cooperative Education Program
 - 7.7 Course Descriptions
-

SECTION 1: Academic Staff

Deans Emeriti

L.H. Shebeski, R.C. McGinnis, J.I. Elliot

Agribusiness and Agricultural Economics

Professors

Boyd, M.S., B.A. (Seattle Pacific), M.A. (Washington State), Ph.D. (Purdue);
Oleson, B.T., B.A., M.A. (Manitoba), Ph.D. (Minnesota).

Associate Professors

Coyle, B.T., B.A. (California-Berkeley), B.Sc., M.Sc. (British Columbia), Ph.D. (Maryland); **Johnson**, G.V., B.S., M.S., M.A., Ph.D. (Wisconsin);
Kim, B.Y.R., B.Sc., M.Sc., Ph.D. (Alberta).

Assistant Professors

Brewin, D.G., B.Sc. (Alberta), M.Sc. (Saskatchewan), Ph.D. (Pennsylvania State); **Cardwell**, R.T., B.A. (Hons.)(Saskatchewan), M.A. (British Columbia), Ph.D. (Saskatchewan); **Carlberg**, J.G., B.Comm., B.A.(Hons), M.Sc. (Saskatchewan), Ph.D. (Oklahoma State); **Rude**, J.I., B.A., M.A. (Saskatchewan), Ph. D. (Guelph).

Senior Instructor

Grant, C.W., B.S.A., M.Sc. (Manitoba).

Animal Science

Professors Emeriti

Kondra, P.A., B.S.A., M.Sc. (Manitoba), Ph.D. (Minnesota); **Marquardt**, R.R., B.S.A. (Saskatchewan), M.Sc. (Alberta), Ph.D. (Washington State); **Parker**, R.J., B.Sc. (Glasgow), M.S.A. (Toronto), Ph.D. (Michigan State), Dip.Agr. (Redding); **Seale**, M.E., B.Sc. (Alberta), M.Sc., Ph.D. (Minnesota), F.A.I.C.; **Stringam**, E.W., B.Sc., M.Sc. (Alberta), Ph.D. (Minnesota), F.A.I.C.

Senior Scholars

Campbell, L.D., B.S.A.(Hons.), M.Sc. (Manitoba), Ph.D. (Wisconsin)

Professors

Connor, M.L., B.Sc.(Agr.) (Guelph), M.Sc., Ph.D. (Manitoba); **Guenter**, W., B.S.A., M.Sc. (Manitoba), Ph.D. (North Dakota State); **Wittenberg**, K.M., B.S.A., M.Sc., Ph.D. (Manitoba).

Associate Professors

Crow, G.H., B.Sc.Agric., M.Sc. (Guelph), Ph.D. (Saskatchewan); **House**, J.D., B.Sc., Ph.D. (Guelph); **Kennedy**, A.D., B.S.A., M.Sc. (Manitoba), Ph.D. (Alberta); **Lewis**, N.J., B.Sc., M.Sc., Ph.D., D.V.M. (Guelph); **O**, K., B.Sc. (Shanghai), M.Sc., Ph.D. (Manitoba); **Nyachoti**, C.M., B.Sc. Agric. (Kenya), M.Sc. Ph.D. (Guelph); **Plaizier**, J.C.B., B.Sc., M.Sc. (Wageningen), Ph.D. (Guelph).

Assistant Professors

Krause, D.O., B.Sc. Agric. (Stellenbosch), M.Sc., Ph.D. (Illinois); **Ominski**, K.H., B.Sc., Ph.D. (Manitoba).

Senior Instructor

Onischuk, L.A., B.S.A., Ph.D. (Manitoba)

Biosystems Engineering

Dean Emeritus

Laberte, G.E., B.E., M.Sc. (Manitoba), Ph.D. (Colorado State), P.Eng.

Professor Emeritus

Muir, W.E., B.E. (Saskatchewan), M.S. (Illinois), Ph.D. (Saskatchewan), P.Eng.

Professors

Britton, M.G., B.E. (Saskatchewan), M.Sc. (Manitoba), Ph.D. (Texas A and M), P.Eng.; **Cenkowski**, S., B.Sc., M.Sc. (Technical Univ.), Ph.D., Sc.D. (Agric. Univ.), P.Eng.; **Jayas**, D.S., B.Sc. (G.B.Pant), M.Sc. (Manitoba), Ph.D. (Saskatchewan), P.Ag., P.Eng.; **Zhang**, Q., B.Sc. (Hefei Polytechnical), M.Sc., Ph.D. (Pennsylvania State), P.Eng.

Associate Professors

Chen, Y., B.Sc., M.Sc. (China), Ph.D. (McGill), P.Eng.; **Mann**, D.D., B.Sc., M.Sc., Ph.D. (Manitoba), P.Eng.; **Sri Ranjan**, R., B.Sc. (Peradeniya), M.Sc., Ph.D. (Colorado State), P.Eng.

Assistant Professors

Cicek, N., B.Sc. (Bosporus), M.Sc., Ph. D. (Cincinnati), P.Eng.; **Morrison**, J.B., B.Eng., B.Sc.Hons. (McMaster), M.C.S., Ph.D. (Carleton); **Paliwal**, J., B.Tech. (India), M.Sc., Ph.D. (Manitoba), P.Eng.

Lecturers

Dick, J.K., B.Sc., M.Sc., Ph.D. (Manitoba), P.Eng; **Inglis**, D., B.Sc., L.L.B. (Manitoba); **Johnson**, D.J., B.S.A., B.Ed. (Manitoba); **Philp**, J.D., B.S.A. (Manitoba)

Entomology

Professors Emeriti

Brust, R.A., B.S.A., M.Sc. (Manitoba), Ph.D. (Illinois); **Jay**, S.C., B.A. (McMaster), B.S.A. (Manitoba), M.S.A. (Toronto), Ph.D. (London).

Senior Scholar

Mackay, P.A., B.Sc., M.Sc. (Toronto), Ph.D (British Columbia).

Professors

Galloway, T.D., B.Sc.Agr. (Guelph), Ph.D. (Manitoba); **Holliday**, N.J., B.Sc.(Hons.) (London), Ph.D. (Bristol); **Roughley**, R.E., B.Sc. Agr., M.Sc. (Guelph), Ph.D. (Alberta).

Associate Professor

Currie, R.W., B.Sc., M.Sc., Ph.D. (Manitoba).

Food Science

Professor Emeritus

Bushuk, W., B.Sc., M.Sc. (Manitoba), Ph.D. (McGill), F.R.S.C., F.C.I.C., F.A.I.C.

Professors

Arntfield, S.D., B.Sc., M.Sc. (McGill), Ph.D. (Manitoba); **Blank**, G., B.Sc., M.Sc., Ph.D. (Manitoba); **Fulcher**, R.G., B.Sc., M.Sc. (Carleton), Ph.D. (Monash); **Holley**, R.A., B.Sc., M.Sc. (McGill), Ph.D. (Guelph); **Jones**, P., B.Sc., M.Sc. (British Columbia), Ph.D. (Toronto); **Scanlon**, M.G., B.Sc.(Hons.), Ph.D. (Leeds); **Trevar**, M.D., M.B., B.S., B.Sc. (Hons.), Ph.D. (London).

Associate Professors

Sapirstein, H.D., B.Sc. (Michigan), B.Sc.Ag. (Alberta), Ph.D. (Manitoba).

Assistant Professor

Beta, T., B.Sc. (Zimbabwe), M.Sc. (Texas A&M), Ph.D. (Pretoria), **Han**, J.H., B.Sc., M.Sc. (Korea), Ph.D. (Purdue).

Senior Instructor

Hydamaka, A.W., B.Sc., M.Sc. (Manitoba), Ph.D. (Reading).

Plant Science

Professors Emeriti

Evans, L.E., B.S.A. (Saskatchewan), M.Sc., Ph.D. (Manitoba); **Larter**, E.N., B.Sc., M.Sc. (Alberta), Ph.D. (Washington);

Professors

Ballance, G.M., B.Sc.(Hons.), M.Sc. (Manitoba), Ph.D. (Heriot-Watt); **Brûlé-Babel**, A.L., B.S.A., Ph.D. (Saskatchewan); **Dronzek**, B.L., B.Sc., M.Sc., Ph.D. (Manitoba); **Entz**, M.H., B.S.A., M.Sc. (Manitoba), Ph.D. (Sas-

katchewan); **Hill**, R.D., B.Sc., M.Sc., Ph.D. (Manitoba); **Lamari**, L., B.Sc. (Institut de Technologie Agricole), M.Sc., Ph.D. (Manitoba); **McVetty**, P.B.E., B.Sc., M.Sc. (Queen's), Ph.D. (Manitoba); **Pritchard**, M.K., B.S.A., M.Sc. (Manitoba), Ph.D. (Purdue); **Remphrey**, W.R., B.Sc.(Hons.), Ph.D. (Saskatchewan); **Scarth**, R., B.A., M.Phil., Ph.D. (Cambridge).

Associate Professors

Daayf, F., B.Sc. (Marrakech), M.Sc., Ph.D. (Montpellier), D. d'etat (Marrakech); **Fernando**, W.G.D., B.Sc. (Peradeniya), M.Sc. (Kelaniya), Ph.D. (Oregon State); **Fristensky**, B.W., B.A. (Cornell), Ph.D. (Washington State); **Van Acker**, R.C., B.Sc., M.Sc. (Guelph), Ph.D. (Reading).

Assistant Professors

Froese, J.C., B.S.A. (Manitoba), M.Sc. (Iowa State), Ph.D. (Maryland); **Li**, G., B.S., M.S. (Henan), Ph.D. (Huazhong); **Stasolla**, C., B.Sc.(Hons.), Ph.D. (Calgary).

Instructor II

Martens, G.B., Agric. Dip., B.Sc.(Hons.) (Manitoba).

Soil Science

Professors Emeriti

Racz, G.J., B.S.A., M.Sc. (Saskatchewan), Ph.D. (Manitoba); **Soper**, R.J., B.A., B.S.A., M.Sc. (Saskatchewan), Ph.D. (McGill), F.A.I.C.

Senior Scholar

Shaykewich, C.F., B.S.A., M.Sc. (Manitoba), Ph.D. (McGill).

Professors

Amiro, B.D., B.Sc., M.Sc. (Laurentian), Ph.D. (Guelph); **Goh**, T.B., B.Ag.Sc. (Hons.) (Malaya), M.Sc. (Ghent), Ph.D. (Saskatchewan).

Associate Professors

Akinremi, O.O., B.Agr. (Ife), M.Sc., Ph.D. (Manitoba); **Bullock**, P.R., B.S.A., M.Sc. (Saskatchewan), Ph.D. (Australian National University); **Farenhorst**, A., B.Sc., M.Sc. (Amsterdam), Ph.D. (Toronto); **Flaten**, D.N., B.S.A. (Saskatchewan), Ph.D. (Manitoba); **Lobb**, D.A., B.Sc. (Toronto), M.Sc., Ph.D. (Guelph); **Tenuta**, M., B.Sc. (Hons.) (Toronto), M.Sc. (Guelph), Ph.D. (Western Ontario).

School of Agriculture

Professor

Pritchard, M.K., B.S.A., M.Sc. (Manitoba), Ph.D. (Purdue).

Instructor

Metrycki, B., B.A. (Winnipeg).

Lecturers

Corbett, S., Dip.Agric. (Manitoba); **Koroscil**, L., Dip.Agric. (Manitoba); **Sponagel-Ridder**, G., B.S.A. (Manitoba); **Steeves**, E.I., Dip.Agric (Manitoba).

SECTION 2: Introduction to Agricultural and Food Sciences

The degree programs in the faculty are designed to prepare graduates for service in professions concerned with the production, processing and marketing of food. Professional agriculturists hold positions in extension, resource management and conservation, teaching, research and business. Professional food science graduates hold similar positions related to food manufacturing and processing. Graduates from the faculty have important contributions to make in the economy of Canada and the well-being of its citizens. Other graduates accept international responsibilities, particularly in the developing countries. Programs of study in the faculty include courses in physical and biological sciences, mathematics, social sciences, and humanities. With these courses as background, major studies may be taken in areas represented by programs in the faculty. Graduates of the B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) and B.Sc. (Food Science) degrees are eligible to practice agrology as members of the Manitoba Institute of Agrologists. An agrologist is a "person who is qualified to teach or to practice the science and art of agriculture or to conduct scientific experiments and research in relation thereto." The motto of the profession is *Ciba ad Omnes* (Food for All). B.Sc. (Food Science) graduates are eligible to become members of the Canadian Institute of Food Science and Technology (CIFST), a professional society associated with the manufacturing, processing and packaging of food.

Faculty overview

The oldest college of its kind in western Canada had its beginning in Winnipeg in 1906. The Faculty of Agriculture and Home Economics was founded in Tuxedo and the first class entered the former Manitoba Agricultural College that year. The first agricultural diplomas were conferred in 1908 and the first agricultural degrees in 1911.

Home Economics students began enrolling in the faculty in 1910, but several years elapsed before degrees were conferred. It wasn't until eight years later, in 1918, that the first graduates of the degree program were recognized.

In 1913, the Manitoba Agricultural College moved to a site in Fort Garry that later became the campus of the University of Manitoba. The administration of the Manitoba Agricultural College was transferred to the University of Manitoba in 1924 and instructional work was taken over by the Faculty of Agriculture and Home Economics.

Agriculture and Home Economics became separate faculties in 1970 and, in July 1991, the name was changed from Faculty of Agriculture to the Faculty of Agricultural and Food Sciences.

SECTION 3: Admission to the Faculty of Agricultural and Food Sciences

3.1 Degrees and Diploma offered

Bachelor of Science in Agriculture

Bachelor of Science in Agribusiness

Bachelor of Science in Agroecology

Bachelor of Science in Food Science

Minimum time to graduation: Four years (University 1 plus three years).

Diploma in Agriculture

Minimum time to graduation: Two years with admission directly from high school.

Pre-Veterinary Program: A two-year program beyond senior matriculation providing prerequisite subjects for entrance to the Western College of Veterinary Medicine, University of Saskatchewan and the Ontario Veterinary College, University of Guelph.

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

3.1.1 Minors in the Faculty

The Faculty of Agricultural and Food Sciences currently offers minors in Plant Biotechnology and Food Science. Other minors may be available; contact the Student Services Office for details.

3.2 Admission and Course Requirements: All Agriculture degree programs

The requirement for admission to the Faculty of Agricultural and Food Sciences is a minimum cumulative grade point average of 2.00 on a minimum of 24 credit hours.

It is recommended that students take the following courses in University 1 to allow completion of the degrees in the minimum amount of time.

B.Sc. (Agribusiness)

- Economics (6 credit hrs)
ECON 1200 (or ECON 1210 and ECON 1220)
- Mathematics (6 credit hrs)
MATH 1680 (or MATH 1520 or MATH 1500, and MATH 1310 or MATH 1300)
- Agriculture (9 credit hrs)
ABIZ 1000
AGRI 1500
AGRI 1510
- Biology (6 credit hrs)
BIOL 1020
BIOL 1030

- Open Electives (3 credit hrs)
B.Sc. (Agriculture), B.Sc. (Agroecology), B.Sc. (Food Science)
- Chemistry (6 credit hrs)
CHEM 1300 and CHEM 1310 or CHEM 1320
- Economics (6 credit hrs)
ECON 1200 (or ECON 1210 and ECON 1220)
- Mathematics (6 credit hrs)
MATH 1680 (or MATH 1520 or MATH 1500, and MATH 1310 or MATH 1300)
- Biology (6 credit hrs)
BIOL 1020
BIOL 1030
- Agriculture (6 credit hrs)
AGRI 1500
AGRI 1510
- Open Electives (nil)

Other requirements:

High school requirements include Math 40S (Pre-Calculus) (60%) for all degree programs, Chemistry 40S (50%) for B.Sc. (Agriculture), B.Sc. (Agroecology) and B.Sc. (Food Science) students; pre-veterinary students should include Physics 40S.

Students are required to take three credit hours of Philosophy in their degree.

The written English and mathematics requirement are met by completing the required courses in Agriculture.

Applicants who do not meet the above-mentioned course requirements may be eligible for admission. Please contact the Student Advisor, Faculty of Agricultural and Food Sciences at (204) 474-8269, for further information.

First Year Agriculture: Brandon University

Brandon University offers the first year of the Agriculture degree program of the Faculty of Agricultural and Food Sciences. Under arrangements between the two universities, students who complete the first-year Agriculture program at Brandon University may apply for admission with full credit into the second year programs of the University of Manitoba.

Transfers of Credit

Some courses taken within the Diploma in Agriculture of the Faculty of Agricultural and Food Sciences qualify for credit towards the undergraduate degree program. These courses are outlined in the table below. Students should have a cumulative grade point average of 2.50 and a C+ or better in courses for which transfer is being considered.

Transfer of Credits Diploma/Degree

Diploma	Degree
BIOE 0600 Farm Machinery	BIOE 2090 Machinery for Ag Production
ANSC 0420 Animal Biology & Nutrition	ANSC 2500 Animal Production
ANSC 0670 Beef Production and PLNT 0750 Forage & Pasture Mgmt or ANSC 0680 Dairy Cattle Production & Mgmt and PLNT 0750 Forage & Pasture Mgmt	ANSC 4520 Ruminant Production Systems Meat or ANSC 4530 Ruminant Production Systems Milk
ANSC 0600 Animal Health and Welfare and ANSC 0690 Swine Production or ANSC 0600 Animal Health & Welfare and ANSC 0700 Poultry Production	ANSC 4540 Monogastric Production Systems or ANSC 4550 Avian Production Systems
ENTM 0620 Pest Mgmt & Farm Insects	ENTM 0010 Unallocated
PLNT 0410 Cereal & Oilseeds PLNT 0790 Landscape Horticulture and PLNT 0800 Diversification with Horticultural Crops	PLNT 2500 Crop Production PLNT 2510 Fundamentals of Horticulture
PLNT 0770 Weed Mgmt SOIL 0420 Soil Productivity & Land Use and AGRI 0420 Intro Soils & Crops	PLNT 3540 Weed Science SOIL 3600 Soils and Landscapes in Our Environment
SOIL 0620 Soil Conservation & Mgmt and BIOE 0690 Water Mgmt	SOIL 4510 Soil & Water Mgmt

ABIZ 0440 Ag Econ & Marketing 1 and ABIZ 0450 Ag Econ & Marketing 2	ABIZ 2510 Agricultural Marketing
ABIZ 0730 Financial Risk Mgmt	ABIZ 3120 Commodity Futures Markets
ABIZ 0680 Ag Business Mgmt	ABIZ 1000 Ag Business Mgmt
ABIZ 0720 Farm Business Mgmt	ABIZ 3530 Farm Management
065.064 Mgmt Plan Project I and 065.065 Mgmt Plan Project II	ABIZ 0010 Unallocated
DAGR 0680 Mgmt Plan I and DAGR 0690 Mgmt Plan Project II	ABIZ 0010 Unallocated
DAGR 0420 Intro Soils & Crops	AGRI 1500 Natural Resources & Ag Production
DAGR 0020 Unallocated	AGRI 1510 Utilization of Ag Prod
DAGR 0410 Communications & Learning Skills (min B grade)	AGRI 2030 Technical Communications

Courses taken outside the Faculty of Agricultural and Food Sciences or outside of the University of Manitoba may also qualify for credit towards the degree if the course content and the student's performance are deemed appropriate by the department concerned.

SECTION 4: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) and B.Sc. (Food Science) degree programs have the triple objectives of vocational, professional and cultural education. To fulfil the objectives, the degrees are offered in a program of study. Most courses in first year, which are taken in University 1 and some in second year, are prescribed. The remainder of second year courses and all courses in third and fourth years are determined by the program of study, and by the student's selection of elective courses.

It is **strongly recommended** that all students plan their coursework for third and fourth years before the end of their second academic year.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Agricultural and Food Sciences has regulations and requirements, published below, that apply specifically to its students. Supplementary academic regulations are on file in the general office. Admission information can be found in the Admissions chapter of this *Calendar*.

Scholastic Requirements

To obtain a B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) or B.Sc. (Food Science) degree, a student must pass 120 credit hours normally comprised of 30 hours from University 1 and 90 hours in the Faculty of Agricultural and Food Sciences (i.e., a total of 20 full-courses or the equivalent).

A maximum of 144 credit hours (24 full-courses or the equivalent) may be attempted to obtain the 120 credit hours.

A minimum passing grade of "D" in prescribed courses is required of all students in the faculty.

Elective courses in which passing grades were not obtained need not be repeated.

A student's Grade Point Average (GPA) will be determined from the number of "effective" courses which apply at a particular stage. The effective courses consist of all courses passed in addition to all failures which have not been cleared or substituted for in the student's record.

In order to graduate, students must obtain a minimum GPA of 2.0 calculated over the final 120 credit hours before graduation.

Residence Requirements of Degree Program

The residence requirements for the degrees offered by the Faculty of Agricultural and Food Sciences, can be found in the chapter, General Academic Regulations and Policy.

Time Limits and Lapse of Credit

The normal maximum time allowed for the completion of the Agriculture degree programs is ten years from the date of first registration. A candidate

for a degree will not be permitted to count toward that degree any courses taken more than ten years prior to the date of awarding the degree.

Probational Standards

Effective Courses to Date		Minimum GPA
1-5	(6-30 credits)	1.80
5 1/2-10	(33-60 credits)	1.85
10 1/2- 15	(63-90 credits)	1.90
15 1/2- 20	(93-120 credits)	1.95
20+	(120+ credits)	2.00

Academic Suspension Regulations

A student is placed on academic suspension when one of the following occurs:

- When a student fails to obtain 12 Weighted Grade Points in the first year program; or
- When a student fails to meet the probational standards after attempting a minimum of 24 credit hours while on probation; or
- When a student accumulates failures in excess of 24 credit hours.

Re-entry Regulations

A student must remain out of faculty for a period of one year and then apply for re-entry.

The student must complete at least 12 credit hours with a minimum Grade Point Average of 2.50 in courses approved by the faculty in the academic term or session in which reinstatement is being attempted.

The student loses credit for all courses in which a grade of "D" was obtained prior to being reinstated.

The student is given credit for courses in which grades of "C" or better were obtained, as well as the courses attempted for reinstatement.

The student is reinstated and placed in the category of "good academic standing."

A student who is placed on academic suspension for the second time, will not be permitted reinstatement in the faculty.

Appeals

Appeals of academic assessment of students must be submitted to the general office of the Faculty of Agricultural and Food Sciences within 21 days of the date of notification of the action sent to the student.

Graduation With Distinction: Degree Programs

The B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) and B.Sc. (Food Science), degrees with distinction will be awarded to students who:

- Complete the normal 120 credit hours for the degrees which include 30 hours from University 1 requirements, and 90 hours from the Faculty of Agricultural and Food Sciences requirements and obtain a cumulative Grade Point Average (GPA) of 3.75 or higher;
- Transfer from other universities or colleges, or from the Diploma in Agriculture program, and take at least 90 credit hours while registered in the Faculty of Agricultural and Food Sciences in order to complete the B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) or B.Sc. (Food Science) degrees. A cumulative GPA of 3.75 or higher will be required in the 90 or more credit hours.

Dean's Honour Roll

Students registered in 24 to 30 credit hours in the degree program and who obtain a sessional GPA of 3.50 or higher will be placed on the Dean's Honour Roll.

Course Load Limits

A normal "course load" is 30 credit hours during the regular session, with 15 credit hours normally taken in each academic term. A student may attempt a maximum of 39 credit hours during the regular session, with not more than 21 credit hours in an academic term, provided the student is in a good academic standing and has completed at least 24 credit hours in the previous regular session.

University Written English and Mathematics Requirements

All students are required to complete the university written English and mathematics requirement within the first 60 credit hours of their program.

This requirement is described in the chapter, General Academic Regulations and Requirements of this *Calendar*.

For the degree program in Agriculture, the university written English requirement can be met by AGRI 2030 Technical Communications, or by ENGL 1200, or ENGL 1300. (NOTE: Technical Communications cannot be taken in University 1). The mathematics requirement can be met by completing MATH 1680 or STAT 1000.

SECTION 5: Program Requirements

In order to fulfil the requirements for a degree in the Faculty of Agricultural and Food Sciences, students must complete five components:

- Faculty Core
- Degree Core
- Program Core
- Restricted Electives
- Free Electives

These requirements are outlined for all four degrees in the sections which follow.

5.1 Faculty Core

Course No.		Credit Hours
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry (see Notes 1&2) and one of the following two courses:	3
CHEM 1310	University 1 Chemistry: An Introduction to Physical Chemistry (see Notes 1&2)	3
	Or	
CHEM 1320	University 1 Chemistry: An Introduction to Organic Chemistry (see Notes 1&2)	3
STAT 1000	Basic Statistical Analysis 1	3
MATH 1680	Mathematical Science for Agricultural and Related Sciences	6
ECON 1200	Principles of Economics or ECON 1210 and ECON 1220	6
ABIZ 1000	Introduction to Agribusiness Management (see Note 3)	3
AGRI 1500	Natural Resources and Primary Agricultural Production	3
AGRI 1510	Production, Distribution and Utilization of Agricultural Products	3
AGRI 2030	Technical Communications	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
	Three credit hours from the following:	
PHIL 1290	Critical Thinking (3)	
PHIL 2740	Ethics and Biomedicine (3)	
PHIL 2750	Ethics and the Environment (3)	
PHIL 2830	Business Ethics (3)	3
	Total credit hours	36 - 42

NOTES:

- 1) Students planning to enter into the B.Sc. Agribusiness degree program are not required to take chemistry at the university level.
- 2) Both CHEM 1310 and CHEM 1320 are required for the B.Sc. (Food Science) program.
- 3) MKTG 2210 Fundamentals of Marketing may be substituted for ABIZ 1000 in the B.Sc. (Food Science) degree program.

5.2 Bachelor of Science (Agriculture)

The four year program (one year in University 1 and three years in the Faculty of Agricultural and Food Sciences) leading to the B.Sc. (Agriculture) is a professional program which prepares graduates for careers in the public and private sectors related to the production and distribution of agricultural commodities. Graduates will also be prepared to enter directly into a program of graduate studies. In addition to the faculty core courses, all students are required to take the following B.Sc. (Agriculture) degree core requirements and the respective program core courses.

B.Sc. (Agriculture) Degree Core

Course No.		Credit Hours
CHEM 2770 (MBIO 2770)	Elements of Biochemistry 1	3
PLNT 2520	Genetics	3

AGEC 2370 (BOTN 2370)	Principles of Ecology	3
or		
ZOOL 2370)		
	Total credit hours	9

Agronomy Core		
BOTN 2010	Plant Structure and Function 1	3
ANSC 2500	Animal Production	3
PLNT 2500	Crop Production	3
PLNT 3500	Plant Physiology (Not required for students who have taken the former 001.230)	3
PLNT 3510	Cropping Systems	3
PLNT 4590	Physiology of Crop Plants	3
SOIL 3600	Soils and Landscapes in Our Environment	3
SOIL 4510	Soil and Water Management	3
SOIL 4520	Soil Fertility	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
	Total credit hours	30

Animal Systems Core		
CHEM 2780 (MBIO 2780)	Elements of Biochemistry 2	3
ANSC 2500	Animal Production	3
PLNT 2500	Crop Production	3
ANSC 2510	Anatomy and Physiology 1: Control Systems	3
ANSC 2520	Anatomy and Physiology 2: Nutrient Utilization	3
ANSC 3500	Principles of Animal Genetics	3
ANSC 3510	Feeds and Feeding	3
ANSC 3520	Animal Reproduction	3
ANSC 3530	The Animal and Its Environment	3
ANSC 4560	Issues in Animal Agriculture	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
	Total credit hours	33

Plant Biotechnology Core		
BOTN 2010	Plant Structure and Function 1	3
BOTN 2210	Biology of Fungi and Lichens	3
CHEM 2780 (MBIO 2780)	Elements of Biochemistry 2	3
ZOOL 2280	Cell Biology	3
PLNT 2530	Plant Biotechnology	3
PLNT 3500	Plant Physiology	3
PLNT 4600	Issues in Agricultural Biotechnology	3
MBIO 2100	General Microbiology A	3
	Total credit hours	24

Within the B.Sc. (Agriculture) students will elect one of three programs of study or specialities – Agronomy, Animal Systems or Plant Biotechnology. Students will normally begin the program of study of their choice in second year. A description of each program and their requirements follows.

5.2.1 Agronomy Program

Chair: M.H. Entz

Office: 309 Agriculture Building

Telephone: 204 474 6077

The Agronomy program, which students enter into after completing University 1, will provide an integrated and comprehensive study of the factors and processes associated with the science of crop production and the management and use of land and water resources. The program emphasizes land management and the sustainability of agronomic and horticultural crop systems.

Suggested progression of program:

Second Year		
Course No.		Credit Hours
BOTN 2010	Plant Structure and Function 1	3
CHEM 2770 (MBIO 2770)	Elements of Biochemistry 1	3
PLNT 2500	Crop Production	3
PLNT 2520	Genetics	3
SOIL 3600	Soils and Landscapes in Our Environment	3
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 2030	Technical Communications	3
	Restricted Elective Philosophy - Group 5 and free elective(s)	9
	Total credit hours	30

Third Year		
STAT 1000	Basic Statistical Analysis 1	3
ANSC 2500	Animal Production	3
PLNT 3500	Plant Physiology	3
PLNT 4590	Physiology of Crop Plants	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
AGEC 2370	Principles of Ecology	3
(BOTN 2370)		
or		
ZOOL 2370)		
	Restricted and/or Free Electives	12
Total credit hours		30

Fourth Year		
PLNT 3510	Cropping Systems	3
SOIL 4510	Soil and Water Management	3
SOIL 4520	Soil Fertility	3
	Restricted and/or Free Electives	21
Total credit hours		30

Restricted Electives

Group 1

Two courses (six credit hours) from the following:

PLNT 3540	Weed Science (3)	
PLNT 4270	Plant Disease Control (3)	
ENTM 3170	Crop Protection Entomology (3)	6

Group 2

One course (three credit hours) from the following:

ANSC 4410/PLNT 4410	Grassland Agriculture: Plant, Animal and Environment (3)	
PLNT 2510	Fundamentals of Horticulture (3)	
PLNT 3520	Principles of Plant Improvement (3)	3

Group 3

One course (three credit hours) from the following:

SOIL 3060	Introduction to Agrometeorology (3)	
SOIL 4060	Physical Properties of Soils (3)	
SOIL 4120	Soil Microbiology (3)	
SOIL 4130	Soil Chemistry and Mineralogy (3)	3

Group 4

One course (three credit hours) from the following:

BIOE 2090	Machinery for Agricultural Production (4)	
BIOE 4500	Water Management (3)	
BIOE 4520	Crop Preservation and Handling (3)	
GEOG 2250	Introduction to Geographic Information Systems (3)	3

Group 5

One course (three credit hours) from the following:

PHIL 1290	Critical Thinking (3)	
PHIL 2740	Ethics and Biomedicine (3)	
PHIL 2750	Ethics and the Environment (3)	
PHIL 2830	Business Ethics (3)	3
Free Electives		24

5.2.2 Animal Systems Program

Chair: W. Guenter

Office: 240 Animal Science Building

Telephone: 204 474 9334

The Animal Systems program, which students enter after completing University 1, will provide an integrated and comprehensive study of the factors and processes associated with the science of animal production. The program will be based on a strong foundation in the scientific disciplines underlying growth and reproduction in animals and how they respond to a range of environmental systems and constraints.

Suggested progression of program:

Second Year

Course No.	Credit Hours	
CHEM 2770	Elements of Biochemistry 1 (MBIO 2770)	3
CHEM 2780	Elements of Biochemistry 2 (MBIO 2780)	3
ANSC 2500	Animal Production	3
ANSC 2510	Anatomy and Physiology 1	3
ANSC 2520	Anatomy and Physiology 2	3
PLNT 2500	Crop Production	3
PLNT 2520	Genetics	3
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 2030	Technical Communications	3
	Restricted Elective - Group 4	3
Total credit hours		30

Third Year		
STAT 1000	Basic Statistical Analysis	3
ANSC 3500	Principles of Animal Genetics	3
ANSC 3510	Feeds and Feeding	3
ANSC 3530	The Animal and Its Environment	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
AGEC 2370	Principles of Ecology	3
(BOTN 2370)		
or		
ZOOL 2370)		
	Restricted and/or Free Electives	12
Total credit hours		30

Fourth Year		
ANSC 3520	Animal Reproduction	3
ANSC 4560	Issues in Animal Agriculture	3
	Restricted Elective - Group 1	3
	Restricted Elective - Group 2	3
	Restricted and/or Free Electives	18
Total credit hours		30

Total credit hours

Restricted Electives

Group 1

One course (three credit hours) from the following:

ANSC 4520	Ruminant Production Systems - Meat (3)	
ANSC 4530	Ruminant Production Systems - Milk (3)	3

Group 2

One course (three credit hours) from the following:

ANSC 4540	Monogastric Production Systems (3)	
ANSC 4550	Avian Production Systems (3)	3

Group 3

Two courses (six credit hours) from the following:

BIOE 4510	Agricultural Waste Management (3)	
ANSC 4280	Applied Animal Genetics (3)	
ANSC 4410	Grassland Agriculture: Plant, Animal and Environment (3)	
/PLNT 4410		
ANSC 4500	Animal Health (3)	
ANSC 4510	Domesticated Animal Behaviour (3)	
ENTM 3160	Veterinary and Wildlife Entomology (3)	
FOOD 3500	Processing of Animal Food Products (3)	6

Group 4

One course (three credit hours) from the following:

PHIL 1290	Critical Thinking (3)	
PHIL 2740	Ethics and Biomedicine (3)	
PHIL 2750	Ethics and the Environment (3)	
PHIL 2830	Business Ethics (3)	3
Free Electives		24

5.2.3 Plant Biotechnology Program

Chair: G. M. Ballance

Office: 228 Agriculture Building

Telephone: 204 474 6086

The Plant Biotechnology Program which students enter after University 1 will provide an integrated and comprehensive study of genetic, physiological and pathological factors and modern technological processes associated with the sciences of plant improvement, production, protection, and utilization. The program will provide an understanding of the biological principles that determine the heredity, growth, and responses of plants and plant pathogens to cultural and environmental factors.

Suggested progression of program:

Second Year

Course No.		Credit Hours
BOTN 2010	Plant Structure and Function 1	3
BOTN 2210	Biology of Fungi and Lichens	3
CHEM 2770	Elements of Biochemistry 1 (MBIO 2770)	3
CHEM 2780	Elements of Biochemistry 2 (MBIO 2780)	3
ZOOL 2280	Cell Biology	3
PLNT 2520	Genetics	3
PLNT 2530	Plant Biotechnology	3
AGRI 2030	Technical Communications	3
	Free and/or restricted electives	6
Total credit hours		30

Third Year

STAT 1000	Basic Statistical Analysis 1	3
PLNT 3500	Plant Physiology	3
MBIO 2100	General Microbiology A	3

AGEC 2370 Principles of Ecology (BOTN 2370 or ZOOL 2370)	3
ABIZ 1000 Introduction to Agribusiness Management	3
Free and/or restricted electives	15
Total credit hours	30

Fourth Year

PLNT 4600 Issues in Agricultural Biotechnology	3
Free and/or restricted electives	27
Total credit hours	30

Restricted Electives

Group 1

Genetics, Physiology and Pathology Group

Five courses (fifteen credit hours) of the following:

Genetics

PLNT 3520 Principles of Plant Improvement (3)	
PLNT 4330 Intermediate Plant Genetics (3)	
PLNT 4540 Plant Genomics (3)	

Physiology

PLNT 4550 Developmental Plant Biology (3)	
PLNT 4560 Secondary Plant Metabolism (3)	
PLNT 4590 Physiology of Crop Plants (3)	

Pathology

PLNT 3570 Fundamentals of Plant Pathology (3)	
PLNT 4570 Research Methods in Plant Pathology (3)	
PLNT 4580 Molecular Plant-Microbe Interactions (3)	15

Group 2

Applied Agriculture Group

Two courses (six credit hours) of the following:

ANSC 2500 Animal Production (3)	
ENTM 3170 Crop Protection Entomology (3)	
PLNT 2500 Crop Production (3)	
PLNT 2510 Fundamentals of Horticulture (3)	6

Group 3

One course (three credit hours) of the following:

PHIL 1290 Critical Thinking (3)	
PHIL 2740 Ethics and Biomedicine (3)	
PHIL 2750 Ethics and the Environment (3)	
PHIL 2830 Business Ethics (3)	3
Free Electives	24

5.2.3.1 Minor in Plant Biotechnology

Students may attain a minor in Plant Biotechnology by completing the following courses:

PLNT 2530 Plant Biotechnology (3)	
Plus 15 credit hours from the following list:	
PLNT 3140 Introductory Cytogenetics (3)	
PLNT 3520 Principles of Plant Improvement (3)	
PLNT 3570 Fundamentals of Plant Pathology (3)	
PLNT 4330 Intermediate Plant Genetics (3)	
PLNT 4540 Plant Genomics (3)	
PLNT 4550 Developmental Plant Biology (3)	
PLNT 4560 Secondary Plant Metabolism (3)	
PLNT 4570 Research Methods in Plant Pathology (3)	
PLNT 4580 Molecular Plant-Microbe Interactions (3)	
PLNT 4590 Physiology of Crop Plants (3)	
PLNT 4600 Issues in Agricultural Biotechnology (3)	

5.3 Bachelor of Science (Agribusiness)

Chair: B. Oleson

Office: 356 Agriculture Building

Telephone: (204) 474-9384

Program Advisor: G. Johnson

Office: 379 Agriculture Building

Telephone: (204) 474-9795

Agribusiness students specialize in the people component of agriculture. This begins with the consumer, ends with the producer and involves all those along the food chain. Food production and distribution is undertaken in a business environment and agribusiness is the study of decision-making within this setting. Graduates gain insight into the agribusiness environment through mastering concepts in economics, finance, marketing and management. In addition to the faculty core courses, all students are required to take the B.Sc. (Agribusiness) degree core requirements. Students in Agribusiness are not required to take University 1 Chemistry as part of the Faculty Core requirement.

Through the choice of restricted electives, students will specialize in either agricultural economics, agribusiness management or international agribusiness. The respective agricultural economics, agribusiness management or international agribusiness options involve selecting restricted electives from courses offered by either the Department of Economics, or the Faculty of Management, or the Faculty of Arts through their cross-disciplinary programs.

Students selecting an option in agricultural economics can declare a minor in economics, and by meeting the additional requirements can qualify for a major in economics as well.

The international agribusiness option involves taking a minor in one of the cross disciplinary programs in the Faculty of Arts. International agribusiness requires knowledge of languages, cultures, and international political history, in addition to the other business skills required by the B.Sc. (Agribusiness) degree.

B.Sc. (Agribusiness) Degree Core Course Requirements

Course No.		Credit Hours
STAT 2000	Basic Statistical Analysis 2	3
ACC 1100	Introductory Financial Accounting	3
ECON 2450	Microeconomic Theory and Its Applications 1	3
ECON 2470	Macroeconomic Theory and Its Applications 1	3
HRIR 2440	Human Resource Management	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
ABIZ 2520	Introduction to Management Science	3
ABIZ 3080	Introduction to Econometrics	3
ABIZ 3500	Agricultural and Food Policy	3
ABIZ 3540	Financial Risk Management	3
ABIZ 4500	Agribusiness Strategies Seminar	3

Restricted Electives

Three courses (nine credit hours) from the following:

PLNT 2500	Crop Production (3)	
ANSC 2500	Animal Production (3)	
AGEC 2370	Principles of Ecology (3)	
(BOTN 2370 or ZOOL 2370)		
ABIZ 2390	Introduction to Environmental Economics (3)	9
Total credit hours		42

Faculty Core Requirements (Section 5.1)

Students must fulfil the requirements of one of the following options:

Agricultural Economics Option

At least nine credit hours from the Department of Economics, with three credit hours at the 3000 level.

Agribusiness Management Option

At least nine credit hours from the Faculty of Management

International Agribusiness Options

Minor in Asian Studies or Central and East European Studies or Latin American Studies as defined in the Faculty of Arts chapter of this Calendar under cross-disciplinary programs.

Free electives	24-33
Total credit hours for degree	120

Suggested progression of program:

Second Year

Course No.		Credit Hours
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
ACC 1100	Introductory Financial Accounting	3
ECON 2450	Microeconomic Theory and Its Applications 1	3
ECON 2470	Macroeconomic Theory and Its Applications 1	3
ABIZ 1000	Introduction to Agribusiness Management*	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
AGRI 2030	Technical Communications	3
ABIZ 2520	Introduction to Management Sciences	3
One course (three credit hours) from Restricted Electives		3
Total credit hours		30

*Recommended in second year only if not taken during University 1

Third Year

HRIR 2440	Human Resource Management	3
ABIZ 3080	Introduction to Econometrics	3
ABIZ 3500	Agricultural and Food Policy	3
ABIZ 3540	Financial Risk Management	3

Two courses (six credit hours) from Restricted Electives	6
Electives for Option and/or Free Electives	12
Total credit hours	30
Fourth Year	
ABIZ 4500 Agribusiness Strategies Seminar	3
Electives for Option and/or Free Electives	27
Total credit hours	30
Students are encouraged to take free electives from the following ten courses:	
ABIZ 1010 Economics of World Food Issues and Policies	3
ABIZ 2120 World Agribusiness Study Tour	3
ABIZ 2210 Transportation Principles	3
ABIZ 3120 Commodity Futures Markets	3
ABIZ 3520 Food Distribution and International Merchandising	3
ABIZ 3530 Farm Management	3
ABIZ 3550 Environmental Policy	3
ABIZ 3560 Agribusiness Portfolio Management	3
ABIZ 4120 Intermediate Econometrics	3
ABIZ 4250 Commodity Market Analysis	3

5.4 Bachelor of Science (Agroecology)

Chair: B.Amiro

Office: 364 Ellis Building

Telephone: (204) 474-9155

Program Advisor: N. Holliday

Office: 214A Animal Science Building

Telephone: (204) 474-6020

The Agroecology program, which students enter after completing University 1, provides students with an understanding of the natural processes in the agroecosystem and the impact of agricultural practices on these processes. The program emphasizes three areas: ecological sciences, agricultural production, and the social and economic implications of environmental management. Students will develop an understanding of how to manage natural and agricultural resources in a manner that enhances economic production while maintaining the integrity of natural and agricultural environments. An undergraduate research project is completed during third and fourth years as part of AGEC 3510 and AGEC 4540. Graduates are prepared for careers at the technical and management levels in government and non-government agencies involved in planning and management of natural and agricultural resources. By appropriate choice of free elective courses, students can prepare for graduate studies.

In addition to the courses prescribed in the faculty core for all students in the Faculty of Agricultural and Food Sciences, the following courses are prescribed for students in the program leading to the B.Sc. Agroecology.

B.Sc. Agroecology Degree Core

Course No.		Credit Hours
BOTN 3540	Community Ecology	3
CHEM 2770 (or MBIO 2770)	Elements of Biochemistry 1	3
STAT 2000	Basic Statistical Analysis 2	3
BIOE 3530	Engineering Fundamentals	3
ANSC 2500	Animal Production	3
PLNT 2500	Crop Production	3
SOIL 3600	Soils and Landscapes in Our Environment	3
ABIZ 2390 (or ECON 2390)	Introduction to Environmental Economics	3
ABIZ 3550	Environmental Policy	3
AGEC 2370 (or BOTN 2370 or ZOOL 2370)	Principles of Ecology	3
AGEC 2500	Population Genetics	3
AGEC 3510	Agroecology	3
AGEC 4510	Applications in Agroecology	3
AGEC 4540	Agroecology Research Project	3
Total credit hours		42
Suggested Progression of Program:		
Second Year		
CHEM2770 (or MBIO2770)	Elements of Biochemistry 1	3
STAT 1000	Basic Statistical Analysis 1	3

STAT 2000	Basic Statistical Analysis 2	3
ANSC 2500	Animal Production	3
PLNT 2500	Crop Production	3
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 2030	Technical Communications	3
AGEC 2370 (or BOTN 2370 or ZOOL 2370)	Principles of Ecology	3
AGEC 2500	Population Genetics	3
	Restricted Elective	3
Total credit hours		30

Third Year		
BOTN 3540	Community Ecology	3
BIOE 3530	Engineering Fundamentals	3
SOIL 3600	Soils and Landscapes in Our Environment	3
ABIZ 2390 (or ECON 2390)	Introduction to Environmental Economics	3
AGEC 3510	Agroecology	3
	Restricted and/or Free Electives	15
Total credit hours		30

Fourth Year		
ABIZ 3550	Environmental Policy	3
AGEC 4510	Applications in Agroecology	3
AGEC 4540	Agroecology Research Project	3
	Restricted and/or Free Electives	21
Total credit hours		30

Restricted Electives

Group 1

Two courses (six credit hours) of the following:

BOTN 2010	Plant Structure and Function 1 (3)	
ENTM 2050*	Introductory Entomology (3)	
ANSC 2510	Anatomy and Physiology 1: Control Systems (3)	
MBIO 2100	General Microbiology A (3)	
	or	
SOIL 4120	Soil Microbiology (3)	6

Group 2

Two courses (six credit hours) of the following:

SOIL 3060	Introduction to Agrometeorology (3)	
SOIL 4060	Physical Properties of Soils (3)	
SOIL 4530	Land Use and Environment (3)	
SOIL 4520	Soil Fertility (3)	
	or	
SOIL 4130	Soil Chemistry and Mineralogy (3)	6

Group 3

One course (three credit hours) of the following:

PHIL 1290	Critical Thinking (3)	
PHIL 2740	Ethics and Biomedicine (3)	
PHIL 2750	Ethics and the Environment (3)	
PHIL 2830	Business Ethics (3)	3
Free Electives		24

NOTES:

* ENTM 2050 Introductory Entomology is a prerequisite for most courses in entomology. Students contemplating additional entomology courses as free electives are advised to take ENTM 2050 in second year.

5.5 Bachelor of Science (Food Science)

Chair: S. Arntfield

Office: 201 Ellis Building

Telephone: 204 474 9866

The B.Sc. degree program in Food Science, which students enter into after completing University 1, provides the academic foundation of knowledge and skills for the wide range of activities in food science and technology. The principal areas covered are food processing, chemistry, analysis and safety. The degree program is structured in course offerings and content to enhance the competence of graduating students by providing greater emphasis in communications, critical thinking, computer literacy and statistics which are basic requirements of a modern professional environment.

The Food Science program specifies ten required and a minimum of three restricted elective courses in Food Science. As well, students must select a minimum of three credit hours from a prescribed list of courses in critical thinking and ethics. Twenty-one credit hours of free electives are available and can be selected in Food Science. This will ensure a strong academic base in Food Science and accommodate a satisfactory level of Food Science specialization.

In addition to the courses required for the faculty core for all students in the Faculty of Agricultural and Food Sciences the following courses are prescribed for the program leading to a B.Sc. in Food Science.

Suggested Progression of Program:

Second Year

Course No.	Credit Hours	
CHEM 1310	University 1 Chemistry: Introduction to Physical Chemistry**	3
	or	
CHEM 1320	University 1 Chemistry: Introduction to Organic Chemistry**	
CHEM 2770	Elements of Biochemistry 1 (MBIO 2770)	3
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
MBIO 2100	General Microbiology A	3
AGRI 2030	Technical Communications	3
FOOD 2500	Food Chemistry	3
	Restricted/and or Free Electives:	9
Total credit hours		30

Third Year

HNSC 2140	Basic Principles of Human Nutrition	3
BIOE 3530	Engineering Fundamentals	3
FOOD 3210	Food Engineering Fundamentals	3
FOOD 3010	Food Process 1	3
FOOD 4150	Food Microbiology 1	3
FOOD 4160	Food Analysis 1	3
FOOD 4250	Food Analysis 2	3
MKTG 2210	Fundamentals of Marketing	3
	Restricted and/or Free Electives:	6
Total credit hours		30

Fourth Year

FOOD 4010	Food Process 2	3
FOOD 4120	Food Science Seminar	3
FOOD 4200	Quality Control in Foods	3
FOOD 4510	Food Product Development	3
	Restricted and/or Free Electives:	18
Total credit hours		30

Group 1

One course (three credit hours) from the following:

FOOD 1000	Food Safety Today and Tomorrow (3)	
FOOD 4280	Food Microbiology 2 (3)	
FOOD 4300	Food Toxicants (3)	
FOOD 4310	Introduction to HACCP (3)	
FOOD 4500	Food Safety and Regulations (3)	3

Group 2

Two courses (six credit hours) from the following:

HNSC 4270	Applied Sensory Methods (3)	
FOOD 3160	Frozen Dairy Products (3)	
FOOD 3170	Cheese and Fermented Milk Products (3)	
FOOD 3200	Baking Science and Technology (3)	
FOOD 3500	Processing of Animal Food Products (3)	
FOOD 4230	Food Research (3)	
FOOD 4240	Analysis of Water and Waste (3)	
FOOD 4520	The Packaging of Food (3)	
FOOD 4540	Functional Foods and Nutraceuticals (3)	6

Group 3

One course (three credit hours) of the following:

PHIL 1290	Critical Thinking (3)	
PHIL 2740	Ethics and Biomedicine (3)	
PHIL 2750	Ethics and the Environment (3)	
PHIL 2830	Business Ethics (3)	3
Free Electives		21

**While both CHEM 1310 and CHEM 1320 are required for the Food Science program, normally only one is taken in second year.

Minor in Food Science

Students may attain a minor in Food Science (18 credit hours) by completing the following courses:

FOOD 1000	Food Safety Today and Tomorrow
FOOD 2500	Food Chemistry

Plus 12 additional credits in FOOD courses excluding FOOD 4230 Food Research and FOOD 4120 Food Science Seminar

5.6 Biosystems Engineering

Head: Q. Zhang

Office: E2-376 EITC (Engineering Building)

Telephone: 204 474 6033

Students in the Bachelor of Science degree in Biosystems Engineering must be admitted to the Faculty of Engineering. The Biosystems Engineering program is outlined in the Faculty of Engineering chapter of this *Calendar*.

The courses below are for students studying in the various majors in Agricultural and Food Sciences and for non-Agriculture students with a special interest in the subjects.

Course No.		Credit Hours
BIOE 2050	Metalworking Methods	3
BIOE 2080	Agricultural Survey Systems	3
BIOE 2090	Machinery for Agricultural Production	4
BIOE 3530	Engineering Fundamentals	3
BIOE 4340	Animal Production Environment	3
BIOE 4450	Radiation Processing of Food and Other Commodities	4
BIOE 4500	Water Management	3
BIOE 4510	Agricultural Waste Management	3
BIOE 4520	Crop Preservation and Handling	3

5.7 Cooperative Education Program

Cooperative Education is a process of learning, which formally integrates the student's academic study with work experience in employer organizations. Work-related experience is found in industry, government and the farming profession. The work terms provide the students with practical experience, help to finance their education and provide guidance for further career specialization. All regulations governing regular Faculty of Agricultural and Food Sciences degree programs apply to the Cooperative Education Program. In addition, the following variations apply:

Admission: To be considered for admission in the Cooperative Education Program, an undergraduate degree student must have a minimum GPA of 2.5, have completed at least 75 credit hours of study by the end of the academic year of application but still need to complete 21 credit hours in their last year of academic study.

Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Education Program. Acceptance into the program is dependant upon the student receiving a job placement through the Cooperative Education Office.

Employment Term Requirements: The Cooperative Education Program is a five year program in which 12 months are spent in three-four month work terms with a faculty approved employer. The student will receive three credits for completing the Cooperative Education Program (one credit for each completed term). Students are required to register in the appropriate employment term course and pay the fee prior to starting the employment term. Normally each employment term will be completed with a different employer. While on a work term, a cooperative education student is not permitted to take more than six hours of academic credit and may not take more than one course at a time.

Academic Term Requirements: Once having been accepted into the Cooperative Education Program there are three requirements for each work term completed. Failure to do any of them in a timely fashion will result in a failing grade.

- Part way through the work term, the Cooperative Education Coordinator will contact the student for a work site evaluation. During the evaluation both the student and employer will be interviewed and the work assessed. The student will need to make him/herself available for the interview.

- Two weeks after the end of the work term, a work term report is due and must be submitted to the Cooperative Education Coordinator. Both content and format will be marked. (Details as to format and what is required in the report can be found in "Guidelines for Cooperative Education Work Term Report" which can be obtained from the Cooperative Education Coordinator.)

- Also, two weeks after the end of the work term, a post employment review is required to be submitted to the Cooperative Education Coordinator.

The appropriate department head, in consultation with the student's program chair, will assign each participating student a faculty advisor. The faculty advisor will be responsible for evaluating the student's work term report and assigning the student a grade based on the report, the employer's evaluation and Cooperative Education Coordinator's site evaluation. Grades of "Pass" or "Fail" will be assigned for each work term. Degree students successfully completing three work terms will have their "Cooperative Education Option" acknowledged on their graduation parchment.

5.8 Pre-Veterinary Program

A pre-veterinary program is offered to students who plan to take the degree Doctor of Veterinary Medicine. Pre-veterinary students whose academic standing is acceptable may be admitted to the Western College of Veterinary Medicine, University of Saskatchewan. Acceptance into the Western College of Veterinary Medicine from the pre-veterinary program at the University of Manitoba is normally restricted to residents of Manitoba. Students from outside Manitoba may be accepted as residents of their own province or country. Students entering the pre-veterinary program are responsible for establishing their residence status.

Western College of Veterinary Medicine, Saskatoon

Two full years of university training are required for admission comprised of 30 hours from University 1 and 30 hours in the Faculty of Agricultural and Food Sciences, during which credit must be secured in the number of courses considered a standard load in the curriculum in which they are obtained. The deadline for applications is December.

The program of Pre-Veterinary study must include one full course in each of: English*, Physics, Biochemistry, Mathematics or Statistics; one half course in Microbiology, one and a half full courses in Biology or Zoology (including genetics), Chemistry (including organic chemistry); plus electives sufficient to complete two full years. (*This requirement can also be met by taking AGRI 2030 Technical Communications, and one half course in philosophy.)

The following program is designed to meet the above requirements within the constraints of present course offerings. Some modifications may be possible.

First Year/University 1

Course No.		Credit Hours
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1320	University 1 Chemistry: An Introduction to Organic Chemistry	3
MATH 1680	Mathematical Science for Agricultural and Related Sciences	6
AGRI 1500	Natural Resources and Primary Agricultural Production	3
AGRI 1510	Production, Distribution and Utilization of Agricultural Products	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, function and Interactions	3
ENGL 1200*	Representative Literary Works (6) Or	
ENGL 1300*	Literature Since 1900 (6)	
Total credit hours		30

NOTE: * In place of ENGL 1200 or ENGL 1300, Technical Communications (AGRI 2030) may be taken in second year; and one of the following Philosophy courses: PHIL1 290, PHIL 2740, PHIL 2750, PHIL 2830.

Second Year

CHEM 1310	University 1 Chemistry: An Introduction to Physical Chemistry	3
CHEM 2770	Elements of Biochemistry 1 (MBIO 2770)	3
CHEM 2780	Elements of Biochemistry 2 (MBIO 2780)	3
PHYS 1020	General Physics 1	3
PHYS 1030	General Physics 2	3
PLNT 2520	Genetics	3
MBIO 2100	General Microbiology A	3
	Electives (See note * above)	9
Total credit hours		30

5.9 Minors

As part of the electives portion of their programs, students may declare and complete a Minor from departments in which a Minor is offered. Minors are available in the Plant Biotechnology and Food Sciences programs. Course requirements are outlined in sections 5.2 and 5.5. Minors are also available in the Faculties of Arts, Environment, Human Ecology, and Science and can be found within the departmental sections of each of these faculties. A Management Minor is offered by the Asper School of Business; Agriculture, Agroecology and Food Science students may complete this minor (this minor is not available to Agribusiness students). The Minor consists of 18 credit hours of Management courses. Students must meet prerequisites for all courses. Completion of a Minor is optional.

SECTION 6: Course Descriptions

6.1 Agriculture

AGRI 1500 Natural Resources and Primary Agricultural Production (3-L:0-0) 3 (Formerly 065.150) Introduces students to natural resources and climate, primary production of crops and livestock, production and resource economics and rural society. A model of the entire agri-food system will be used to show interrelationships among disciplines, processes, etc.

AGRI 1510 Production, Distribution and Utilization of Agricultural Products (0-0:3-L) 3 (Formerly 065.151) Introduction to the aspects of agriculture that follow primary production and includes confined animal production and a presentation of a model of the entire agri-food system. Special emphasis on processing, marketing, transportation and food safety. Laboratory sessions will use small groups to examine problem based case studies.

AGRI 2030 Technical Communications (0-0:3-0) 3 (Formerly 065.203) Lectures and workshops to develop written and oral communication skills for preparing and presenting scientific and technical reports. Basic composition skills, communication graphics and job interview techniques are included. *Prerequisite:* 24 credit hours of university.

AGRI 2180 Introductory Toxicology (0-0:3-0) 3 (Formerly 065.218) A survey of general principles underlying the effects of toxic substances on biological systems, including history, scope and applications of toxicology, the mechanisms of toxic action, and some major types of toxicants. Not to be held with BOTN 2180, BOTN 219, ENVR 2180, ENVR 2190, ZOOL 2180, ZOOL 2190, AGRI 2190 and the former 001.337. *Prerequisite:* BIOL 1020 and BIOL 1030 or (071.125) and CHEM 1310 (or the former 002.128) or CHEM 1320.

AGRI 2190 Toxicology Principles (0-0:1.5-0) 1.5 (Formerly 065.219) A survey of general principles underlying the effects of toxic substances on biological systems, including the history, scope and applications of toxicology, the mechanisms of toxic action. Not to be held with BOTN 2180, BOTN 2190, ENVR 2180, ENVR 2190, ZOOL 2180, ZOOL 2190, AGRI 2180 and the former 001.337. *Prerequisite:* BIOL 1020 and BIOL 1030 or (071.125) and CHEM 1310 (or the former 002.128) or CHEM 1320.

AGRI 2200 Principles of Plant and Animal Physiology for Engineers (0-0:3-2) 4 (Formerly 065.220) Plant and animal physiology as affected by environment for use in the design of agricultural machines, structures and food processes for biological products; models of simulation of plant and animal growth. *Prerequisite:* BIOL 2010.

AGRI 3030 Modern Topics in Agriculture 1 (3-0:0-0) 3 (Formerly 065.303) An interdisciplinary course including topical national and international issues in agriculture. The course will vary from year to year to provide material of current interest in a wide variety of subject areas. Student participation by means of seminars will be encouraged.

AGRI 3040 Modern Topics in Agriculture 2 (0-0:3-0) 3 (Formerly 065.304) Similar to AGRI 3030.

AGRI 4520 Agriculture Cooperative Education Work Term 1 (1) (Formerly 065.452) Special 32-week work assignment in business, industry, government or research for cooperative education students. Requires submission of a written report covering the work completed during the eight-month professional assignment.

AGRI 4530 Agriculture Cooperative Education Work Term 2 (1) (Formerly 065.453) Special 32-week work assignment in business, industry, government or research for cooperative education students. Requires submission of a written report covering the work completed during the eight-month professional assignment.

6.2 Agribusiness and Agricultural Economics

ABIZ 1000 Introduction to Agribusiness Management (3-0:3-0) 3 (Formerly 061.100) Introduction to management principles applied to agribusiness. Topics covered will include cooperative and corporate organizations, financial analysis, marketing and planning. All students will prepare a business plan. Students will develop spreadsheet skills with respect to processing information and preparing forecasts. Not to be held with the former 061.250.

ABIZ 1010 Economics of World Food Issues and Policies (0-0:3-0) 3 (Formerly 061.101) Examination of global food consumption, supply and distribution, and the factors underpinning food security, food safety and malnutrition. The importance of international trade and policies on the global food system. Not to be held with the former 061.210.

ABIZ 2120 World Agribusiness Study Tour (2/I Intersession) 3 (Formerly 061.212)

Provides an understanding of world agribusiness, including areas such as agri-marketing, agricultural trade, agri-finance, agricultural policy, risk management, and economics of the environment and resources through an international study trip. A particular region of the world will be visited each time the course is offered. Offered at the discretion of the Department of Agribusiness. Pre-requisite: Approval of instructor.

ABIZ 2210 Transportation Principles (3-0:0-0) 3 (Formerly 061.221) Demand forecasting, cost analysis, regulation of carriers, role of transport in economic development, project appraisal, and transport planning. Not to be held with the former 061.351 or 018.354. Also offered as MSC1 2210 by the Department of Supply Chain Management.

ABIZ 2390 Introduction to Environmental Economics (0-0:3-0) 3 (Formerly 061.239) Economics of management of water, air and land resources quality, and conservation. Economic implications of current issues in environmental standards, licensing criteria and pollution charges. Students may not hold credit for both ABIZ2390 and ECON 2390. *Prerequisite:* ECON 1200.

ABIZ 2510 Introduction to Agricultural and Food Marketing (0-0:3-0) 3 (Formerly 061.251) Examination of marketing principles and techniques involved in the Canadian agricultural and food marketing system. Agribusiness applications. Not to be held with the former 061.207. *Prerequisite:* ECON 1200.

ABIZ 2520 Introduction to Management Sciences (0-0:3-L) 3 (Formerly 061.252) An introduction to management science techniques and models. Topics include linear programming, distribution problems, and decision theory. *Prerequisites:* MATH 1310 or MATH 1300 and MATH 1520 or MATH 1500 or MATH 1680. *Pre-corequisite:* STAT 1000 or the former 005.221 or equivalent. Students may not hold credit for MSC1 2150 (OR THE FORMER 027.215) Introduction to Management Sciences and ABIZ 2520. Not to be held with the former 061.414.

ABIZ 3080 Introduction to Econometrics (3-L:0-0) 3 (Formerly 061.308) The application of statistical tools, especially regression analysis for estimating economic relationships and testing economic hypotheses through use of spreadsheets and data sets. Students may not hold credit for both ABIZ 3080 and the former 018.344. *Prerequisite:* STAT 2000 or equivalent, or ECON 3170. Also offered as ECON 3180 by the Department of Economics.

ABIZ 3120 Commodity Futures Markets (3-0:0-0) 3 (Formerly 061.312) Theory and economic functions of commodity markets including futures and options markets. The roles of the various participants; the determination of inter-temporal prices and various aspects of hedging will be studied. *Prerequisites:* ECON 1200 and STAT 2000.

ABIZ 3500 Agricultural and Food Policy (0-0:3-0) 3 (Formerly 061.350) Economics of market intervention; trade policy analysis, and agricultural protection, exports, subsidies, tariffs, quotas; intermediate versus final goods; currency exchange rates and agricultural trade policy; trade agreements. Not to be held with the former 061.418. *Prerequisites:* ECON 2450, ECON 2470.

ABIZ 3520 Food Distribution and International Merchandising (3-0:0-0) 3 (Formerly 061.352) An introduction to management concepts and their application to domestic and international merchandising. *Prerequisites:* ABIZ 1000 or the former 061.250, and ABIZ 251 or MKTG 2210.

ABIZ 3530 Farm Management (0-0:3-0) 3 (Formerly 061.353) Management decisions and business planning as they relate to farm production, marketing and financing activities. Identifying potential markets; comparative advantage analysis; organizational form and contractual requirements; alternative marketing and production strategies; financing production and marketing activities; develop farm business plan. *Prerequisite:* ABIZ 1000, or the former 061.250.

ABIZ 3540 Financial Risk Management (0-0:3-0) 3 (Formerly 061.354) Risk expected returns and valuation of capital; capital budgeting and dealing with risk; derivative securities and financial risk management; agricultural production and management of risk; agricultural risk management and public policy. *Prerequisites:* STAT 1000 and ACC 1100 and ABIZ 1000, (or the former 061.250) or ABIZ 2510.

ABIZ 3550 Environmental Policy (3-0:0-0) 3 (Formerly 061.355) Environmental policy development and enactment in Canada; federal and provincial review processes; socio-political aspects of policy development; chemical and pesticide licensing procedures and environmental effects monitoring; environmental policy and sustainability; case studies; discussion of various policies; ethics of development, preservation and conservation; environmental risk management. *Prerequisites:* ABIZ 2390 or ECON 2390.

ABIZ 3560 Agribusiness Portfolio Management (3-0:0-0) 3 (Formerly 061.356) The application of portfolio management to agribusiness, including asset allocation, portfolio construction and analysis, and operation of investment instruments and capital markets. Includes Canadian Securities Course. *Prerequisite:* Major in Agribusiness or Accounting and Finance, with 60 credit hours, ACC 1100 and ECON 1200, or permission from instructor. Recommended G.P.A. of 2.8 or higher.

ABIZ 4120 Intermediate Econometrics (3-L:0-0) 3 (Formerly 061.412) A course in applied econometrics that explores the regression model and how it may be applied. Special emphasis is placed on violations to the assumptions of least squares, specification error, and applying the model to production, marketing, forecasting and other applications. Students may not hold credit for both ABIZ 4120 and the former 018.444. *Prerequisite:* Written consent of Instructor; this course assumes students have had a sound background in economic theory (e.g. micro and macro), as well as single variable calculus, linear algebra, and basic statistics. ABIZ 3080 or ECON 3180 is highly recommended. Also offered as ECON 4120 by the Department of Economics.

ABIZ 4240 Agricultural Economics Special Project (1-0:1-0) 3 (Formerly 061.424) Students will undertake a project to analyze an applied problem and present results in a research and/or extension paper. A list of relevant readings will be assigned. Per-

mission of the Department Head required.

ABIZ 4250 Commodity Market Analysis (3-0:0-0) 3 (Formerly 061.425) Theory and methods of price analysis, commodity markets and the demand and supply factors that underpin seasonal, cyclical and secular changes in commodity prices. *Prerequisites:* ECON 2450 or ECON 2700 and ABIZ 3080 or the former 018.308. Not to be held with the former 061.404.

ABIZ 4500 Agribusiness Strategies Seminar (3-0:0-0) 3 (Formerly 061.450) This course will provide participants with insights into management strategies and decision-making, as well as the responsibilities, tensions and pressures of being an agribusiness CEO. Classes will include participation by CEOs followed by a debriefing session. Students must have completed 90 credit hours towards a degree in Agribusiness, or permission of the Department.

6.3 Agroecology

AGEC 2370 Principles of Ecology (3-L:0-0) 3 (Formerly 065.237) Principles of ecology at the individual, population, community, and ecosystem levels. This course is also given in the Faculty of Science as 001.237 or 022.237. It is the normal prerequisite to other courses in ecology. Not to be held with BOTN 2280 (ZOOL 2290), BOTN 2370, ZOOL 2370. *Prerequisite:* A grade of "C" in BIOL 1020 and BIOL 1030 (or the former 071.125). *Pre- or corequisite:* STAT 1000.

AGEC 2500 Population Genetics (0-0:3-L) 3 (Formerly 065.250) Principles of population genetics as they apply to plants and animals in both natural and managed systems. *Prerequisites:* A grade of "C" in BIOL 1020 and BIOL 1030 (or the former 071.125); AGECE 2370 or BOTN 2370 (ZOOL 2370).

AGEC 3510 Agroecology (3-L:0-0) 3 (Formerly 065.351) Examination of how ecological principles and processes apply to, and function in, managed ecosystems, with emphasis on agricultural ecosystems. Influence of agricultural practices on populations and ecosystem function. Ecological concepts as tools in managing systems. *Prerequisite:* BOTN 2370, ZOOL 2370 or AGECE 2370.

AGEC 4510 Applications in Agroecology (0-0:3-0) 3 (Formerly 065.451) Integration of information on ecological principles, agricultural production technology and environmental and socio-economic issues through in-depth studies of issues and problems in agroecology. *Prerequisite:* AGECE 3510.

AGEC 4540 Agroecology Research Project (0-0:3-0) 3 (Formerly 065.454) Completion of independent research project for which preliminary work was done in AGECE 3510. Students perform research and meet regularly with supervisors beginning in September. Progress reports are required, and final results will be presented in written and verbal reports in April. *Prerequisite:* AGECE 3510

6.4 Animal Science

NOTE: Most third- and fourth-year courses have prerequisites listed. These are recommended to provide the necessary background for the particular course. However, other courses may be acceptable with the consent of the instructor.

ANSC 2500 Animal Production (3-L:0-0) 3 (Formerly 035.250) Built on concepts introduced in AGRI 1500 and AGRI 1510, by elaborating on the basic essentials of animal production. *Prerequisites:* AGRI 1500, AGRI 1510.

ANSC 2510 Anatomy and Physiology 1 Control Systems (3-L:0-0) 3 (Formerly 035.251) Will deal with the structure, functions and interactions of the coordinating/regulatory systems in the animal body; including the nervous, muscular, cardiovascular, respiratory, renal and endocrine systems. *Corequisite:* CHEM 2770 (MBIO 2770) or CHEM 2360 (MBIO 2360).

ANSC 2520 Anatomy and Physiology 2 Nutrient Utilization (0-0:3-L) 3 (Formerly 035.252) The digestion, absorption and utilization of nutrients by farmed species. Basic characteristics of the digestive system, aspects of regulation of feed intake and rates of passage, intermediary metabolism of nutrients, growth and development, health and other factors influencing nutrient utilization. *Prerequisite:* ANSC 2510. *Corequisite:* CHEM 2780 (MBIO 2780) or CHEM 2370 (MBIO 2370)

ANSC 2530 Nutritional Toxicology (0-0:1.5-0) 1.5 (Formerly 035.253) The science of dietary toxins and their interrelationships with nutrition: mode of action and metabolism of toxic chemicals that occur in food and animal feedstuffs. *Prerequisite:* AGRI 2190.

ANSC 3500 Principles of Animal Genetics (3-0:0-0) 3 (Formerly 035.350) Topics discussed will include population genetics, quantitative variation, selection and mating systems with particular reference to domestic species. *Prerequisite:* PLNT 2520.

ANSC 3510 Feeds and Feeding (3-L:0-0) 3 (Formerly 035.351) A detailed discussion of feedstuffs used for domestic animals, animal nutrient requirements, ration balancing, feedstuff processing and feed safety. *Prerequisite:* ANSC 2520.

ANSC 3520 Animal Reproduction (3-L:0-0) 3 (Formerly 035.352) The comparative anatomy and physiology of reproduction of farmed animals will be emphasized. Focus will be on the natural synchronization of reproductive processes and the potential to regulate and improve reproductive efficiency. *Prerequisite:* ANSC 2510.

ANSC 3530 The Animal and Its Environment (0-0:3-L) 3 (Formerly 035.353) Deals with how the animal is influenced by its environment to affect health, welfare and performances. Principles of farmed animal behaviour, welfare and behavioural management, health, and facility design and modification will be considered in the context of animal/environment interactions. *Corequisite:* ANSC 2520.

ANSC 4090 Livestock Problems (3) (Formerly 035.409) First Term. A minor thesis on livestock problems, prepared by the student under direction. (For Animal Systems Majors only.) *Prerequisite:* Consent of department head.

ANSC 4220 Animal Science Investigations (6) (Formerly 035.422) Minor research on

some problem in animal science. Instruction and supervision in setting up the project, in collecting and processing data, and in writing the report. (Fourth-year students in Animal Systems Major only.) *Prerequisite:* Consent of department head.

ANSC 4280 Applied Animal Genetics (0-0:3-0) 3 (Formerly 035.428) Application of principles of animal breeding. Modern methods, techniques, and programs for genetic improvement of cattle, sheep, and swine. *Prerequisite:* ANSC 3500.

ANSC 4410 Grassland Agriculture: Plant, Animal and Environment (0-0:3-L) 3 (Formerly 035.441) Inter-relationships between the biological components of grassland agriculture as they relate to forage production on the Canadian Prairies. Topics include utilization by wild and domestic animals, plant community relationships and role of forages in multiple land use planning. This course also given in Plant Science as PLNT 4410.

ANSC 4500 Animal Health (0-0:3-0) 3 (Formerly 035.450) Responses of basic animal functions to challenge by potentially pathogenic organisms, genetic or metabolic disorders, and toxicants will be discussed. Strategies for prevention and treatment will be outlined. *Corequisite:* ANSC 2520 or consent of Instructor. Not offered in 2006-07 and alternate years thereafter.

ANSC 4510 Domesticated Animal Behaviour (3-L:0-0) 3 (Formerly 035.451) An awareness and understanding of normal behaviours of animals will be emphasized. Relationships between behaviour, welfare and management will be explored. Emphasis will be on farmed animals but companion animals, wild animals and laboratory species will also be discussed. *Corequisite:* ANSC 2520 or consent of the instructor. Offered in 2006-07 and alternate years thereafter.

ANSC 4520 Ruminant Production Systems-Meat (3-L:0-0) 3 (Formerly 035.452) To provide an appreciation of the industry in terms of size, complexity and relationship to the economy and give an understanding of the breeding, feeding, management and marketing strategies for modern ruminant production systems. Open only to students holding at least 60 credit hours. *Prerequisite:* ANSC 2500.

ANSC 4530 Ruminant Production Systems-Milk (0-0:3-L) 3 (Formerly 035.453) Will describe the industry in terms of size, complexity and relationship to the economy and give an understanding of the breeding, feeding, management and marketing practices in a modern system for milk production. Open only to students holding at least 60 credit hours. *Prerequisite:* ANSC 2500.

ANSC 4540 Monogastric Production Systems (3-L:0-0) 3 (Formerly 035.454) Describes the swine industry in terms of size, complexity and relationship to the economy and gives an understanding of the breeding, feeding, management and marketing practices in a modern production unit. Outlines other monogastric production systems of relevance to the agriculture industry. Open only to students holding at least 60 credit hours. *Prerequisite:* ANSC 2500.

ANSC 4550 Avian Production Systems (3-L:0-0) 3 (Formerly 035.455) Describes the various avian systems in terms of size, complexity, and relationship to the economy and gives an understanding of the management and marketing practices in the usual poultry systems. Open only to students holding at least 60 credit hours. *Prerequisite:* ANSC 2500.

ANSC 4560 Issues in Animal Agriculture (0-0:3-0) 3 (Formerly 035.456) Through a combination of lectures and independent group learning activities students will develop an appreciation of the scope and complexities of current issues facing the animal industry and integrate knowledge accumulated through the Animal Systems Program using case study problems and group project work. *Prerequisite:* Student must have completed 90 credit hours in Animal Systems or have Permission by Department.

ANSC 4570 Advanced Applied Animal Nutrition (3-L:0-0) 3 (Formerly 035.457) An advanced study of theoretical and applied aspects of monogastric and ruminant nutrition. A laboratory component will provide training in current techniques in feed analyses and computer modelling. *Prerequisite:* ANSC 3510.

6.5 Biosystems Engineering

For course descriptions of the following courses in Biosystems Engineering, see Biosystems Engineering in the Faculty of Engineering section of this *Calendar*: BIOE 2110, BIOE 2580, BIOE 2590, BIOE 3270, BIOE 3320, BIOE 3550, BIOE 3580, BIOE 3590, BIOE 4240, BIOE 4390, BIOE 4400, BIOE 4420, BIOE 4460, BIOE 4480, BIOE 4530, BIOE 4540, BIOE 4550, BIOE 4560, BIOE 4570, BIOE 4580, BIOE 4590, BIOE 4600, BIOE 4610, BIOE 4620, BIOE 4630.

BIOE 2050 Metalworking Methods (0-0:2-L) 3 (Formerly 034.205) Principles of operation of the lathe, milling machine, shaper, planer, drill, and grinding machine. Laboratory project requiring the use of the above machines. Limited practice in gas and electric welding.

BIOE 2080 Agricultural Survey Systems (2-L:0-0) 3 (Formerly 034.208) Survey systems and techniques applicable to agriculture. Use of level, transit and tape. Theory of errors and error adjustment. Mapping. Not offered in 2006-07.

BIOE 2090 Machinery for Agricultural Production (3-L:0-0) 4 (Formerly 034.209) Farm machinery selection. Machine performance. Ownership and operating costs. Analysis of machine functions for safety and efficiency.

BIOE 3530 Engineering Fundamentals (3-L:0-0) 3 (Formerly 034.353) Principles of heat transfer, steam, psychometrics, fluid mechanics, material balances, electricity and refrigeration. Cannot be held for credit in the Faculty of Engineering. Not to be held with the former 034.329. *Prerequisite:* MATH 1680 or the former 013.129 or 013.128.

BIOE 4340 Animal Production Environment (0-0:3-L) 3 (Formerly 034.434) Aspects of temperature, humidity, light, space, manure and feed handling components of controlled environments for domestic animals. Not offered in 2006-07.

BIOE 4450 Radiation Processing of Food and Other Agricultural Commodities (3-2:0-0) 4 (Formerly 034.445) An introduction to the scientific principles underlying the

radiation processing of food and other agricultural commodities; its development within the context of societal needs and concerns. *Prerequisite:* BIOE 2590 or BIOL 2010 (or the former 071.125) and CHEM 1300 (or the former 002.123 or the former 002.127). Not offered in 2006-07.

BIOE 4500 Water Management (0-0:3-0) 3 (Formerly 034.450) Introduction to the design of irrigation and drainage systems. Topics in irrigation include sprinklers, laterals, mainline and pumps. Drainage topics cover both the surface and subsurface systems. Analysis of precipitation and runoff. Environmental impacts of water management. Not offered in 2006-07.

BIOE 4510 Agricultural Waste Management (3-0:0-0) 3 (Formerly 034.451) Characteristics of waste, design of systems for collection, storage and land application, alternate treatment/conversion systems, impacts on air, soil and water quality. *Prerequisite:* 035.353 or consent of instructor. Offered in 2006-07 and alternate years thereafter.

BIOE 4520 Crop Preservation and Handling (3-0:0-0) 3 (Formerly 034.452) Interaction of biological and physical factors related to methods of preserving, storing, and handling cereals, oilseeds, and other agricultural crops. Not offered in 2006-07.

6.6 Entomology

ENTM 1000 World of Bugs (0-0:3-0) 3 A survey of insect biology and life styles with emphasis on insect diversity and human-insect interactions.

ENTM 2050 Introductory Entomology (0-0:3-L) 3 (Formerly 038.205) A basic course for students requiring a foundation in entomology. The anatomy, life history, identification, adaptations, and relations of insects to humans are examined along with methods of collecting and preserving insect specimens.

ENTM 3160 Veterinary and Wildlife Entomology (0-0:3-0) 3 (Formerly 038.316) An introduction to the insects and their relatives that affect domestic animals, pets and wildlife. Special consideration is given to life histories, insect/host interactions, evolutionary relationships, impact on host vertebrates and pest management. Offered in 2006-07 and alternate years thereafter.

ENTM 3170 Crop Protection Entomology (0-0:3-L) 3 (Formerly 038.317) A course for students requiring a foundation in entomology and knowledge of major insect pest groups in western Canada. The pests and principles for their control (chemical, cultural, mechanical, physical and biological methods) are explored with emphasis on the entire agroecosystem. Students may not hold credit in ENTM 3170 and the former 038.413 or 038.431.

ENTM 4250 Pesticide Toxicology (3-0:0-0) 3 (Formerly 038.425) Action, behaviour, and fate of pesticides in target and non-target species and in the environment. Past, present, and future chemical control agents will be discussed on the basis of chemical and biochemical knowledge. *Prerequisite:* A course in biochemistry. Not offered 2006-07.

ENTM 4280 Aquatic Entomology (3-L:0-0) 3 (Formerly 038.428) Adaptations and significance of insects to aquatic habitats, with emphasis on identification. Aquatic insects as indicator species of pollution and their response to chemical pesticide application. A collection of aquatic insects is required. *Prerequisites:* ENTM 2050; AGE 2370 or ZOOL 2370 or BOTN 2370; or consent of instructor. Offered in 2006-07 and alternate years thereafter.

ENTM 4320 Pollination Biology (3-0:0-0) 3 (Formerly 038.432) The biology, ecology of social, semisocial and solitary insect pollinators and their ecological interactions with entomophilous plants. Offered 2007-08 and alternate years thereafter.

ENTM 4500 Insect Taxonomy and Morphology (3-L:0-0) 3 (Formerly 038.450) Study of insect structure combined with evolution of insect orders. Modern concepts of sub-species, species and higher taxa. Collection required (contact instructor for details in April/May of preceding year.) Students may not hold credit for 038.450 and the former 038.412. *Prerequisite:* ENTM 2050 or consent of instructor.

ENTM 4520 Physiological Ecology of Insects (0-0:3-0) 3 (Formerly 038.452) The effect of environmental factors such as temperature, moisture, light and other organisms on the physiology and ecology of insects. *Prerequisite:* ENTM 2050 or consent of instructor. Not offered in 2006-07.

Biosystems Engineering - Diploma

BIOE 0710 Materials Handling and Electrical Controls Cr.Hrs.3 Fundamental concepts and systems approach to storing, conditioning, moving, processing, and metering of agricultural produce. Principles and practices of fans, grain drying, dust control, and electrical supply. Students may not hold credit for BIOE 0710 and the former 034.066.

Biosystems Engineering - Degree

BIOE 2050 Metalworking Methods Cr.Hrs.3 (Formerly 034.205) Principles of operation of the lathe, milling machine, shaper, planer, drill, and grinding machine. Laboratory project requiring the use of the above machines. Limited practice in gas and electric welding.

BIOE 2080 Agricultural Survey Systems Cr.Hrs.3 (Formerly 034.208) Survey systems and techniques applicable to agriculture. Use of level, transit and tape. Theory of errors and error adjustment; mapping. Not offered in 2006-2007.

BIOE 2090 Machinery for Agricultural Production Cr.Hrs.4 (Formerly 034.209) Farm machinery selection. Machine performance. Ownership and operating costs. Analysis of machine functions for safety and efficiency.

BIOE 2110 Transport Phenomena Cr.Hrs.3 (Formerly 034.211) Principles of heat transfer, solar radiation, psychometrics, molecular diffusion, mass transfer and refrigeration and their application to biosystems. *Prerequisite:* ENG 1120 (or 130.112).

BIOE 2580 Biosystems Engineering Design Trilogly 1 Cr.Hrs.4 (Formerly 034.258)

Biosystems Engineering and its place in the professions of engineering and agrology. Design concepts, with an emphasis on team building and technical communication skills. Philosophy of project planning. Preparation of a conceptual design by teams in response to design assignment submitted by industry. Written report presented orally. *Prerequisite:* ENG 1400 (or 130.140). Not to be held with the former 034.214.

BIOE 2590 Biology for Engineers Cr.Hrs.3 (Formerly 034.259) Provide theories and principles of Biology to engineering students and present applications of biological principles to engineering problems. Fundamental theories involved in cell structure and function, metabolism, genetics and heredity, bacteria and virus structure and function, plant and animal structure and function are covered. An introduction to animal and plant physiology is also provided. Laboratory sessions and term assignments focus on the engineering applications of these basic theories and principles to provide a good understanding of the role of Biology in Engineering. *Prerequisite:* CHEM 1300 (or 002.130). Not to be held with the former 071.201.

BIOE 3270 Instrumentation and Measurement for Biosystems Cr.Hrs.4 (Formerly 034.327) Basic instrumentation for measuring electrical and nonelectrical quantities associated with biosystems engineering and industry; transducers for automatic control. *Prerequisites:* 006.261 or MATH 2110 (or 136.211), ENG 1180 (or 130.118).

BIOE 3320 Engineering Properties of Biological Materials Cr.Hrs.4 (Formerly 034.332) Engineering properties of biological and interacting materials within the system. Relationship between composition, structure, and properties of plant, animal, and human tissues. Definition and measurement of mechanical, thermal, electromagnetic, chemical and biological properties and their variability. Use of these properties in engineering calculations. *Prerequisites:* MATH 2100 (or 136.210 or 006.260), CIVL 2800 (or 023.280) or MECH 2220 (or 025.222), BIOE 2580 (or 034.258 or 034.214). Not to be held with the former 034.323.

BIOE 3530 Engineering Fundamentals Cr.Hrs.3 (Formerly 034.353) Principles of heat transfer, steam, psychometrics, fluid mechanics, material balances, electricity and refrigeration. Cannot be held for credit in the Faculty of Engineering. Not to be held with the former 034.329. *Prerequisite:* MATH 1680(136.168M) or the former 013.129 or 013.128.

BIOE 3550 Cooperative Work Study 1 Cr.Hrs.1 (Formerly 034.355) Work assignment in business, industry, or government for Cooperative education students in Biosystems Engineering. Requires a written report covering the work completed during a minimum 25-week work period. Available from January to August. (Pass/Fail grade only)

BIOE 3580 Biosystems Engineering Design Trilogy 2 Cr.Hrs.4 (Formerly 034.358) Advanced design concepts associated with Biosystems Engineering, with emphasis on the principles of safety and human factors engineering. Theory of project planning. Preparation of a preliminary design by design teams in response to a design assignment submitted by industry. Written report with engineering drawings presented orally. *Prerequisites:* BIOE 2580 (or 034.258 or 034.214). Not to be held with the former 034.326.

BIOE 3590 Mechanics of Materials in Biosystems Cr.Hrs.4 (Formerly 034.359) In this course students will be exposed to both the theory and physical behaviour of materials when subjected to loads. The course will be delivered using a combination of lectures and hands-on labs. The materials presented include a wide range of design biosystems engineers may be involved with, including plastics, bone, wood, concrete, steel, other biological materials and composites. *Prerequisite:* CIVL 2800 (or 023.280), or consent of instructor. Not to be with the former 034.324

BIOE 4240 Graduation Project Cr.Hrs.3 (Formerly 034.424) Either an independent or a directed study including at least one of: a comprehensive literature review, an experimental research project, or an engineering design problem. The project is to be concluded by a formal report or thesis. *Corequisites:* ENG 2010 (or 130.201), approval of department.(Pass/Fail grade only)

BIOE 4340 Animal Production Environment Cr.Hrs.3 (Formerly 034.434) Aspects of temperature, humidity, light, space, manure and feed handling components of controlled environments for domestic animals. Not offered in 2006-2007.

BIOE 4390 Unit Operations 1 Cr.Hrs.4 (Formerly 034.439) Equipment and systems used in handling, mixing, size reduction, separation and size enlargement of value-added food products. *Prerequisites:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226), BIOE 3270 (or 034.327). *Corequisites:* BIOE 3320 (or 034.332 or 034.323), BIOE 3580 (or 034.358 or 034.326).

BIOE 4400 Unit Operations 2 Cr.Hrs.4 (Formerly 034.440) Physical and mechanical operations for process and equipment design for handling, processing, and distribution of foods and food products. *Prerequisites:* BIOE 2110 (or 034.211), BIOE 3320 (or 034.332 or 034.323). Offered in 2006-2007 and alternate years thereafter.

BIOE 4420 Crop Preservation Cr.Hrs.4 (Formerly 034.442) Biological and physical deterioration during storage. Methods of preserving and storing cereals, oilseeds, and other agricultural crops. *Prerequisite:* BIOE 2110 (or 034.211). Offered in 2006-2007 and alternate years thereafter.

BIOE 4450 Radiation Processing of Food and Other Agricultural Commodities Cr.Hrs.4 (Formerly 034.445) An introduction to the scientific principles underlying the radiation processing of food and other agricultural commodities; its development and implementation within the context of societal needs and concerns. *Prerequisites:* BIOE 2590 (or 034.259) or 071.201 or BIOL 1020 and BIOL 1030 or the former 071.125 (C) and CHEM 1300 (or 002.130) or the former 002.123 or 002.127. Not offered in 2006-2007.

BIOE 4460 Air Pollution Assessment and Management Cr.Hrs.4 (Formerly 034.446) Air pollutant sources and characteristics, their impact on the environment, their behaviour in the atmosphere. Methods of sampling and measurement and the basic technological alternatives available for separation/removal and control. Particular problems of regional interest are discussed. *Corequisites:* CIVL 2790 (or 023.279) or

MECH 2260 (or 025.226). Offered in 2006-2007 and alternate years thereafter.

BIOE 4480 Environmental Impact Assessment Cr.Hrs.4 (Formerly 034.448) Basic methodologies for conducting impact assessments, including physical, chemical and ecological impacts. *Prerequisites:* approval of department. Offered in 2006-2007 and alternate years thereafter.

BIOE 4500 Water Management Cr.Hrs.3 (Formerly 034.450) Introduction to the design of irrigation and drainage systems. Topics in irrigation include sprinklers, laterals, mainline and pumps. Drainage topics cover both the surface and subsurface systems. Analysis of precipitation and runoff. Environmental impacts of water management. Not offered in 2006-2007.

BIOE 4510 Agricultural Waste Management Cr.Hrs.3 (Formerly 034.451) Characteristics of waste, design of systems for collection, storage and land application, alternate treatment/conversion systems, impacts on air, soil and water quality. *Prerequisite:* ANSC 3530 (035.353) or consent of instructor. Offered in 2006-2007 and alternate years thereafter.

BIOE 4520 Crop Preservation and Handling Cr.Hrs.3 (Formerly 034.452) Interaction of biological and physical factors related to methods of preserving, storing, and handling cereals, oilseeds, and other agricultural crops. Not offered in 2006-2007.

BIOE 4530 Analysis and Design of Biomachinery Cr.Hrs.4 (Formerly 034.453) Design of machines for bioprocessing; traction mechanics and tractor chassis mechanics; power transmission components; functional requirements for field and process machines; fluid power hydraulics. *Prerequisite:* BIOE 3580 (or 034.358) or 034.326. Offered in 2005-2006 and alternate years after. Not offered in 2006-2007.

BIOE 4540 Controlled Environment Production Systems Cr.Hrs.4 (Formerly 034.454) Thermal and functional design of plant and animal production systems. *Prerequisites:* BIOE 2110 (or 034.211) and AGRI 2200 (or 065.220). Not offered in 2006-2007.

BIOE 4550 Cooperative Work Study 2 Cr.Hrs.1 (Formerly 034.455) Work assignment in business, industry, or government for Cooperative education students in Biosystems Engineering. Requires a written report covering the work completed during a minimum 25 week work period. Available from May to December. (Pass-Fail grade only)

BIOE 4560 Structural Design in Wood Cr.Hrs.4 (Formerly 034.456) Design using wood as a structural material in light-frame buildings. Consideration of design constraints associated with sawn lumber as well as based composite materials. Emphasis on use of computer based design aids. *Prerequisites:* CIVL 3440 (or 023.344) or BIOE 3240 (or 034.324).

BIOE 4580 Biosystems Engineering Design Trilogy 3 Cr.Hrs.4 (Formerly 034.458) Advanced design concepts, with emphasis on the principle of quality control. Application of project planning techniques. Principles of owning and operating an engineering consulting company. Preparation of a final design by design teams in response to a design assignment submitted by industry. Written report with cost of services rendered, presented orally. *Prerequisite:* BIOE 3580 (or 034.358) or 034.326. Not to be held with the former 034.413.

BIOE 4590 Management of By-Products from Animal Production Cr.Hrs.4 (Formerly 034.459) Topics covered include solid and liquid manure, manure characteristics, manure collection, storage, land application and utilization, biological treatment, design of equipment and facilities for manure handling. Environment issues, such as odour and water pollution associated with manure management will also be discussed. *Prerequisites:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226). Not offered in 2006-2007.

BIOE 4600 Design of Water Management Systems Cr.Hrs.4 (Formerly 034.460) To introduce the basic theoretical principles in the design of irrigation and drainage systems. Topics covered include the determination of irrigation depth and interval, evapotranspiration, measurement and analysis of precipitation, design of sprinkler and drip irrigation systems, selection of pumps, surface and subsurface drainage design, water quality issues, salinity management, and the environmental impact of water management practices. *Corequisite:* SOIL 4060 (or 040.406) or CIVL 3730 (or 023.373) or consent of instructor. Not to be held with the former 034 412 or 034.418. Not offered in 2006-2007.

BIOE 4610 Design of Assistive Technology Devices Cr.Hrs.4 (Formerly 034.461) Application and design of technology for individuals with disabilities; emphasizing the development of the requisite knowledge, skills, and attitudes to evaluate, design, and implement client-centred assistive technology. A multi-disciplinary approach to learning and applying knowledge will be emphasized with engineering and medical rehabilitation students collaborating on a design project. *Prerequisite:* AGRI 2200 (or 065.220). Not offered in 2006-2007.

BIOE 4620 Remediation Engineering Cr.Hrs.4 (Formerly 034.462) The theoretical basis for the engineering design of different remediation technologies to treat contaminated soil and groundwater will be introduced. Methods for site characterization, monitoring of progress in remediation, and modelling of the remediation process will be presented. Different methods such as soil washing, air sparging, bioremediation, phytoremediation, constructed wetlands, electrokinetic remediation, reactive barriers will be discussed. *Prerequisite:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226). Offered in 2006-2007 and alternate years thereafter.

BIOE 4630 Pollution Prevention Practices Cr.Hrs.4 (Formerly 034.463) To give students an understanding of pollution prevention as it relates to solids and hazardous waste management, air and water pollution, energy usage, and resource depletion. To evaluate practices on improved manufacturing operations, present fundamentals of pollution prevention economics, examine waste minimization incentives, design improvements to existing systems, and investigate overall sustainability of industrial practices. *Prerequisite:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226). Offered in 2006-2007 and alternate years thereafter.

6.7 Food Science

FOOD 1000 Food Safety Today and Tomorrow (0-0:3-0) 3 (Formerly 078.100) A contemporary examination of the safety of the food supply – where, how and why problems may arise and what is and can be done to consistently achieve high quality, safe food. Controversial issues (residues, organic, biotechnology, irradiation) will be discussed in a balanced manner, and prospects for the future presented.

FOOD 2500 Food Chemistry (0-0:3-L) 3 (Formerly 078.250) The chemical components of food. Chemical problems and chemical changes which exist uniquely in foods. *Prerequisite:* CHEM 2770 (Mbio 2770) or CHEM 2360 (Mbio 2360).

FOOD 3010 Food Process 1 (0-0:3-L) 3 (Formerly 078.301) The principles of food processing and preservation are covered with emphasis on drying, evaporating, separating, thermal processing, mixing and packaging. Also, preservation by salting, smoking, microwave, radiation and chemical techniques is presented. *Corequisite:* FOOD 3210.

FOOD 3160 Frozen Dairy Products (3-L:0-0) 3 (Formerly 78.316) Technology of frozen dairy products, including selection and processing of materials and handling of products. Standards and quality control programs for major dairy products will be covered. Offered in 2006-07 and alternate years thereafter.

FOOD 3170 Cheese and Fermented Milk Products (3-L:0-0) 3 (Formerly 078.317) Selection and evaluation of raw materials and lactic cultures are covered. Processing, packaging and distribution of cheddar and cottage cheese, cultured milk, cream and yoghurt are studied. Not offered in 2006-07. Offered in 2007-08 and alternate years thereafter.

FOOD 3200 Baking Science and Technology (0-0:3-0) 3 (Formerly 078.320) The science and technology of transforming wheat into quality baked foods. Focus will be on the biophysical and biochemical basis for the functionality of intrinsic wheat constituents, e.g. starch, gluten proteins, and extrinsic ingredients, e.g. yeast, chemical leaveners, fats, oxidants, enzymes and other improvers. Principles of product formulations and modern processing techniques used to add value to wheat as diverse foods will also be covered. *Prerequisite:* CHEM 2770 (Mbio 2770) or CHEM 2360 (Mbio 2360).

FOOD 3210 Food Engineering Fundamentals (0-0:3-L) 3 (Formerly 078.321) Applications of engineering fundamentals to unit operations in the food industry. *Prerequisite:* BIOE 3530.

FOOD 3500 Processing of Animal Food Products (0-0:3-0) 3 (Formerly 078.350) Processing of materials of animal origin will be studied with emphasis on product quality and safety. Impact of initial characteristics as well as processing technologies will be discussed in relation to nutritive value, convenience, functionality, aesthetic factors and food safety. *Prerequisite:* CHEM 2770 (Mbio 2770) or CHEM 2360 (Mbio 2360). Offered in 2006-07 and alternate years thereafter.

FOOD 4010 Food Process 2 (3-L:0-0) 3 (Formerly 078.401) The processing of specific food groups is covered. The functions and changes in the primary chemical components (carbohydrates, proteins and lipids) of the commodities receive special consideration. New technologies including thermal/non-thermal processing, radiation, extrusion, minimal processing and other advanced processing methods will be studied. *Prerequisite:* FOOD 3010.

FOOD 4120 Food Science Seminar (3-0:0-0) 3 (Formerly 078.412) Written and verbal presentations of selected topics of current interest in the food science area. Should be taken in fourth year.

FOOD 4150 Food Microbiology 1 (3-L:0-0) 3 (Formerly 078.415) Relationships of microorganisms to processing and spoilage of food.

FOOD 4160 Food Analysis 1 (3-L:0-0) 3 (Formerly 078.416) The more common basic procedures employed in the physico-chemical analysis of food products, plus functions and operations of a processing plant laboratory. *Prerequisite:* CHEM 1320 and FOOD 2500.

FOOD 4200 Quality Control in Foods (3-0:0-0) 3 (Formerly 078.420) Fundamentals of quality control and their industrial application through physical, chemical, microbiological, statistical and sensory methods will be studied. Statistical process control (SPC) will be mainly covered; required background knowledge of statistics will be reviewed briefly. *Prerequisite:* FOOD 3010.

FOOD 4230 Food Research (0-L:0-0) or (0-0:0-L) 3 (Formerly 078.423) Research interests and aptitudes of students are developed through specific project assignments related to the food industry. *Prerequisite:* permission of department head required.

FOOD 4240 Analysis of Water and Wastes (3-L:0-0) 3 (Formerly 078.424) Introduction to the principles and application of the standard methods employed in the analysis of water and wastes in the food processing industry.

FOOD 4250 Food Analysis 2 (0-0:3-L) 3 (Formerly 078.425) Advanced techniques employed in the physico-chemical analysis of food products as preparation for research, development, and inspection roles in government and in industry. *Prerequisite:* FOOD 4160.

FOOD 4280 Food Microbiology 2 (0-0:3-L) 3 (Formerly 078.428) In depth study of the microbiological problems encountered in different segments of the food industry, including the cereal, confectionery, fruit, vegetables, meat, poultry, fish, dairy and beverage industries. *Prerequisite:* FOOD 4150.

FOOD 4300 Food Toxicants (3-0:0-0) 3 (Formerly 078.430) An introduction to the principles of toxicology and the application of these principles to toxicological testing of food products. Food toxicants to be discussed include those of natural origin and those which are either intentional or accidental additives. *Prerequisite:* CHEM 2770 (Mbio 2770) or CHEM 2360 (Mbio 2360).

FOOD 4310 Introduction to HACCP (3-0:0-0) 3 (Formerly 078.431) This course will cover principles related to hazard analysis and critical control points (HACCP), a food safety and self-inspection system that is widely endorsed internationally by industry,

consumer and regulatory groups. HACCP examines chemical, physical and biological hazards and identifies critical control points involved in producing, manufacturing and processing of food products. *Prerequisite or corequisite:* FOOD 4150 or consent of instructor. Offered in 2006-07 and alternate years thereafter.

FOOD 4500 Food Safety and Regulations (0-0:3-0) 3 (Formerly 078.450) Current food safety issues; government, industry and consumers' role in organizing a safe food supply system; food laws and regulations in Canada and internationally. Preventative measures to increase food safety and sanitation will also be covered. *Prerequisite:* FOOD 4150 or FOOD 4300. Not offered in 2006-07. Offered in 2007-08 and alternate years thereafter.

FOOD 4510 Food Product Development (0-0:3-0) 3 (Formerly 078.451) This course will allow the student to gain an understanding of the product development procedure as it relates to the food industry. Emphasis will be on application of basic knowledge of foods and food processing in designing a new product. *Prerequisites:* MKTG 2210, STAT 2000 (or equivalent), FOOD 3010. Cannot be held with HNSC 4280 (030.428).

FOOD 4520 The Packaging of Food (3-L:0-0) 3 (Formerly 078.452) Introduction to the physical principles and technology of packaging for the food industry with emphasis on the consequences to food stability and quality. *Prerequisite:* FOOD 3010 or consent of instructor.

FOOD 4540 Functional Foods and Nutraceuticals (0-0:3-0) 3 (078.454) This course will examine the bioactive components of functional foods and nutraceuticals, their sources, chemistry, process technology, efficacy, safety and regulation. *Prerequisite:* CHEM 2770 or CHEM 2360 (Mbio 2360).

6.8 Plant Science

PLNT 2500 Crop Production (0-0:3-L) 3 (Formerly 039.250) An introduction to the principles and practices of crop production in Canada. Topics will include physiological processes and factors affecting plant yield, plant improvement, seed production, and production of and the major cereal, oilseed, forage and special crops. *Prerequisite:* AGRI 1500.

PLNT 2510 Fundamentals of Horticulture (3-L:0-0) 3 (Formerly 039.251) Principles of the culture, marketing, and utilization of fruits, vegetables, and ornamentals, their contribution to the economy and well-being of consumers, and impact of horticultural activities on the environment. *Prerequisites:* BIOL 1020 and BIOL 1030 (or the former 071.125); AGRI 1500; or consent of instructor.

PLNT 2520 Genetics (3-L:0-0) 3 (Formerly 039.252) Basic principles of genetics and their practical application in the areas of DNA structure and function, genome organization and genetic analysis. Laboratory sessions provide practical experience in solving genetic problems and conducting genetic investigations. Not to be held with BOTN 2460. *Prerequisite:* a minimum grade of "C" in BIOL 1020 and BIOL 1030 (or the former 071.125).

PLNT 2530 Plant Biotechnology (0-0:3-L) 3 (Formerly 039.253) An introduction to current biotechnological techniques, including recombinant DNA, plant tissue culture, plant transformation and regeneration. A background to the techniques as well as a discussion of their applications in current biology and crop production will be examined. A laboratory will provide first hand experience with many of the techniques. Not to be held with 039.450. *Prerequisite:* CHEM 2770 and PLNT 252 or BOTN 2460.

PLNT 3140 Introductory Cytogenetics (3-L:0-0) 3 (Formerly 039.314) Principles of cytogenetics including basic techniques, light microscopy, changes in chromosome number and structure and an introduction to molecular cytogenetics. *Prerequisite:* PLNT 2520 or BOTN 2460.

PLNT 3370 Environmental Horticulture (0-0:3-T) 3 (Formerly 039.337) Management principles involved in the production of ornamental perennial plants in the nursery and their establishment and maintenance in the urban environment, with an emphasis on arboriculture. Includes a number of tutorials to allow for guest speakers, discussions and tour. Not offered in 2006-07.

PLNT 3500 Plant Physiology (3-L:0-0) 3 (Formerly 039.350) An integrative view of major physiological processes in plants, spanning the biochemical, cellular, tissue, organ and whole plant levels of organization and addressing the effects of environmental conditions on these processes. Topics covered: photosynthesis and respiration, water relations, plant nutrition, assimilate partitioning, and regulation of growth. Not to be held with BOTN 3010 or the former 001.317. *Prerequisites:* BIOL 1020 and BIOL 1030 (or the former 071.125); CHEM 2770 (Mbio 2770) or CHEM 2360 (Mbio 2360); BOTN 2010 or the former 001.230 or consent of instructor.

PLNT 3510 Cropping Systems (3-T:0-0) 3 (Formerly 039.351) Examination and analysis of sustainable prairie cropping systems. Emphasis will be placed on integrated systems that optimize the benefits of crop rotation, and conserve soil, water and wild-life resources. Conventional, traditional and alternative crop production systems will be discussed. Includes a limited number of tutorials to allow for field tours and guest speakers. *Prerequisite:* PLNT 2500.

PLNT 3520 Principles of Plant Improvement (3-L:0-0) 3 (Formerly 039.352) Basic objectives, principles, and methods of plant genetic improvement. Traditional and modern plant breeding, genetic resources, selection, and applications of tissue culture, genetic engineering and molecular markers to plant improvement. *Prerequisite:* PLNT 2520 or BOTN 2460.

PLNT 3530 Horticultural Food Crops (3-L:0-0) 3 (Formerly 039.353) Management practices, environmental considerations, and physiological factors involved in the production, marketing, and handling of the major vegetable and fruit crops. *Pre- or corequisite:* PLNT 2510 or consent of instructor.

PLNT 3540 Weed Science (0-0:3-L) 3 (Formerly 039.354) Identification, biology and ecology of weeds of agricultural importance in western Canada, including principles

of cultural, mechanical, biological and chemical control. Topics include weed interference, affects of rotational and management practices on weed species composition, herbicide selectivity and mechanism of action, Factors influencing herbicide efficiency and carry-over problems, herbicide drift and environmental contamination, and emerging control technologies. *Prerequisites:* BIOL 1020 and BIOL 1030 (or the former 071.125); AGRI 1500; or consent of instructor.

PLNT 3560 Organic Crop Production on the Prairies (0-0:3-0) 3 (Formerly 039.356) Management principles and practices involved in the production of organic field and forage crops with a focus on the Canadian Prairie Region. Also available in online delivered format. *Prerequisite:* PLNT 2500 and SOIL 3600 or consent of instructor.

PLNT 3570 Fundamentals of Plant Pathology (0-0:3-L) 3 (Formerly 039.357) An introduction to the science of plant pathology. Topics include causal agents of diseases, symptoms and diagnoses, makes of infections and spread, mechanisms in Disease and Control, effects of the environment on disease development, and methods of disease control. This course is a prerequisite for more advanced courses in plant pathology. *Prerequisite:* BOTN 2210.

PLNT 4270 Plant Disease Control (3-L:0-0) 3 (Formerly 039.427) Diseases attacking field crops and horticultural plants: recognition of symptoms, methods of prevention, alleviation, and control. *Prerequisite:* PLNT 2500 or consent of instructor.

PLNT 4300 Grain Technology (3-0:0-0) 3 (Formerly 039.430) Examination of the technology of handling, storage, transportation, grading (quality control), and processing of the major Canadian grains, including cereals and oilseeds.

PLNT 4330 Intermediate Plant Genetics (3-L:0-0) 3 (Formerly 039.433) A study of gene behaviour as related to genetic analyses of data from plant populations; multiple allelic systems and polygenic inheritance of quantitative traits; extra-chromosomal inheritance and the significance of cytoplasmic influence. Examples will be drawn from experimental data where available. *Prerequisite:* PLNT 2520 or BOTN 2460.

PLNT 4380 Plant Science Thesis (6) (Formerly 039.438) An independent research project under the supervision of a staff member. A thesis including a literature review, methods, results and discussion is required. Enrolment limited. Open only to students in their 4th year. Not to be held with SOIL 4080. *Prerequisite:* Consent of department head.

PLNT 4410 Grassland Agriculture: Plant, Animal and Environment (0-0:3-L) 3 (Formerly 039.441) Inter-relationships between the biological components of grassland agriculture as they relate to forage production on the Canadian Prairies. Topics include utilization by wild and domestic animals, plant community relationships and role of forages in multiple land use planning. This course also given in Animal Science as ANSC 4410.

PLNT 4530 Woody Plants in the Prairie Landscape (3-L:0-0) 3 (Formerly 039.453) Classification, identification, ecological characteristics, landscape characteristics and use of native and introduced woody plants found in the prairie landscape. The course will include the preparation of a landscape plan incorporating a selection of the plants studied.

PLNT 4540 Plant Genomics (0-0:3-L) 3 (Formerly 039.454) An introduction to plant genomics includes mapping and sequencing genomes, gene expression and transcriptome, comparative, functional and integrative genomics; also covers gene constructs and plant transformation and a wide ranging consideration of transgenic crop issues. Theory and practice of genomics will be examined. A laboratory will provide hands-on experience with several genomic techniques. *Prerequisite:* PLNT 2520 and PLNT 2530 or consent of instructor.

PLNT 4550 Developmental Plant Biology (0-0:3-L) 3 (Formerly 039.455) An introduction to mechanisms regulating morphogenesis and plant growth and development. Emphasis will be on experimental approaches used to investigate pattern formation at subcellular, cellular, tissue, and organ levels. A heavy tissue culture component in the lab will implement the lecture topics and will provide new insights into ways to study plant development in vitro. *Prerequisite:* PLNT 3500.

PLNT 4560 Secondary Plant Metabolism (3-0: 0-0) 3 (Formerly 039.456) An examination of secondary plant metabolism at the biochemical and molecular levels covering chlorophylls and haems, lipids, amino acids, phenolics, terpenes, and alkaloids. Biosynthesis, structure, and function of these metabolites will be put in context of their roles as hormones, plant defence compounds, pharmaceuticals, mitigators of environmental stresses, and regulators of cellular and organ physiology. Not to be held with 039.451. *Prerequisite:* PLNT 3500 or consent of instructor.

PLNT 4570 Research Methods in Plant Pathology (0-0:3-L) 3 (Formerly 039.457) Course will provide practical training in plant pathology and will cover plant disease diagnosis, pathogen isolation, identification, inoculation, and storage. Molecular Techniques currently used in the study of Plant Pathogens will be covered. The laboratory component aims at preparing students for a professional career in plant protection and research in Plant Pathology. *Prerequisite:* PLNT 3570 or consent of instructor.

PLNT 4580 Molecular Plant-Microbe Interactions (3-0:0-0) 3 (Formerly 039.458) Course will cover general principles and mechanisms related to plant-pathogen interactions, such as in gene-to-gene and toxin models. Emphasis will be on biochemical/molecular mechanisms of plant-microbe recognition, pathogenesis, and plant reactions to infections. Both beneficial and deleterious associations will be covered. *Prerequisite:* PLNT 3570. First offered in 2006-07.

PLNT 4600 Issues in Agricultural Biotechnology (3-0:0-0) 3 By lecture, group discussion, individual/group projects, selected topics related to the introduction and application of modern biotechnologies in agriculture will be examined. Acquiring a critical appreciation of the of the multidimensional issues associated with the application of biotechnology will be the goal.

PLNT 4590 Physiology of Crop Plants (0-0:3-L) 3 Concepts dealing with the physiological response of crop plants to the environment from the time of seed germination through to reproduction. Not to be held with the former 039.452. *Prerequisites:*

CHEM 2770 (MBO 2770) or CHEM 2360 (MBO 2360); PLNT 3500 or BOTN 2010 and BOTN 2020 or the former 001.230 (PLNT 3500 recommended).

6.9 Soil Science

SOIL 3060 Introduction to Agrometeorology (3-0:0-0) 3 (Formerly 040.306) Basic description and discussion of properties of the atmosphere, radiation, temperature, effect of temperature on plant growth, climate and animal response, water, evapotranspiration, insect adaptation, activity in relation to climate, climatic data.

SOIL 3600 Soils and Landscapes in Our Environment (3-L:0-0) (Formerly 040.360) Discover why soil is an essential resource. Explore the roles of soils and landscapes within natural and agricultural ecosystems by learning the fundamental biological, chemical and physical properties and processes; soil and landscape classification and evaluation. Not to be held with the former 040.350 or 040.351.

SOIL 3520 Pesticides: Environment, Economics and Ethics (0-0:3-0) 3 (Formerly 040.352) A comprehensive examination of the benefits and risks of pesticide use. Topics include: Characteristics of pesticide products and formulations used in western Canada; History, practice, successes and failures in the use of pesticides in agriculture; Pesticide use for protecting human health; Pesticide fate processes in air, soil and aquatic environments; Economical and environmental impact of pesticide application drift; Atmospheric pesticide contamination; Pesticide surface and groundwater contamination; Pesticide toxicity to organisms, including humans; Pesticide residues in food; Pesticide regulations; Pesticide risk indicators; Alternatives to pesticides. Not to be held with the former 040.411, 038.454 and 040.454.

SOIL 4060 Physical Properties of Soils (0-0:3-L) 3 (Formerly 040.406) Physical properties of soils and their relation to plant growth. Topics discussed include particle size distribution, soil water, soil structure, soil temperature, and soil aeration. *Prerequisite:* SOIL 3600 or consent of instructor.

SOIL 4080 Soils Thesis (6) (Formerly 040.408) The student will prepare a thesis on a problem in soil science. Each student will give two seminars: the first will be a review of literature pertinent to his/her problem; the second, a presentation and interpretation of results of his/her research. Not to be held with PLNT 4380. *Prerequisite:* Consent of department head.

SOIL 4120 Soil Microbiology (0-0:3-L) 3 (Formerly 040.412) Types, growth and functions of soil organisms. Cycling of soil nutrients (N,C,P,S) by soil organisms. Microbial transformation of farm wastes and agricultural chemicals and effects of agricultural chemicals on soil microbial processes. *Prerequisite:* SOIL 3600 or consent of instructor. Not to be held with MBO 3400.

SOIL 4130 Soil Chemistry and Mineralogy (0-0:3-0) 3 (Formerly 040.413) Composition of soil materials. Reactions of nutrients and contaminants with soil organic matter, silicate clays, oxides and other soil constituents which affect their mobility and bioavailability. *Prerequisite:* SOIL 3600 or consent of instructor. Not offered in 2006-07.

SOIL 4500 Remediation of Contaminated Land (0-0:3-L) 3 (Formerly 040.450) Physical, chemical and biological approaches to remediation of land including; nature of contaminants, procedures for assessing the extent of the impact, consequences to the environment, approaches to remediation and case studies of contaminant remediation. *Prerequisite:* SOIL 3600 or consent of instructor.

SOIL 4510 Soil and Water Management (3-L:0-0) 3 (Formerly 040.451) Topics include: capability of land for agriculture; storage, movement and use of water; saline and alkaline soils; soil conservation including erosion; sustainability of soil organic matter; effect and fate of soil amendments. *Prerequisite:* SOIL 3600 or consent of instructor.

SOIL 4520 Soil Fertility (3-L:0-0) 3 (Formerly 040.452) Forms and behaviour of plants nutrients in soil; soil fertility evaluation and management, including fertilizer sources and practices. *Prerequisite:* SOIL 3600 or consent of instructor.

SOIL 4530 Land Use and Environment (0-0:3-L) 3 (Formerly 040.453) Biophysical land classification and management tools; land ratings; effect of land use on environment; policy and legislation effects in land management. Not to be held with the former 040.415. *Prerequisite:* SOIL 3600 or consent of instructor.

SECTION 7: School of Agriculture: Diploma Program

General Office: 248 Agriculture Building

Telephone: 204 474 9391

Director: M.K. Pritchard

Student Advisor: M. Brolley

7.1 Preface

The two-year Agriculture Diploma program offers a practical education for persons interested in operating a farm or working in an agricultural business. Although many diploma graduates return to family farms after graduating, an increasing number of graduates can be found working for farm supply companies, feed companies, financial institutions and grain handling companies, as well as doing technical work for various government agencies.

The Agriculture Diploma program covers a wide range of agricultural subjects, from production through to marketing and business management.

Communication and leadership skills also receive considerable emphasis. The program culminates in assignments and a major project that relate directly to the student's individual farm or business interests. The program extends over two winters. Classes begin in late September and end in early April to accommodate students with obligations to plant and harvest crops.

7.2 Core Learning Objectives

Upon completion of this program, students will be expected to demonstrate proficiency in each of the following areas:

- 1. Technical knowledge and competence:** A balanced approach between principles and practices, and between proven concepts and emerging ideas and technologies will provide students with the opportunity to develop skills in diverse areas.
- 2. Critical thinking ability:** The ability to analyze information will be developed through research, problem-solving and decision-making assignments, and through exercises where students will defend their ideas and opinions.
- 3. Awareness of diverse perspectives:** The program will broaden the student's perception of the scope of the agricultural industry beyond primary production to include the many facets of agribusiness in today's world both on local and international scales.
- 4. Personal development:** The emphasis on developing both verbal and written communication skills, team-building, and career initiative allows students to meet the challenge of attaining their best, both academically and professionally.

7.3 Admission to the Diploma In Agriculture

Diploma students enter directly to the Agriculture diploma program from high school; University 1 is not required.

Applicants must be high school graduates with Senior 4 standing in English, Mathematics, and one Science course – normally either Biology, Chemistry or Physics.

Students without a suitable high school standing may be admitted upon the recommendation of the Diploma Selection Committee. The committee will review each application and interview the applicant. The maturity, scholastic ability and agricultural experience of the applicant will be considered.

7.4 Academic Regulations for the Diploma In Agriculture

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

Requirements for Graduation

To qualify for the Diploma in Agriculture a student must have attained a cumulative GPA of at least 2.00 with a minimum grade of "D" in courses totalling 93 credit hours including all those on the prescribed list. Elective courses in which failures were obtained may be substituted for and need not be repeated, except to help meet the requirements of the scholastic standards described previously.

Part-Time vs. Full-Time Status for Students

A student is considered to be equivalent to full-time if at least 60 per cent of the normal full-time course load is attempted in the academic term or session. (A normal full-time course load is usually 48-52 credit hours during the regular session.) A student will be allowed to take a partial course load with the permission of the Director of the School of Agriculture and the payment of pro-rated fees.

Transfers of Credit From Other Programs

Courses taken within the undergraduate degree programs of the Faculty of Agricultural and Food Sciences can qualify for credit towards the Agricultural Diploma program. See Academic Regulations in the Degree section. Courses taken outside the Faculty of Agricultural and Food Sciences or outside of the University of Manitoba can qualify for credit towards the Agriculture Diploma program if the course content and the student's performance are deemed appropriate by the department concerned.

Students who desire to receive such credit should contact the Student Advisor of the School of Agriculture.

Scholastic Standards

To maintain good academic standing a student must maintain a Cumulative GPA that meets or exceeds the minimum academic standards described in the table below. The standards are based on the total number of

credit hours accumulated while in the Agriculture Diploma program, including courses taken during the term in question. A student who fails to meet the standard is placed on probation or on academic suspension.

Cumulative Credit Hours	Cumulative Grade Point Average	
	Probation	Suspension
0 – 17	---	1.00
18 – 24	1.80	1.60
25 – 48	1.90	1.70
Over 48	2.00	1.85

NOTES:

- Cumulative Credit Hours includes courses passed and failures not removed by supplemental exams or successful reattempts.
- When both a final and supplemental exam are written the higher grade obtained will be used to determine Grade Point Averages.
- A minimum of 18 credit hours must be attempted between successive determinations of standing. The minimum does not apply to students who graduate before completing an additional 18 credit hours.

Probation Standards and Academic Suspension Regulations

Students on probation must improve their academic performance and regain good academic standing to avoid being suspended. Specifically, after an attempt of a minimum of 18 additional credit hours, students on probation are required to equal or exceed the probation standard in order to regain good academic standing, otherwise they will be placed on academic suspension.

A student on academic suspension is not allowed to register for the subsequent term of the regular academic session (a student suspended in January may not be reinstated until the following September; a student suspended in April may not be reinstated until the following January). Reinstatement requires the approval of the Director. Students should contact the Student Advisor for further instructions. If reinstatement is granted, all courses from the student's previous attempt will be transferred, except those with a grade of "D" or "F" from their last term (the term during which the student was placed on suspension).

Appeals

Appeals of academic assessment of students must be submitted to the general office of the School of Agriculture within 21 days of the date of notification of the action sent to the student.

Supplemental Exams

Any student in good academic standing (i.e., not on probation or suspension; see previous table of Scholastic Standards) is eligible to write one supplemental exam during each academic session in a course in which an "F" was received. The student must have written the final exam. The supplemental exam shall be considered as a replacement for the final exam only, not for term work. The passing grade in supplementals must be at least "C" (2.0). Students are normally required to carry a full-term program in order to be eligible. Accordingly, students who are granted incomplete or deferred status may not be eligible. When both a final and supplemental exam are written the higher grade obtained will be used to determine the final grade.

Supplementals will be held in January for courses taken in the first term and in June for courses in the second term.

Time Limits and Lapse of Credit

The normal maximum time allowed for the completion of the Agriculture Diploma is five years from the date of first registration. A candidate for a Diploma in Agriculture will not be permitted to count toward that diploma any courses taken more than five years prior to the date of awarding the diploma.

Students who desire an exemption from this maximum must apply, in writing, to the Director.

Dean's Honour Roll

Students registered in at least 36 credit hours and who obtain a sessional GPA of 3.5 or higher will be placed on the Dean's Honour roll.

Graduation with Distinction

The Diploma in Agriculture with Distinction will be awarded to Diploma students who obtain a cumulative GPA of 3.75 or better with 75 per cent of the courses taken within the Diploma in Agriculture.

7.5 Program Requirements

The core curriculum of prescribed courses, common to all students, provides a broad yet integrated education in the production, management and

marketing of agricultural products and the principles of managing a business. Students are taught to use this knowledge to evaluate the technical and economic feasibility of a variety of alternative agricultural practices.

Within the program, students are able to specialize in areas of interest. Options are available in Business Management, Agricultural Finance, Crop Management, Livestock Management and General Agriculture. These options are chosen by the student during the first term, first year. The Agricultural Finance option has an increased focus on the business of financial institutions and credit departments within companies. Those students choosing the Agricultural Finance option do so when registering for their first term as seen in Section 7.5.2.

7.5.1 Students in Business Management, Crop Management, Livestock Management and General Agriculture Options

Prescribed Courses for all Students in these options

First Year, Fall Term

Course No.	Credit Hours
BIOE 0600 Farm Machinery	4
ANSC 0420 Animal Biology and Nutrition	4
ABIZ 0440 Agricultural Economics and Marketing 1	4
ABIZ 0460 Financial Management 1	4
DAGR 0410 Communication and Learning Skills	4
DAGR 0420 Introduction to Soils and Crops	4
DAGR 0680 Management Planning Project 1	
Total credit hours	24

First Year, Spring Term

PLNT 0410 Cereal and Oilseed Production Practices	4
SOIL 0420 Soil Productivity and Land Use	4
ABIZ 0470 Financial Management 2	4
DAGR 0680 Management Planning Project 1	3
Total credit hours	15

+ 3 courses, according to option*

¹continuation of course from fall term

Second Year

ABIZ 0450 Agricultural Economics and Marketing 2	4
ENTM 0620 Pest Management and Farm Insects	4
DAGR 0690 Management Planning Project 2	5
DAGR 0700 Environmental Farm Plans and On-Farm Food Safety	3
Total credit hours	13

+ courses, according to option*

Total credit hours for prescribed courses	52
Total credit hours for prescribed courses for option	18-24
Total credit hours of free electives	17-23
Total credit hours for Agriculture Diploma	93

NOTE:

*These additional courses will consist of those required within an option plus free electives, in accordance with the four options described below:

Options

In order to accommodate a modest level of specialization, the students will be required to elect one of four options by the end of first term, first year. Each of these four options has a series of required courses. However, within each option there are also unrestricted electives available to the student who wishes to blend training available in two or more option areas to increase the degree of specialization.

Business Management Option

This option offers a more in-depth education in business management to those people who intend to manage farms or work as employees, managers and/or business owners in the agricultural service sector (agricultural lending, fertilizer, feed and chemical sales, etc.).

Prescribed Courses for Business Management Option

Course No.	Credit Hours
ABIZ 0680 Agribusiness Management	4
ABIZ 0690 Agricultural Finance and Credit	4
ABIZ 0720 Farm Business Management	4
Plus at least one of the following:	
ABIZ 0700 Merchandising and Sales	3
ABIZ 0710 Agricultural Policy	3
ABIZ 0730 Financial Risk Management	3
Plus one Biosystems Engineering course:	
BIOE 0400 Farm Power	4

BIOE 0710 Materials Handling and Electrical Controls	3
BIOE 0690 Water Management	4
BIOE 0700 Agricultural Buildings and Environments	4
Total prescribed credit hours, within option.	18-19
Plus 22-23 credit hours of electives, to complete 93 credit hours within the program.	

Crop Management Option

This option emphasizes soil and crop management. It is designed for people who plan to manage farms where crops are the primary farm enterprise or for those who are interested in careers in industries or businesses that provide services to these types of farms (e.g. crop supply businesses).

Prescribed Courses for Crop Management Option

Course No.	Credit Hours
PLNT 0770 Weed Management	4
PLNT 0780 Plant Disease Management	4
SOIL 0620 Soil Conservation and Management	4
SOIL 0630 Soil Fertility	4
Plus at least one of the following:	
PLNT 0750 Forage and Pasture Management	4
PLNT 0760 Special Crops	4
PLNT 0800 Diversification With Horticultural Crops	4
PLNT 0820 Organic Crop Production on the Prairies	3
Plus one Biosystems Engineering course:	
BIOE 0400 Farm Power	4
BIOE 0710 Materials Handling and Electrical Controls	3
BIOE 0690 Water Management	4
Total prescribed credit hours, within option	22-23
Plus 17-19 credit hours of electives, to complete 93 credit hours in the program.	

Livestock Management Option

This option emphasizes the principles of livestock production, with some degree of specialized attention to beef, dairy, swine, poultry or horse production. It is designed for people who plan to manage farms where livestock production is the primary enterprise or for those who are interested in the agricultural service industries that support livestock production (e.g. feed suppliers).

Prescribed Courses for Livestock Management Option

Course No.	Credit Hours
ANSC 0600 Animal Health and Welfare	3
PLNT 0750 Forage and Pasture Management	4
Plus at least one of the following:	
ANSC 0670 Beef Cattle Production and Management	4
ANSC 0680 Dairy Cattle Production and Management	4
Plus at least one of the following:	
ANSC 0690 Swine Production and Management	4
ANSC 0700 Poultry Production and Management	4
ANSC 0730 Horse Production and Management	3
Plus one Biosystems Engineering course:	
BIOE 0710 Materials Handling and Electrical Controls	3
BIOE 0700 Agricultural Buildings and Environments	4
Total prescribed credit hours, within option	17-19
Plus 22-24 credit hours of electives to complete 93 credit hours in the program.	

General Agriculture Option

This option exposes the student to crop and livestock production, business management and biosystems engineering beyond the exposure contained in the core curriculum. It is designed for those people who intend to manage diversified farm operations and for those who desire a general education in applied agricultural science.

Prescribed Courses for General Agriculture Option

Course No.	Credit Hours
At least one of the following:	
ANSC 0670 Beef Cattle Production and Management	4
ANSC 0680 Dairy Cattle Production and Management	4
ANSC 0690 Swine Production and Management	4
ANSC 0700 Poultry Production and Management	4
ANSC 0730 Horse Production and Management	3
Plus at least one of the following:	
PLNT 0750 Forage and Pasture Management	4

PLNT 0760	Special Crops	4
PLNT 0800	Diversification with Horticultural Crops	4
PLNT 0820	Organic Crop Production on the Prairies	3
Plus at least one of the following:		
SOIL 0620	Soil Conservation and Management	4
SOIL 0630	Soil Fertility	4
Plus at least one of the following:		
ABIZ 0680	Agribusiness Management	4
ABIZ 0720	Farm Business Management	4
Plus one Biosystems Engineering course:		
BIOE 0400	Farm Power	4
BIOE 0710	Materials Handling and Electrical Controls	3
BIOE 0690	Water Management	4
BIOE 0700	Agricultural Buildings and Environments	4
Total prescribed credit hours, within option		17-20
Plus 21-24 credit hours of electives, to complete 93 credit hours in the program.		

7.5.2 Students in Agricultural Finance Option

This option, designed in consultation with agricultural finance institutions, will focus on financial management and analysis. Students will be prepared for employment with lending agencies, financial institutions and larger agricultural businesses.

Prescribed Courses for all Students in the Agricultural Finance Option

First Year, Fall Term

Course No.	Credit Hours	
ANSC 0420	Animal Biology and Nutrition	4
DAGR 0710	Agricultural Enterprise	3
ABIZ 0440	Agricultural Economics and Marketing 1	4
ABIZ 0460	Financial Management 1	4
DAGR 0410	Communication and Learning Skills	4
DAGR 0420	Introduction to Soils and Crops	4
Total credit hours		23

First Year, Spring Term

SOIL 0420	Soil Productivity and Land Use	4
DAGR 0720	Agricultural Industry	3
DAGR 0750	Money and Banking	3
DAGR 0770	Tax	2
DAGR 0780	Succession and Estate Planning	2
DAGR 0760	Agricultural Law	3
or		
DAGR 0800	Intercultural Communications and	2
DAGR 0810	Public Relations (See Note 1)	2
ABIZ 0470	Financial Management 2	4
Restricted and/or Free Electives		3-4
Total credit hours		24-26

Second Year, Fall Term

DAGR 0730	Case Studies in Institutional Lending 1	4
DAGR 0790	Asset Appraisal	3
DAGR 0820	Business Writing Skills	2
ABIZ 0450	Agricultural Economics and Marketing 2	4
ABIZ 0680	Agribusiness Management	4
Restricted and/or Free Electives		6-8
Total credit hours		23-25

Second Year, Spring Term

DAGR 0740	Case Studies in Institutional Lending 2	4
DAGR 0760	Agricultural Law	3
or		
DAGR 0800	Intercultural Communications and	2
DAGR 0810	Public Relations (see note 1)	2
ABIZ 0690	Agricultural Finance and Credit	4
DAGR 0700	Environmental Farm Plans and On-Farm Food Safety	3
Restricted and/or Free Electives		9-11
Total credit hours		23-26
Total credit hours for prescribed courses, common for all Agricultural Finance Students		
		76
Total credit hours of restricted electives		15-18
Total credit hours of free electives		0-3
Total credit hours for Agriculture Diploma		93

NOTES:

1) Agricultural Law and Intercultural Communications/Public Relations will be offered in alternate years.

2) The number of free elective courses taken will be dependent upon which restricted electives are taken. Total credit hours for Agriculture Diploma is 93.

Restricted Electives

Group 1: Agribusiness

Two courses (6 or 7 credit hours) from the following:

Course No.		Credit Hours
ABIZ 0700	Merchandising and Sales (3)	
ABIZ 0710	Agricultural Policy (3)	
ABIZ 0720	Farm Business Management (4)	
ABIZ 0730	Financial Risk Management (3)	
ABIZ 3560	Agribusiness Portfolio Management (3)	6-7

Group 2: Livestock

One course (3 or 4 credit hours) from the following:

ANSC 0670	Beef Cattle Production and Management (4)	
ANSC 0680	Dairy Cattle Production and Management (4)	
ANSC 0690	Swine Production and Management (4)	
ANSC 0700	Poultry Production and Management (4)	
ANSC 0730	Horse Production and Management (3)	3-4

Group 3: Crop Production

One course (3 or 4 credit hours) from the following:

PLNT 0410	Cereal and Oilseed Production (4)	
PLNT 0700	Nursery Management (3)	
PLNT 0710	Greenhouse Crop Production (3)	
PLNT 0730	Commercial Vegetable Production (3)	
PLNT 0740	Commercial Fruit Production (3)	
PLNT 0750	Forage and Pasture Management (4)	
PLNT 0760	Special Crops (4)	
PLNT 0800	Diversification with Horticultural Crops (4)	
PLNT 0820	Organic Crop Production on the Prairies (3)	3-4

Group 4: Services and Human Resources*

One course (3 credit hours) from the following:

24006	Managerial Process and Organizational Behaviour (3)	
24011	Managing the Human Resource Function (3)	
24033	Organizational Behaviour (3)	3

*Courses offered by Extended Education. See Student Services office (160 Agriculture) for details on registration. Students may not hold credit in both 24006 and 24033.

Additional Courses

(includes electives and courses required within options)

BIOE 0400	Farm Power	4
BIOE 0680	Shop Methods	4
BIOE 0690	Water Management	4
BIOE 0700	Agricultural Buildings and Environments	4
BIOE 0710	Materials Handling and Electrical Controls	3
ANSC 0600	Animal Health and Welfare	3
ANSC 0670	Beef Cattle Production and Management	4
ANSC 0680	Dairy Cattle Production and Management	4
ANSC 0690	Swine Production and Management	4
ANSC 0700	Poultry Production and Management	4
ANSC 0730	Horse Production and Management	3
ANSC 0720	Special Topics in Livestock Management	3
ENTM 0610	Beekeeping	2
PLNT 0660	Plant Propagation	4
PLNT 0670	Landscape Plants	3
PLNT 0680	Landscape Design	3
PLNT 0690	Landscape Maintenance	3
PLNT 0700	Nursery Management	3
PLNT 0710	Greenhouse Crop Production	3
PLNT 0740	Commercial Fruit Production	3
PLNT 0750	Forage and Pasture Management	4
PLNT 0760	Special Crops	4
PLNT 0770	Weed Management	4
PLNT 0780	Plant Disease Management	4
PLNT 0790	Landscape Horticulture	4
PLNT 0800	Diversification with Horticultural Crops	4
PLNT 0810	Special Topics in Crop Management	3
PLNT 0820	Organic Crop Production on the Prairies	3
SOIL 0620	Soil Conservation and Management	4
SOIL 0630	Soil Fertility	4
DAGR 0610	Advanced Communication and Rural Leadership	3
DAGR 0630	Special Project	3
DAGR 0660	Special Topics in General Agriculture	3

DAGR 0750 Money and Banking	3
DAGR 0760 Agricultural Law	3
DAGR 0770 Tax	2
DAGR 0780 Succession and Estate Planning	2
DAGR 0790 Asset Appraisal	3
DAGR 0800 Intercultural Communications	2
DAGR 0810 Public Relations	2
DAGR 0820 Business Writing Skills	2
DAGR 0830 Agriculture Cooperative Education Work Term	2
ABIZ 0680 Agribusiness Management	4
ABIZ 0690 Agricultural Finance and Credit	4
ABIZ 0700 Merchandising and Sales	3
ABIZ 0710 Agricultural Policy	3
ABIZ 0720 Farm Business Management	4
ABIZ 0730 Financial Risk Management	3
ABIZ 0740 Special Topics in Business Management	3

7.6 Cooperative Education Program

Cooperative Education is a process of learning, which formally integrates the student's academic study with work experience in employer organizations. Work-related experience is found in industry, government and the farming profession. The work term provides the students with practical experience, helps to finance their education and provides guidance for further career specialization. All regulations governing the regular Faculty of Agricultural and Food Sciences diploma program apply to the Cooperative Education Program; in addition the following variations apply:

Admission: To be considered for admission in the Cooperative Education Program, a first year diploma student must have a minimum GPA of 2.5, and have completed at least 47 credit hour of studies by the end of the academic year of application.

Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Education Program. Acceptance into the program is dependant upon the student receiving a job placement through the Cooperative Education Office.

Employment Term Requirements: The Cooperative Education Program is a five month program between the first and second year with a faculty-approved employer. The student will receive two credits for completing the Cooperative Education Program. Students are required to register in the employment term course and pay the fee prior to starting the employment term.

Academic Term Requirements: Once having been accepted into the Cooperative Education program there are three requirements for completion of the Work Term. Failure to do any of them in a timely fashion will result in a failing grade.

- Part way through the work term, the Cooperative Education Coordinator will contact the student for a work site evaluation. During the evaluation both the student and employer will be interviewed and the work assessed. The student will need to make him/herself available for the interview.
- Two weeks after the end of the work term, a work term report is due and must be submitted to the Cooperative Education Coordinator. Both content and format will be marked. (Details as to format and what is required in the report can be found in "Guidelines for Cooperative Education Work Term Report" which can be obtained from the Cooperative Education Coordinator.)
- Also, two weeks after the end of the work term, a post employment review is required to be submitted to the Cooperative Education Coordinator.

The Director of the School of Agriculture, in consultation with the student advisor, will assign each participating student a faculty advisor. The faculty advisor will be responsible for evaluating the student's work term report and assigning the student a grade based on the report, the employer's evaluation and Cooperative Education Coordinator's site evaluation. Grades of "Pass" or "Fail" will be assigned. Diploma students successfully completing the work term will have their "Cooperative Education Option" acknowledged on their graduation parchment.

7.7 Course Descriptions

General Agriculture

DAGR 0410 Communication and Learning Skills (4) (Formerly 065.041) A course designed to improve learning skills and abilities in written and oral communication.

DAGR 0420 Introduction to Soils and Crops (3-L) 4 (Formerly 065.042) Topics covered will include soil forming factors; soil characteristics, climate, nutrient supply and crop production, biology of crop plants, crop establishment and protection, harvest management, farming systems and crop rotations.

DAGR 0610 Advanced Communication and Rural Leadership (3) (Formerly 065.061) A course designed to improve leadership potential and understanding of the rural community. *Prerequisite:* DAGR 0410.

DAGR 0630 Special Project (3) (Formerly 065.063) This project allows a student to make practical application of scientific knowledge acquired during the first year and/or to intensify the study of a topic of particular interest. A satisfactory report is required to qualify for credit. Students who intend to register for this course must obtain approval from the Director before the end of their first year.

DAGR 0660 Special Topics in General Agriculture (3) (Formerly 065.066) Selected topics of current interest in General Agriculture. *Prerequisite:* Written consent of Director of the School of Agriculture.

DAGR 0680 Management Planning Project 1 (3) Development of an objectives-driven plan that deals with production, personnel, marketing and financial management of a farm or off-farm business. Students may not hold for credit with the former 065.064.

DAGR 0690 Management Planning Project 2 (1.5-L) 5 Refinement of the plan developed in Management Planning Project 1 with emphasis on generating and analyzing a complete set of financial statements for a farm or off-farm business. Presentation of the management plan, in both written and verbal form. On-site visits will be used to illustrate and reinforce management principles and practices and address issues raised in class. Students may not hold for credit the former 065.065. *Prerequisite:* DAGR 0680

DAGR 0700 Environmental Farm Plans and On-Farm Food Safety (3) (Formerly 065.070) This course examines environmental and food safety concerns and regulations as they relate to farming. Students will develop a Manure Management Plan, an Environmental Farm Plan and will understand HACCP principles.

DAGR 0830 Agriculture Cooperative Education Work Term (2) Special 5-month work assignment in business, industry, government or research for cooperative education students in the diploma program. Requires submission of a written report covering the work completed during the professional assignment.

Agribusiness and Agricultural Economics

ABIZ 0440 Agricultural Economics and Marketing 1 (3-L) 4 (Formerly 061.044) Introduction to key economic concepts and business principles and their application to commodity marketing and Canadian agribusiness.

ABIZ 0450 Agricultural Economics and Marketing 2 (3-L) 4 (Formerly 061.045) The application of economic analysis in the study of commodity marketing: concepts, policy, practices and institutions. *Prerequisite:* ABIZ 0440. Students may not hold credit for ABIZ 0450 and the former 061.065.

ABIZ 0460 Financial Management 1 (3-L) 4 (Formerly 061.046) Study of accounting principles and financial information for the preparation and presentation of financial statements to facilitate the management of farms and agricultural businesses.

ABIZ 0470 Financial Management 2 (3-L) 4 (Formerly 061.047) Study of analysis of financial statements and financial information by decision makers managing the finances of farms and agricultural businesses. *Prerequisite:* ABIZ 0460.

ABIZ 0680 Agribusiness Management (3-L) 4 (Formerly 061.068) The application of economic, accounting and management principles to organizing, operating and managing an agribusiness. Students may not hold credit for ABIZ 0680 and the former 061.060.

ABIZ 0690 Agricultural Finance and Credit (3-L) 4 (Formerly 061.069) Application of financial management concepts in evaluating investment options and risk in farm and agribusiness decision-making. *Prerequisite:* ABIZ 0460. Students may not hold credit for ABIZ 0690 and the former 061.061.

ABIZ 0700 Merchandising and Sales (3) (Formerly 061.070) Analyzing food consumption, farm input usage and marketing trends and translating these into effective selling and distribution programs. Examination of the selling function and sales management. Students may not hold credit for ABIZ 0700 and the former 061.062.

ABIZ 0710 Agricultural Policy (3) (Formerly 061.071) Review of agriculture, international trade and food safety policies affecting the production and distribution of agricultural commodities and food products. Students may not hold credit for ABIZ 0710 and the former 061.064.

ABIZ 0720 Farm Business Management (3-L) 4 (Formerly 061.072) Application of decision making principles in terms of farm production, finance, and marketing. *Prerequisite:* ABIZ 0470. Students may not hold credit for ABIZ 0720 and the former 061.066.

ABIZ 0730 Financial Risk Management (3) (Formerly 061.073) Various approaches to managing market risk will be studied. This includes forward pricing, hedging and options along with insurance, diversification and technology to manage production risk. *Prerequisite:* ABIZ 0470; *Pre- or co-requisite:* ABIZ 0450.

ABIZ 0740 Special Topics in Business Management (3) (Formerly 061.074) Selected topics of current interest in business management. *Prerequisite:* written consent of Director of the School of Agriculture.

Animal Science

ANSC 0420 Animal Biology and Nutrition (3-L) 4 (Formerly 035.042) An introduction to animal structure and function. Genetics, growth and reproduction will be related to animal production. Further, the digestive systems of various livestock species will be studied and related to types of feedstuffs that each species can utilize. The general function of nutrients within animals will also be discussed. Nutrient content of

feedstuffs and application to nutrient requirements will be discussed.

ANSC 0600 Animal Health and Welfare (3) (Formerly 035.060) This course will discuss the common livestock and poultry diseases of the prairie provinces. Emphasis will be placed on prevention through management and health programs but treatment of specific diseases will be addressed. Animal welfare as it relates to commercial animal production will be discussed. *Prerequisite:* ANSC 0420 or equivalent.

ANSC 0670 Beef Cattle Production and Management (3-L) 4 (Formerly 035.067) Beef cattle industry; the types of beef cattle enterprises and factors affecting profitability of production. Application of principles of nutrition, genetics and physiology in the management of beef cattle enterprises. *Prerequisite:* ANSC 0420 or equivalent.

ANSC 0680 Dairy Cattle Production and Management (3-L) 4 (Formerly 035.068) A study of current production practices in Canada's dairy industry with focus on nutrition, reproduction, genetics, health, replacement rearing and marketing. *Prerequisite:* ANSC 0420 or equivalent.

ANSC 0690 Swine Production and Management (3-L) 4 (Formerly 035.069) Swine industry; the types of swine enterprises and factors affecting profitability of production. Application of principles of nutrition, genetics and physiology in the management of swine. *Prerequisite:* ANSC 0420 or equivalent. Students may not hold credit for ANSC 0690 and the former 035.064.

ANSC 0700 Poultry Production and Management (3-L) 4 (Formerly 035.070) The poultry industry; marketing system, breeding, hatchery practices, management and feeding of large scale turkey and chicken enterprises. *Prerequisite:* ANSC 0420 or equivalent.

ANSC 0720 Special Topics in Livestock Management (3) (Formerly 035.072) Selected topics of current interest in livestock management. *Prerequisite:* written consent of Director of the School of Agriculture.

ANSC 0730 Horse Production and Management (3) (Formerly 035.073) Principles of horse production, including genetics and breeding, reproductive management, nutrition and health. Applications to major sections of the horse industry. *Prerequisite:* ANSC 0420 or equivalent.

Biosystems Engineering

BIOE 0400 Farm Power (3-L) 4 (Formerly 034.040) Basic operating principles of electric motors and gasoline, diesel, and LPG engines with emphasis on fuels, fuel systems, ignition systems, lubrication and power transmission. Dynamometer tests for efficiency, traction, tractor testing and power cost estimating.

BIOE 0600 Farm Machinery (3-L) 4 (Formerly 034.060) Operating principles of basic farm implements with emphasis on seed cleaning, seeding, tillage, haying and harvest machines including their selection, adjustment, efficiency and cost of operation with respect to test data.

BIOE 0680 Shop Methods (3-L) 4 (Formerly 034.068) Principles of operation of lathes, mills, drills, grinders and saws. Intensive instruction in the use of precision measuring tools. Laboratory project requiring the use of the above machines and tools. Students may not hold credit for BIOE 0680 and the former 034.062.

BIOE 0690 Water Management (3-L) 4 (Formerly 034.069) Surveying including use of the level instrument and steel tape, agricultural drainage, dugouts and wells for farm water supply, irrigation, pump selection, the Water Rights Act. Students may not hold credit for BIOE 0690 and the former 034.063.

BIOE 0700 Agricultural Buildings and Environments (3-L) 4 (Formerly 034.070) Factors that impact the practicality of farm buildings. Components of buildings, including materials and construction techniques. Techniques of maintaining building environments to facilitate production and/or storage. Students may not hold credit for BIOE 0700 and the former 034.064 or 034.065.

BIOE 0710 Materials Handling and Electrical Controls (3) (Formerly 034.071) Fundamental concepts, systems approach, metering, moving, processing, storing agricultural produce, refrigeration, pumps, flumes, fans, ducts, grain drying, waste handling, dust control, electrical controls, wiring techniques. May not be held with the former 034.066)

Entomology

ENTM 0610 Beekeeping (2) (Formerly 038.061) Introduction to beekeeping that includes economics and marketing of honey and beeswax, equipment and its construction, pollen and nectar plants, pollination, management systems, diseases and pests, honey handling, package bees, wintering of bees, etc.

ENTM 0620 Pest Management and Farm Insects (3-L) 4 (Formerly 038.062) Characteristics, damage, and identification; insecticide use and safety; life histories and control of common Manitoba livestock, field and farmyard insects. General principles of pest management in agriculture will also be discussed. Students may not hold credit for ENTM 0620 and the former 038.060.

Plant Science

PLNT 0410 Cereal and Oilseed Production Practices (3-L) 4 (Formerly 039.041) Production practices for wheat (spring and winter), barley, oats, rye, triticale, canola and flax will be discussed; tillage, seeding, fertility, pest control, harvesting, rotation and utilization. *Prerequisite:* DAGR 0420.

PLNT 0660 Plant Propagation (4) (Formerly 039.066) Basic principles and practices in the propagation of plants by sexual and asexual methods. Special emphasis will be placed on regionally important horticultural crops. Equivalent course offered through the Prairie Horticulture Certificate program; contact the Director of the School of Agriculture.

PLNT 0670 Landscape Plants (3) (Formerly 039.067) Classification, identification and quality characteristics of woody and herbaceous plants, and their value and use in the landscape. Equivalent course offered through the Prairie Horticulture Certificate pro-

gram; contact the Director of the School of Agriculture.

PLNT 0680 Landscape Design (3) (Formerly 039.068) A study of landscape design principles and processes including contracting, construction, and establishment of plants in the environment. Equivalent course offered through the Prairie Horticulture Certificate program; contact the Director of the School of Agriculture.

PLNT 0690 Landscape Maintenance (3) (Formerly 039.069) Establishment and maintenance of trees, shrubs, herbaceous plants and turf grass in the landscape environment. Equivalent course offered through the Prairie Horticulture Certificate program; contact the Director of the School of Agriculture.

PLNT 0700 Nursery Management (3) (Formerly 039.070) A study of nursery methods of propagation and growing as they relate to bare root, container and caliper tree production in Manitoba. Equivalent course offered through the Prairie Horticulture Certificate program; contact the Director of the School of Agriculture.

PLNT 0710 Greenhouse Crop Production (3) (Formerly 039.071) A study of greenhouse construction, environmental control, growth regulation and special problems relating to cut flowers, pot and foliage plants, bedding plants, vegetables and woody plants. Equivalent course offered through the Prairie Horticulture Certificate program; contact the Director of the School of Agriculture.

PLNT 0730 Commercial Vegetable Production (3) (Formerly 039.073) Production problems and practices, environmental considerations, and the storage and marketing of the major vegetable crops. Equivalent course offered through the Prairie Horticulture Certificate program; contact the Director of the School of Agriculture.

PLNT 0740 Commercial Fruit Production (3) (Formerly 039.074) Cultural steps involved in the commercial production of tree fruits and small fruits with specific reference to Manitoba conditions. Equivalent course offered through the Prairie Horticulture Certificate program; contact the Director of the School of Agriculture.

PLNT 0750 Forage and Pasture Management (3-L) 4 (Formerly 039.075) For forage crops and the continuum of improved and unimproved pasture land, a discussion of production practices including: choice of species and cultivars of forage crops, cultural management including tillage practices, pest control, forage harvesting, grazing management and seed production. *Prerequisite:* DAGR 0420.

PLNT 0760 Special Crops (3-L) 4 (Formerly 039.076) Production practices of special crops for Manitoba including: quality and grade, crop and cultivar selection, cultural requirements including tillage, pest control, fertility requirements, harvesting, rotation and utilization. *Prerequisite:* DAGR 0420. Students may not hold credit for PLNT 0760 and the former 039.061.

PLNT 0770 Weed Management (3-L) 4 (Formerly 039.077) General principles of pest management and pesticide use safety as they relate to weed control. Economic importance, principles of cultural, biological and chemical weed control, weed identification, introduction to herbicides and factors influencing their use and selectivity. *Prerequisite:* DAGR 0420.

PLNT 0780 Plant Disease Management (3-L) 4 (Formerly 039.078) General principles of pest management and pesticide use safety as they relate to plant disease control. Discussion of diseases attacking field and horticultural crops in the Prairies including: disease symptoms, cycles, prevention and control. *Prerequisite:* DAGR 0420. Students may not hold credit for PLNT 0780 and the former 039.063.

PLNT 0790 Landscape Horticulture (3-L) 4 (Formerly 039.079) Principles of the production and use of horticultural plants in the rural and urban landscape including the establishment and value of shelterbelts. Topics include basic plant propagation, the principles of choosing and establishing ornamental trees, shrubs, herbaceous perennials, annuals, lawns, and multi-use fruit-bearing plants in the landscape, and development of a landscape plan.

PLNT 0800 Diversification With Horticultural Crops (3-L) 4 (Formerly 039.080) Principles of the uniqueness of production of horticultural crops including vegetables, fruits, herbs, spices and nutraceuticals. The potential for including these alternative crops in Prairie agriculture will be discussed.

PLNT 0810 Special Topics in Crop Management (3) (Formerly 039.081) Selected topics of current interest in Crop Management. *Prerequisite:* written consent of the Director of the School of Agriculture.

PLNT 0820 Organic Crop Production on the Prairies (3) (Formerly 039.082) Management principles and practices involved in the production of organic field and forage crops with a focus on the Canadian Prairie Region. *Prerequisite:* DAGR 0420, PLNT 0410, SOIL 0420, ENTM 0620 or consent of instructor.

School of Agriculture

DAGR 0710 Agricultural Enterprise (3) (Formerly 041.071) On-site visits to various agricultural operations to illustrate and reinforce management principles and practices. Guest lectures will cover topics pertinent to the agricultural industry. Students may not hold credit for DAGR 0710 and DAGR 0690 or the former 065.065.

DAGR 0720 Agricultural Industry (3) (Formerly 041.072) This course provides students with the opportunity to increase their awareness of agriculture and the agri-business sector. The following will be emphasized: agriculture in other parts of the world, humane livestock practices, marketing or agricultural products, production of agricultural products for niche markets, and trade shows. Students may not hold credit for DAGR 0720 and DAGR 0690 or the former 065.065.

DAGR 0730 Case Studies in Institutional Lending 1 (4) (Formerly 041.073) Case studies will provide a primary look at assessing loan applications and determining financial need, production feasibility and repayment. Students will analyze lending portfolios and the management of various enterprises. *Prerequisite:* ABIZ 0470; *Pre- or co-requisite:* ABIZ 0450.

DAGR 0740 Case Studies in Institutional Lending 2 (4) (Formerly 041.074) This course is a continuation of Case Studies in Institutional Lending 1, and will examine and analyze more applications and financial statements of agricultural operations.

Prerequisite: DAGR 0730.

DAGR 0750 Money and Banking (3) (Formerly 041.075) Introduction to various financial institutions and the services they provide. Also, students will study interest rate determination, the Bank Act and money markets. This course is designed to provide an overview of the program of study in the Agricultural Finance option.

DAGR 0760 Agricultural Law (3) (Formerly 041.076) Discussion of the complexity of the agriculture industry and the laws affecting it. The course will illustrate laws critical for effective planning and the making of sound management decisions respecting the farm operations and agribusinesses. Topics include the Manitoba and Canadian legal system, major laws affecting agriculture, and resolution of issues in Canadian agriculture. Offered in 2007-08 and alternate years thereafter.

DAGR 0770 Tax (2) (Formerly 041.077) Examination of specific farm and agribusiness tax laws and filing procedures. Tax management strategies will also be discussed.

DAGR 0780 Succession and Estate Planning (2) (Formerly 041.078) An in-depth look at the legal requirements necessary for asset transfer and farm continuity. Topics include wills, asset divisions, tax planning, savings and opportunities.

DAGR 0790 Asset Appraisal (3) (Formerly 041.079) To learn the principles and concepts as they relate to the valuation of farm property, specifically, the process for various methods of appraisal of farm assets.

DAGR 0800 Intercultural Communications (2) (Formerly 041.080) A course designed to introduce written and verbal communication in a multicultural environment. Offered in 2006-2007 and alternate years thereafter.

DAGR 0810 Public Relations (2) (Formerly 041.081) Identification of and interaction with various public within an organization or business. Enhanced written and verbal communications. Offered in 2006-2007 and alternate years thereafter.

DAGR 0820 Business Writing Skills (2) (Formerly 041.082) A course designed to enhance written business communications skills. *Prerequisite:* DAGR 0410.

Soil Science

SOIL 0420 Soil Productivity and Land Use (3-L) 4 (Formerly 040.042) Soil classification systems; soils of Manitoba and their properties; soil productivity and its maintenance; soil fertility and testing, fertilizer recommendations; environmental concerns. *Prerequisite:* DAGR 0420.

SOIL 0620 Soil Conservation and Management (3-L) 4 (Formerly 040.062) Land capability for agriculture; storage, use of water and water use efficiency; saline and alkaline soils; soil acidity; soil erosion and conservation; tillage, cropping systems and rotations; fate of biosolids, pesticides. *Prerequisite:* 040.042. Students may not hold credit for SOIL 0620 and the former 040.060.

SOIL 0630 Soil Fertility (3-L) 4 (Formerly 040.063) Soil nutrients and their behaviour; evaluation of soil fertility including soil testing for precision agriculture; crop response to fertilizers; manufacture, properties, reactions and applications of fertilizer. *Prerequisite:* SOIL 0420. Students may not hold credit for SOIL 0630 and the former 040.061.

Faculty of Architecture

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Associate Dean (Academic):

Associate Dean (Research): Rae Bridgman, Ph.D., MCIP

Environmental Design Coordinator: Eduard Epp

Program Assistant: Shamina Khan

Student Advisor: Lori Amedick

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Introduction to the Faculty of Architecture

SECTION 3: Admission to the Faculty of Architecture

3.1 Degree Offered

3.2 Course Requirements

SECTION 4: Academic Regulations

4.1 Undergraduate Scholastic Standards

4.2 Supplementary Regulations

4.3 Dean's Honour List

SECTION 5: Program Requirements

5.1 Environmental Design

SECTION 1: Academic Staff

Dean Emeritus:

Cox, M., B.I.D. (Manitoba), M.Ed. (Toronto), P.I.D.I.M., I.D.C., I.D.E.C.

Architecture

Professors Emeriti:

Graham, J., B.Arch. (Manitoba)

Professor:

Chard, N., B.A.(Hons) (Oxford), Dip. Arch (Oxford), M.A. (North London);

Enns, H., Dip.Arch.Tech. (Red River College), B.E.S., M.Arch. (Manitoba), M.A.A., M.R.A.I.C.

Associate Professors:

Aquino, E., B.Arch. (San Paulo), M.F.A. (Concordia), C.R.E.A.; Epp, E., B.E.S., M.Land.Arch. (Manitoba), M.Arch. (McGill), M.R.A.I.C.; Hasdell, P., B.Acc. (TCAE Launceston), B.Sc.Computing & Fine Arts(Sydney), B.Sc.(Arch) (Sydney), Dip. Arch. Assoc. (London); Subotincic, N., B.Arch. (Carleton), M.Arch. (McGill); West, M., B.Arch. (Cooper Union), M.Arch. (Carleton).

Assistant Professors:

Fuglem, T., B.Arch. (Carleton), M.Arch (McGill); Harrop, P., Dip.Des. (Ottawa), B.Arch. (Carleton), M.Arch. (McGill), M.A.A.; Kramer-Wolfart, C., B.A. (Calvin), B.Sc. Arch. (Michigan), M.Arch. (Princeton); Neveu, M, B.Arch. (Wentworth), M.Arch. (McGill)

Part-time Staff:

Ackerman, S. B.E.S., M. Arch. (Manitoba); Chon, J.S., B.Sc. Arch. Eng. (Yonsei), Grad.Dip.Housing (McGill), M.Arch. (Manitoba); Monteyne, T., B.E.S. (Manitoba), M.Arch. (Waterloo), M.A.A.; Syverson, D., B.A. (Alberta), M.Arch. (Manitoba), M.A.A.

Senior Scholar:

Thompson, H., B.Arch. (North Dakota State), M.Arch. (Illinois); Thompson, W.P., B.Arch. (Rhode Island), M.Arch. (Cornell), Ph.D. (Cornell).

City Planning

Professor Emeritus:

Carvalho, M., B.Arch. (Howard), M.C.P. (Pennsylvania), Ph.D. (Edinburgh), FCIP.

Professor:

Bridgman, R., B.A., B.Music (Toronto), M.A., Ph.D. (York), MCIP; Skelton, I., B.A., M.U.P., (McGill), Ph.D. (York), MCIP; Witty, D., B.A.(Hons.) (Waterloo), M.A. Urban & Reg. Plan. (Waterloo), Ph.D. (British Columbia), MRAIC, FCIP

Associate Professors:

Blake S., B.E.S. (Waterloo), M.Eng., D.Eng. (Tokyo), MCIP; van Vliet, D., B.A. (Fine Arts) (Saskatchewan), M.E.Des. (Calgary), Ph.D. (British Columbia), MCIP; Wight, J.B., M.A. (Aberdeen), M.Sc. (Alberta), Ph.D. (Aberdeen), MCIP.

Assistant Professor: Milgrom, R., B.E.S. (Manitoba), M. Arch. (Pennsylvania), Ph.D. (York)

Senior Scholar:

Rotoff, B., B.Sc. (C.E.), M.C.P. (Manitoba), MCIP

Interior Design

Professor Emeritus:

Harland, J., B.Arch. (Manitoba), M.A. (Columbia), F.P.I.D.I.M., F.I.D.E.C.

Associate Professors:

Chalmers, L., Dip.Int.Des. (Royal Melbourne Institute of Technology), M.Des. (South Australia), P.I.D.I.M., I.D.C., I.D.E.C.; Madill, R., B.A.(Hons.) (Manitoba), M.A. (Berkeley), M.S.A., S.C.A. (Toronto), R.S.P.; Maruca, N.E., B.I.D. (Manitoba), P.I.D.I.M., I.D.C., A.C.I.D.; Weselake, F.J., B.Sc.Design (Institute of Design, Chicago), Des.Man. (Domus Academy, Milan), I.D.S.A., S.E.G.D.

Assistant Professors:

Beaverford, K., Int.Des.Tech. (Lakeland), B.I.D. (Manitoba), M.Arch. (Calgary); Karpan, C., B.I.D., M.Ed., Ph.D. (Manitoba); Miyahara, A., B.I.D., B.F.A. (Manitoba), P.I.D.I.M., I.D.C., I.D.E.C.; Mallory-Hill, S, B.E.S. (Manitoba), M.Arch (Manitoba), Ph.D. (Eindhoven); Roshko, T., B.Sc. (Middle East Tech.), B.I.D., M.Sc. (Manitoba), N.I.C.D.Q., LEED™ A.P., P.I.D.I.M., I.D.C.

Part-time Staff:

Close, S., B.F.A. (Saskatchewan), M.A. (Carleton)

Landscape Architecture

Professor:

McLachlan, E.B., B.E.S., M.Land., Arch. (Manitoba), M.A.L.A, F.C.S. L.A

Associate Professors:

Eaton M., B.E.S. (Manitoba), Ph.D. (Heriot Watt); Perron, R.P., B.Sc. (Winnipeg), M.N.R.M. (Manitoba), Ph.D. (Victoria); Tate, A., B.A. Dip. L.D. (Manchester), M.A.L.A., C.S.L.A., P.P.L.I.

Assistant Professors:

Trottier, J., B.L.A. (Montreal), M.U.P. (McGill); Wilson-Baptist, K, B.F.A.(Hons), M.Ed. (Manitoba).

Part-time Staff:

Lucas, D., B.F.A.(Hons) (Manitoba), M.F.A. (Victoria)

SECTION 2: Introduction to the Faculty of Architecture

The Bachelor of Environmental Design, the faculty's only undergraduate degree, is the basic pre-professional degree required for graduate study in four areas of professional practice: Architecture, City Planning, Interior Design and Landscape Architecture. All graduate programs are accredited externally.

The Environmental Design degree is multidisciplinary with a curriculum structured around a design studio sequence that provides a forum for exploring the complex relationships between humans and the environments that constitute the places and artifacts of cultural production.

The teaching of architecture began in 1913 as a four-year degree program within the Faculty of Arts. In 1920 the program became a part of the newly established Faculty of Engineering and Architecture. In 1938 a three year diploma program in interior decoration was established. In 1945 the departments of Architecture and Interior Decoration were combined in the School of Architecture and Fine Arts. In 1948 the entire school was reorganized as the School of Architecture. The professional architecture degree became a five year program; and a new four year Bachelor of Interior Design degree was also introduced. In 1949 a one year graduate program in Community Planning was established. In 1957 the Manitoba Legislature approved a grant for the construction of a building for the School of Architecture, the first in Canada to be designed exclusively for architecture education. In 1963 the school was reconstituted as the Faculty of Architecture and a two-year graduate program leading to the degree, Master of City Planning, was introduced. In 1966 the curriculum in Architecture was reorganized so that the degree, Bachelor of Environmental Studies, became the prerequisite for the professional programs in Architecture and Landscape Architecture. This was followed in 1970 with a new curriculum leading to the professional degree, Master of Architecture, and two years later with new curriculum leading to a Master of Landscape Architecture. In 1990 an admissions year of 30 credit hours of Arts and Sciences courses became a prerequisite for entry into Environmental Design. In 1998 the Bachelor of Environmental Design (B.E.D.) became the foundation undergraduate program of the faculty. This program consists of two common foundation years followed by a third year in one of the professional 'options' in Architecture, City Planning, Interior Design or Landscape Architecture. University 1 replaced the admissions year as a prerequisite for admission to the B.E.D. program.

The foundation years of the B.E.D. program provide a solid grounding in the basic knowledge and vocabulary shared by all environmental design disciplines. Students come to understand the holistic nature of environmental design and, at an early stage, begin to establish a rich and multidisciplinary dialogue with their peers. It also enables students to discover their strengths and interests relating to their third year option and beyond. The B.E.D. program is envisioned as a strong multidisciplinary undergraduate degree in its own right and provides a solid base of education for students intending to pursue careers and/or graduate studies in a wide variety of disciplines, including the faculty's master's degrees in Architecture, City Planning, Interior Design and Landscape Architecture.

SECTION 3: Admission to the Faculty of Architecture

3.1 Degree Offered

Bachelor of Environmental Design

Minimum time to graduation: Four years (University 1 plus three years).

This program is the pre-professional degree leading to graduate studies at this institution and beyond, including master's degrees in Architecture, City Planning, Interior Design and Landscape Architecture within the Faculty of Architecture.

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

3.2 Course Requirements

6 credit hours of courses offered by the Faculty of Arts

6 credit hours of courses offered by the Faculty of Science

6 credit hours of courses offered by either the Faculty of Arts or the Faculty of Science; or 3 credit hours of each

12 credit hours of electives

Other Requirements

Elective courses in University 1 may include Environmental Design courses EVDS 1600, EVDS 1660 (available in Intersession only), and EVDS 1670 (available in Intersession only), all of which are on the list of approved University 1 courses.

The written English and mathematics requirement must be satisfied by the end of the April examination period of the year of application to the program.

Minimum GPA for consideration: 2.50 with no grade less than C in the required courses.

SECTION 4: Academic Regulations

Academic Regulations are under review. Please check the web Calendar after July 1, 2006 for updates.

4.1 Undergraduate Scholastic Standards

A Grade Point Average (GPA) of 2.0 is required as an acceptable standard of performance.

A minimum grade of 'C' is required to pass all courses offered by the departments within the faculty.

Environmental Design students must clear all conditions of first year to be eligible to register for third year subjects.

To be eligible for the degree of Bachelor of Environmental Design a student is required to complete a minimum of two full academic years of study at the University of Manitoba, including the final year.

4.2 Supplementary Regulations

Special regulations governing admission, attendance, withdrawals, examinations, grading procedures and curriculum requirements are on file in the general office of the Faculty of Architecture. The faculty reserves the right to retain temporarily or permanently any work done by students in fulfillment of course requirements.

4.3 Dean's Honour List

Students who achieve a term GPA of 3.5 or better, while registered in 80 per cent of a full course load will be included in the Dean's Honour List for the Faculty.

SECTION 5: Program Requirements

5.1 Environmental Design

The Environmental Design degree is a multidisciplinary design program that is delivered cooperatively and collectively by the four departments of the Faculty of Architecture (Architecture, City Planning, Interior Design and Landscape Architecture). The curriculum is structured around a design studio sequence that provides opportunities for examining the complex relationships between humans and the environments that constitute the places and artifacts of cultural production. The design studio comprises the core of this exploration, which is informed and enriched through the study of theory, history, technology and communications/information technology.

The Environmental Design program consists of two foundation years for which all students in the program must register, and a third-year 'option'

lected by students. Professional options include Architecture, Community Design, Interior Environment and Landscape Architecture.

The two foundation years common to all undergraduate students within the faculty provides a solid grounding in the basic knowledge and vocabulary shared by all environmental design disciplines. Students come to understand the holistic nature of environmental design and, at an early stage, begin to establish a rich and multidisciplinary dialogue with their peers. The two-year period also enables students to discover their strengths and interests, and to make a determination of their preference in pursuing specific studies both in the third-year option and beyond.

The professional options will be an important curriculum link with the graduate programs. Students holding a B.E.D. degree will be eligible to apply to the graduate departments of Architecture, City Planning, Interior Design and Landscape Architecture. Applicants already possessing baccalaureate degrees may be qualified to apply directly to one of the graduate programs and should consult the Graduate Calendar.

Course No.	Credit Hours
First Year	
EVDS 1610 Theory of Design 1	3
EVDS1620 Theory of Design 2	3
EVDS1630 Design Studio 1	5
EVDS1640 Design Studio 2	5
EVDS1650 Communication and Information Technology 1	3
EVDS1660 History of Culture, Ideas and Environment 1	3
EVDS1670 History of Culture, Ideas and Environment 2	3
EVDS1680 Environmental Technology	3
EVDS1690 Construction Materials and Assemblies 1	3
EVDS1700 Construction Materials and Assemblies 2	3
Total Credit Hours	34
Second Year	
Approved Elective	6
EVDS 2610 Theory of Design 3	3
EVDS 2620 Theory of Design 4	3
EVDS 2630 Design Studio 3	5
EVDS 2640 Design Studio 4	5
EVDS 2650 Communications and Information Technology 2	3
EVDS 2670 Environmental Controls	3
EVDS 2690 Design Since 1800	3
EVDS 2700 Construction Materials and Assemblies 3	3
Total Credit Hours	34
Third Year: Architecture Option	
Approved Elective	3
EVAR 3700 History of Modern Architecture	3
EVAR 3330 Canadian Architecture	3
EVAR 3560 Technology 4	3
EVAR 3570 Technology 5	3
EVAR 3470 Process, Method and Theory 1	3
EVAR 3480 Process, Method and Theory 2	3
EVAR 3680 Design Studio 5	6
EVAR 3690 Design Studio 6	6
Total Credit Hours	33
Students contemplating entry to the Architecture option should meet with the department head in Architecture prior to the end of their second year program.	
Third Year: City Planning Option	
Curriculum in the City Planning Option is in the process of being revised. All students are encouraged to check the Environmental Design website prior to registration for course requirements. Students contemplating entry to the Community Design option should meet with the department head in City Planning prior to the end of their second year program.	
Third Year: Interior Environment Option	
EVIE 3610 Sensory Technology 1	3
EVIE 3620 Sensory Technology 2	3
EVIE 3630 Sensory Technology 3	3
EVIE 3640 Design Inquiry	3
EVIE 3650 The Interior Dimension 1	3
EVIE 3660 The Interior Dimension 2	3
EVIE 3670 Digital Design Media	3
EVIE 3680 Design Studio 5	6
EVIE 3690 Design Studio 6	6
Total Credit Hours	33

Students contemplating entry to the Interior Environment option should meet with the department head in Interior Design prior to the end of their second year program.

Third Year: Landscape Architecture Option	
Approved Elective	3
EVLA 3240 Plants, Landscape and Design	3
EVLA 3210 Process and Landscape Form (Site Planning)	3
EVLA 3220 Site Grading Technology	3
EVLA 3680 Design Studio 5	6
EVLA 3690 Design Studio 6	6
EVLA 3720 Introduction to Landscape Architecture Theory	3
EVLA 3730 Introduction to Landscape Ecology	3
EVLA 3750 History of Landscape Architecture Before 1900	3
Total Credit Hours	33

Electives

University credit courses may be taken as electives. They may come from the faculties of Arts, Sciences, Engineering, Fine Arts, Management and Agriculture or with the permission of the Program Coordinator in special circumstances.

Supplies and Expenses

The Faculty of Architecture has introduced an Information Technology Program Fee of \$400.00 for all enrolling students. The Information Technology Program fee includes \$100.00 to go to a technology endowment fund. Remaining funds will be expended on current technology items of direct benefit to students.

In addition to fees and other expenses, the estimated cost of supplies and textbooks for students in Environmental Design is approximately \$4,000 per year. All field trip costs will be borne by the students.

The Environmental Design Program has implemented a mandatory computer purchase for all students entering second year.

Architecture, City Planning, Interior Design and Landscape Architecture

For information about professional studies leading to the degrees of Master of Architecture, Master of City Planning, Master of Interior Design and Master of Landscape Architecture, please refer to the Graduate Calendar.

Course Descriptions

U1 EVDS 1600 Introduction to Environmental Design Cr.Hrs.3 (Formerly 079.160) An introduction to the philosophy and pragmatics of design and designing processes and methods. The focus will be on design as a creative, aesthetic and scientific endeavour, and will examine the challenges and roles of environmental designers in society. Available to non-Environmental Design students only.

EVDS 1610 Theory of Design 1 (Elements of Design and Perception) Cr.Hrs.3 (Formerly 079.161) An introduction to formal theoretical issues common to the design disciplines. Emphasis is placed on identifying and locating theoretical issues in the built environment and in various modes of cultural production. Corequisite: EVDS 1630 (or 079.163).

EVDS 1620 Theory of Design 2 (Intentions in Design) Cr.Hrs.3 (Formerly 079.162) An examination of formal theoretical issues common to the design disciplines. Theoretical issues are linked with design intentions and 'ways of world-making'. Emphasis is placed on exploring design activity as a conscious, methodical act embodying meaning in historical and contemporary contexts. *Prerequisite:* EVDS 1610 (or 079.161). *Corequisite:* EVDS 1640 (or 079.164).

EVDS 1630 Design Studio 1 Cr.Hrs.5 (Formerly 079.163) Introduction to the principles of visual and spatial design, representation and communication; Studio work will concentrate on the development of perceptual and communication skills, exploration of design principles, concepts and criteria, and their applications in form making. *Corequisites:* EVDS 1610 (or 079.161) and EVDS 1680 (or 079.168).

EVDS 1640 Design Studio 2 Cr.Hrs.5 (Formerly 079.164) Introduction to concepts of space and order in the built environment. Studio work will examine design criteria and issues at various scales, with a focus on design process, intentions and meanings. *Prerequisite:* EVDS 1630 (or 079.163). *Corequisite:* EVDS 1620 (or 079.162).

EVDS 1650 Communication and Information Technology 1 Cr.Hrs.3 (Formerly 079.165) Introduction to both traditional and electronic skills, including drawing, graphics, delivery options, and internet based learning.

EVDS 1660 History of Culture, Ideas and Environment 1 Cr.Hrs.3 (Formerly 079.166) A historical survey of the western movement in architecture, interior design and urban planning considered in the setting of the physical, socio-economic, political, artistic and cultural environment.

EVDS 1670 History of Culture, Ideas and Environment 2 Cr.Hrs.3 (Formerly 079.167) A historical survey of the western movement in architecture, interior design and urban planning considered in the setting of the physical, socio-economic, political, artistic and cultural environment. *Prerequisite:* EVDS 1660 (or 079.166).

EVDS 1680 Environmental Technology Cr.Hrs.3 (Formerly 079.168) An examination of the scientific principles embodied in the natural laws which govern the science of

building, landscape and environmental design in the context of sustainable development. Factors of climate, geology and natural resource systems are introduced. *Corequisite:* EVDS 1630.

EVDS 1690 Construction Materials and Assemblies 1 Cr.Hrs.3 (Formerly 079.169) An introduction to the principles and applications associated with the manufacture of construction materials and assemblies used in environmental design with an emphasis on resource impact. An introduction to the study of loading conditions, systems of forces and conditions of equilibrium for two and three dimensional structures. *Prerequisite:* EVDS 1680 (or 079.168).

EVDS 1700 Construction Materials & Assemblies 2 Cr.Hrs.3 (Lab Required) (Formerly 079.170) An examination of structural and construction systems applied in a variety of building and site conditions. Introduction of the principles associated with foundation system selection and design. Masonry, timber framing, structural systems and basic principles of building enclosure are reviewed through lectures, laboratory assignments and design studio projects. *Prerequisite:* EVDS 1690 (or 079.169).

EVDS 2610 Theory of Design 3 (Human Behaviour and the Built Environment) Cr.Hrs.3 (Formerly 079.261) An introduction to human behaviour and its interrelationship with the design and shaping of the built environment; the relationship of language, culture and environmental cues to human behaviour. *Prerequisite:* EVDS 1620 (or 079.162) or consent of instructor.

EVDS 2620 Theory of Design 4 (Tectonic Precedent) Cr.Hrs.3 (Formerly 079.262) An examination of built works of environmental design from the 19th and 20th Centuries, with emphasis on examples that are representative of diverse positions on key issues in design practice. *Prerequisite:* EVDS 2610 (or 079.261).

EVDS 2630 Design Studio 3 Cr.Hrs.5 (Formerly 079.263) Introduction to discipline-based design problems ranging in scale from townscape design to the design of private domestic environments. Studio work includes the investigation, analysis, programming and design synthesis of a multitude of factors into buildable forms that balance pragmatic requirements with poetic intentions. *Prerequisite:* EVDS 1640 (or 079.164).

EVDS 2640 Design Studio 4 Cr.Hrs.5 (Formerly 079.264) Continuation of Design Studio 3 with discipline-based design problems at the scale of the room and of the small, free-standing building. Emphasis is placed on the understanding and resolution of architectonic issues, and on the detailed design of exterior and interior environments, both public and private. Studio work will encourage the development of design process and the application of theory. *Prerequisite:* EVDS 2630 (or 079.263).

EVDS 2650 Communications and Information Technology 2 Cr.Hrs.3 (Formerly 079.265) Skill building in visual communication and information technology. Continues development of traditional and electronic communications and graphic skills. Alternate weeks will be devoted to rotating workshops offering freehand, mechanical and computer communication skills. This course normally commences with approximately 50 contact hours of workshop comprising intensive skill building sessions. NOTE: A field work fee applies and students should check the fee schedule for the amount. *Prerequisite:* EVDS 1650 (or 079.165).

EVDS 2670 Environmental Controls Cr.Hrs.3 (Formerly 079.267) The course introduces principles and methodologies associated with acoustics, natural and artificial lighting in environmental design. These principles are examined within the context of appropriate case studies, laboratory assignments and studio projects. *Prerequisite:* EVDS 1700 (or 079.170).

EVDS 2690 Design Since 1800 Cr.Hrs.3 (Formerly 079.269) An examination of key architectural treatises of the 19th and 20th centuries that are representative of the predominant ideals of their time and the influence they have had in the construction of the built environment. *Prerequisite:* EVDS 1670 (or 079.167)

EVDS 2700 Construction Materials and Assemblies 3 Cr.Hrs.3 (Formerly 079.270) An examination of structural and construction systems applied in a variety of building and site conditions. Introduction of the principles associated with foundation system selection and design. Masonry, timber framing structural systems and basic principles of building enclosure are reviewed through lectures, laboratory assignments and design studio projects. *Prerequisite:* EVDS 1700 (or 079.170)

EVDS 3250 Advanced Computing in Environmental Design Cr.Hrs.3 (Formerly 079.325) Advanced Computing in Environmental Design builds upon skills obtained in the introductory course. The advanced course provides an opportunity for students to explore detailed applications of computational technologies in design & planning. *Prerequisite:* EVDS 2650 (or 079.265)

EVDS 3710 Special Topics Cr.Hrs.3 (Formerly 079.371) Independent study related to environmental design. Content may vary according to the interest of the community, students, profession, and the faculty. Written consent of the instructor(s) and program coordinator required.

EVDS 3740 Introduction to AutoCad in Design Cr.Hrs.3 (Formerly 079.374) The course will familiarize the student with the AutoCad program. The course content begins at an introductory level and will progress to a level which will prepare the student for work within a professional office. The course will explore the use of AutoCad for the creation of presentation drawings as well as working drawings. *Prerequisite:* EVDS 2650 (or 079.265), EVDS 2150 (or 079.215), ARCH 6370 (or 050.637) or written permission of Instructor.

Architecture Option

EVAR 3330 Canadian Architecture Cr.Hrs.3 (Formerly 079.333) Examined in reverse chronological order beginning with the present and concluding with the arrival of European settlers in the seventeenth century. Not to be held for credit with ARCH 6470 (or 050.647). *Prerequisite:* EVDS 2690 (or 079.269) or consent of instructor.

EVAR 3470 Process, Method and Theory 1 Cr.Hrs.3 (Formerly 079.347) Continuing studies into the principles of spatial ordering. The focus will be on the persistence of particular forms and systems of ordering through time and analysis of the elements

that contribute to the perception of the built environment. *Prerequisite:* EVDS 2620 (or 079.262).

EVAR 3480 Process, Method and Theory 2 Cr.Hrs.3 (Formerly 079.348) An examination of the roots of contemporary thought and theory in architecture, developed through a critical analysis of written treatises, significant movements and the work of prominent individuals from the 18th century to the present day. *Prerequisite:* EVAR 3470 (or 079.347).

EVAR 3560 Technology 4 Cr.Hrs.3 (Formerly 079.356) Examination of principles and methodologies associated with structural and construction decisions in architecture. Aspects of life safety including evacuation design and fire protection to Canadian standards are explored. Economic factors in building decisions are reviewed within the context of the architectural design process. *Prerequisite:* EVDS 2670 (or 079.267). Boots with steel toes required for site visits.

EVAR 3570 Technology 5 Cr.Hrs.3 (Formerly 079.357) Principles, environmental parameters and methodologies associated with the design of plumbing, electrical and mechanical systems in buildings. The potential of utility systems as integrated architectural elements is examined with a combination of case studies and related studio projects. *Prerequisite:* EVAR 3560 (or 079.356). Corequisite: EVAR 3690 (or 079.369).

EVAR 3680 Design Studio 5 Cr.Hrs.6 (Formerly 079.368 L01) Studies in the principles, vocabularies and methods of approach to architectural and environmental design. Studio work with specific projects to exercise the analytical, the conceptual and the developmental stages of design. *Prerequisite:* EVDS 2640 (or 079.264).

EVAR 3690 Design Studio 6 Cr.Hrs.6 (Formerly 079.369 L01) Continuing studies in the principles, vocabularies and methods of approach to architectural and environmental design. Studio work with specific projects to exercise the analytical, conceptual and developmental stages of design. *Prerequisite:* EVAR 3680 (or 079.368).

EVAR 3700 History of Modern Architecture Cr.Hrs.3 (Formerly 079.370) Introduction to key events, images and personalities of the 19th and 20th centuries shaping the ideals and the human environment. *Prerequisite:* EVDS 2690 (or 079.269) or consent of instructor.

Landscape Architecture Option

EVLA 3210 Process and Landscape Form Cr.Hrs.3 (Formerly 079.321) An investigation of the relationship between natural and cultural processes and the landscape, with particular emphasis on the plains environment of Western Canada.

EVLA 3220 Site Grading Technology Cr.Hrs.3 (Formerly 079.322) The study of the means and methods of shaping land form, of controlling the runoff of water, and of stabilizing earthwork structures. *Prerequisite:* EVDS 2670 (or 079.267).

EVLA 3240 Plants, Landscape and Design Cr.Hrs.3 (Formerly 079.324) The identification of individual, group and community behaviour in plants; investigation of physical factors affecting these phenomena and the application of this knowledge in design. *Prerequisite:* EVDS 2700 (or 079.270) or consent of instructor.

EVLA 3680 Design Studio 5 Cr.Hrs.6 (Formerly 079.368 L02) Studies in the principles, vocabularies and methods of approach to landscape architectural and environmental design. Studio work with specific projects to exercise the analytical, the conceptual and the developmental stages of design. *Prerequisite:* EVDS 2640 (or 079.264). Corequisites: EVLA 3750 (or 079.375), EVLA 3210 (or 079.321), EVLA 3220 (or 079.322) and EVLA 3240 (or 079.324).

EVLA 3690 Design Studio 6 Cr.Hrs.6 (Formerly 079.369 L02) Studies in the principles, vocabularies and methods of approach to landscape architectural and environmental design. Studio work with specific projects to exercise the analytical, the conceptual and the developmental stages of design. *Prerequisite:* EVLA 3680 (or 079.368), EVLA 3750 (or 079.375), EVLA 3220 (or 079.322), EVLA 3240 (or 079.324). Corequisite: EVLA 3210 (or 079.321).

EVLA 3720 Introduction to Landscape Architecture Theory Cr.Hrs.3 (Formerly 079.372) An examination of philosophical thinking from the late twentieth and early twenty-first centuries which has had an influence on the theory and practice of landscape architecture. Philosophical writings and their impacts on/manifestation in constructed landscape architectural works are examined through lectures, set readings, seminars and essay assignments. *Prerequisite:* EVDS 2620 (or 079.262).

EVLA 3730 Introduction to Ecology in Landscape Architecture Cr.Hrs.3 (Formerly 079.373) This course complements EVLA 3240 (or 079.324) Plants, Landscape and Design and uses the concept of sustainability to guide explorations of environmental ethics; ecological structure, function and change; and design topics such as ecological restoration, wetland creation and phytoremediation.

EVLA 3750 History of Landscape Architecture before 1900 Cr.Hrs.3 (Formerly 079.375) History of Landscape Architecture globally, beginning with the Paradise Gardens in Persia and concluding with the design of public parks in North America. *Prerequisite:* EVDS 2690 (or 079.269) or consent of instructor.

City Planning Option

EVCP 3340 History of the City Cr.Hrs.3 (Formerly 079.334) History of religious, political, cultural, technological, and aesthetic forces behind urban development and the forms that this development has taken, from the dawn of recorded history to the present day. *Prerequisite:* EVDS 2690 (or 079.269) or consent of instructor.

EVCP 3350 Planning and Design for Shelter Cr.Hrs.3 (Formerly 079.335) History of the development of housing in the western world, from the industrial revolution to the present day, and critical appraisal with respect to desirable practices in Canada. *Prerequisite:* EVDS 2690 (or 079.269) or consent of instructor.

EVAR 3470 Process, Method and Theory 1 Cr.Hrs.3 (Formerly 079.347) Continuing studies into the principles of spatial ordering. The focus will be on the persistence of particular forms and systems of ordering through time and analysis of the elements that contribute to the perception of the built environment. *Prerequisite:* EVDS 2620

(or 079.262).

EVAR 3480 Process, Method and Theory 2 Cr.Hrs.3 (Formerly 079.348) An examination of the roots of contemporary thought and theory in architecture, developed through a critical analysis of written treatises, significant movements and the work of prominent individuals from the 18th century to the present day. *Prerequisite:* EVAR 3470 (or 079.347).

Interior Environment Option

EVIE 3610 Sensory Technology 1 Cr.Hrs.3 (Formerly 079.361) The study of the interaction of light, colour, materials, construction, building systems and detailing in the design of the interior environment; responding to human and ecological considerations. *Co-requisite* EVIE 3630 (or 079.363).

EVIE 3620 Sensory Technology 2 Cr.Hrs.3 (Formerly 079.362) Further study of the interaction of light, colour, materials, construction, building systems and detailing in the design of the interior environment; responding to human and ecological considerations. *Co-requisite* EVIE 3630 (or 079.362).

EVIE 3630 Sensory Technology 3 Cr.Hrs.3 (Formerly 079.363) Workshop, studio and site investigations which explore and extend curriculum content in Sensory Technology 1 and 2. *Co-requisites* EVIE 3610 (or 079.361) and EVIE 3620 (or 079.362).

EVIE 3640 Design Inquiry Cr.Hrs.3 (Formerly 079.364) Contemporary methods of inquiry relating to the design of interior environments.

EVIE 3650 The Interior Dimension 1 Cr.Hrs.3 (Formerly 079.365) An historical and theoretical approach to the evolution of interior environments, artifacts, and the visual/spatial statements of twentieth century design culture.

EVIE 3660 The Interior Dimension 2 Cr.Hrs.3 (Formerly 079.366) An extended historical and theoretical investigation of interior environments, artifacts, and visual/spatial statements of contemporary design culture. *Prerequisite:* EVIE 3650 (or 079.365).

EVIE 3670 Digital Design Media Cr.Hrs.3 (Formerly 079.367) An intermediate level computer applications elective focused on design, representation and communications. Specific course content to be determined by the areas of specialization available to the faculty and department on a yearly basis. *Pre-requisite* EVDS 2650 (or 079.265).

EVIE 3680 Design Studio 5 Cr.Hrs.6 (Formerly 079.368 L03) Studio projects which explore and elaborate systems of meaning in interior placemaking in the private realm; developing strategies and processes in the design of the interior environment. *Pre-requisite* EVDS 2640 (or 079.264).

EVIE 3690 Design Studio 6 Cr.Hrs.6 (Formerly 079.369 L03) Studio projects which explore and elaborate systems of meaning in interior placemaking in the public realm; developing strategies and processes in the design of transitional interior environments. *Pre-requisite* EVIE 3680 (or 079.368).

School of Art

General Office

203 FitzGerald Building

Telephone: (204) 474 9367

Fax: (204) 474-7605

Website: www.umanitoba.ca/schools/art

E-Mail: fineart@cc.umanitoba.ca

Director: Professor Celia Rabinovitch (Ph.D., M.F.A.)

Student Advisor: (204) 474 8294 or 474 9586

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Mission of the School of Art

SECTION 3: Admission to the School of Art

- 3.1 Degrees Offered
- 3.2 Course Requirements: Studio Programs
- 3.3 Course Requirements: Art History

SECTION 4: Academic Regulations

- 4.1 Attendance
- 4.2 Dean's Honour List
- 4.3 Residency Requirements
- 4.4 Scholastic Standards
- 4.5 University Written English and Mathematics Requirement
- 4.6 Maximum Number of Voluntary Withdrawals
- 4.7 Limited Access Policy
- 4.8 Audit Policy

SECTION 5: Program Descriptions

- 5.1 Bachelor of Fine Arts Art History Programs
- 5.2 Bachelor of Fine Arts Studio Programs
- 5.3 Diploma in Art Program
- 5.4 Elective Subjects and Academic Requirements

SECTION 6: Course Descriptions

SECTION 1: Academic Staff

Director Emeriti

Williams, R.E., B.A. (Carnegie), M.F.A. (Iowa).

Professors Emeriti

Eyre, I.K., B.F.A. (Manitoba); **Reichert, D.K.**, B.F.A. (Manitoba).

Senior Scholars

Amundson, D.O., B.F.A. (Manitoba), M.F.A. (Arkansas); **Whitehouse, D.**, N.D.D. (Birmingham, Coll. of Art).

Professors

Alward, S., B.A. (Winnipeg), B.F.A.(Hons.) (Manitoba), M.F.A. (UCLA); **Baker, M.C.**, B.A. (Northwestern), M.A., Ph.D. (Wisconsin); **McMillan, D.S.**, B.Sc., M.F.A. (Wisconsin); **Pura, W.P.**, B.F.A. (Hons.) (Manitoba), M.F.A. (Indiana); **Rabinovitch, C.**, B.F.A.(Hons.) (Manitoba), B.A. (Manitoba), M.F.A. (Wisconsin), Ph.D. (McGill); **Sakowski, R.C.**, B.F.A., M.F.A. (Maryland).

Associate Professors

Botar, O.A.I., B.A. (Alberta), M.Sc., M.A., Ph.D. (Toronto); **Reeve, G.M.**, B.F.A. (Cranbrook), M.F.A. (Rhode Island School of Design); **Steggles, M.A.**, B.F.A. (A.H.Hons.) (Manitoba), M.A. (Manitoba), Ph.D., (Leicester); **Werner, C.A.**, B.F.A. (Manitoba), M.A. (North Dakota State), M.A. (North Dakota), Ph.D. (Manitoba).

Assistant Professors

Bugslag, J.F.P., B.A. (Victoria), M.A. (Victoria), Ph.D. (East Anglia); **Eyland, C.**, B.F.A. (Nova Scotia); **Funnell, J.A.**, B.F.A. (Manitoba), M.F.A. (Cincinnati); **Grimmer, S.**, B.Sc. (Iowa), B.F.A., (Kansas), MFA (Massachusetts); **Kelly, K.** B.F.A. (Victoria), M.F.A. (Rutgers); **Poruchnyk, A.A.**, B.F.A. (Hons.) (Manitoba), M.F.A. (Windsor); **Warren, D.** Kirk, BA (Manitoba), MA (Syracuse).

Lecturers

Howorth, E.J., B.F.A. (Manitoba), M.F.A. (North Dakota).

SECTION 2: Mission of the School of Art

The School of Art at the University of Manitoba offers professional education in the visual arts. It is one of the oldest degree-granting art schools in Canada, recognized for its high standards. The School of Art joined the University of Manitoba in 1950, continuing traditions of the independent Winnipeg School of Art originally founded in 1913. Since moving from downtown Winnipeg to the Fort Garry campus in 1965, the School continues to embrace both contemporary and traditional art practices as well as sponsoring scholarship in art history. Our new and redesigned buildings accommodate programs in Studio Foundations, Art History, Drawing, Ceramics, Painting, Sculpture, Graphic Design, Photography, Printmaking, Video and New Media. Gallery One One One presents major art exhibitions and holds collections of international significance.

The School of Art fosters the development of artists, designers and scholars in art history and studio art programs. Artistic practice, aesthetics, and knowledge of ancient through contemporary art and architecture combine with selected studio programs. Students learn to express their personal creativity through specialized elective studio and research programs. Theoretical and critical approaches combined with intuitive and conceptual frameworks encourage your creativity and knowledge of art and design. The School of Art supports diversity of expression with the understanding that art expresses the human spirit in various cultural forms.

The School of Art uses three locations: FitzGerald Building, the Ceramics/Sculpture Building, and the Fine Arts Barn. Each studio and classroom uses specialized equipment. The FitzGerald Building also houses Gallery One One One, the School of Art Permanent Collection, the FitzGerald Study Collection, digital media labs, printmaking, a video production studio, and the Art History Research and Study Centre.

SECTION 3: Admission to the School of Art

3.1 Degrees and Diploma offered

Bachelor of Fine Arts (Honours)

Bachelor of Fine Arts Art History (Honours)

Minimum time to graduate: Studio program requires four years with admission directly from high school; Art History program requires four years (University 1 plus three years).

Bachelor of Fine Arts

Bachelor of Fine Arts Art History

Minimum time to graduate: Studio program requires three years with admission directly from high school; Art History program requires three years (University 1 plus two years). These degrees are also called the “general” program.

Diploma in Art

Minimum time to graduate: Four years following direct admission.

The following summarizes admission requirements. Equivalent academic courses completed at recognized universities elsewhere are considered only after acceptance to the School of Art. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website, www.umanitoba.ca.

Acceptance Deposits are required. Deposits will be credited towards tuition once student has registered. Please see the Registration and Fees section of this General Calendar.

3.2 Course requirements: Studio programs

Bachelor of Fine Arts (Honours), and Bachelor of Fine Arts

Most applicants apply to our studio programs directly from high school. The School encourages and appreciates applications from people of diverse backgrounds and cultures. Applicants must submit the required portfolio. Other ways to apply are to:

1. Receive a grade of “B” or better in STDO 1260 Drawing for Non-Majors (Offered only in Summer 1. Equivalent to Portfolio submission, may not be used for credit in any School of Art program).
2. Receive a grade of “B” or better in the studio portion of FAAH 1050 Introduction to Art 1B and FAAH 1060 Introduction to Art 2B and an overall passing grade in the course.
3. Fulfil the entrance requirements to the School of Art from University 1.

Applicants must also fulfil the entrance requirements to the University of Manitoba as outlined in the Admissions Chapter of this *Calendar*.

For entry through University 1 students must take one or more of the following:

- a) STDO 1200 Fundamentals of Drawing (FD),
- b) STDO 1220 Basic Design (BD), and/or,
- c) STDO 1030 Introduction to Art 1A and FAAH 1040 Introduction to Art 2A.

University 1 students must complete 24 credit hours with a GPA of 2.0 or better. When FD & BD are used to enter the School, a GPA of 2.5 (C+) or better in either STDO 1200 Fundamentals of Drawing, or STDO 1220 Basic Design, or an average GPA of 2.5 in the two courses combined meet the entry requirements.

The School of Art admission has an annual quota and is competitive. Overall GPA and grades in courses taken in the School of Art are considered in the selection of students applying from University 1, Introduction to Art 1B/2B and Drawing for Non-Majors.

Diploma in Art

Admission to this program requires a high school diploma. Applicants must submit a portfolio and satisfy high school course requirements as described in the application bulletin available from Admissions.

All studio programs in the School of Art are direct entry programs. University 1 is not a requirement.

3.3 Course requirements: Art History program

Bachelor of Fine Arts in Art History, and Bachelor of Fine Arts in Art History (Honours)

To be eligible for admission to the Art History programs in the School of Art, University 1 students must have completed 24 credit hours, including the 12 credit hours of required courses listed with a minimum GPA of 2.0. Students must complete any outstanding requirements prior to graduation. Drawing for Non-Majors, STDO 1260, may not be used for credit in any School of Art program.

To qualify for the Bachelor of Fine Arts in Art History General degree, a student must maintain a minimum GPA of 2.0 with a passing grade in each course. In courses required for the degree a minimum grade of C is required.

The following courses are required:

FAAH 1030 Introduction to Art 1A (3), or FAAH 1050 Introduction to Art 1B (3) and FAAH 1040 Introduction to Art 2A (3), or FAAH 1060 Introduction to Art 2B (3)

English (3 credit hours at 100-level or above).

HIST 1200 or PHIL 1200 or 1510

Mathematics (FA 1020 or MATH 1020 or any other course that meets the University of Manitoba “M” requirements)

French, German, Italian, or any language course.

Other Requirements for Art History program

Minimum GPA required for consideration: 2.0 for the General degree program and 2.5 (in third year) for the Honours program.

In most cases, University 1 is a prerequisite for entry to the BFA in Art History General and BFA in Art History Honours programs.

Entrance requirements to the University of Manitoba are listed in the Admissions chapter of this *Calendar*.

Additional Admission Categories

Mature Students: A mature student is eligible to enter the School of Art as a student in the Diploma in Art program. A diploma student may transfer into the degree programs under certain conditions once they have completed the first year of the diploma program.

Transfer Students: A student seeking transfer to the School of Art from another faculty/school at the University of Manitoba should contact the School of Art student advisor regarding transfer of credit. Transfers from other institutions will not be assessed until after admittance to the School of Art. Note: The maximum transferable to the B.F.A. Degree is 30 credit hours and the maximum transferable to the B.F.A. Honours Degree is 60 credit hours.

Special Students: A special student is someone who is permitted by the director of the School of Art to take courses for interest and whose basis of admission is normally possession of a first degree. It should be noted that only art history courses may be audited. Studio courses must be taken for credit.

Visiting Students: A visiting student is allowed to take courses in the School of Art as long as they have the required letter of permission from their home university listing the specific courses for which they are being granted permission to take at this university.

SECTION 4: Academic Regulations

Academic Regulations are under review. Please check the web Calendar after July 1, 2006 for updates.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the School of Art has regulations and requirements that apply specifically to its students.

4.1 Attendance

Letters of warning may be issued for unexcused absences in excess of three for a course in one term. These letters of warning will become part of students permanent records in the School of Art. Unexcused absences in excess of four for a course that meets twice a week and five for a course that meets three times a week in one term may result in debarment (suspension).

4.2 Dean's Honour List

School of Art students who achieve a Sessional GPA of 3.3 and carry at least the maximum credit hours in their current year of study will be eligible for the Dean's Honour List. Students who are granted incomplete or deferred status will not be eligible.

4.3 Residence Requirement

In addition to the general University of Manitoba residence requirement, it must be noted that for the BFA General degree, BFA Honours degree, and Diploma in Art, one-half of the studio course requirements beyond the first year must be taken at this university. In any case, all thesis and workshop courses (STDO 4880, STDO 4890, STDO 4030, STDO 4060, STDO 4070, STDO 4090, STDO 4110, STDO 4140, STDO 4150) must be taken at this university.

4.4 Scholastic Standards

General Scholastic Standards

A grade of "C" is the lowest acceptable grade in a prerequisite course unless otherwise stated.

If a course is repeated, the grade and hours of credit for the repeated course are substituted for those of the original attempt in the same course in calculating the Cumulative Grade Point Average.

A student placed on probation at the end of an academic year must clear the probationary status by the end of the next academic year or withdraw permanently from the School of Art.

Specific Scholastic Standards: Art History

Bachelor of Fine Arts in Art History General: A minimum adjusted GPA of 2.0 is required for entrance to the BFA in Art History General program.

To qualify for the Bachelor of Fine Arts in Art History General degree, a student must maintain a minimum GPA of 2.0 with a passing grade in each course ("D" or better). In courses which apply toward the major a minimum grade of "C" is required.

Bachelor of Fine Arts in Art History Honours: A minimum adjusted GPA of 2.5 is required for entrance to the BFA in Art History Honours program.

To continue in Art History Honours, a student must obtain a GPA of 2.5 or better in each year's work.

Art History First Class Honours: Upon completion of the requirements for a BFA Art History Honours degree, an Honours student who achieves a 3.75 GPA in courses taken at the second, third and fourth year levels will be awarded BFA Art History Honours Degree First Class.

Specific Scholastic Standards: Studio

Bachelor of Fine Arts Honours: To enter Honours, a student must have satisfactorily completed 70 hours of credit in the first two years, with a minimum Cumulative GPA of 2.5 in the Fine Arts courses. Students must contact the Student Advisor to pursue the Honours Program.

A minimum grade of "C+" in the second year prerequisite course is required for admission to a nine credit hour (major) course. Normally a student may not use a summer session course as a prerequisite for a nine credit hour major.

A minimum grade of "B" in the nine credit hour course (major) is required for admission to the Bachelor of Fine Arts thesis course. Students must have completed all required courses in their third year (or 103 credit hours) in order to register in the BFA Thesis and Thesis Seminar courses.

To continue in Honours, a student must maintain a Cumulative GPA as follows:

Third-year Honours	2.2
Fourth-year Honours	2.5 (2.5 to graduate)

Studio First Class Honours: Upon completion of the requirements for the BFA Honours degree, an Honours student who achieves a 3.5 Cumulative GPA in courses applicable to the last two years of the Honours program is awarded the BFA Honours Degree First Class.

Bachelor of Fine Arts General: A student must maintain a cumulative GPA above probationary level as follows:

First year	1.5
Second year	1.8
Third year	2.0 (2.0 to graduate)

Diploma in Art: A minimum grade of "C+" in the second year prerequisite course is required for admission to a nine credit hour (major) course. Normally a student may not use a summer session course as a prerequisite for a nine credit hour major course.

A minimum grade of "B" in the nine credit hour (major) course is required for admission to any fourth-year diploma workshop course.

To continue in the diploma program, a student must maintain a cumulative GPA as follows:

First Year Diploma	1.5
Second Year Diploma	1.8
Third Year Diploma	2.2
Fourth Year Diploma	2.5 (2.5 to graduate)

4.5 Written English and Mathematics Requirement

All students are required to complete, within the first 60 credit hours of their programs, a minimum of at least six credit hours with significant content in **written English**, and a minimum of one three credit hour course with significant content in Mathematics.

The written English requirement for all studio degree programs in the School of Art will be met through one of ENGL 1200, Representative Literary Works, or ENGL 1300, Literature since 1900, or equivalent in English literature.

The Mathematics requirement for all studio degree programs in the School of Art can be met through FA 1020, Mathematics in Art, or any other university course designated as satisfying the 'M' mathematics requirement. Students who entered the School of Art in Regular Sessions 1997-98 and 1998-99 are exempt from the University mathematics requirement.

Refer to the chapter on General Academic Regulations and Requirements of this *Calendar* for the complete Written English and Mathematics policy.

4.6 Voluntary Withdrawal policy

Refer to the general policy on voluntary withdrawal from programs and courses in the chapter, General Academic Regulations and Requirements.

4.7 Limited Access Policy

The School of Art has opted out of the limited access policy. However Art students are subject to the limited access conditions when they take courses in faculties or schools that are part of the limited access policy. The limited access policy can be found in the chapter, General Academic Regulations and Policies.

4.8 Audit Policy

Auditing of studio courses is NOT allowed; however, art history courses may be audited. See the chapter, General Academic Regulations and Requirements, for information.

SECTION 5: Program Descriptions

5.1 Bachelor of Fine Arts, Art History Programs

The Art History program at the School of Art offers students an opportunity to consider, in a cultural context, both Western and non-Western artistic traditions with an emphasis on the former from the Renaissance to the present. While all courses acknowledge methodological issues, the program also offers courses in art theory and criticism at the second- and third-year levels. Students enrolled in this program broaden their knowledge of art production with studio electives.

Art History General

A student may proceed to the Bachelor of Fine Arts in Art History General degree by completing satisfactorily the following requirements:

At least 30 and no more than 42 credits in Art History, two specified studio courses, field trips and Health Hazards in the Arts, specified history or philosophy requirement, university written English and mathematics requirement, and electives for a total of at least 91 credit hours.

Course Distribution: Art History

University 1

See Section 3, Admission to School of Art, for information on admission to the BFA in Art History General program from University 1.

Students admitted to the Art History General program who have not fulfilled the three credit university mathematics requirement must take these three credits as part of their second year electives requirement.

Course No.		Credit Hours
Second Year (31 Credit Hours)		
Students will select 5 of the 8 200-level courses listed below:		
CLAS 2670	Greek Art and Architecture	3
CLAS 2680	Roman Art and Architecture	3
FAAH 2060	Med. To Early Renaissance Art and Arch	3
FAAH 2070	Renaissance To Baroque Art and Arch.	3
FAAH 2080	Modern to Contemporary Art	3

FAAH 2090	Art of North American Aboriginal Peoples	3
FAAH 2100	Survey of Asian Art	3
FAAH 2110	Women and Art	3
Additional Required Courses:		
STDO 1200	Fundamentals of Drawing	
	Or	
STDO 1220	Basic Design	9
FA 1270	Health Hazards in the Arts	1
	Academic or Studio Electives	6
FA 2620	Writing about Art (strongly recommended for Art History Majors.)	3
Third Year (30 Credit Hours)		
FAAH 3210	Introduction to Theory and Criticism of Art	3
FAAH 3260	Canadian Art and Arch to WWII	
	Or	
FAAH 3270	Canadian Art Since WWII	3
FA 3440	Field Trip	0
Studio Electives (Students must take either 9 credit hours of studio at the 100-level or 6 credit hours of studio at the 200-level)		
		6/9
	Art History Electives	18/15
TOTAL CREDIT HOURS		91

Art History (Honours)

A student may proceed to the Bachelor of Fine Arts in Art History Honours degree by completing satisfactorily the following requirements:

At least 54 and no more than 72 credits in Art History, two specified studio courses, field trips and FA 1270 (Health Hazards in the Arts), specified history or philosophy requirement, university written English and mathematics requirement, and electives for a total of at least 121 credit hours. A minimum GPA of 2.5 is required to enter the Art History Honours Degree program. To continue in the Art History Honours, a student must maintain a minimum GPA for 2.5 or better.

University 1

Refer to the School of Art Section 3 Admission to School of Art for specific information on admission to the BFA in Art History Honours program from University 1. Students admitted to the Art History Honours program who have not fulfilled the three-credit university mathematics requirement must take these three credits as part of their second year electives requirement.

Second Year (Honours)

Same as for BFA General Art History Degree 31

Third Year (Honours)

Same as for BFA General Art History Degree 30

Fourth Year (Honours)

Art History Electives: 18

Other Academic and/or Studio Electives: 12

Honours students wishing to take more than 18 credit hours of Art History may use their academic electives to do so.

TOTAL CREDIT HOURS 121

5.2 Bachelor of Fine Arts Studio Programs

The School of Art offers degrees that cover the history, theory, and techniques of art. Students must also take courses in the humanities, sciences, and social sciences.

These programs provide a general cultural background as well as the technical education necessary to become an educator, or a professional creative artist in fine art or applied fields. The programs reflect the assumption that in a time of fluctuating cultural values, technical training alone is not sufficient for significant work in any branch of the arts.

The first two years offer basic instruction in the fundamental principles of drawing, design and representation. In the fine arts studio electives in second year, the student selects a program that provides specialization in one or more of the following: ceramics, drawing, new graphic design, painting, photography, printmaking, sculpture and video.

The school reserves the right to retain temporarily or permanently any work done by students in fulfilment of course requirements.

General Studio Degree

A student may proceed to the Bachelor of Fine Arts General studio degree by completing satisfactorily 100 credit hours as outlined below:

Course No.		Credit Hours
First Year (37 Credit Hours)		
Students must choose one of ENGL 1200 or ENGL 1300 for a total of at least six credit hours:		
ENGL 1200	Representative Literary Works	
	Or	
ENGL 1300	Literature since 1900	6
	Elective subject(s) other than Fine Arts	6
FAAH 1030	Introduction to Art 1A	3
FAAH 1040	Introduction to Art 2A	3
STDO 1200	Fundamentals of Drawing	9
STDO 1220	Basic Design	9
FA 1270	Health Hazards in the Arts	1
FA 1990	Field Trip	0
Second Year (33 Credit Hours)		
	Elective Fine Arts studio	21
	Elective History and Theory of Art	6
	Elective subject(s) other than Fine Arts	6
Third Year (30 or 33 Credit Hours)		
FA 3440	Field Trip	0
	Elective Fine Arts studio	12/15
	Elective History and Theory of Art	12
	Elective subject(s) other than Fine Arts	6
TOTAL CREDIT HOURS		100

Third Year (30 or 33 Credit Hours)

FA 3440	Field Trip	0
	Elective Fine Arts studio	12/15
	Elective History and Theory of Art	12
	Elective subject(s) other than Fine Arts	6

TOTAL CREDIT HOURS 100

NOTES:

The three credit Mathematics requirement must be taken in either first or second year as part of the elective subject(s) other than Fine Arts requirement.

A student seeking the degree of Bachelor of Fine Arts with a view to obtaining admission to Education after obtaining their Fine Arts degree should inquire at the Faculty of Education for advice in selecting appropriate courses other than Fine Arts.

One of Sculpture 1 or Ceramics 1 must be taken as one of the elective Fine Art studios in either second or third year.

A minimum grade of "C+" in the second year prerequisite course is required for admission to a nine credit hour (major) course. Normally a student may not use a summer session course as a prerequisite for a nine credit hour major.

Honours Studio Degree

At the beginning of the second year, a student who wants to enter the honours program must make a tentative selection of a major area of study from the following: ceramics, drawing, new graphic design, painting, photography, printmaking, sculpture, or video. Choice is expressed through a second-year Fine Arts studio elective, which must be a course in the intended major (9 credit hour) subject if the major is other than drawing. If the intended major is drawing, one elective must be selected from another studio area.

The third-year Fine Arts major and the thesis in the fourth year will be done as advanced work in one area of study to which the student has been introduced through a course in that area taken in the first or second year.

A minimum of 136 credit hours is required for the Bachelor of Fine Arts Honours degree.

NOTE: A student who fails to achieve the standing required for continuance in the BFA Honours program can transfer back to the BFA General program.

First and Second Year

Same requirements as those listed above for the first (37) and second (33) years of the BFA General degree.

Third Year (Honours) (33 Credit Hours)

FA 3440	Field Trip	0
	Fine Arts Major Course (B or better is required to register for B.F.A. Thesis)	9
	Elective Fine Arts studio (One of Sculpture 1 or Ceramics 1 must be taken as one of the elective Fine Arts studios in either the second or third years)	6
	Elective History and Theory of Art	6
	Elective subject other than Fine Arts	6
	Elective Fine Arts Studio, History and Theory of Art, OR Elective subject other than Fine Arts	6

Fourth Year (Honours) (33 Credit Hours)

STDO 4880	Bachelor of Fine Arts thesis	18
STDO 4890	Bachelor of Fine Arts Thesis Seminar	3

Elective Fine Arts studio	6
Elective subject other than Fine Arts studio	6
TOTAL CREDIT HOURS	136

5.3 Diploma in Art Program

The Diploma in Art is a four-year program, essentially technical in nature, that prepares students for careers as practising artists in either the fine or applied fields. A minimum of 106 credit hours is required for the Diploma in Art Program.

For students who entered the Diploma in Art Program prior to Regular Session 2002-2003, Foundation Sculpture, 054.125, is required. For those students entering the Diploma in Art Program in Regular Session, 2002-2003, Foundation Sculpture, 054.125, is NOT required.

Course No		Credit Hours
First Year All Diploma Concentrations (25 Credit Hours)		
FAAH 1030	Introduction to Art 1A	3
FAAH 1040	Introduction to Art 2A	3
STDO 1200	Fundamentals of Drawing	9
STDO 1220	Basic Design	9
FA 1270	Health Hazards in the Arts	1
FA 1990	Field Trip	0
TOTAL CREDIT HOURS		25
Second Year All Diploma Concentrations (27 Credit Hours)		
STDO 2220	Painting 1	6
Elective	Studio: Choose 21 credit hours from the following:	
STDO 2210	Sculpture 1	6
STDO 2230	Ceramics 1	6
STDO 2240	Advanced Drawing	6
STDO 2400	Photography 1	6
STDO 2550/2560	Printmaking 1A/1B	3/3
STDO 2610	Video 1	6
STDO 2630/2640	Design Studio 1/2	3/3
TOTAL CREDIT HOURS		27
Third & Fourth Years (27 Credit Hours each year for a total of 54 cr hr)		
Students select an area of concentration from the following:		
FA 3440	Field Trip: required in third year for all students	0
Ceramics		
STDO 3330	Advanced Drawing 2	6
STDO 3620	Ceramics 2	9
STDO 4070	Ceramics Workshop	15
	A 300 level two dimensional studio	6
	A minimum of three elective Fine Arts courses	18
TOTAL CREDIT HOURS		54
Drawing		
STDO 2550/2560	Printmaking 1A/2A	3/3
STDO 3420	Advanced Painting	6
STDO 3630	Drawing	9
STDO 4030	Drawing Workshop	15
	A minimum of three elective Fine Arts courses	18
TOTAL CREDIT HOURS		54
Graphic Design		
STDO 2400	Photography 1	6
STDO 3330	Advanced Drawing 2	6
STDO 3420	Advanced Painting	6
STDO 4840/4850	Design Studio 5/6 (Students registering in this Design Studio (Major) must also enrol in STDO 2400 Photography 2, if not already completed)	4.5/4.5
STDO 4090	Commercial Problems	15
	A minimum of two elective Fine Arts courses	12
TOTAL CREDIT HOURS		54
Painting		
STDO 3330	Advanced Drawing 2	6
STDO 3600	Painting 2	9
STDO 4110	Painting Workshop	15
	A minimum of four elective Fine Arts courses	24
TOTAL CREDIT HOURS		54
Photography		
STDO 3330	Advanced Drawing 2	6
STDO 3490	Advanced Photography 2	9
STDO 4150	Photography Workshop	15

A minimum of four elective Fine Arts courses	24	
TOTAL CREDIT HOURS	54	
Printmaking		
STDO 3330	Advanced Drawing 2	6
STDO 3420	Advanced Painting	6
STDO 3890/3900	Printmaking 2A/B	9
STDO 4060	Printmaking Workshop	15
	A minimum of three elective Fine Arts courses	18
TOTAL CREDIT HOURS		54

Sculpture
Students must choose either STDO 2230 or STDO 2550/2560 (whichever was not selected in second year) for a total of at least six credit hours:

STDO 2230	Ceramics 1	
	or	
STDO 2550/2560	Printmaking 1A/1B	3/3
STDO 3330	Advanced Drawing 2	6
STDO 3650	Sculpture 2	9
STDO 4140	Sculpture Workshop	15
	A minimum of three elective Fine Arts courses	18
TOTAL CREDIT HOURS		54

Video		
STDO 3330	Advanced Drawing 2	6
STDO 3420	Advanced Painting	6
STDO 3610	Video 2 (9) MAJOR	9
STDO 4160	Video Workshop	15
	A minimum of three elective Fine Arts courses	18
TOTAL CREDIT HOURS		54

NOTE: Diploma students may elect courses in Art History as well as studio art courses for their elective Fine Arts courses.

5.4 Elective Subjects and Academic Requirements

Elective Courses in History and Theory of Art

When offered, any of the following courses may be chosen when the program outline calls for an elective in History and Theory of Art. (Courses are offered in alternate years where possible).

Course No.		Credit Hours
FAAH 2060	Medieval to Early Renaissance Art and Architecture	3
FAAH 2070	Renaissance to Baroque Art and Architecture	3
FAAH 2080	Modern to Contemporary Art	3
FAAH 2090	Art of the North American Aboriginal Peoples	3
FAAH 2100	Survey of Asian Art	3
FAAH 2110	Women and Art	3
FAAH 2910	Field Studies in Art History 1	3
FAAH 2920	Field Studies in Art History 2	3
FAAH 3130	Topics in Medieval Art and Architecture	3
FAAH 3140	Topics in Renaissance and Baroque Art and Architecture	3
FAAH 3150	Topics in 18th and 19th Century Art	3
FAAH 3160	Topics in 20th Century Art	3
FAAH 3170	Contemporary Art	3
FAAH 3180	History of Photography	3
FAAH 3190	History of Ceramics	3
FAAH 3200	Art in New Media	3
FAAH 3210	Introduction to the Theory and Criticism of Art	3
FAAH 3220	Topics in Aboriginal Art	3
FAAH 3230	Chinese Art and Architecture	3
FAAH 3240	Japanese Art and Architecture	3
FAAH 3250	Topics in Art History	3
FAAH 3260	Canadian Art and Architecture to World War II	3
FAAH 3270	Canadian Art since World War II	3
FAAH 3280	Early Byzantine Art and Architecture	3
FAAH 3290	Later Byzantine Art and Architecture	3
FAAH 3430	Inuit Art	3
FAAH 3590	Islamic Art and Architecture	3
FAAH 3780	Twentieth Century American Art Until 1950	3
FAAH 3910	Field Studies in Art History 3	3
FAAH 3920	Field Studies in Art History 4	3
FAAH 4060	Seminar in Art Theory and Criticism	3
FAAH 4070	Seminar in Art History 1	3
FAAH 4080	Seminar in Art History 2	3
FAAH 4090	Seminar on Contemporary Issues in Art	3
FAAH 4710	Directed Study 1	3
FAAH 4720	Directed Study 2	3

Elective Subjects Other Than Fine Arts

Credit courses in the Faculty of Arts, Faculty of Science, and Faculty of Music are acceptable as academic electives in the School of Fine Arts studio programs. Students wishing to take academic electives beyond those in the Faculties listed above, should contact the School of Art office to verify credit options.

SECTION 6: Course Descriptions

General Courses:

U1 M FA 1020 Mathematics in Art Cr.Hrs.3 (Formerly 054.102) Specific theory, structuring systems, and mathematical methods and principles used in works of art from various historical periods and contexts will be explored in relation to Euclidean and non-Euclidean geometries. Topics include 1) linear perspective; 2) shapes, patterns, balance and symmetry; 3) ratio, proportion, and harmony; and 4) order, dynamics, and chaos. The course will be one half art and one half mathematics, team-taught by faculty from the School of Art and the Department of Mathematics. Students may not hold credit for both FA 1020 (or 054.102) and MATH 1020 (or 136.102). No prerequisite.

FA 1270 Health Hazards in the Arts Cr.Hrs.1 (Formerly 054.127) Lectures on the hazards inherent in the use of common artists' materials and equipment. *Prerequisite* for all School of Art studio courses with the exception of STDO 1200 (or 054.120), STDO 1220 (or 054.122), FAAH 1030 (or 054.103), FAAH 1040 (or 054.104), FAAH 1050 (or 054.105) and FAAH 1060 (or 054.106).

FA 1990 First Year Field Trip Cr.Hrs.0 (Formerly 054.199) A field trip conducted by members of faculty. The 1st year field trip is held in second term. When the field trips are destined for the United States, students requiring a visa should make arrangements to obtain the visa at least 90 days before field trip departure date. A field trip exemption is not grantable except under extreme/extraordinary/visa issues circumstances. The field trip is required for a BFA General Degree and the Diploma program. Students unable to obtain a visa should contact their student advisor.

FA 2620 Writing About Art Cr.Hrs.3 (Formerly 054.262) This course is designed to give art history majors, studio majors, and other interested students studying art history the opportunity to develop their writing skills in the context of the requirements of the discipline. The focus will be on the production of both academic and critical writing about historical and contemporary art, as well as on writing which meets the practical needs of professional artists. This course can only be held as "academic elective" credit for students within the School of Art. *Prerequisite*: FAAH 1030 (or 054.103) and FAAH 1040 (or 054.104) or FAAH 1050 (or 054.105) and FAAH 1060 (or 054.106); or the previous 054.124 or 054.130.

FA 3440 Field Trip Cr.Hrs.0 (Formerly 054.344) A field trip conducted by members of faculty. The 3rd year field trip is held in first term and the 1st year field trip is held in second term. When the Field Trips are destined for the United States, students requiring a visa should make arrangements to obtain the visa at least 90 days before field trip departure date. A field trip exemption is not grantable except under extreme/extraordinary/visa issues circumstances. The field trip is required for a BFA General Degree and the diploma program. Students unable to obtain a visa should contact their student advisor. *Prerequisite*: First Year Field Trip

Art History Courses

Note: Intro to Art A (FAAH 1030/1040) or Intro to Art B (FAAH 1050/1060) is the prerequisite to further study in Art History courses unless specifically stated.

U1 FAAH 1030 Introduction to Art 1A Cr.Hrs.3 (Formerly 054.103) A basic study/survey of world art history and theory to the early Renaissance. May not be held for credit with FAAH 1050 (or 054.105) or the previous 054.124 or 054.130. (Formerly first half of 054.124) This course is a *prerequisite* to further study in art history and theory of art.

U1 FAAH 1040 Introduction to Art 2A Cr.Hrs.3 (Formerly 054.104) A basic study/survey of world art history and theory from the Renaissance to the present. May not be held for credit with FAAH 1060 (or 054.106) or the previous 054.124 or 054.130. *Prerequisite*: FAAH 1030 (or 054.103) or FAAH 1050 (or 054.105). (Formerly second half of 054.124) *Prerequisite* to further study in art history and theory of art.

U1 FAAH 1050 Introduction to Art 1B Cr.Hrs.3 (Formerly 054.105) A basic study/survey of world art history and theory from the early Renaissance to the present, supplemented by a two-hour studio/laboratory in the practice and techniques of art. A combined grade of "B" or better in the laboratory of this course (FAAH 1050 (or 054.105) & FAAH 1060 (or 054.106)) can be used in place of the entrance portfolio to the School of Art. This course is only open to students in faculties and schools other than the School of Art. *Prerequisite* to further study in art history and theory of art. May not be held for credit with FAAH 1030 (or 054.103) or the previous 054.124 or 054.130. (Formerly first half of 054.130).

U1 FAAH 1060 Introduction to Art 2B Cr.Hrs.3 (Formerly 054.106) A basic study/survey of world art history and theory from the Renaissance to the present, supplemented by a two-hour studio/laboratory in the practice and techniques of art. A combined grade of "B" or better in the laboratory of this course (FAAH 1050 (or 054.105) & FAAH 1060 (or 054.106)) can be used in place of the entrance portfolio to the School of Art. This course is only open to students in faculties and schools other than the School of Art. May not be held for credit with FAAH 1040 (or 054.104) or the previous 054.124 or 054.130. *Prerequisite*: FAAH 1050 (or 054.105). (Formerly second half of 054.130). *Prerequisite* to further study in art history and theory of art.

FAAH 2060 Medieval to Early Renaissance Art and Architecture Cr.Hrs.3 (Formerly 054.206) An introduction to the study of Medieval art and architecture in Europe, from the very beginnings of a specifically Christian artistic tradition to the beginning of the Renaissance. May not be held for credit with the previous 054.251 or 054.252. *Prerequisite*: 6 credits from FAAH 1030 (or 054.103), FAAH 1040 (or 054.104), FAAH 1050 (or 054.105) or FAAH 1060 (or 054.106); or the previous 054.124 or 054.130; or written permission of the instructor.

FAAH 2070 Renaissance to Baroque Art and Architecture Cr.Hrs.3 (Formerly 054.207) An introduction to the study of Renaissance art and architecture up to the Baroque in the context of the social, political and economic circumstances of this time. May not be held for credit with the previous 054.245, 054.246, 054.249 or 054.250. *Prerequisite*: 6 credits from FAAH 1030 (or 054.103), FAAH 1040 (or 054.104), FAAH 1050 (or 054.105) or FAAH 1060 (or 054.106); or the previous 054.124 or 054.130; or written permission of the instructor.

FAAH 2080 Modern to Contemporary Art Cr.Hrs.3 (Formerly 054.208) A study of the major movements, themes, and media of Western Art from the late 18th century to the present. May not be held for credit with the previous 054.368 or 054.369. *Prerequisite*: 6 credits from FAAH 1030 (or 054.103), FAAH 1040 (or 054.104), FAAH 1050 (or 054.105) or FAAH 1060 (or 054.106); or the previous 054.124 or 054.130; or written permission of the instructor.

FAAH 2090 Art of the North American Aboriginal Peoples Cr.Hrs.3 (Formerly 054.209) A study of the art and artifacts of the indigenous peoples of North America (other than the Inuit). No *prerequisite*. May not be held for credit with the previous 054.373.

FAAH 2100 Survey of Asian Art Cr.Hrs.3 (Formerly 054.210) An introductory survey of the arts of India, China and Japan from prehistory to the present. May not be held for credit with the previous 054.247 or 054.248. No *prerequisite*.

FAAH 2110 Women and Art Cr.Hrs.3 (Formerly 054.211) This art history course will examine the aesthetics, ideology and social conditions that have shaped women's relationships to the visual arts and to art history, as artists, as patrons, and as subject matter. No *prerequisite*. Only offered through Distance Education for 2006-2007.

FAAH 2910 Field Studies in Art History I Cr.Hrs.3 (Formerly 054.291) This off-campus travel course will provide students with the opportunity to study firsthand the art and architecture of a particular city or region in a broad cultural context. Course location may vary from year to year. Offered during Summer Session only. *Prerequisite*: Written permission of instructor.

FAAH 2920 Field Studies in Art History 2 Cr.Hrs.3 (Formerly 054.292) This off-campus travel course will provide students with the opportunity to study firsthand the art and architecture of a particular city or region in a broad cultural context. Course location may vary from year to year. Offered during Summer Session only. *Prerequisite*: Written permission of instructor.

FAAH 3130 Topics in Medieval Art and Architecture Cr.Hrs.3 (Formerly 054.313) Significant topics in Medieval art and architectural history. Topic will vary from year to year. Depending on the topic, this course may not be held for credit with one or more of the following courses: the previous 054.251 or 054.252. *Prerequisite*: FAAH 2060 (or 054.206) or written permission of the instructor.

FAAH 3140 Topics in Renaissance and Baroque Art and Architecture Cr.Hrs.3 (Formerly 054.314) Significant topics in Renaissance and Baroque art and architectural history. Topic will vary from year to year. Depending on the topic, this course may not be held for credit with one or more of the following courses: the previous 054.245, 054.246, 054.249 or 054.250. *Prerequisite*: FAAH 2070 (or 054.207) or written permission of the instructor.

FAAH 3150 Topics in 18th and 19th Century Art Cr.Hrs.3 (Formerly 054.315) Significant topics in 18th and 19th century art history. Topic will vary from year to year. Depending on the topic, this course may not be held for credit with one or more of the following courses: the previous 054.258, 054.368, 054.369, 054.370. *Prerequisite*: FAAH 2070 (or 054.207) or FAAH 2080 (or 054.208) as appropriate to the topic, or written permission of the instructor.

FAAH 3160 Topics in 20th Century Art Cr.Hrs.3 (Formerly 054.316) Significant topics in 20th century art history. Topic will change from year to year. Depending on the topic, this course may not be held for credit with one or more of the following courses: the previous 054.231, 054.259 or 054.379. *Prerequisite*: FAAH 2080 (or 054.208) or written permission of the instructor.

FAAH 3170 Contemporary Art Cr.Hrs.3 (Formerly 054.317) This course will consider the art of the past few decades, with an emphasis on recent and contemporary developments. *Prerequisite*: FAAH 2080 (or 054.208) or written permission of the instructor.

FAAH 3180 History of Photography Cr.Hrs.3 (Formerly 054.318) The development of photography from its origins to the present. May not be held for credit with the previous 054.258 or 054.259. *Prerequisite*: FAAH 2080 (or 054.208) or written permission of the instructor. (Formerly 054.259)

FAAH 3190 History of Ceramics Cr.Hrs.3 (Formerly 054.319) This course will examine the history of ceramics, extending from prehistory in Asia to recent work in Europe, the United States and Canada. No *prerequisite*.

FAAH 3200 Art in New Media Cr.Hrs.3 (Formerly 054.320) This course will consider art produced in non-traditional media during the Modern era, i.e. since the 18th century, with emphasis on developments during the 20th century and particularly the last 40 years. *Prerequisite*: FAAH 2080 (or 054.208) or written permission of the instructor.

FAAH 3210 Introduction to the Theory and Criticism of Art Cr.Hrs.3 (Formerly 054.321) An introduction to the theory and criticism of art. May not be held for credit with the previous 054.257, 054.340, or 054.380. *Prerequisite*: any second-year course or written permission of the instructor. (Formerly 054.257)

FAAH 3220 Topics in Aboriginal Art Cr.Hrs.3 (Formerly 054.322) This course will cover significant topics in the art of the North American Aboriginal peoples, including the Inuit. Topic will vary from year to year. *Prerequisite:* FAAH 2090 (or 054.209) or FAAH 3430 (or 054.343), as appropriate, or written permission of the instructor.

FAAH 3230 Chinese Art and Architecture Cr.Hrs.3 (Formerly 054.323) A survey of the art and architecture of China beginning with the Shang-Yin Period (2000 BCE) and continuing to the present. May not be held for credit with the previous 054.247. *Prerequisite:* FAAH 2100 (or 054.210) or written permission of the instructor.

FAAH 3240 Japanese Art and Architecture Cr.Hrs.3 (Formerly 054.324) A survey of the art and architecture of Japan beginning with the Jomon Period (300 BCE to 300 CE) and continuing through the Heisei Period (1989 - present). May not be held for credit with the previous 054.248. *Prerequisite:* FAAH 2100 (or 054.210) or written permission of the instructor.

FAAH 3250 Topics in Art History Cr.Hrs.3 (Formerly 054.325) This course will vary from year to year depending on the needs of students and the interests and availability of instructors. May not be taken for credit with a course equivalent to the topic currently offered. *Prerequisite:* Any 200-level course or written permission of instructor.

✦ **FAAH 3260 Canadian Art and Architecture to World War 2 Cr.Hrs.3** (Formerly 054.326) A study of Canadian art up to World War 2. *Prerequisite:* FAAH 2080 (or 054.208) or written permission of the instructor.

✦ **FAAH 3270 Canadian Art Since World War 2 Cr.Hrs.3** (Formerly 054.327) A study of Canadian art from World War 2 to the present. *Prerequisite:* FAAH 2080 (or 054.208) or written permission of the instructor.

FAAH 3280 Early Byzantine Art and Architecture Cr.Hrs.3 (Formerly 054.328) A study of the origin and evolution of early Byzantine Art and Architecture. *Prerequisite:* 6 credits from FAAH 1030 (054.103), FAA 1040 (054.104), FAA 1050 (054.105) or FAAH 1060 (054.106); or the previous 054.124 or 054.130; or FAAH 2060 (or 054.206); or written permission of the instructor.

FAAH 3290 Later Byzantine Art and Architecture Cr.Hrs.3 (Formerly 054.329) A study of later Byzantine Art and Architecture to the end of the Middle Ages. Special emphasis will be placed on the influence of Byzantine art on the modern traditions of Eastern Europe. *Prerequisite:* 6 credits from FAAH 1030 (or 054.103), FAAH 1040 (or 054.104), FAAH 1050 (or 054.105) or FAAH 1060 (or 054.106); or the previous 054.124 or 054.130; or FAAH 2060 (054.206); or 054.328; or written permission of the instructor.

✦ **FAAH 3430 Inuit Art Cr.Hrs.3** (Formerly 054.343) The history and analysis of Inuit Art. *Prerequisite:* 6 credits from FAAH 1030 (or 054.103), FAAH 1040 (or 054.104), FAAH 1050 (or 054.105) and FAAH 1060 (or 054.106); or the previous 054.124 or 054.130; or written permission of the instructor.

FAAH 3590 Islamic Art and Architecture Cr.Hrs.3 (Formerly 054.359) A contextual and thematic study of Islamic art and architecture beginning in the 7th century and continuing through the present. *No prerequisite.*

FAAH 3780 Twentieth Century American Art Until 1950 Cr.Hrs.3 (Formerly 054.378) Realism, modernism, and regionalism are among the topics given special emphasis in this study of late 19th and 20th century American art. *Prerequisite:* one 200-level course in the appropriate area as defined by the instructor, or written permission of the instructor.

FAAH 3910 Field Studies in Art History 3 Cr.Hrs.3 (Formerly 054.391) This off-campus travel course will provide students with the opportunity to study firsthand the art and architecture of a particular city or region in a broad cultural context. Course location may vary from year to year. Open to Art History and Studio students who have already completed their Art History requirements at the second-year level. Offered during Summer Session only. *Prerequisite:* written permission of the instructor is required.

FAAH 3920 Field Studies in Art History 4 Cr.Hrs.3 (Formerly 054.392) This off-campus travel course will provide students with the opportunity to study firsthand the art and architecture of a particular city or region in a broad cultural context. Course location may vary from year to year. Open to Art History and Studio students who have already completed their Art History requirements at the second-year level. Offered during Summer Session only. *Prerequisite:* written permission of the instructor is required.

FAAH 4060 Seminar in Art Theory and Criticism Cr.Hrs.3 (Formerly 054.406) A seminar treating selected topics in the theory and criticism of art. *Prerequisite:* either FAAH 3210 (or 054.321); the former 054.257, 054.340, or 054.380; or written permission of the instructor.

FAAH 4070 Seminar in Art History 1 Cr.Hrs.3 (Formerly 054.407) Seminar treating special topics in Art History. May not be taken for credit if the topic is the same as that previously offered in 054.447, 054.465, 054.466, 054.474, 054.475, 054.476, or 054.483. *Prerequisite:* one 300-level course in the appropriate area as defined by the instructor, or written permission of the instructor.

FAAH 4080 Seminar in Art History 2 Cr.Hrs.3 (Formerly 054.408) Seminar treating special topics in Art History. May not be taken for credit if the topic is the same as that previously offered in 054.447, 054.465, 054.466, 054.474, 054.475, 054.476, or 054.483. *Prerequisite:* one 300-level course in the appropriate area as defined by the instructor, or written permission of the instructor.

† **FAAH 4090 Seminar on Contemporary Issues in Art Cr.Hrs.3** (Formerly 054.409) A seminar treating contemporary issues in art. The topic varies from year to year. *Prerequisite:* one 300-level course in the appropriate area as defined by the instructor, or written permission of the instructor.

FAAH 4710 Directed Study 1 Cr.Hrs.3 (Formerly 054.471) Directed study in art history. *Prerequisite:* Written permission of instructor and director.

FAAH 4720 Directed Study 2 Cr.Hrs.3 (Formerly 054.472) Directed study in art history. *Prerequisite:* Written permission of instructor and director.

Studio Courses:

Note: Fundamentals of Drawing (STDO 1200 or 54.120), Basic Design (STDO 1220 or 54.122) and Health Hazards in the Arts (FA 1270 or 54.127) are prerequisites to further study in Studio courses.

U1 STDO 1200 Fundamentals of Drawing Cr.Hrs.9 (Formerly 054.120) Problems of representational and expressive drawing in black and white and colour. *Prerequisite:* to further study in fine arts studio courses.

U1 STDO 1220 Basic Design Cr.Hrs.9 (Formerly 054.122) Elements and principles of design and their use in creative expression. *Prerequisite:* to further study in fine arts studio courses.

U1 STDO 1260 Drawing for Non-Majors Cr.Hrs.6 (Formerly 054.126) A basic drawing course for students who are not enrolled in the School of Art. (A grade of "B" or better will satisfy the portfolio requirement for admission to the School of Art.) This course is only offered in Intercession. May not be used for credit in any School of Art program. *Prerequisite:* None. No restrictions. Course offered in Intercession only.

STDO 2210 Sculpture 1 Cr.Hrs.6 (Formerly 054.221) Modelling in clay, principles of casting; introduction to other media with emphasis on the study of the human figure. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122).

STDO 2220 Painting 1 Cr.Hrs.6 (Formerly 054.222) Basic instruction in oil painting and pictorial composition. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122).

STDO 2230 Ceramics 1 Cr.Hrs.6 (Formerly 054.223) Introduction to ceramic art, including contemporary processes, techniques, and history. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122).

STDO 2240 Advanced Drawing 1 Cr.Hrs.6 (Formerly 054.224) Creative use of drawing with emphasis on the human figure. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122). May not hold for credit with previous 054.220.

STDO 2400 Photography 1 Cr.Hrs.6 (Formerly 054.240) Introduction to the camera and photographic techniques with problems in creative visual expression. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122).

STDO 2550 Printmaking 1A Cr.Hrs.3 (Formerly 054.255) An introduction to the basic techniques in one of intaglio, relief, lithography or serigraphy. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122). May not hold credit for both STDO 2550 (or 054.255) and 054.227.

STDO 2560 Printmaking 1B Cr.Hrs.3 (Formerly 054.256) An introduction to the basic techniques in one of the printmaking media not already taken in Printmaking 1A. *Prerequisite:* STDO 1200 (or 054.120), STDO 1220 (or 054.122) and STDO 2550 (or 054.255). May not hold for credit for both 054.227 and STDO 2560 (054.256).

STDO 2610 Video 1 Cr.Hrs.6 (Formerly 054.261) The creative use of video as an art medium. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122).

STDO 2630 Design Studio 1 Cr.Hrs.3 (Formerly 054.263) An introduction to the creative use of design elements and principles applied to problems in Graphic Design. The course provides a grounding in the concepts, techniques and skills required to solve specific problems, develop a personal design process and acquire a deeper understanding of visual media. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122). May not be held for credit with the former 054.228.

STDO 2640 Design Studio 2 Cr.Hrs.3 (Formerly 054.264) A continuation of the investigation of the creative use of advanced design elements and principles applied to problems in Graphic Design. The course provides a grounding in the concepts, techniques and skills required to solve specific problems, develop a personal design process and acquire a deeper understanding of visual media. *Prerequisite:* STDO 2630 (or 054.263).

STDO 2650 Digital Design Technology Cr.Hrs.3 (Formerly 054.265) An introduction to the computer as a creative tool and to explore industry standard software for use in creative design applications such as advertising, print media, environmental graphics, illustration and image manipulation. *Prerequisite:* STDO 1200 (or 054.120) and STDO 1220 (or 054.122).

STDO 2660 History of Visual Communication 1 Cr.Hrs.3 (Formerly 054.266) An introduction to the history of western visual communication from pre-Hellenistic cultures to the beginning of the twentieth century in the context of cultural and technological factors. This course is part of the Graphic Design sequence. *Prerequisite:* FAAH 1030 (or 054.103) and FAAH 1040 (or 054.104), or FAAH 1050 (or 054.105) and FAAH 1060 (or 054.106), or 054.124 and 054.130, and EVDS 1610 (or 079.161), EVDS 1620 (or 079.162), EVDS 1660 (or 079.166), or EVDS 1670 (or 079.167).

STDO 2670 Design Theory and Criticism 1 Cr.Hrs.3 (Formerly 054.267) An introduction to the nature of the design process and the principles of visual perception and visual language with a focus on the cultural and commercial roles of visual communication design practice. *Prerequisite:* FAAH 1030 (or 054.103) and FAAH 1040 (or 054.104), or FAAH 1050 (or 054.105) and FAAH 1060 (or 054.106), or 054.124, 054.130, EVDS 1610 (or 079.161), EVDS 1620 (or 079.162), EVDS 1660 (or 079.166) or EVDS 1670 (or 079.167).

STDO 2680 Special Topics Cr.Hrs.3 (Formerly 054.268) Selected projects in Fine Art Studio of current interest. *Prerequisite:* Written permission of instructor and director.

STDO 3330 Advanced Drawing 2 Cr.Hrs.6 (Formerly 054.333) Continuation of Advanced Drawing 1 (STDO 2240), with stress on finished drawings and experimental techniques. *Prerequisite:* STDO 2240 (or 054.224).

STDO 3370 Advanced Ceramics Cr.Hrs.6 (Formerly 054.337) Continuation of Ceramics 1 (STDO 2230). *Prerequisite:* STDO 2230 (or 054.223).

STDO 3420 Advanced Painting Cr.Hrs.6 (Formerly 054.342) Continuation of Painting 1 (STDO 2220) with increasing emphasis on painting techniques, theory, and use

of expressive idioms. *Prerequisite:* STDO 2220 (or 054.222).

STDO 3460 Advanced Sculpture Cr.Hrs.6 (Formerly 054.346) Continuation of Sculpture 1 (STDO 2210), with emphasis on one of modelling, carving, or construction. *Prerequisite:* STDO 2210 (or 054.221).

STDO 3480 Advanced Photography 1 Cr.Hrs.6 (Formerly 054.348) Continuation of Photography 1 (STDO 2400), with emphasis on print quality and personal imagery. *Prerequisite:* STDO 2400 (or 054.240).

STDO 3490 Photography 2 Cr.Hrs.9 (Formerly 054.349) Advanced instruction toward individual expression. (Major course) *Prerequisite:* a grade of "C+" or better in STDO 2400 (or 054.240).

STDO 3600 Painting 2 Cr.Hrs.9 (Formerly 054.360) Advanced instruction toward individual expression. (Major course) *Prerequisite:* a grade of "C+" or better in STDO 2220 (or 054.222).

STDO 3610 Video 2 Cr.Hrs.9 (Formerly 054.361) An intensive exploration of the creative use of video as an art medium, with an emphasis on finished works. (Major course) *Prerequisite:* a grade of "C+" or better in STDO 2610 (or 054.261).

STDO 3620 Ceramics 2 Cr.Hrs.9 (Formerly 054.362) Advanced instruction toward individual expression in ceramic media; a more intensive study of the properties of clays and glazes. (Major course) *Prerequisite:* a grade of "C+" or better in STDO 2230 (or 054.223).

STDO 3630 Drawing Cr.Hrs.9 (Formerly 054.363) Advanced instruction toward individual expression in a variety of black and white and colour media. (Major course) *Prerequisite:* a grade of "C+" or better in STDO 2240 (or 054.224).

STDO 3650 Sculpture 2 Cr.Hrs.9 (Formerly 054.365) Advanced instruction toward individual expression with emphasis on one of modelling, carving, construction. (Major course) *Prerequisite:* a grade of "C+" or better in STDO 2210 (or 054.221).

STDO 3670 Special Topics Cr.Hrs.6 (Formerly 054.367) Projects of an unusual nature. Click on View "Timetable" to see current offerings. *Prerequisite:* written permission of instructor and director.

STDO 3830 Advanced Printmaking A Cr.Hrs.3 (Formerly 054.383) Continuation of Printmaking 1A. Students may not hold credit for both the former 054.345 and STDO 3830 (or 054.383). *Prerequisite:* a grade of C in STDO 2550 (or 054.255) and STDO 2560 (or 054.256) or 054.227.

STDO 3840 Advanced Printmaking B Cr.Hrs.3 (Formerly 054.384) Continuation of Printmaking 1B. Students may not hold credit for both the former 054.345 and STDO 3840 (or 054.384). *Prerequisite:* a grade of C in STDO 3830 (or 054.383).

STDO 3890 Printmaking 2A Cr.Hrs.4.5 (Formerly 054.389) Continuation of Advanced Printmaking A/B. Students may not hold credit for both the former 054.364 and STDO 3890 (or 054.389). (First part of Major course) *Prerequisite:* an average of "C+" in STDO 2550 (or 054.255) and STDO 2560 (or 054.256) or the previous 054.227.

STDO 3900 Printmaking 2B Cr.Hrs.4.5 (Formerly 054.390) Continuation of Advanced Printmaking A/B. Students may not hold credit for both 054.364 and STDO 3900 (or 054.390). (Second part of Major course) *Prerequisite:* STDO 3890 (or 054.389).

STDO 3930 Design Studio 3 Cr.Hrs.4.5 (Formerly 054.393) Builds on students' abilities to solve graphic design problems in visual communications as developed in Design Studio 1 and to increase repertoire of design problems typically encountered in professional practice. *Prerequisite:* "C+" or better in STDO 2630 (or 054.263) and STDO 2640 (or 054.264) or 054.228. May not be held for credit with the former 054.347 or 054.366.

STDO 3940 Design Studio 4 Cr.Hrs.4.5 (Formerly 054.394) Builds on students' abilities to solve advanced graphic design problems in visual communications as developed in Design Studio 3 and to increase repertoire of design problems typically encountered in professional practice. *Prerequisite:* STDO 3930 (or 054.393). May not be held for credit with the former 054.347 or 054.366.

STDO 3950 New Media Design Cr.Hrs.3 (Formerly 054.395) An exploration of the 'new media' revolution within a critical graphic design context. The course is also an introduction to the tools and principles of new media content creation and information architecture. *Prerequisite:* STDO 2650 (or 054.265).

STDO 3960 History of Visual Communication 2 Cr.Hrs.3 (Formerly 054.396) A concentration of the advent of Modernism in visual communication and subsequent graphic design movements in the 20th Century. *Prerequisite:* STDO 2660 (or 054.266).

STDO 4450 Advanced Drawing 3 Cr.Hrs.6 (Formerly 054.445) Advanced individual instruction in creative drawing. *Prerequisite:* STDO 3330 (or 054.333) or STDO 3630 (or 054.363).

STDO 4520 Advanced Ceramics 2 Cr.Hrs.6 (Formerly 054.452) Individual instruction with concentration in the areas most relevant to the student's creative development. *Prerequisite:* STDO 3370 (or 054.337) or STDO 3620 (or 054.362).

STDO 4530 Advanced Painting 2 Cr.Hrs.6 (Formerly 054.453) Individual instruction with concentration in the areas most relevant to the student's creative development. *Prerequisite:* STDO 3420 (or 054.342) or STDO 3600 (or 054.360).

STDO 4550 Advanced Sculpture 2 Cr.Hrs.6 (Formerly 054.455) Individual instruction with concentration in the areas most relevant to the student's creative development. *Prerequisite:* STDO 3460 (or 054.346) or STDO 3650 (or 054.365).

STDO 4570 Advanced Printmaking 2A Cr.Hrs.3 (Formerly 054.457) Continuation of Advanced Printmaking 2. Students may not hold credit for both 054.454 and STDO 4570 (or 054.457). *Prerequisite:* one of the former 054.345, the former 054.364, STDO 3830 (or 054.383) and STDO 3840 (or 054.384), or STDO 3890 (or 054.389) and STDO 3900 (or 054.390).

STDO 4610 Advanced Printmaking 2B Cr.Hrs.3 (Formerly 054.461) Continuation of Advanced Printmaking 2A. Students may not hold credit for both 054.454 and STDO 4610 (or 054.461). *Prerequisite:* STDO 4570 (or 054.457).

STDO 4700 Advanced Photography 2 Cr.Hrs.6 (Formerly 054.470) Advanced individual instruction in creative photography. *Prerequisite:* STDO 3480 (or 054.348) or STDO 3490 (or 054.349).

STDO 4840 Design Studio 5 Cr.Hrs.4.5 (Formerly 054.484) Advanced problems in visual communication design. This studio course is part of the graphic design area sequence. *Prerequisite:* STDO 3930 (or 054.393). May not be held for credit with the former 054.450 or 054.451.

STDO 4850 Design Studio 6 Cr.Hrs.4.5 (Formerly 054.485) Advanced problems in visual communication design. This studio course is a part of the graphic design area sequence. *Prerequisite:* STDO 4840 (or 054.484).

STDO 4860 Design Theory and Criticism 2 Cr.Hrs.3 (Formerly 054.486) An examination of contemporary personalities, images, ideas, and developments in visual communication design including current issues in design criticism. This course is a part of the graphic design area sequence. *Prerequisite:* STDO 2670 (or 054.267).

STDO 4870 Production and Professional Practice Cr.Hrs.3 (Formerly 054.487) An examination of the technologies and techniques of visual communication production with a focus on the concepts of business and production management. This studio course is a part of the graphic design area sequence. *Prerequisite:* STDO 3930 (or 054.393), STDO 3940 (or 054.394), STDO 3950 (or 054.395)

STDO 4880 Bachelor of Fine Arts Thesis Cr.Hrs.18 (Formerly 054.488) Sometimes referred to as the thesis studio course for one of several areas in the School of Art. This course is generally taken in the fourth year of a Bachelor of Fine Arts Honours degree. *Prerequisite:* a minimum grade of "B" in one of the following nine credit hour (Major) courses: STDO 3490 (or 054.349); STDO 3600 (or 054.360); STDO 3610 (or 054.361); STDO 3620 (or 054.362); STDO 3630 (or 054.363); STDO 3640 (or 054.364) or STDO 3890 (or 054.389) and STDO 3900 (or 054.390); STDO 3650 (or 054.365) and the former 054.366.

STDO 4890 Bachelor of Fine Arts Thesis Seminar Cr.Hrs.3 (Formerly 054.489) This thesis seminar course is taken in the fourth year of a Bachelor of Fine Arts Honours degree along with thesis studio. Issues of professional practice are examined against contemporary art theory. Students document their work and create artist's statements and interact with Visiting Artists. *Prerequisite:* Registered concurrently in STDO 4880 (or 054.488) or STDO 4840 (or 054.484) and STDO 4850 (or 054.485).

STDO 4030 Drawing Workshop Cr.Hrs.15 (Formerly 058.403) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in STDO 3630 (or 054.363).

STDO 4060 Printing Workshop Cr.Hrs.15 (Formerly 058.406) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in the former 054.364 or STDO 3890 (or 054.389) and STDO 3900 (or 054.390).

STDO 4070 Ceramics Workshop Cr.Hrs.15 (Formerly 058.407) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in STDO 3620 (or 054.362).

STDO 4090 Commercial Problems Cr.Hrs. 15 (Formerly 058.409) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in STDO 3930 (054.393) and STDO 3940 (054.394).

STDO 4110 Painting Workshop Cr.Hrs.15 (Formerly 058.411) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in STDO 3600 (or 054.360).

STDO 4140 Sculpture Workshop Cr.Hrs.15 (Formerly 058.414) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in STDO 3650 (or 054.365).

STDO 4150 Photography Workshop Cr.Hrs.15 (Formerly 058.415) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in STDO 3490 (or 054.349).

STDO 4160 Video Workshop Cr.Hrs.15 (Formerly 058.416) Advanced individual instruction. *Prerequisite:* a minimum grade of "B" in STDO 3610 (or 054.361).

Faculty of Arts

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Chapter Contents

SECTION 1: History of the Faculty of Arts

SECTION 2: Students' Code of Responsibilities

- 2.1 A Community of Scholars
- 2.2 Rights and Responsibilities
- 2.3 Rules and Regulations
- 2.4 Conclusion

SECTION 3: Admission to the Faculty of Arts

- 3.1 Degrees Offered
- 3.2 Admission to University 1
- 3.3 Admission from University 1
- 3.4 Admission as a Transfer Student
- 3.5 Admission as a Student Seeking a Second Degree
- 3.6 Admission as a Visiting Student
- 3.7 Admission as a Special Student

SECTION 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

- 4.1 General (or Three-Year Major) Degree Program
- 4.2 Advanced (or Four-Year Major) Degree Program
- 4.3 Honours Degree Program (Regulations applicable to students admitted to an Honours Program commencing September 1997)
- 4.4 Application to Graduate with a B.A. Degree

SECTION 5: Additional Faculty Regulations and Policies

- 5.1 Recognized Subject Fields
- 5.2 Courses Acceptable for Credit in the Faculty of Arts
- 5.3 How Courses Taken in Another Faculty or School Within the University of Manitoba Prior to the Student's Registering in the Faculty of Arts are Taken into Account
- 5.4 How Courses Taken at Other Universities are Taken into Account
- 5.5 Residency Requirement
- 5.6 Year-of-Study Equivalents
- 5.7 Maximum Number of Courses During a Term
- 5.8 Maximum Number of Courses Attempted During One's Academic Career
- 5.9 Prerequisite, Corequisite, and Course Availability
- 5.10 Challenge for Credit
- 5.11 Repeating a Course
- 5.12 Statute of Limitations

- 5.13 Probation and Academic Suspension
- 5.14 Dean's Honour List and Graduating With Distinction or First Class Honours
- 5.15 University Gold Medal and Program Medals
- 5.16 Evaluation of Undergraduate Student Coursework
- 5.17 Seeking a B.A. as a Second Degree

SECTION 6: Student Responsibilities

SECTION 7: Special Circumstances and Appeals of Matters Regarding Academic Regulations

SECTION 8: Departments in, and Programs and Courses Offered by, the Faculty of Arts

- 8.1 Anthropology
- 8.2 Asian Studies
- 8.3 Canadian Studies
- 8.4 Catholic Studies
- 8.5 Central and East European Studies
- 8.6 Classics
- 8.7 Cross-Disciplinary Programs
- 8.8 Drama
- 8.9 Economics
- 8.10 English
- 8.11 Film Studies
- 8.12 French, Spanish and Italian
- 8.13 Geography
- 8.14 German and Slavic Studies
- 8.15 Global Political Economy
- 8.16 History
- 8.17 Icelandic
- 8.18 Interdisciplinary Courses
- 8.19 Labour Studies
- 8.20 Latin American Studies (Minor)
- 8.21 Linguistics
- 8.22 Medieval and Renaissance Studies
- 8.23 Native Studies
- 8.24 Near Eastern and Judaic Studies
- 8.25 Philosophy
- 8.26 Political Studies
- 8.27 Psychology
- 8.28 Religion
- 8.29 Sociology
- 8.30 Theatre (Minor)
- 8.31 Ukrainian Canadian Heritage Studies
- 8.32 Urban Studies (Minor)
- 8.33 Women's Studies

SECTION 9: Courses and Programs Offered by Other Faculties and Schools Acceptable for Credit in Arts

- 9.1 Faculty of Agricultural and Food Sciences
- 9.2 Faculty of Architecture
- 9.3 School of Art
- 9.4 Faculty of Education
- 9.5 Faculty of Engineering
- 9.6 Clayton H. Riddell Faculty of Environment, Earth, and Resources
- 9.7 Faculty of Human Ecology
- 9.8 Faculty of Law
- 9.9 I.H. Asper School of Business (Faculty of Management)
- 9.10 Faculty of Music
- 9.11 Faculty of Nursing

- 9.12 Faculty of Physical Education and Recreation Studies
- 9.13 Faculty of Science
- 9.14 Faculty of Social Work
- 9.15 Interfaculty Option in Aging

Academic Staff

Deans Emeriti

Currie, R.F., M.A. Ph.D. (Fordham); **McCarthy, D. J.**, B.A. (St. Paul's, Washington, D.C.), M.A., Ph.D. (Toronto), L.M.S. (Medieval Institute).

The names of academic staff members are published in the department and program sections later in this chapter.

SECTION 1: History of the Faculty of Arts

Although a separate Faculty of Arts was not established until 1970 (when the Faculty of Arts and Science, which was founded in 1921, was divided into two administrative units), the teaching of Arts (and Science) subjects, and the granting of Arts degrees, go back to the beginning of this university.

When the University of Manitoba was founded in 1877, it was given the following responsibilities: to set requirements for degrees, to determine which persons were to be admitted as candidates for degrees (this was done by means of entrance examinations, which were first opened to women in 1886), to administer the examinations that were to be written each spring (in either English or French), and to award degrees to successful candidates. During its early years the only undergraduate degrees actually awarded by the university were Bachelor of Arts degrees, with the first being awarded in 1880 (when the graduating class consisted of only one person, a Science student; the Bachelor of Science degree was not introduced until 1912). Originally the Bachelor of Arts program was designed to take three years; a fourth year, however, was added in 1900 (to compensate for the lack of grade 12 in most rural high schools); the five-year Honours degree in Arts was introduced in 1923.

During the 27 year period from 1877 to 1904 the University of Manitoba did not offer any instruction by academic staff appointed and paid directly by the university; the only instruction in Arts and Science subjects available during that period was that provided by the three founding colleges (St. Boniface College, St. John's College, and Manitoba College), plus Wesley College from 1888. When the colleges found it increasingly difficult to provide all the instruction needed in Science (especially at the upper level, which was required for entrance to Medicine), the university itself began to assist three of the colleges in teaching Science courses, first by providing space for lectures and laboratories (in rented rooms from 1890, and from 1901 in the first building owned by the university, the "Old Science Building" on Broadway), and then by providing (from 1900 to 1904) half the salary of the college Science teachers. In 1904, however, the university began the long process of acquiring a professorial staff of its own, with the hiring that year of six Science professors. Arts professors were first hired by the university in 1910, and by 1914 (when the decision was made to offer instruction also at the first and second year levels, and not only at the third and fourth year levels) the departments of English, History, Political Economy, French, German and Classics had all been established, with the departments of Philosophy and Psychology being added in 1920. The remaining Arts departments were established later: Slavic Studies in 1949, Judaic Studies in 1950, Geography and Icelandic in 1951, Anthropology and Sociology in 1962, Religion in 1968, Native Studies in 1974, and Linguistics in 1987.

Prior to 1931, all instruction provided by the Faculty of Arts and Science (which was established in 1921 as a separate faculty from Medicine and from Engineering and Architecture) was offered at the Broadway site in downtown Winnipeg, where the offices for faculty members were also located. But with the completion of the Arts Building (now known as the Tier Building) in 1931, and the Science Building (now called the Buller Building) in 1932, senior division courses in Arts and Science were transferred to the present Fort Garry Campus, with junior division courses continuing to be offered at the Broadway site until they were transferred to the Fort Garry Campus in 1950. Two of the Arts and Science colleges, St. John's and St. Paul's (the latter having affiliated with the university in 1931), moved to their present locations in 1958, becoming Member Colleges in 1968. (St. Boniface College remained at its original site, and retains its Affiliated College status.) The Isbister Building was completed in 1960, Uni-

versity College (a Constituent College) in 1964, the Fletcher Argue Building in 1967, and the Duff Roblin Building in 1969.

Faculty of Arts courses are also taught at two additional colleges with a less close relationship with the university: St. Andrew's College (which went from Associated to Affiliated College status in 1981), Canadian Mennonite Bible College (an approved teaching centre since 1963), William and Catherine Booth College (an approved teaching centre since 1992). In 1988, the Prairie Theatre Exchange school was granted approval as a teaching centre of the University of Manitoba in connection with the Theatre Studies program of the Department of English.

When grade 12 was adopted as the minimum requirement for entrance to the university in 1964, the General degree program was reduced to three years, and the Honours degree program was reduced to four years. In 1967, the major and minor system replaced the sequence system in the General degree program, and letter grades replaced numerical grades. A third undergraduate degree program, a four-year program leading to a B.A. Advanced, was introduced in 1980.

SECTION 2: Students' Code of Responsibilities

2.1 A Community of Scholars

The Faculty of Arts at the University of Manitoba defines itself as a community of scholars, all citizens of which must commit themselves to the advancement of learning, the dissemination of knowledge, and the well-being of all its members. Essential to these goals is each individual's commitment to the following values:

- The affirmation of the dignity, worth, and equality of all citizens in the community;

- The importance of reasoned debate and inquiry in all academic pursuits;

- The practise of ethical conduct and personal integrity in all aspects of academic life.

Students who enrol in the Faculty of Arts voluntarily choose to join this community of scholars, and in doing so they accept the responsibilities as well as the benefits of living within it.

The Faculty of Arts offers its students remarkable opportunities for the acquisition of knowledge, the development of skills, and the free exchange of ideas that will shape their future lives. The scholarly community also provides a forum for extra-curricular activities, personal growth and social relationships that are equally important to one's sense of fulfilment. This should be an exciting process of discovering new goals, new points of view, and, indeed, a new and better sense of one's ideals and potential. But it is also a process of coming to recognize the value and special nature of the academic community itself.

The dynamic freedom of student life in the Faculty of Arts carries a special obligation that each individual act in such a way as to promote the well-being of other members — to accept willingly the categorical imperative of behaving in such a way that, if everyone else did the same, the good of all would prevail. This is a matter of accepting the differences of others, respecting the rights of others, and not abusing the resources that the faculty and the university put at your disposal. It is also a matter of acting honourably in all personal and academic relationships, and not tolerating through diffidence or neglect any violations of such obligations on the part of others. Our common commitment as citizens of the scholarly community will then work to enhance every individual member's experience and likelihood of success. Only with such a commitment from everyone can the Faculty of Arts fulfil its mission at the core of a public institution charged with educating the leaders of tomorrow's society. And only with such a commitment can we make wise use of the public funds for which we are accountable.

2.2 Rights and Responsibilities

As a student in the Faculty of Arts you are entitled to the use of all appropriate resources (human and other) for the successful completion of your studies. But you are also responsible for the use of those resources in a manner that is honest, fair and equitable. For example, when you enrol in a course you implicitly accept the terms of a contract whereby the professor is committed to teaching to the best of his/her ability, while you and the other students are committed to learning to the best of yours. Repeated

absences, or the neglect of reading or writing assignments, are not just matters of individual concern; because they undermine the effectiveness of discussion for others as well, they are a failure to honour the academic and social contract that is implicitly a part of your membership in this community. Similarly, borrowing a book from the library is a direct commitment to honour the rules and regulations governing the circulation of such material. To damage a library book by writing in it, highlighting, or worse, is not just an act of individual vandalism; it is the wilful partial destruction of a resource that other students (and even other generations of students) have the right and the need to consult. It is to forget, in other words, that public property is not no one's property; it is everyone's property.

Similar obligations to ethical conduct are an inherent part of all the academic work you do as requirements of your program. Participation in the free exchange of ideas, upon which the scholarly community depends, obligates all members of that community to complete honesty and to adequate documentation of their intellectual debts. Plagiarism, the representing of someone else's words or ideas as your own, or any other form of academic dishonesty such as cheating, is a betrayal not just of individual honour, but of the whole basis of civilized discourse upon which all other members of the community depend.

The Manitoba Code of Human Rights guarantees everyone the right to be free of discrimination on the basis of gender or sexual orientation, age, ancestry, religion, family status, physical or mental handicap, and political beliefs. The rights and responsibilities of students thus go well beyond the classroom, library, or computer facility. Every student in the Faculty of Arts is at all times entitled to pursue his/her activities and program of study free of any social discrimination, harassment, exploitation or abuse of power on the part of others, staff or students. Consequently, every student also has a reciprocal obligation to act in a similarly ethical fashion toward all other members of the community. In order that we all be fully empowered to take advantage of the pursuit of knowledge, the development of skills and the special opportunities for personal growth offered by the faculty, there must be on everyone's part a commitment to avoid irresponsible behaviour that damages the academic potential or self-esteem of others.

2.3 Rules and Regulations

It is the intention of the Faculty of Arts to discourage any conduct that is detrimental to the welfare of the scholarly community and its individual members. In this *Undergraduate Calendar* there are many regulations governing the expectations and standards of academic work in the faculty, and there are mechanisms of appeal at the department and faculty level for those who feel that the application of these regulations has been unfair or unjust. There are also rules and regulations governing the use of university resources and facilities, and others governing the social conduct of members of the community — for example, a policy on sexual harassment and a policy banning weapons from campus. Any violations of these rules and regulations should be reported to the appropriate administrative agency or authority (e.g., the director of Libraries, the sexual harassment investigation officer or the Security Services). It must be remembered, too, that all federal, provincial and municipal laws (regarding, for example, violence, alcohol, and drugs) are enforced on campus.

There are, however, some kinds of behaviour that fall between these academic and legal concerns, which are nevertheless inappropriate in the context of an academic community. Any disruptive action or physically or verbally aggressive behaviour that serves to threaten or intimidate another member of the community (staff or student) should be immediately reported to the relevant head of department or dean. Persons who are found to have violated the rights of other individuals, or to have subverted the welfare of the academic community, will face disciplinary action, which may include expulsion from the faculty. It is important to recognize, though, that such discipline is always less effective than a common commitment to respect the rights of others.

2.4 Conclusion

The foregoing statement of responsibilities applies to all student members of the Faculty of Arts. Faculty members and support staff are governed by a number of university, Senate and faculty policies that set out similar standards of ethical and professional conduct. This code is meant to give the students in the Faculty of Arts a sense of the relation that exists between their rights and their responsibilities and how these rights and responsibilities in turn sustain the welfare of the whole academic community.

SECTION 3: Admission to the Faculty of Arts

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

3.1 Degrees Offered

Bachelor of Arts

Minimum time to graduate: Three years of full-time study (University 1 plus two years). This degree is also called the "general" program. There is no time limit to complete the degree.

Bachelor of Arts (Advanced)

Minimum time to graduate: Four years of full-time study (University 1 plus three years). There is no time limit to complete the degree.

Bachelor of Arts (Honours)

Minimum time to graduate: Four years of full-time study (University 1 plus three years). There is no time limit to complete the degree.

Admission Requirements

The following is a summary of the admission requirements. All admission requirements, as well as application deadline dates and forms, are included in an application bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

A minimum of 24 credit hours of university level courses. Depending on the academic performance on the courses acceptable for credit, students may be admitted to or transit into the Faculty in good standing or on probation.

However, a student who applies for admission and who has completed more than 138 credit hours of acceptable transfer credit will not be admissible.

Other requirements for all degree programs

The specific requirements for the General, Advanced and Honours degree programs are given in Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Each department and program outlines its entry and requirements in Section 8: Departments in, and Programs and Courses Offered by, the Faculty of Arts.

3.2 Admission to University 1

Commencing September 1998, most students newly admitted from high school and those who have completed less than 24 credit hours at another post secondary institution, will complete the first year of their degree program in University 1. In University 1 students will select courses from a wide variety of offerings in Arts, Science and other faculties and schools. After completion of a minimum number of credit hours taken in University 1, students may apply for admission to another faculty or school, or transit to Arts or Science for further study. "Transiting" means declaration of registration in the Faculty of Arts or Faculty of Science on or before the first registration after University 1. For information about University 1, see the chapter on University 1 in this *Calendar*.

The curriculum of University 1 may be completed on a full-time or part-time basis, and consists of 30 credit hours: six hours from courses offered by the Faculty of Arts; six hours of courses offered by the Faculty of Science; six hours of courses offered by either Arts or Science or Clayton H. Riddell Faculty of Environment, Earth, and Resources; and 12 hours from any faculty offering courses to University 1 students, including Arts and Science. Students will not be permitted to remain in University 1 indefinitely but, after completing 30 credit hours or more, must exit from University 1 to a faculty or school.

Effective May, 2005 students will be academically assessed in University 1. Once a student transits to Arts, they are subject to the performance requirements as set out under Section 4.1.3. University 1 students will be advised of their status as their program progresses.

3.3 Admission from University 1

a) Students who have completed 30 credit hours or more of coursework and who are not admissible to other faculties or schools will be required to transfer to the Faculty of Arts or Faculty of Science.

b) Students who have completed either 24 or 27 hours of coursework may choose to transfer to the Faculty of Arts or Faculty of Science.

In either a) or b), the student will be assessed in accordance with the Minimum Performance Table (see Section 4.1.3) and will either transit to Arts in good standing or on probation depending on their performance in University 1. Students who are transited on probation from University 1 are advised to see an Arts student advisor prior to registration.

3.4 Admission as a Transfer Student

Transfer students are students who, before being admitted as regular students to the Faculty of Arts, were admitted to another faculty or school at the University of Manitoba (these are called “internal transfers”) and/or some other recognized university or college (these are called “external transfers”) and who received a final grade in courses acceptable for credit within the University of Manitoba’s Faculty of Arts. For the University of Manitoba’s general policy on external transfer students and advance standing, see the chapter on Admission to the University of Manitoba in this *Calendar*. Students who apply to transfer to the Faculty of Arts must have completed no fewer than 24 credit hours of university level coursework and will be assessed in accordance with the Minimum Performance Table (see Section 4.1.3). Those students who meet the minimum performance requirement will be admitted in good standing. Those students who do not meet the minimum performance requirement will be admitted on probation. Any student who has completed coursework such that there would be insufficient attempts remaining to complete the degree or meet the minimum residency requirement for the B.A. General Degree (see Section 5.5) will not be admitted. (Those students who are inadmissible because of insufficient attempts remaining or who are unable to satisfy the residency requirement may be considered for admission in accordance with the regulations stated in the area entitled “Two Year Suspension” in Section 5.13.) Anyone who has been placed on academic suspension by another faculty, school, or external institution will not be admissible if less than one year has elapsed since he/she had been placed on suspension Sections 5.3 and 5.4.

3.5 Admission as a Student Seeking a Second Degree

A “second degree” student is one who is pursuing a second undergraduate degree and whose basis of admission is a first degree from a recognized university program. For information regarding possible transfer credit, if any, see Section 5.17.

3.6 Admission as a Visiting Student

A “visiting” student is one who is pursuing a degree at another institution and whose basis of admission is a Letter of Permission from his/her home institution granting permission to register at the University of Manitoba. Previously admitted visiting students can register in a subsequent session without applying for admission, provided they have a Letter of Permission and have not changed their home institution. Certain restrictions may be placed on the kind and number of courses in which they will be allowed to register.

3.7 Admission as a Special Student

A “special” student is someone who is not pursuing a degree and is permitted by the Dean of Arts to take courses out of interest. The basis of admission is normally possession of a first degree.

SECTION 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

For academic regulations related to graduate degrees, see the *Graduate Calendar* of the Faculty of Graduate Studies. For academic regulations pertaining to the following degrees, *Baccalauréat ès Arts (Latin-Philosophie)*, *Baccalauréat ès Arts (Spécialisé en français)*, and *Baccalauréat ès Arts (Spécialisé en traduction)*, which are also offered under the Faculty of Arts but with instruction available only at Collège universitaire de Saint-Boniface, see the *Annuaire* of the Collège universitaire de Saint-Boniface.

Students are encouraged, prior to reading the faculty regulations which follow, to review the chapter, General Academic Regulations and Requirements, in this *Calendar*, especially as they pertain to the Letter Grade System and the way in which a student’s Cumulative Grade Point Average is calculated.

It is **highly recommended** that all students entering the Faculty of Arts to pursue a degree complete six credit hours in each of five different subject fields within the first 30 credit hours, and that, if possible, they include among those courses the subject fields in which they will probably specialize because future choices may be limited by the initial choice of courses a student makes. Also, students must meet a subject field requirement to qualify for entrance to both the Advanced and Honours programs (see Section 4.2 and 4.3).

Combinations of courses for the Major, Minor and Honours programs, other than those listed, may be permitted with written consent of the department head or program coordinator and consent from Dean’s Office, Faculty of Arts. Similarly, Honours courses may be taken by students in the General or Advanced Major programs with the written consent of the department head or program coordinator.

4.1 General (or Three-Year Major) Degree Program

4.1.1 Its General Purpose

This program is aimed at training students to evaluate information, reach conclusions, and act on these conclusions. The training is intended to result in flexibility and objectivity in problem-solving, sensitivity to the social and physical environment, breadth of learning, and an appreciation of our cultural, political, and economic milieu.

4.1.2 Entrance into the B.A. General Degree Program

1) At the point of admission or transfer to Arts all students proceeding to an undergraduate degree are automatically in the General degree program. Subsequently, students may apply in the general office for admission to either the Advanced degree program or the Honours degree program.

2) All students who have completed 30 credit hours of coursework are encouraged to declare a Major. Only one Major may be declared (though this can be changed to a different subject field at some later registration). Students should note that for entry into a Major requiring courses from only one department, the faculty requirement is that the student must have a grade of “C” or better in the prerequisite course(s). If the student has taken other courses from that department besides the requisite course, then entry into the Major would require an average of “C” or better in all courses including only the last grade of any course that has been repeated and excluding any failed courses.

For entry into a Major requiring courses from more than one department, the faculty requirement is that the student must have an average of “C” or better in all courses which are eligible to count towards the Major.

Students who have not declared a Major by the time 45 credit hours of coursework have been completed or registered for, will not be able to continue registration until a Major is declared.

For detailed information regarding entry requirements into Majors and specific course requirements for Majors, see the specific listing for the relevant department in Sections 8 and 9.

3) Following completion of the first five full-course equivalents all students are encouraged to declare a Minor (though this can be changed to a different subject field at some later registration). For entry to the Minor, the prerequisite is a grade of “C” or better in the prerequisite course(s).

Students who have not declared a Minor by the time 45 credit hours of coursework have been completed or registered for, will not be able to continue registration until a Minor is declared.

4.1.3 Requirements for Continuing in the B.A. General Degree Program

1) By the time they complete ten full-course equivalents (i.e., 60 credit hours), all students must have one full-course-equivalent (i.e., six credit hours) in five different subject fields.

2) Students admitted to the Faculty of Arts for the 1997-98 Regular Session and thereafter must by the time they have completed 60 credit hours have successfully completed or be registered for at least three credit hours in a course with significant content in written English (see Section 8 for courses

marked with a “W” in the departments/area section) and at least three credit hours in a course in mathematics chosen from any courses bearing the subject code of STAT (Statistics) or MATH (Mathematics). Other courses which satisfy this requirement are designated with an “M” in the Faculty of Science section of this *Calendar*. Other courses which satisfy the “M” requirement are: Psychology PSYC 2260 or PSYC 2300; Sociology SOC 2290; Geography GEOG 3680; School of Art FA 1020; Faculty of Music MUSC 3230.

The chapter, General Academic Regulations and Requirements, in this *Calendar* contains a complete list of the courses which satisfy the written English and mathematics requirement.

3) When students register again after completing 10 full-course equivalents (i.e., 60 credit hours), they will be expected to declare if they plan to graduate.

4) *Minimum Performance Level*. Once a minimum of 24 credit hours of university level coursework has been completed, the Minimum Performance Table listed below is used to:

- a) Determine a student's admission/transfer status to the Faculty of Arts and
- b) Ensure that once in the Faculty of Arts a student meets the required minimum Grade Point Average after every session in which courses are completed.

The Minimum Performance check is carried out at the conclusion of the Regular and Summer Session if registration in courses has occurred in either session and if the courses are completed and not voluntarily withdrawn.

To determine the required minimum Grade Point Average a student should first locate in Column 1 of the table the number that matches the total number of credit hours they have attempted where a final grade is recorded as of the date of the most recent check by the Arts general office. (Regarding what counts as an attempt, see Section 5.8). Having identified this line in the Table, students should calculate their Grade Point Average on the number of credit hours indicated in Column 2 on that same line (taking into account only their better performances), and then compare this with the minimum Grade Point Average required at this point in their career, which is given in Column 3 on that same line. Students who fail to achieve the required minimum Grade Point Average will be placed on probation (see Section 5.13). Students previously admitted/transferred to Arts on probation, and those Arts students who were last assessed on probation, who fail to meet the required minimum Grade Point Average will be placed on academic suspension for one year (see Section 5.13). In addition to meeting the Minimum Performance Level, students must be careful to satisfy all degree requirements within the maximum of 23 full course attempts (138 credit hours) allowed (See Section 5.8). Students who do not have sufficient attempts remaining to allow them to fulfil their graduation requirements will be placed on academic suspension (see Section 5.13). For information regarding how the requirement of a Minimum Performance Level would apply to a particular transfer student, consult the Faculty of Arts general office.

MINIMUM PERFORMANCE TABLE

Effective September 1998, this table applies to all students regardless of the point of admission.

Column 1 Total Number of Credit Hours Attempted at this point	Column 2 Number of Credit Hours on which the student's performance is to be assessed	Column 3 Required Minimum Grade Point Average
24	12	2.00
27	12	2.00
30	15	2.00
33	15	2.00
36	18	2.00
39	18	2.00
42	21	2.00
45	21	2.00
48	24	2.00
51	24	2.00
54	27	2.00
57	27	2.00
60	30	2.00
63	33	2.00

66	36	2.00
69	39	2.00
72	42	2.00
75	45	2.00
78	48	2.00
81	51	2.00
84	54	2.00
87	57	2.00
90	60	2.00
93	63	2.00
96	66	2.00
99	69	2.00
102	72	2.00
105	75	2.00
108	78	2.00
111	81	2.00
114	84	2.00
117	87	2.00
120	90	2.00
123	90	2.00
126	90	2.00
129	90	2.00
132	90	2.00
135	90	2.00
138	90	2.00

4.1.4 Eleven Faculty Requirements for Graduating with a B.A. General Degree

1) A student must successfully complete 15 full-course equivalents (i.e., 90 credit hours) from among the courses acceptable for credit in the Faculty of Arts (see Section 5.2), with a passing grade (“D” or better) in each, and a minimum Cumulative Grade Point Average of 2.00 (i.e. “C” or better) for these 15 courses. (It should be noted that the Faculty of Arts also has a minimum performance level requirement such that this first requirement for graduating is to be met within the total number of credit hours allowed, namely 23 full-course equivalents (i.e., 138 credit hours).) At the time of graduation, however, a student may have completed more than 15 full-course equivalents in which a passing grade was received.

The remaining ten faculty requirements for graduating should be understood as pertaining to the above 15 full-course equivalents.

2) There must be at least one full-course-equivalent (i.e., six credit hours) completed in each of five different subject fields (as listed in Section 5.1). In addition, a subject field may also satisfy the requirement for a Humanity, or Social Science, or Science and at the same time satisfy the Mathematics or Written English requirement.

3) There must be at least one full-course-equivalent (i.e., six credit hours) from a subject field designated Humanities, at least one full-course-equivalent from a subject field designated Social Science, and at least one full-course-equivalent from a subject field designated Science (see Section 5.1).

4) Major: There must be five full-course equivalents (i.e., 30 credit hours) which constitute a **Major** in one of the subject fields approved by the Faculty of Arts (see Section 5.1). The student must also have a Cumulative Grade Point Average of 2.00 (i.e. “C”) or better in courses where a final grade is recorded and that are used toward the Major including only the last grade of any course that has been repeated and excluding any failed course(s). A student may declare only one Major. A Major may be declared once the prerequisite has been satisfied. (For detailed information regarding which courses may be used toward a specific Major, continuation requirements, and which courses have prerequisites, etc., see the listing for the relevant department in Sections 8 and 9). *Students who have questions about a Major in a particular subject are strongly urged to consult an instructor in the appropriate department.*

Students who declare and complete a major in Global Political Economy **will not** be required or allowed to complete a separate field for a minor for purposes of satisfying the degree requirements.

5) Minor: There must be three full-course equivalents (i.e., 18 credit hours) which are in some subject field that is different from that of the declared Major, and which constitute a **Minor** in one of the subject fields approved by the Faculty of Arts (see Section 5.1). A student may declare only one Minor. A Minor may be declared once the prerequisite has been satisfied. No course can be used to satisfy both the Major and the Minor requirement. (For detailed information regarding which courses may be used toward a

specific Minor, or regarding any prerequisites, see the listing for the relevant department in Section 8 and 9.)

6) No more than ten full-course equivalents (i.e., 60 credit hours) can be from the two subject fields used to fulfil the Major and Minor requirements. Hence, no more than seven full-course equivalents (i.e., 42 credit hours) can be in the Major field, or no more than five full-course equivalents (i.e., 30 credit hours) can be in the Minor field. (A student who has five full-course equivalents in more than one subject field can declare only one of them as a Major; that is, it is not possible to declare a “Double Major.”) Similarly, a student who has three full-course equivalents in more than one subject field can declare only one of them as a Minor (that is, it is not possible to declare a “Double Minor”). The same course may not be used to satisfy the requirements of both the Major and Minor.

7) Except for five special cases, a student’s Major and Minor cannot be from the same department. (For details on these five exceptions, see the departmental listings in Section 8 for Classics, French, Spanish and Italian, German and Slavic Studies, Native Studies, and Near Eastern and Judaic Studies.)

8) No more than seven full-course equivalents (i.e., 42 credit hours) can be from one subject field.

9) There must be at least eight full-course equivalents (i.e., 48 credit hours) that have been taught by the Faculty of Arts (which, for the purpose of this regulation, includes up to four full-course equivalents (i.e., 24 credit hours) from the Department of Mathematics, Faculty of Music or Art History courses), or which have been accepted on transfer as equivalent to courses taught by the Faculty of Arts.

10) Students admitted to the Faculty of Arts for September 2000 and thereafter must complete at least five full-course equivalents (i.e., 30 credit hours) numbered at or above the 2000 level.

11) A student must successfully complete a minimum number of full-course equivalents that are taken and successfully completed at the University of Manitoba: either eight (i.e., 48 credit hours) taken here at various times in a student’s career, or five (i.e., 30 credit hours) taken here as the final five courses being offered towards the required 15. This is referred to as the “Residency Requirement” (see Section 5.5 for details).

4.2 Advanced (or Four-Year Major) Degree Program

4.2.1 Its General Purpose

This program is intended primarily to serve students who desire a general education along with a reasonable degree of specialization in one area of study through the Major.

4.2.2 Entrance to the B.A. Advanced Degree Program

1) To enter an Advanced program, a student must complete an application form which is available in the Faculty of Arts general office and have it approved by a student advisor.

Once admitted to the Faculty of Arts it is possible to enter this program at various stages in a student’s career. The normal entrance point is upon successful completion of four full-course equivalents (i.e., six credit hours) in each of four different subject fields with a minimum Cumulative Grade Point Average of 2.00 (i.e. “C”) on all courses acceptable for credit in the Faculty of Arts which the student has attempted up to the point of entrance.

2) Students will not be admitted to the Advanced degree program unless they have enough attempts remaining to enable them to satisfy all the graduation requirements within the maximum number of attempts; e.g., if they have failures or repeats in more than 18 credit hours or three full-course equivalents, they would not be admissible.

3) All students are *required, upon entering* the Advanced degree program, *to declare a Major and Minor*. (Nothing in this regulation, however, prevents students from changing their declared Major or Minor **in person** in the general office). Students should note that for entry into a Major requiring courses from only one department, the faculty requirement is that the student must have a grade of “C” or better in the prerequisite course(s); in addition, if the student has taken other courses from that department besides the requisite course, then entry into the Major would require an average of “C” or better in all courses including only the last grade of any course that has been repeated and excluding any failed course(s).

For entry into a Major requiring courses from more than one department, the faculty requirement is that the student must have an average of “C” or better in all courses which are eligible to count towards the Major.

For additional information regarding entrance into Majors (such as which courses are eligible for counting as fulfilling the Major, or where the department has a higher entrance requirement than the above faculty minimum), see the specific listing for the relevant department in Sections 8 and 9.

Students should be careful in changing declared majors as they may have insufficient attempts remaining to satisfy all degree requirements. Students must apply in-person at the Faculty of Arts general office to change their Major/Minor when in the Advanced program.

4) For entry to the minor, the prerequisite is a grade of “C” or better in the prerequisite course(s).

4.2.3 Requirements for Continuing in the B.A. Advanced Degree Program

1) Students admitted to the Faculty of Arts for the 1997-98 Regular Session and thereafter must by the time they have completed 60 credit hours have successfully completed or be registered for at least three credit hours in a course with significant content in written English (see Section 8 for courses marked with a “W” in the departments/area section) and at least three credit hours in a course in mathematics chosen from any courses bearing the subject code of STAT (Statistics) or MATH (Mathematics). Other courses which satisfy this requirement are designated with an “M” in the Faculty of Science section of this *Calendar*. Other courses which satisfy the “M” requirement are: Psychology PSYC 2260 or PSYC 2300; Sociology SOC 2290; GEOG 3680; School of Art FA 1020; Faculty of Music MUSC 3230.

The chapter, General Academic Regulations and Requirements, in this *Calendar*, has a complete list of the courses which satisfy the written English and mathematics requirement.

2) When students register again after completing 15 full-course equivalents (i.e., 90 credit hours), they will be expected to indicate when they plan to graduate. Students should have completed all requirements for the General degree by this point.

3) **Minimum Performance Level.** All students admitted to the Advanced degree program are required to maintain a minimum Cumulative Grade Point Average of 2.00 on all courses acceptable for credit in the Faculty of Arts that they attempt. This average is calculated at the end of each session in which the student is registered and is based on coursework where a final grade is recorded. Failure to maintain this minimum will result in the student being required to withdraw from the Advanced degree program. The student will automatically be placed in the General degree program where they still must fulfil all the requirements in order to receive a B.A. General. The following academic assessment will be permanently recorded on the transcript: “Required to Withdraw from the Advanced Program.”

4) All students who do not have enough attempts remaining to enable them to satisfy all the graduation requirements for a B.A. Advanced (e.g., students who have failed or repeated more than 18 credit hours of courses) will automatically be reverted to the General degree program where they still must fulfil all the requirements in order to receive the B.A. General. The following academic assessment will be permanently recorded on the transcript: “Required to Withdraw from the Advanced Program.”

4.2.4 Eleven Faculty Requirements for Graduating with a B.A. Advanced Degree

1) A student must successfully complete 20 full-course equivalents (i.e., 120 credit hours) from among the courses acceptable for credit in the Faculty of Arts (see Section 5.2), with a passing grade (“D” or better) in each, and a minimum Cumulative Grade Point Average of 2.00 for these 20 courses. (It should be noted that the Faculty of Arts has a minimum performance level requirement such that this first requirement for graduating is to be met within the total number of credit hours allowed, namely 23 full-course equivalents (i.e., 138 credit hours).) At the time of graduation, however, a student may have completed more than 20 full-course equivalents in which a passing grade was received.

The remaining ten faculty requirements for graduating should be understood as pertaining to the above 20 full-course equivalents.

2) There must be at least one full-course-equivalent (i.e., six credit hours) completed in each of five different subject fields (as listed in Section 5.1). In addition, a subject field may also satisfy the requirement for a Humanity,

or Social Science, or Science and at the same time satisfy the Mathematics or Written English requirement.

3) There must be at least one full-course-equivalent (i.e., six credit hours) in a Humanities subject field, at least one full-course-equivalent in a Social Science subject field, and at least one full-course-equivalent in a Science subject field (see Section 5.1).

4) Major: There must be at least eight full-course equivalents (i.e., 48 credit hours) which constitute a **Major** in one of the subject fields approved by the Faculty of Arts (see Section 5.1). The student must have a cumulative Grade Point Average of 2.00 (i.e. "C") or better in courses where a final grade is recorded that are used toward the Major including only the last grade of any course that has been repeated and excluding any failed course(s). (It should be noted that not every department offers an Advanced Major. For information on those which do, see the listings for the departments in Sections 8 and 9).

Note: Students either unsure about their choice of a Major, or considering a Major in a particular subject are strongly encouraged to consult an instructor in the appropriate department.

Students who declare and complete a major in Global Political Economy **will not** be required or allowed to complete a separate field for a minor for purposes of satisfying the degree requirements.

5) Minor: There must be three full-course equivalents (i.e., 18 credit hours) which are in some field that is different from the above Major, and which constitute a **Minor** in one of the subject fields approved by the Faculty of Arts (see Section 5.1). No course can be used to satisfy both the Major and the Minor requirement. (For detailed information regarding which courses may be used toward a specific Minor, plus any prerequisites, see the listing for the relevant department in Sections 8 and 9.) A student having three full-course equivalents in more than one subject field can declare only one of them as his/her Minor.

6) No more than 13 full-course equivalents (i.e., 78 credit hours) can be from the two subject fields used to fulfil the Major and Minor requirements. Hence, no more than ten full-course equivalents (i.e., 60 credit hours) can be in the Major field, or no more than five full-course equivalents (i.e., 30 credit hours) can be in the Minor field.

7) Except for five special cases, a student's Major and Minor cannot be from the same department. (For details on these five exceptions, see the departmental listings, in Section 8, for Classics, French, Spanish and Italian, German and Slavic Studies, Native Studies, and Near Eastern and Judaic Studies.)

8) No more than ten full-course equivalents (i.e., 60 credit hours) can be from one subject field.

9) There must be at least 11 full-course equivalents (i.e., 66 credit hours) that have been taught by the Faculty of Arts (which, for the purpose of this regulation, includes up to six full-course equivalents (i.e., 36 credit hours) from the Department of Mathematics, Faculty of Music or Art History courses), or which have been accepted on transfer as equivalent to courses taught by the Faculty of Arts.

10) Students admitted to the Faculty of Arts for September 2000 and thereafter must complete at least seven full-course equivalents (i.e., 42 credit hours) numbered at or above the 2000 level.

11) There must be at least ten full-course equivalents (i.e., 60 credit hours) which were taken and successfully completed at the University of Manitoba. This is referred to as the "Residency Requirement" (see Section 5.5 for details).

4.3 Honours Degree Program

Regulations applicable to students admitted to an Honours Program (Full-time or Part-time) in September 1997 and thereafter.

4.3.1 Its General Purpose

This program is designed to provide a high degree of specialization in a subject field. The entrance requirements and evaluation of performance are at a higher level than the General or Advanced programs. The Honours program is the preferred program for students seeking entrance to graduate study.

4.3.2 Entrance to the B.A. Honours Degree Program

To enter an Honours program, a student must complete an application form which is available in the Faculty of Arts general office. To be eligible

for acceptance into an Honours program, students must have successfully completed one full-course-equivalent (i.e., six credit hours) in each of four different subject fields (see Section 5.1), with a minimum cumulative Grade Point Average of 3.0 (3.25 for entry to Psychology) on all courses acceptable for credit in Arts. In addition, students are to have a Grade Point Average of 3.0 (3.25 for entry to Psychology) or better in all course(s) in the intended Honours subject field(s).

4.3.3 Requirements for Continuing in the B.A. Honours Degree Program

1) Prior to each registration, Honours students must have their programs approved by the department, and then by the Faculty of Arts general office, and they cannot make any subsequent changes without receiving prior permission from their department and the faculty general office.

2) Students admitted to the Faculty of Arts for the 1997-98 Regular Session and thereafter must by the time they have completed 60 credit hours have successfully completed or be registered for at least three credit hours in a course with significant content in written English (see Section 8 for courses marked with a "W" in the departments/area section) and at least three credit hours in a course in mathematics chosen from any courses bearing the subject code of STAT (Statistics) or MATH (Mathematics). Other courses which satisfy this requirement are designated with an "M" in the Faculty of Science section of this *Calendar*. Other courses which satisfy the "M" requirement are: Psychology PSYC 2260 or PSYC 2300; Sociology SOC 2290; Geography GEOG 3680; School of Art FA 1020; Faculty of Music MUSC 3230.

The chapter, General Academic Regulations and Requirements, in this *Calendar* contains a complete list of the courses which satisfy the written English and mathematics requirement.

3) To continue in an Honours program, the student must maintain a cumulative Grade Point Average of 3.0 (3.25 for Psychology) at each point of assessment on all courses where a final grade is recorded (as well as meet any additional departmental requirements there may be).

Students who fail to maintain the required minimum cumulative Grade Point Average are required to withdraw from the Honours program. They will be automatically placed in the General degree program and will have the following academic assessment permanently recorded on their transcript: "Required to Withdraw from the Honours Program". Such students may be eligible to apply for the Advanced degree program.

4.3.4 Four Faculty Requirements for Graduating with a B.A. Honours Degree

It should be noted that not every department has an Honours program. For information on those which do, and on whether they provide for both single and double Honours, please consult the specific listing for the relevant department in Section 8.

1) The number of full-course equivalents which a student must present (with a passing grade) in order to receive an Honours degree ranges from 18 to 20, depending on the specific requirements of the individual department. Information on the specific course requirements for the individual departments will be found in Section 8.

2) In order to graduate with a B.A. Honours, students must satisfy a residency requirement (see Section 5.5) at the University of Manitoba, and attain a minimum cumulative Grade Point Average of 3.0 on all coursework where a final grade is recorded.

3) Included among the courses presented for graduation there is to be at least one full-course equivalent completed in five different subject fields (as listed in Section 5.1). In addition, a subject field may also satisfy the requirement for a Humanity, or Social Science, or Science.

4) Among the courses presented for graduation there must be at least one full-course equivalent (i.e., six credit hours) in a Humanities subject field, at least one full-course-equivalent in a Social Science subject field, and at least one full-course equivalent in a Science subject field (on subject fields see Section 5.1).

4.4 Application to Graduate with a B.A. Degree

In order to actually receive a degree in any of the three programs leading to a B.A., students must indicate their intention to graduate by the relevant deadline date listed below. This process applies to students in each of the following three categories.

Category 1: Those students currently registered in the Faculty of Arts in either the B.A. General degree or the B.A. Advanced degree program must indicate their intention to graduate using UMREG or via the web.

Those students currently registered in the Faculty of Arts in the B.A. Honours degree program must indicate their intention to graduate at the point of registration for their last set of courses when they complete the Registration Worksheet.

Category 2: Those students currently registered in the Faculty of Arts in either the B.A. Advanced or a B.A. Honours degree program who decide to graduate with a B.A. General degree, must submit a request in writing to graduate to the General Office, Faculty of Arts. For graduation in May, the request must be received by April 30. For graduation in October, the request must be received by August 30. For graduation in February, the request must be received by November 30.

Category 3: Those students previously admitted to and registered in the Faculty of Arts who have completed **all** of the requirements for any one of the three degree programs leading to a B.A. while registered in the Faculty of Arts, but who are currently registered in another Faculty or School at the University of Manitoba (excluding Division of Extended Education) may submit a request in writing to graduate to the General Office, Faculty of Arts.

Deadline Dates to declare expected Graduation Date by Telephone/Web:

May Graduation: January 16

October Graduation: August 1

February Graduation: September 17

Section 5: Additional Faculty Regulations and Policies

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

5.1 Recognized Subject Fields

5.1.1 Five-subject Field Requirement and Humanity/Social Science/Science Requirement

Faculties and Schools offer a number of courses covering a variety of subjects. To satisfy the subject field requirement for any B.A. degree a student must complete 6 credit hours in each of 5 different course subjects. For example: 6 credit hours in Psychology plus 6 credit hours in German plus 6 credit hours in Mathematics plus 6 credit hours in Music plus 6 credit hours in Biology.

Each course subject in the Faculty of Arts has been further categorized as either a Humanity or Social Science. Courses offered by the Faculty of Science will satisfy the Science requirement. Therefore a course may satisfy both the subject field requirement as well as the requirement for the Humanity/Social Science/Science.

Listed below are the categories of Humanities, Social Sciences, Sciences and the course subjects that belong to each category.

Humanities

1) Course subjects taught by the Faculty of Arts that can be used towards the **Humanities** requirement: Asian Studies, Canadian Studies, Catholic Studies, Classical Studies, Drama, English, Film Studies, French, German, Greek, History, Icelandic, Italian, Latin, Native Languages, Native Studies, Near Eastern and Judaic Studies, Philosophy, Polish, Religion, Russian, Spanish, Theatre, Ukrainian, and Yiddish. In addition the following courses may be used: Women's Studies WOMN 1530, WOMN 2530, WOMN 2570, WOMN 3570, WOMN 3590, WOMN 3600, WOMN 3610 and Others ARTS 1140, ARTS 1150, ARTS 2640 and ARTS 2650.

2) Course subjects offered by other units where courses can — if acceptable for credit in the Faculty of Arts — be used towards the **Humanities** requirement: Music and History of Art. (For details, see Section 9).

Social Sciences

3) Course subjects taught by the Faculty of Arts that can be used towards the **Social Science** requirement: Anthropology, Economics, Global Political Economy courses GPE 2700, GPE 4700, Labour Studies, Linguistics, Political Studies, Psychology, and Sociology. In addition the following

courses may be used: Women's Studies WOMN 1540, WOMN 2500, WOMN 2510, WOMN 2550, WOMN 2560, WOMN 3510, WOMN 3550, WOMN 3560. Note: Geography courses completed prior to September 1, 2003 will be considered a Social Science.

Sciences

4) Course subjects taught by the Faculty of Science that can (provided it is acceptable for credit in the Faculty of Science, and is not designated as a service course for another faculty or school) be used towards the **Science** requirement: Astronomy, Biology, Botany, Chemistry, Computer Science, Mathematics, Microbiology, Physics, Statistics, and Zoology. (For details, see the Faculty of Science chapter of this *Calendar*.) Note: Environmental Science and Geological Sciences courses completed prior to September 1, 2003 will be considered a Science.

5.1.2 Major, Minor, or Honours Programs

1) The Faculty of Arts offers various majors, minors and Honours programs. For a listing of the programs offered by the respective departments, please refer to the departmental entry section 8.

2) In addition an Arts student may complete certain major and minor programs offered by other Faculties or Schools. They are: The Department of Mathematics offers a General Major and an Advanced Major that have been specially designed to satisfy the requirement of a Major for a Faculty of Arts student (see Section 9). In addition, there is also available a General Major in the History of Art, with most but not all courses being provided by the School of Art (see Section 9). Further a General and Advanced Major in Music is available (see Section 9).

All Minors offered by the Faculty of Science can be used as satisfying the Faculty of Arts requirement of a Minor; (for details, see the Faculty of Science chapter of this *Calendar*). In addition, certain Minors are possible from the School of Art; the Faculty of Music; Clayton H. Riddell Faculty of Environment, Earth, and Resources; and the I. H. Asper School of Business (Faculty of Management); (for details, see Section 9).

5.2 Courses Acceptable for Credit in the Faculty of Arts

The expression "courses acceptable for credit in the Faculty of Arts" refers to those courses (with two exceptions, on which see Section 5.4) which, if taken, count towards the maximum number of attempts allowed a student to fulfil his/her degree requirements (see Section 5.8), and which, if passed, would count towards the minimum number of successfully completed full-course equivalents required to receive one of the three undergraduate degrees dealt with in Section 4.

There are four types of courses acceptable for credit in the Faculty of Arts:

5.2.1 Courses Offered by the Faculty of Arts:

Every course offered by the Faculty of Arts is regarded as acceptable for credit in the Faculty of Arts, though there are some restrictions regarding certain combinations of courses that may be counted towards a degree, and regarding whether certain courses can be counted towards a student's Major, Minor, or Honours degree. For details on these restrictions, see the graduation requirements in Section 4, and the specific listings for departments, in Section 8.

5.2.2 Courses Offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources; Faculty of Science; and the I.H. Asper School of Business:

All courses offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources; Faculty of Science; and the I.H. Asper School of Business are acceptable for credit in Arts with the exception of Science courses designated as service courses. For details see Section 5.3 and Section 9 as well as the Faculty of Science chapter in this *Calendar*.

5.2.3 Courses Offered by Other Faculties or Schools at the University of Manitoba:

Certain courses offered by other Faculties or Schools at the University of Manitoba have been approved as acceptable for credit in Arts (see Section 9). Some of these courses may be taken prior to admission to Arts and will be included on transfer (Consult the Arts general office for details). For further details on transfer credit see Section 5.3.

5.2.4 Courses Offered at Other Universities and Colleges:

All courses offered at other universities and colleges which are evaluated as equivalent to University of Manitoba courses which are acceptable for

credit in Arts will be used when determining eligibility for admission and transfer credit (see Section 5.4).

5.3 How Courses Taken in Another Faculty or School Within the University of Manitoba Prior to the Student's Registering in the Faculty of Arts are Taken into Account

If a student was registered in another faculty or school within the University of Manitoba prior to registering in the Faculty of Arts, all courses which are acceptable for credit in the Faculty of Arts and in which the student received a final grade will be transferred to the Faculty of Arts, and will be treated in the same way as they would have been had they been taken by a student already registered in the Faculty of Arts. That is, they will all count in determining the admission status (in good standing, on probation or not admissible); they will also count towards the maximum number of attempts, and they will all be taken into account when determining the student's Grade Point Average. In addition, they will all count towards the minimum number of full-course equivalents required for graduating, provided the student received a passing grade in each of them, and counting them would not be in conflict with some other graduation or continuing regulation (such as the Residency Requirement).

5.4 How Courses Taken at Other Universities are Taken into Account

There are two groups of courses that are taken at other universities or colleges and which can be used for credit in the Faculty of Arts at the University of Manitoba, namely: a) those taken by students who are already registered in the Faculty of Arts at the University of Manitoba, and b) those taken by students prior to transferring to the Faculty of Arts at the University of Manitoba.

a) Students who are already registered in the Faculty of Arts at the University of Manitoba, and who wish to take courses at another university or college to count towards their degree here, are required to obtain a Letter of Permission from The Registrar's Office prior to registering at that other institution; see the chapter, General Academic Regulations and Requirements. The Letter of Permission will **not** be given to a student on probation. Commencing September 1999 grades earned in courses at other universities are utilized in establishing the minimum performance level, are counted as attempts and are taken into account in the cumulative hours when determining the Grade Point Average at the University of Manitoba. Grades earned at other universities will not be used in determining eligibility for awards (see Section 5.14 and 5.15 for details).

b) Completed courses acceptable for credit in the Faculty of Arts which were taken by a student registered at another university or college prior to transferring to the Faculty of Arts, will be used when determining eligibility for admission. That is, they will all count in determining the admission status (in good standing, on probation or not admissible).

That is, commencing September 1999 the applicable courses (credits and attempts) in both a) and b) are included on the University of Manitoba record, the external courses are counted as attempts and external grades are taken into account when determining the University of Manitoba Grade Point Average as well as meeting the performance requirements, and they appear on the University of Manitoba transcript. Grades earned at other universities will not be used in determining eligibility for awards (see Section 5.14 and 5.15 for details).

Completed courses acceptable for credit in the Faculty of Arts which were taken by a student outside the ten-year period prior to admission and registration in the Faculty of Arts will **not** be used for purposes of determining admissibility, advance standing or transfer credit.

5.5 Residency Requirement

As indicated in Section 4, each of the three undergraduate degree programs has a residency requirement which requires that a minimum number of credit hours must be taken at the University of Manitoba itself in order to qualify for one of these degrees.

1) There are two ways in which the Residency Requirement for the B.A. General may be satisfied: either by successfully completing at the University of Manitoba no fewer than eight full-course equivalents (48 credit hours) of the required 15 (these eight may be taken at various points in the student's career); or by successfully completing at the University of Mani-

toba itself no fewer than the last five full-course equivalents (30 credit hours) of the required 15 full-course equivalents.

2) To receive the B.A. Advanced degree, the student must successfully complete at least ten full course-equivalents (60 credit hours) of the required 20 full-course equivalents at the University of Manitoba.

3) For students admitted to the Honours program prior to the 1997-1998 Regular Session:

Once admitted to an Honours program, students are generally expected to take all their courses at the University of Manitoba (regarding exceptions to this requirement due to special circumstances, the student should consult the Faculty of Arts general office).

4) For students admitted to the Honours program commencing in the 1997-98 regular session:

In order to graduate with a B.A. Honours degree, students must take and successfully complete the hours of coursework offered by the University of Manitoba as noted below:

- In Honours programs requiring 108 credit hours, 48 credit hours must be from acceptable courses offered by the University of Manitoba;
- In Honours programs requiring 114 credit hours, 54 credit hours must be from acceptable courses offered by the University of Manitoba;
- In Honours programs requiring 120 credit hours, 60 credit hours must be from acceptable courses offered by the University of Manitoba.

Residency Requirement Collège universitaire de Saint-Boniface:

In order to satisfy the University of Manitoba, Faculty of Arts residency requirement, students who transfer from Collège universitaire de Saint-Boniface must complete the following minimum hours at the Fort Garry Campus.

1) In order to receive the B.A. (General) or (Advanced) degree, the student must successfully complete at least five full-course equivalents (30 credit hours) at the Fort Garry campus.

2) In order to receive the B.A. (Honours) degree, the student must successfully complete the hours of coursework offered at the Fort Garry campus as noted below:

- In Honours programs requiring 108 credit hours, 24 credit hours of acceptable coursework must be completed at the Fort Garry campus.
- In Honours programs requiring 114 credit hours, 24 credit hours of acceptable coursework must be completed at the Fort Garry campus.
- In Honours programs requiring 120 credit hours, 30 credit hours of acceptable coursework must be completed at the Fort Garry campus.

5.6 Year-of-Study Equivalents

A student's progress towards a degree is measured in terms of credit hours passed rather than years of study completed. The following table may be used to determine the year equivalent for the B.A. General and B.A. Advanced degree only.

Credit Hours Passed Plus ½ of Registered Hours	Year Equivalent
fewer than 23.999 credit hours	1
24 credit hours to less than 53.999 credit hours	2
54 credit hours to less than 83.999 credit hours	3
more than 84 credit hours	4

5.7 Maximum Number of Courses During a Term

Normally a student may attempt a maximum of 15 credit hours during a term. If, however, a student takes at least 15 credit hours in a previous term and obtains a term Grade Point Average of 2.75 or better (with no failures), he/she may apply at the general office to be allowed to take 3 additional credit hours in any term.

5.8 Maximum Number of Courses Attempted During One's Academic Career

Students are required to complete the requirements for graduating with any degree within the maximum number of attempts which they are allowed, namely 23 full-course equivalents (i.e., 138 credit hours). If students have attempted 23 full-course equivalents without completing all the requirements for graduating, or have reached a point where they do not have enough attempts remaining to satisfy all the requirements for graduating,

they will be placed on academic suspension (see Section 5.13). Any student who has applied for admission but has exhausted all 23 attempts, will not be admitted. Any student who has attempted 15 full-course equivalents without satisfying the degree requirements for a B.A. General should consult with a student advisor in the Faculty of Arts general office prior to registering for additional courses.

Each course contained in one of the following groups will be counted towards the maximum number of attempts allowed:

a) Courses at the University of Manitoba which are acceptable for credit in the Faculty of Arts, and in which a Faculty of Arts student registers and for which a final grade is assigned.

b) Courses taken in another faculty or school at the University of Manitoba prior to the student's transferring to the Faculty of Arts, provided the courses are acceptable for credit in the Faculty of Arts and for which a final grade is assigned.

c) Courses taken at another university or college prior to the student's registering in the Faculty of Arts (either as a transfer student, or in some other category but with transfer credit being granted), provided the courses were acceptable for credit in the Faculty of Arts and were taken within the ten-year period prior to registering in the Faculty of Arts, and for which a final grade has been recorded.

d) Courses completed at another university or college by a student registered in the Faculty of Arts at the University of Manitoba, provided the courses are acceptable for credit in the Faculty of Arts and the student had received a Letter of Permission.

5.9 Prerequisite, Corequisite, and Course Availability

Prerequisite: Minimum grades of "C" are required in all courses listed as prerequisites, except as otherwise noted in the course descriptions published in each department and program section of this chapter. If a course is prerequisite for a second course, the prerequisite must be met in order to continue in the second course.

Corequisite: Minimum grades of "C" are required in all courses listed as corequisites. If a first course is a corequisite for a second course, then the first course must be taken concurrently with (or prior to) the second course.

Course availability: All courses listed in this *Calendar* are not offered every year. The course(s) being offered for the current academic session are published in the *Registration Guide* section of this publication and at www.umanitoba.ca

5.10 Challenge for Credit

Some departments in the Faculty of Arts offer courses by means of challenge for credit. Since the courses offered in this manner may vary from year to year, students interested in this method of attaining credit should consult the Challenge for Credit section in the Faculty of Arts chapter of the *Registration Guide* section of this publication for information. The Academic Schedule in the front of this *Calendar* contains the relevant registration deadline dates appropriate to challenge for credit. Mature students, and students on academic suspension or probation are not permitted to challenge courses for credit.

5.11 Repeating a Course

A student may repeat a previously passed course provided the student is otherwise eligible to register in the course and has sufficient credit hours remaining to complete the degree. If you wish to repeat a course, you should be aware of the following:

- All completed courses (passed, failed or repeated) will appear on your transcript and will be used to calculate your attempted hours. Courses that have been repeated will appear on the transcript but only the grade on the 1st attempt on the course will be used in calculating the cumulative grade point average.
- Repeating a course will not remove the previous grade from the transcript.
- For purposes of meeting degree requirements for graduation, the last grade will be used in the calculation of the Grade Point Average in the major field and in the calculation of the grade point average required for the degree.
- The Limited Access policy will apply to any course being repeated. (This policy is under review).

5.12 Statute of Limitations

Students who have not been registered at the University of Manitoba (or any other post-secondary institution) for a period of five years or longer immediately preceding an admission to Arts may submit a written appeal to the dean's office to be allowed to start afresh a Faculty of Arts degree. If the appeal is granted, all courses listed on the University of Manitoba record will remain but all previous work will **not** count towards satisfying degree requirements nor affect the GPA calculation. The following notation will appear under the session of readmission:

"Having discontinued attendance at post-secondary institutions for a period of five years or more, this student has been permitted to start afresh on recommendation of the Dean. All previous credits have been forfeited."

5.13 Probation and Academic Suspension

A student in the B.A. General program will be placed on **probation** if, at the point of assessment (i.e., at the conclusion of either a regular session or a summer session), he/she fails to achieve the relevant minimum performance level (see Section 4.1.3 (4) above). The notation "On Probation" will be recorded on the transcript. [A student who is admitted to the Faculty of Arts, or transits from University 1, may be transferred on probation if he/she failed to meet the required minimum grade point average. The notation "Admitted (or Transferred) to Arts on Probation" will be recorded on the transcript.] Once on probation, a student will be allowed to register for **one** additional session (with intersession, summer evening and summer day being treated as one session for the purpose of this regulation), to enable them to achieve the required minimum Grade Point Average applicable to their **new** number of attempts. If the student succeeds in this, he/she will be allowed to continue. But if the student does not succeed, he/she will be placed on **academic suspension for one year**.

Because of the importance of the first session in which a student registers after being placed on probation, students should consult the Faculty of Arts general office to ensure that they register for a sufficient number of credit hours to make their removal from probation even a possibility.

One Year Suspension

Students who have been placed on **academic suspension for one year** are those students who had been previously placed on probation and then failed to achieve the required minimum grade point at the next academic assessment. The notation, "Academic Suspension for One Year," will be permanently recorded on the transcript. However, if there are insufficient credit hours remaining at this point of assessment to complete the degree, the student will be immediately placed on academic suspension for two years (see below for further information). Students placed on academic suspension for one year will be allowed to register in the Faculty of Arts again, but only if they first sit out a minimum of one year after the session on which they were placed on the one year suspension. During that year they will not be permitted to register in any other faculty or school at the University of Manitoba or at other post-secondary institutions. After this year of rustication has been served, the student may return and register for one additional regular session (in which they may register for a maximum of five full-course equivalents (i.e., 30 credit hours)), or one additional summer session (in which they may register for a maximum of three full-course equivalents (i.e., 18 credit hours)), to enable them to reach the appropriate required minimum Grade Point Average. Before registering, however, they must consult the Faculty of Arts general office to review their status and to determine if reinstatement is even possible. If the student succeeds in attaining the required minimum Grade Point Average relevant to his/her new number of attempts, he/she will be permitted to continue. Failure to achieve this required minimum Grade Point Average again, will result in the student being placed on academic suspension for two years, on which see below.

Two Year Suspension

This group is made up of students in the B.A. General program who have been placed on academic suspension for two years because either they:

- Have failed to achieve the required minimum Grade Point Average at the next academic assessment following one year suspension;
- Have exhausted the number of credit hours allowed without satisfying all the requirements for graduation (e.g., students who have failed or repeated more than eight full-course equivalents); *or*
- Have reached a point where, although they do have some credit hours remaining, they do not have enough credit hours remaining to complete the requirements for graduating.

The notation, "Academic Suspension for Two Academic Years," will be permanently recorded on the transcript.

Students placed on academic suspension for two years may not register again in the Faculty of Arts unless, after a two-year waiting period, (i.e., this means no registration in credit courses at a post-secondary institution during this waiting period), they apply to the Admissions Office and are admitted once again to start afresh.

If they are re-admitted, they must start working towards their degree completely afresh, with their previous work not counting either towards satisfying degree requirements, or towards the maximum number of attempts. (This does not mean that the previous coursework will be removed from the student history or transcript.) If, however, they are ever again placed on suspension, this will be a **permanent** suspension, and they will not be allowed to register again in the Faculty of Arts.

5.14 Dean's Honour List and Graduating With Distinction or First Class Honours

Dean's Honour List

To qualify for this list a student must have completed at least four full-course equivalents (i.e., 24 credit hours) offered by the University of Manitoba during the regular session and attained a minimum Grade Point Average of 3.50 on all the work taken during the regular session. The notation "Dean's Honour List" will be included on the student's transcript.

With Distinction

Students graduating with a B.A. General degree as a first degree will have their degree granted "With Distinction" if they have a minimum cumulative Grade Point Average of 3.80 on all coursework taken at the University of Manitoba and provided a minimum of 60 credit hours of acceptable coursework is completed at the University of Manitoba. (Students seeking a second degree will be eligible for this recognition provided they complete a minimum of 60 credit hours of acceptable coursework at the University of Manitoba following admission to their second degree program.)

Students graduating with a B.A. Advanced degree as a first degree will have their degree granted "With Distinction" if they have a minimum cumulative Grade Point Average of 3.80 on all coursework taken at the University of Manitoba and provided a minimum of 90 credit hours of acceptable coursework is completed at the University of Manitoba. (Students seeking a second degree will be eligible for this recognition provided they complete a minimum of 90 credit hours of acceptable coursework at the University of Manitoba following admission to their second degree program.)

This distinction will be noted on the parchment and on the student's transcript.

First Class Honours

For students admitted to the Honours Program commencing in the 1997-1998 Regular Session and thereafter and who are graduating with a B.A. Honours degree will have their degree granted with "First Class Honours" if they have a minimum cumulative Grade Point Average of 3.80 on all acceptable coursework completed at the University of Manitoba and have met the following residency requirements:

- Students must have completed a minimum of 78 credit hours of acceptable coursework at the University of Manitoba in a 108 credit hour Honours program;
- Students must have completed a minimum of 84 credit hours of acceptable coursework at the University of Manitoba in a 114 credit hour Honours program;
- Students must have completed a minimum of 90 credit hours of acceptable coursework at the University of Manitoba in a 120 credit hour Honours program.

The notation "First Class Honours" will appear on both the parchment and the student's transcript.

5.15 University Gold Medal and Program Medals

Gold Medal

The Faculty of Arts will award the University Gold Medal to the student graduating with an Arts degree who:

1) has the highest cumulative Grade Point Average of all graduating students (with a minimum of 3.85) on all courses creditable in Arts attempted at the University of Manitoba over the last two regular sessions prior to

graduation (with each session consisting of a minimum 24 hours of credit completed at the University of Manitoba) including any courses taken in the Summer Session between the last two sessions and

2) has a minimum cumulative Grade Point Average of 3.85 which is determined on the basis of all courses creditable in Arts attempted in completing the degree, including courses approved on transfer from other faculties/schools at the University of Manitoba.

Students who have up to 30 hours of external transfer credit (including failed courses) would be eligible providing they attain the minimum cumulative Grade Point Average of 3.85 on courses completed at the University of Manitoba which are acceptable for credit in Arts.

The Gold Medal winner is ineligible for Faculty of Arts program medals.

For specific details on the tie-breaking mechanism, contact the Faculty of Arts general office.

Program Medals

The Faculty of Arts will award a Program Medal to the student graduating in each of the General, Advanced and Honours degree programs who:

1) has the highest cumulative Grade Point Average of all graduating students (with a minimum of 3.75) on all courses creditable in Arts attempted at the University of Manitoba over the last two regular sessions prior to graduation (with each session consisting of a minimum of 24 hours of credit completed at the University of Manitoba) including any courses taken in the Summer Session between the last two sessions and

2) has a minimum cumulative Grade Point Average of 3.75 which is determined on the basis of all courses creditable in Arts attempted in completing the degree, including courses approved on transfer from other faculties/schools at the University of Manitoba.

Students who have up to 30 hours of external transfer credit (including failed courses) are eligible providing they attain the minimum cumulative Grade Point Average of 3.75 on courses completed at the University of Manitoba which are acceptable for credit in Arts.

The Gold Medal winner is ineligible for Faculty of Arts program medals.

For specific details on the tie-breaking mechanism, contact the Faculty of Arts general office.

5.16 Evaluation of Undergraduate Student Coursework

A copy of the Faculty of Arts *Regulations for the Academic Evaluation of Student Coursework* is available to students for perusal on the front counter in the general office or on the Faculty of Arts website. This booklet includes regulations concerning the method of student evaluation, final examinations and/or term tests, final grades, etc. It should in particular be noted that there are no Supplemental Examinations in the Faculty of Arts. For information on Incompletes, Deferred Examinations, Debarment, Academic Dishonesty, etc., see the chapter General Academic Regulations and Requirements in this *Calendar*.

5.17 Seeking a B.A. as a Second Degree

Once a Bachelor of Arts degree has been awarded by the University of Manitoba Senate, it cannot be revoked or "turned in" towards a higher or different degree. Students are free to apply for admission to the Faculty of Arts seeking a second degree.

Students who have completed a first degree may be admitted to the Faculty of Arts seeking a second degree.

Effective the 2002-2003 Regular Session and thereafter, students who have graduated with a first degree from the University of Manitoba will be allowed to transfer up to 60 credit hours of coursework from their first degree toward a second degree program in the Faculty of Arts. Courses taken in a qualifying program will be considered part of the first degree. Courses extra to the first degree, excluding courses taken in a qualifying program, may be transferred in addition to the 60 credit hours.

Students with first degrees awarded by external institutions will be eligible for up to 60 credit hours of transfer credit providing the degree was awarded and the courses were taken within the 10 year period prior to admission and registration in the Faculty of Arts (see Section 5.4).

Once admitted students must satisfy all relevant undergraduate degree requirements except for the Written English and Mathematics requirements.

Students may not be admitted to the Faculty of Arts or complete a Bachelor of Arts Degree while concurrently pursuing a degree in another Faculty or School.

No transfer credit will be awarded to students seeking a third degree.

Section 6: Student Responsibilities

Every effort is made to ensure that students in the Faculty of Arts have access to sound information and individual advice and guidance. Within this context and within the framework of faculty and department requirements indicated above, students are personally responsible for course selection and conforming to regulations regarding continuation in, and graduating from, the three undergraduate programs.

Students should take special care to ensure:

That each time they register that the courses they choose meet all requirements for graduation;

- That the courses they choose meet prerequisite conditions;
- That the courses they choose are not exclusions of, or the equivalent of, other courses already taken;
- The accuracy of their registration records, including all changes; and
- That they have noted and are following all deadlines and procedures published in the *Calendar* and elsewhere.

A copy of the Policy on Disclosure and Security of Student Academic Records is available for students to read in the Faculty of Arts general office.

Section 7: Special Circumstances and Appeals of Matters Regarding Academic Regulations

Students should promptly consult the Faculty of Arts general office when special circumstances warrant consideration of exceptions to regulations. In addition, the Academic Regulations Appeals Committee meets throughout the year to consider appeals from students who request special consideration with respect to rules and regulations governing their programs of study and qualifications for graduation.

Students who intend to appeal matters concerning regulations or decisions of the faculty which may affect their registration for any session must arrange to submit a written appeal including all pertinent documentation to the secretary no later than the dates listed below:

Deadline to Submit Appeal	ARAC Meeting Date
June 30	Third week of August
October 1	Third week of November
December 1	Third week of February
April 1	Third or fourth week of May

Deadlines falling on a Saturday or Sunday will be observed on the preceding Friday.

Meeting dates are subject to change by the chair.

Appeals should be addressed to: The Secretary of the Academic Regulations Appeals Committee, c/o General Office, Faculty of Arts. Special forms are available in the general office of the faculty.

SECTION 8: Departments in, and Programs and Courses Offered by, the Faculty of Arts

8.1 Department of Anthropology

Head: Brian Schwimmer

General Office: 435 Fletcher Argue Building

Telephone: 204 474 9361

E-mail: um-anthro@cc.umanitoba.ca

Website: www.umanitoba.ca/anthropology/

8.1.1 Academic Staff

Professor Emeritus

Townsend, J.B., B.A., Ph.D. (UCLA).

Senior Scholars

Koolage, W.W., Jr., A.B. (Dartmouth), M.A., Ph.D. (North Carolina); **Rokala, D.A., B.A., M.A.** (Colorado), Ph.D. (Minnesota); **Shay, C.T., B.A., M.A., Ph.D.** (Minnesota).

Professors

Greenfield, H.J., B.A., M.A., Ph.D. (CUNY); **Judd, E.R., B.A.(Hons.)** (Queen's), M.A., Ph.D. (UBC), Diploma (Beijing Language Institute and Fudan U, Shanghai); **Monks, G.G., B.A., M.A.** (Victoria), Ph.D. (UBC); **Szathmáry, E.J.E., C.M., B.A.(Hons.), Ph.D., LL.D** (Toronto), D.Sc.(Western Ontario), D.Litt.S. (St. Michael's).

Associate Professors

Chodkiewicz, J-L., L.-ès-L. (Sorbonne), Ph.D. (Columbia); **Hoppa, R.D., B.Sc.** (Toronto), M.Sc. (Sheffield/Bradford), Ph.D. (McMaster), **Pentland, D.H., B.A.(Hons.)(Manitoba), M.A., Ph.D.**(Toronto); **Schwimmer, B.E., B.A.** (St. John's, MD), M.A. (SUNY Binghamton), Ph.D. (Stanford); **Sty-meist, D.H., B.A.** (Wayne State), M.A., Ph.D. (Toronto).

Assistant Professors

Buddle-Crowe, K.A., B.A. (Concordia), M.A. (Western Ontario), Ph.D. (McMaster); **Burke, S.D.A., B.Sc., M.Sc., Ph.D.** (Toronto); **Frohlick, S.E., B.A., M.A.** (Simon Fraser), Ph.D. (York); **Leinawever, J.B., B.A.** (Whitman College), M.A., Ph.D. (Michigan); **Milne, S.B., B.A.** (Waterloo), M.A. (Trent), Ph.D. (McMaster).

8.1.2 Program Information

Anthropology is a science that examines human issues from both cultural and biological perspectives. The narrowest concern of this discipline is the

survival of humanity, while its broadest concerns address the conditions of continuity and change for all human life. The department offers courses in socio-cultural anthropology or ethnology, archaeology, language and culture, and biological or physical anthropology. While academic staff of the department have research interests that range from northern climates to the tropics and from Asia to the Americas, the department is also involved in research that sheds light on Manitoba and its people.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in both ANTH 1210 and ANTH 1220 (or ANTH 1520). For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in both ANTH 1210 and ANTH 1220 (or ANTH 1520).

Introductory Courses

The general introductory courses (ANTH 1210, and ANTH 1220 or ANTH 1520) present the major ideas and findings of Anthropology. It is equally appropriate for those planning to take further courses in this field and for students from other departments or faculties.

Specializations

Anthropology courses are arranged into groups or areas of study as follows:

- A: Introductory Anthropology
- B: Cultural Anthropology
- C: Physical Anthropology
- D: Archaeology
- E: Applied Anthropology

8.1.3 Anthropology

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

GENERAL MAJOR¹ TOTAL: 30 CREDIT HOURS

ANTH 1210 and ANTH 1220 (or ANTH 1520)

ANTH 2390; 6 credit hours in one of: Archaeology (Group D), or Physical Anthropology (Group C); 12 credit hours in Anthropology.

ADVANCED MAJOR¹ TOTAL: 60 CREDIT HOURS

ANTH 1210 and ANTH 1220 (or ANTH 1520)

ANTH 2390

● ANTH 3470
● one of ANTH 2890, ANTH 3390, ANTH 3730, ANTH 3950, ANTH 3980, ANTH 3990

● ANTH 4850
● 9 credit hours in Anthropology (of these a minimum of 3 credit hours must be at the 4000 level). No more than 6 credit hours may be taken from ANTH 4830 and ANTH 4840

Required in years two and three are six additional credit hours from each of groups B, C, and D; an additional 12 credit hours in Anthropology preferably including courses from Group E and ANTH 2370. A minimum of 9 credit hours (in addition to ANTH 3470) must be at the 3000 level. Students considering graduate studies should include a quantitative methods course among their non-Anthropology electives (e.g., Sociology SOC 2290, Statistics STAT 1000 and STAT 2000).

MINOR¹ TOTAL: 18 CREDIT HOURS

ANTH 1210 and ANTH 1220 (or ANTH 1520)

An additional 12 credit hours in Anthropology. ANTH 2390 is recommended for students taking a Minor because the course is fundamental to many subsequent Anthropology courses.

NOTE:

¹ Courses NATV 2070 and NATV 2080 offered by the Department of Native Studies count for credit (Category B) towards a General Major and Advanced Major in Anthropology.

8.1.4 Anthropology Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

U1 ANTH 1210 Human Origins and Antiquity (A) Cr.Hrs.3 (Formerly 076.121) An introduction to physical anthropology and archaeology. Topics include: biological evolution, evolution and comparative behaviour of primates, fossil evidence for human evolution, and the emergence of human culture. Students may not hold credit for ANTH 1210 (or 076.121) and any of: ANTH 1211 (or 076.121) or the former 076.120.

ANTH 1211 L'origine et l'antiquité de l'humanité (A) Cr.Hrs.3 (L'ancien 076.121) Une introduction à l'anthropologie physique et à l'archéologie. Les sujets suivants seront présentés: évolution biologique, évolution et cultures des primates, fossiles démontrant la théorie de l'évolution, origine et développement de la culture humaine. L'étudiant(e) qui détient les crédits du ANTH 1211 (ou 076.121) ne peut se faire créditer aucun des cours ANTH 1210 (ou 076.121) ou l'ancien 076.120. Donné au Collège universitaire de Saint-Boniface.

U1 ANTH 1220 Cultural Anthropology (A) Cr.Hrs.3 (Formerly 076.122) The comparative study of human societies and cultures, including language, economic and political organization, family and kinship, ritual and belief systems, cultural stability and change. Students may not hold credit for ANTH 1220 (or 076.122) and any of: ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), or the former 076.120.

ANTH 1221 Anthropologie culturelle (A) Cr.Hrs.3 (L'ancien 076.122) Étude comparative des sociétés et des cultures humaines. Les sujets suivants seront présentés: institutions familiales, sociales, économiques et politiques, langage vocal humain, systèmes de parenté, de rites et de croyances, stabilité et changements culturels. L'étudiant(e) qui détient les crédits du ANTH 1221 (ou 076.122) ne peut se faire créditer aucun des cours ANTH 1220 (ou 076.122), ANTH 1520 (ou 076.152), ou l'ancien 076.120. Donné au Collège universitaire de Saint-Boniface.

U1 ANTH 1520 Critical Cultural Anthropology (A) Cr.Hrs.3 (Formerly 076.152) An introduction to social cultural anthropology that critically examines production and exchange systems, age, gender, kinship and other social distinctions, belief systems, politics, and interactions between cultural systems. Learning and performance assessment is based upon supervised reading and essay writing. Students may not hold credit for ANTH 1520 (or 076.152) and any of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), or the former 076.120.

ANTH 2011 Langage et culture (B) Cr.Hrs.3 (L'ancien 076.201) Considération générale de la nature du langage et des inter-relations entre le langage et les autres aspects de la culture. Corrélations socio-culturelles des variations linguistiques. Ethnographie de la communication. Origine et évolution du langage. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 2011 (ou 076.201) et le ANTH 2370 (ou 076.237). *Préalable:* une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), l'ancien 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

● **ANTH 2040 Native North America: A Sociocultural Survey (B) Cr.Hrs.3** (Formerly 076.204) An ethnographic survey of the cultures of Native North American peoples. Students may not hold credit for both ANTH 2040 (or 076.204) and ANTH 2041 (or 076.204). *Prerequisite:* a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

● **ANTH 2041 Les Amérindiens de l'Amérique du Nord: Une étude socioculturelle (B) Cr.Hrs.3** (L'ancien 076.204) Survol ethnographique des cultures des peuples amérindiens de l'Amérique du Nord. L'étudiant(e) qui détient le crédits du ANTH 2041 (ou 076.204) ne peut se faire créditer aucun des cours ANTH 2040 (ou 076.204) ou l'ancien 076.345. *Préalable:* une note minimale de C dans un de: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou le consentement écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

● **ANTH 2060 European Archaeology (D) Cr.Hrs.3** (Formerly 076.206) This course will survey the archaeological record of Europe from the earliest human occupation through the rise of early cities and complex societies. Case studies will be used to examine the social, political, economic, and technological adaptations of early human societies in the region.

● **ANTH 2071 Religions amérindiennes et inuites (B) Cr.Hrs.3** (L'ancien 076.207) Étude comparative et interprétative des valeurs, croyances et pratiques religieuses propres aux traditions autochtones. Une attention particulière sera accordée aux religions traditionnelles, à l'impact du christianisme sur ces religions, et à l'émergence de la spiritualité autochtone contemporaine en mettant l'accent sur l'expérience et les structures, fonctions et significations des mythes, récits et rituels qui composent l'idéologie religieuse autochtone. Donné au Collège universitaire de Saint-Boniface.

● **ANTH 2100 Introduction to Archaeology (D) Cr.Hrs.3** (Formerly 076.210) A general introduction to the principles of archaeology and the materials, analyses, and interpretations encountered in archaeological study. Students may not hold credit for both ANTH 2100 (or 076.210) and the former 076.290. *Prerequisite:* a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

● **ANTH 2230 Anthropology of Travel and Tourism (B) Cr.Hrs.3** (Formerly 076.223) Anthropological approaches to the study of cultural practices and phenomena of travel and tourism. Travel is examined in various social, historical, and cultural contexts as a way of seeing and experiencing the world. Emphasis is placed on the intersection of culture, colonialism, capitalism, and globalization, with practices of travel, including mass tourism. *Prerequisite:* a grade of "C" or better in one of ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.120, or written consent of the instructor.

● **ANTH 2240 Plagues and People (C) Cr.Hrs.3** Examines selected plagues in evolutionary, ecological, and epidemiological context, and considers the complex biological, social, and economic repercussions for human populations. Foci include past, present, and emerging infectious disease epidemics.

● **ANTH 2350 Ethnology of Sub-Saharan Africa (B) Cr.Hrs.3** (Formerly 076.235) A survey of culture and society in traditional and contemporary Africa. Students may not hold credit for ANTH 2350 (or 076.235) and any of: ANTH 2351 (or 076.235) or the

former 076.337. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), ANTH 2360 (or 076.236), ANTH 2361 (or 076.236), the former 076.120, or written consent of instructor.

ANTH 2351 Ethnologie de l'Afrique sous-saharienne (B) Cr.Hrs.3 (L'ancien 076.235) Le cours est un compte rendu de la culture des sociétés traditionnelles et contemporaines de l'Afrique sous-saharienne. L'étudiant(e) qui détient les crédits du ANTH 2351 (ou 076.235) ne peut se faire créditer aucun des cours ANTH 2350 (ou 076.235) ou l'ancien 076.337. *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), ANTH 2360 (ou 076.236), ANTH 2361 (ou 076.236), ou l'ancien 076.120, ou l'autorisation du professeur. Donné au Collège universitaire de Saint-Boniface.

W ANTH 2360 Ethnohistory of Sub-Saharan Africa (B) Cr.Hrs.3 (Formerly 076.236) An overview of the development of African cultures, technologies and political systems from earliest times to the present. Students may not hold credit for both ANTH 2360 (or 076.236) and ANTH 2361 (or 076.236).

ANTH 2361 Ethnohistoire de l'Afrique sous-saharienne (B) Cr.Hrs.3 (L'ancien 076.236) Le cours se présente sous la forme d'une vue générale du développement des cultures africaines au sud du Sahara, de leurs technologies et systèmes politiques, du paléolithique à nos jours. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 2361 (ou 076.236) et le ANTH 2360 (ou 076.236). Donné au Collège universitaire de Saint-Boniface.

ANTH 2370 Language and Culture (B) Cr.Hrs.3 (Formerly 076.237) The investigation of the complex interaction of language and culture, including linguistic perspectives on prehistory, ethnosemantics, and sociocultural correlations of linguistic variation. Students may not hold credit for both ANTH 2370 (or 076.237) and ANTH 2011 (or 076.201). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.120, or written consent of instructor.

ANTH 2380 Art, Symbols, Cultures (B) Cr.Hrs.3 (Formerly 076.238) Studies of the social contexts and functions of human artistic and symbolic behaviour in cross-cultural perspective. Students may not hold credit for both ANTH 2380 (or 076.238) and ANTH 2381 (or 076.238). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2381 Arts, symboles et cultures (B) Cr.Hrs.3 (L'ancien 076.238) Étude des contextes sociaux et des fonctions des comportements artistiques et symboliques humains dans une perspective comparative. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 2381 (ou 076.238) et le ANTH 2380 (ou 076.238). *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 2390 Social Organization in Cross-Cultural Perspective (B) Cr.Hrs.6 (Formerly 076.239) Kinship, gender, class and political structures are examined to consider variations, continuities, and changes in relationships among individuals, groups and societies around the world. Students may not hold credit for both ANTH 2390 (or 076.239) and ANTH 2391 (or 076.239). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2391 Organisation sociale transculturelle: Introduction à l'ethnographie (B) Cr.Hrs.6 (L'ancien 076.239) Ce cours porte sur le système de parenté, les distinctions de genre, les structures de stratification et d'autorité politique dans leurs divers effets sur les rapports interindividuels, les groupes et les sociétés à travers le monde. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 2391 (ou 076.239) et le ANTH 2390 (ou 076.239). *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 2430 Ecology, Technology and Society (B) Cr.Hrs.3 (Formerly 076.243) Ecological analysis of the interplay of socio-political and technological processes in different types of societies. Focus upon the ecological side-effects and selected technologies, economic mechanisms and political institutions. Students may not hold credit for both ANTH 2430 (or 076.243) and ANTH 2500 (or 076.250). May not be used for Major or Minor in Anthropology.

ANTH 2450 Ethnology of China (B) Cr.Hrs.3 (Formerly 076.245) Issues in the anthropological study of contemporary China will be introduced in comparative perspective. The emphasis will be on issues such as economic development, changing gender relations, population growth and migration, and the politics of culture.

ANTH 2460 Peasantry in a Changing World (B) Cr.Hrs.3 (Formerly 076.246) Anthropological approaches to the study of peasant societies as part of larger political economies. Attention is given to peasant economies, social and political organizations and belief systems, and their articulation with wage-labour and cash crop markets. Students may not hold credit for both ANTH 2460 (or 076.246) and the former 076.244. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2470 Anthropology of Mass Communication (B) Cr.Hrs.3 (Formerly 076.247) This course focuses on media production and dissemination and on images of the world created by media. Media practices and products are addressed in relation to the formation of social relations and identities, the shaping of peoples' sense of time and space, and media's role in the construction of communities and in processes of socio-economic and cultural change. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2500 Culture, Environment, and Technology (B) Cr.Hrs.3 (Formerly 076.250) Study of ecological systems, focussing on processes of adaptation in societies differing in organization and in views of technology. Demographic and technological changes are examined in relation to cultural, political and ideological factors. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2510 Anthropology of Economic Systems (B) Cr.Hrs.3 (Formerly 076.251) A comparative study of factors bearing upon production, exchange, and consumption of goods, practices and ideas in varying social contexts. The course also examines the articulation of economic systems in the global political economy. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2530 Anthropology of Political Systems (B) Cr.Hrs.3 (Formerly 076.253) Analysis of political institutions and their changing nature in diverse societies and forms of society, with attention to authority, leadership, decision-making, power and its disguises, and forms of resistance. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2550 Culture and the Individual (B) Cr.Hrs.3 (Formerly 076.255) The study of the interrelations between life-cycle, psychological functioning and malfunctioning, and social and cultural institutions. Emphasis is placed on enculturation and life-cycle rituals. Students may not hold credit for both ANTH 2550 (or 076.255) and ANTH 2551 (or 076.255). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2551 Culture et l'individu (B) Cr.Hrs.3 (L'ancien 076.255) Étude des corrélations entre le cycle de vie, les fonctions et dysfonctions psychologiques, et les institutions sociales et culturelles. L'accent est mis sur les rituels d'enculturation et du cycle de vie. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 2551 (ou 076.255) et le ANTH 2550 (ou 076.255). *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 2560 Anthropology of Illness (B) Cr.Hrs.3 (Formerly 076.256) Comparative study of cultural factors involved in health/illness: concepts of disease and curing practices. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 2570 Urban Anthropology (B) Cr.Hrs.3 (Formerly 076.257) Comparison of the processes of urbanization and various forms of urbanism, with attention to archaeological evidence and the emergence of urbanism and urbanization in developing nations.

ANTH 2600 Old World Prehistory (D) Cr.Hrs.3 (Formerly 076.260) A survey of the archaeological evidence and cultural interpretations of Old World cultures from the beginning of the Pleistocene to the development of agriculture. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2610 Old World Civilizations (D) Cr.Hrs.3 (Formerly 076.261) Archaeological evidence and cultural interpretations of the origins of complex societies from the development of agriculture to the beginnings of written history in the Old World. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2620 New World Prehistory (D) Cr.Hrs.3 (Formerly 076.262) Archaeological evidence and cultural interpretations of those New World cultures which did not develop civilizations, from the earliest inhabitants until the period of initial European contact. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2630 New World Civilizations (D) Cr.Hrs.3 (Formerly 076.263) Archaeological evidence and cultural interpretations of the growth and development of complex societies in the New World from the origins of agriculture to the period of initial European contact. Emphasis will be placed on the "high cultures" of Central and South America. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

★ **ANTH 2640 Manitoba Prehistory (D) Cr.Hrs.3** (Formerly 076.264) Archaeological evidence and culture history of prehistoric populations which inhabited the various environmental zones of Manitoba. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2690 Peoples and Cultures of Contemporary Latin America (B) Cr.Hrs.3 (Formerly 076.269) An ethnographic survey of the cultural diversity of contemporary Latin America with selected case study examples drawn from Mexico and Central America, South America, and the Hispanic Caribbean. Case studies are selected to represent a variety of anthropological perspectives. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.120, or written consent of instructor.

ANTH 2820 Human Osteology (C) Cr.Hrs.3 (Formerly 076.282) An examination of normal and pathological skeletal anatomy. Quantitative methods of analysis for archaeological and forensic applications. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2831 Méthodes en ethnologie (B) Cr.Hrs.3 (L'ancien 076.283) Panorama des méthodes de recherche utilisées en ethnologie, y compris les techniques analytiques

et de recherche sur le terrain. *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), l'ancien 076.120 ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 2860 Evolution and Human Diversity (C) Cr.Hrs.3 (Formerly 076.286) An introduction to the interacting roles of heredity, culture and environment in human families and populations. Introduces the biological bases for variation within/between human populations. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2880 Human Evolution (C) Cr.Hrs.3 (Formerly 076.288) Intensive study of human organic evolution within hominid primates. Consideration of the relationships of socio-cultural adaptation to human evolution. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2890 Human Population Biology (C) Cr.Hrs.3 (Formerly 076.289) Intensive study of the evolutionary implications of genetic variation within/between human populations in relationship to ecological and cultural variation. *Prerequisite*: a grade of "C" or better in ANTH 2860 (or 076.286) or written consent of instructor.

ANTH 2910 Historical Archaeology (D) Cr.Hrs.3 (Formerly 076.291) An archaeological survey of the early post-European period in North America. Case studies will emphasize selected regions, time periods, and topics that may include: the western Canadian fur trade; European colonialism in North America; international colonialism. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2930 Archaeology of a Selected Area (D) Cr.Hrs.3 (Formerly 076.293) Detailed examination of the archaeology of a geographical area that is of current interest to faculty and students. The areas will rotate annually and will include but not be limited to the Caribbean, Europe, the Northwest Coast, Canada, the Arctic and the sub-Arctic. *Prerequisite*: a grade of "C" or better in one of: ANTH 1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 2980 Anthropological Perspectives on Contemporary Mexico (B) Cr.Hrs.3 (Formerly 076.298) An introduction to the history, cultural diversity, and contemporary social and economic complexity of Mexico. The lectures will be complemented by visits to museums and places of historical interest in Morelia and other localities of Michoacan. Only offered in Morelia, Mexico as part of the Term in Mexico option. *Prerequisite*: written consent of the coordinator for Latin American Studies.

ANTH 2990 Prehispanic Cultures of Mexico (D) Cr.Hrs.3 (Formerly 076.299) This course will examine the archaeology of Mexico with special focus on Purhepecha and the Western culture area. An analysis of the changing social, political and economic structures of these societies will be complemented by a consideration of aesthetic, philosophical and religious aspects. Visits to archaeological sites will complement the lectures and readings for this course. Only offered in Morelia, Mexico as part of the Term in Mexico option. *Prerequisite*: written consent of the coordinator for Latin American Studies.

ANTH 3210 Culture Change (B) Cr.Hrs.3 (Formerly 076.321) Theories and case studies of culture change. Includes treatment of industrialization, urbanization, and social movements with an emphasis on developing countries. Students may not hold credit for both ANTH 3210 (or 076.321) and ANTH 3211 (or 076.321). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), or the former 076.120.

ANTH 3211 Évolution de la culture (B) Cr.Hrs.3 (L'ancien 076.321) Étude théorique et pratique des changements qui s'opèrent dans une culture. Nous étudierons tout spécialement l'industrialisation, l'urbanisation et les différents mouvements sociaux. Nous insisterons sur l'évolution dans les pays en voie de développement. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3211 (ou 076.321) et le ANTH 3210 (ou 076.321). *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), ou l'ancien 076.120. Donné au Collège universitaire de Saint-Boniface.

ANTH 3320 Women in Cross-Cultural Perspective (B) Cr.Hrs.3 (Formerly 076.332) Critical perspectives on the role of women cross-culturally, with ethnographic reference to non-Western societies and cultures. Students may not hold credit for both ANTH 3320 (or 076.332) and ANTH 3321 (or 076.332). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 3321 Femmes, sociétés et cultures (B) Cr.Hrs.3 (L'ancien 076.332) Étude critique des rôles de la femme selon une approche interculturelle à partir d'analyses ethnographiques des sociétés et des cultures africaines, amérindiennes et asiatiques. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3321 (ou 076.332) et le ANTH 3320 (ou 076.332). *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3350 Anthropology of Sex and Sexualities (B) Cr.Hrs.3 Anthropological approaches to the study of human sexuality and the diversity of sexual expression and identification. Sex and sexualities are examined as social and cultural constructions, experiences, discourses, identities and practices taking place in specific local contexts and shaped by wider social processes including colonialism and globalization. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 3380 Anthropology and Contemporary Social Issues (B) Cr.Hrs.3 (Formerly 076.338) Anthropological perspectives on poverty, social accountability, colonialism, racism, education, ecological degradation and violence. Students may not hold

credit for both ANTH 3380 (or 076.338) and ANTH 3381 (or 076.338). *Prerequisite*: a grade of "C" or better in ANTH 2390 (or 076.239) or ANTH 2391 (or 076.239) or written consent of instructor.

ANTH 3381 Problèmes sociaux contemporains et l'anthropologie (B) Cr.Hrs.3 (L'ancien 076.338) Nous étudions la pauvreté, la responsabilité sociale, le colonialisme, le racisme, l'éducation, la dégradation de l'écologie et la violence du point de vue anthropologique. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3381 (ou 076.338) et le ANTH 3380 (ou 076.338). *Préalable*: une note minimale de C dans le ANTH 2390 (ou 076.239) ou ANTH 2391 (ou 076.239) ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3390 Methods in Ethnology (B) Cr.Hrs.3 (Formerly 076.339) A survey of ethnological research methods, including both field and analytical techniques. *Prerequisite*: a grade of "C" or better in ANTH 2390 (or 076.239) or ANTH 2391 (or 076.239) or written consent of instructor.

ANTH 3460 Native North American Ethnology (B) Cr.Hrs.3 (Formerly 076.346) An ethnographic and theoretical study of selected Native North American societies and their changes after contact. Students may not hold credit for both ANTH 3460 (or 076.346) and ANTH 3461 (or 076.346). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 3461 Ethnologie des Amérindiens de l'Amérique du Nord (B) Cr.Hrs.3 (L'ancien 076.346) Études ethnographiques et ethnologiques de quelques sociétés amérindiennes de l'Amérique du Nord. On étudiera aussi les changements survenus depuis les premiers contacts. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3461 (ou 076.346) et le ANTH 3460 (ou 076.346). *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3470 History of Anthropology (B) Cr.Hrs.3 (Formerly 076.347) A temporal survey of the development of major paradigms and theoretical movements in anthropological thought and method. Students may not hold credit for both ANTH 3470 (or 076.347) and ANTH 3471 (or 076.347). *Prerequisite*: a grade of "C" or better in ANTH 2390 (or 076.239) or ANTH 2391 (or 076.239) or written consent of instructor.

ANTH 3471 Histoire de la pensée anthropologique (B) Cr.Hrs.3 (L'ancien 076.347) Étude du développement des principaux paradigmes des courants théoriques et méthodologiques en anthropologie. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3471 (ou 076.347) et le ANTH 3470 (ou 076.347). *Préalable*: une note minimale de C dans le ANTH 2390 (ou 076.239) ou ANTH 2391 (ou 076.239) ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3500 Peoples of the Arctic (B) Cr.Hrs.3 (Formerly 076.350) Ethnographic survey of the aboriginal peoples of the circumpolar regions of Asia, North America, and Greenland. Attention will be given to the aboriginal and post-contact situations among such peoples. Students may not hold credit for both ANTH 3500 (or 076.350) and ANTH 3501 (or 076.350). *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 3501 Peuples de l'Arctique (B) Cr.Hrs.3 (L'ancien 076.350) Étude ethnographique des peuples autochtones des régions circumpolaires d'Asie, d'Amérique du Nord et du Groënland, avec une attention spéciale portée aux situations causées par différents contacts culturels. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3501 (ou 076.350) et le ANTH 3500 (ou 076.350). *Préalable*: une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3531 Peuples d'Amérique du Sud (B) Cr.Hrs.6 (L'ancien 076.353) Étude de certaines cultures sudaméricaines, notamment celles des Andes, de l'Amazonie et de la Patagonie. Seront analysées les premières civilisations de même que l'adaptation des autochtones à la société contemporaine. Donné au Collège universitaire de Saint-Boniface.

ANTH 3550 Canadian Subcultures (B) Cr.Hrs.3 (Formerly 076.355) An anthropological study of dimensions of community, ethnicity, and social class in Canadian society. Students may not hold credit for both ANTH 3550 (or 076.355) and ANTH 3551 (or 076.355).

ANTH 3551 Sous-cultures canadiennes (B) Cr.Hrs.3 (L'ancien 076.355) Étude anthropologique de la communauté, de l'ethnicité et du statut social dans la société canadienne. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3551 (ou 076.355) et le ANTH 3550 (ou 076.355). Donné au Collège universitaire de Saint-Boniface.

ANTH 3600 Archaeological Method and Theory (D) Cr.Hrs.3 (Formerly 076.360) The historical development and current application of theoretical and methodological frameworks for archaeological interpretation. *Prerequisite*: a grade of "C" or better in ANTH 2100 (or 076.210) or the former 076.290 or written consent of instructor.

ANTH 3680 Anthropological Perspectives on Current Issues in Latin America (B) Cr.Hrs.3 (Formerly 076.368) This course focuses on anthropological treatment of current Latin American issues such as civil war, interventionism, and refugees; population growth, urbanization, migration and poverty; class relations; agrarian structure, and rural proletarianization; agribusiness, nutrition and health; genocide and ethnocide; and the international drug trade. *Prerequisite*: a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.120, or written consent of instructor.

ANTH 3720 Demography of Past Populations (C) Cr.Hrs.3 (Formerly 076.372) This course provides students with a basic understanding of demographic methods and techniques applied in analysis of long term changes in the demographic patterns of anthropological populations. *Prerequisite*: a grade of "C" or better in one of: ANTH

1210 (or 076.121), ANTH 1211 (or 076.121), the former 076.120, or written consent of instructor.

ANTH 3730 Forensic Anthropology (C) Cr.Hrs.3 (Formerly 076.373) This course provides the theory, methods, and techniques for forensic identification of human skeletal remains, including estimation of sex, age-at-death, stature, population affinities and features of personal biology. The laboratory component of this course, where students work with actual human skeletal remains, is a major component. *Prerequisite:* a grade of "C" or better in ANTH 2820 (or 076.282).

ANTH 3740 Human Growth and Variation (C) Cr.Hrs.3 (Formerly 076.374) An examination of variation in human body form and composition in the context of normal growth and development viewed in an evolutionary perspective. *Prerequisite:* a grade of "C" or better in ANTH 2860 (or 076.286) or written consent of instructor.

ANTH 3750 Anthropological Perspectives on Globalization and the World-System (B) Cr.Hrs.3 (Formerly 076.375) An anthropological perspective on the modern world-system and the expansion of capitalism into peripheral areas of the world; the transformation of indigenous societies and cultures; the rise of ethnic conflict, protest and resistance; and a comparative examination of selected global and transnational processes. Students may not hold credit for both ANTH 3750 (or 076.375) and ANTH 3751 (or 076.375). *Prerequisite:* a grade of "C" or better in ANTH 2390 (or 076.239) or ANTH 2391 (or 076.239) or written consent of instructor.

ANTH 3751 Globalisation et mondialisation: Une perspective anthropologique (B) Cr.Hrs.3 (L'ancien 076.375) Perspective anthropologique sur la mondialisation et sur l'expansion du capitalisme dans les zones périphériques du monde. Étude de la transformation des sociétés et cultures autochtones; de l'émergence des conflits ethniques; et de la résistance. Approche comparative de processus transnationaux et globaux particuliers. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3751 (ou 076.375) et le ANTH 3750 (ou 076.375). *Préalable:* une note minimale de C dans le ANTH 2390 (ou 076.239) ou ANTH 2391 (ou 076.239) ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3810 Anthropology of Belief Systems (B) Cr.Hrs.3 (Formerly 076.381) A comparative study of belief systems, rituals, and ceremonies in non-Western and Western societies and cultures. Students may not hold for credit both ANTH 3810 (or 076.381) and ANTH 3811 (or 076.381). *Prerequisite:* a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.109, 076.120, or written consent of instructor.

ANTH 3811 Anthropologie des systèmes de croyances (B) Cr.Hrs.3 (L'ancien 076.381) Étude comparative des systèmes de croyances, de rites sacrés et de cérémonies dans les sociétés et les cultures du monde. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3811 (ou 076.381) et le ANTH 3810 (ou 076.381). *Préalable:* une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), les anciens 076.109, 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

★ **ANTH 3910 Archaeological Field Training (D,E) Cr.Hrs.6** (Formerly 076.391) Theory and practical field experience in the investigation of archaeological sites from the formulation of research designs through data analysis in the field. Offered in alternate summers. See Anthropology department for details. *Prerequisite:* a grade of "C" or better in ANTH 2100 (or 076.210) or the former 076.290 and written consent of instructor.

ANTH 3950 Artifact Analysis (D) Cr.Hrs.3 (Formerly 076.395) Analytic and interpretive methods for treating archaeologically recovered materials such as lithics, ceramics and other artifacts are addressed through lectures, demonstrations and other laboratory exercises. *Prerequisite:* a grade of "C" or better in ANTH 2100 (or 076.210) or the former 076.290 or written consent of instructor.

ANTH 3960 Cultural Resource Management (D,E) Cr.Hrs.3 (Formerly 076.396) A survey of the concepts, methods, and techniques used in the management of cultural, especially archaeological, heritage resources. The roles of public agencies, private contractors, and heritage legislation in Canadian CRM are reviewed. *Prerequisite:* a grade of "C" or better in ANTH 2100 (or 076.210) or the former 076.290 or written consent of instructor.

ANTH 3970 Ethnography of a Selected Region (B) Cr.Hrs.3 (Formerly 076.397) An ethnographic survey of the culture(s) of a selected geographical area currently of interest to faculty and students. The areas to be studied may differ from year to year. Students may not hold for credit both ANTH 3970 (or 076.397) and ANTH 3971 (or

076.397). *Prerequisite:* a grade of "C" or better in one of: ANTH 1220 (or 076.122), ANTH 1221 (or 076.122), ANTH 1520 (or 076.152), the former 076.120, or written consent of instructor.

ANTH 3971 Ethnographie régionale (B) Cr.Hrs.3 (L'ancien 076.397) Survol ethnographique de la culture d'une aire géographique d'intérêt pour le département ou l'étudiant. L'aire étudiée peut changer d'une année à l'autre. L'étudiant(e) ne peut se faire créditer à la fois le ANTH 3971 (ou 076.397) et le ANTH 3970 (ou 076.397). *Préalable:* une note minimale de C dans un des cours suivants: ANTH 1220 (ou 076.122), ANTH 1221 (ou 076.122), ANTH 1520 (ou 076.152), l'ancien 076.120, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3980 Botanical Analysis in Archaeology (D) Cr.Hrs.3 (Formerly 076.398) Analytic and interpretive methods for treating archaeologically recovered plant remains and soils are addressed through lectures, demonstrations, and laboratory exercises. *Prerequisite:* a grade of "C" or better in ANTH 2100 (or 076.210) or the former 076.290 or written consent of instructor.

ANTH 3990 Faunal Analysis in Archaeology (D) Cr.Hrs.3 (Formerly 076.399) Analytic and interpretive methods of treating archaeologically recovered faunal remains are addressed through lectures, demonstrations, and laboratory exercises. *Prerequisite:* a grade of "C" or better in ANTH 2100 (or 076.210) or the former 076.290 or written consent of instructor.

ANTH 4750 The Anthropology of Aging (C) Cr.Hrs.3 (Formerly 076.475) This course provides an in-depth examination of the biological foundations of human aging and senescence in the context of evolutionary theories of longevity. *Prerequisite:* written consent of instructor or department head.

ANTH 4760 Practicum in Archaeology (D) Cr.Hrs.3 (Formerly 076.476) This course is designed to provide advanced undergraduate students in archaeology with individualized practical experience in different aspects of archaeology by working with professional archaeologists. *Prerequisite:* a grade of "C" or better in ANTH 2100 (or 076.210) or the former 076.290 or written consent of instructor.

ANTH 4770 Seminar in Contemporary North American Native Cultures (B) Cr.Hrs.3 (Formerly 076.477) The anthropological study of contemporary Native communities in the United States and Canada. Topics will focus on particular sub-systems such as religion, economy, medical care, social structure or political organization. *Prerequisite:* written consent of instructor or department head.

ANTH 4780 Selected Topics in Cultural Anthropology (B) Cr.Hrs.3 (Formerly 076.478) *Prerequisite:* written consent of instructor or department head.

ANTH 4790 Selected Topics in Archaeology (D,E) Cr.Hrs.3 (Formerly 076.479) *Prerequisite:* written consent of instructor or department head.

ANTH 4800 Seminar in Applied Anthropology (B,E) Cr.Hrs.6 (Formerly 076.480) A review of the history of applied anthropology and investigation of major case studies, research methodologies, intervention strategies, and substantive areas of application. *Prerequisite:* written consent of instructor or department head.

ANTH 4810 Seminar in Medical Anthropology (B,C,E) Cr.Hrs.6 (Formerly 076.481) A topical or case-study approach to method, theory and research as utilized in the field of Medical Anthropology. *Prerequisite:* written consent of instructor or department head.

ANTH 4830 Advanced Reading and Research (B,C,D) Cr.Hrs.3 (Formerly 076.483) *Prerequisite:* written consent of instructor and department head.

ANTH 4840 Advanced Independent Work (B,C,D) Cr.Hrs.6 (Formerly 076.484) *Prerequisite:* written consent of instructor and department head.

ANTH 4850 Advanced Seminar in Anthropological Theory (B) Cr.Hrs.3 (Formerly 076.485) An analysis of the process of theory formation in the social sciences in general and in cultural (social) anthropology in particular. The theoretical content of various contemporary "schools" in anthropology is critically analyzed. *Prerequisite:* a grade of "C" or better in one of the following: ANTH 3470 (or 076.347), ANTH 3471 (or 076.347), the former CRM 320, or written consent of instructor or department head.

ANTH 4860 Selected Topics in Biological Anthropology (C,E) Cr.Hrs.3 (Formerly 076.486) Topics in biological anthropology which will vary depending on the needs of students and the interest of the instructor. *Prerequisite:* written consent of instructor or department head.

8.2 Asian Studies Centre

Associate Director: William Lee

Centre Office: 328 Fletcher Argue Building

Telephone: 204 474 9516

E-mail: asian_studies@umanitoba.ca

Website: www.umanitoba.ca/asian_studies

8.2.1 Academic Staff

Associate Professor

Russell, T., B.A., M.A. (UBC), Ph.D. (A.N.U.).

Assistant Professor

Lee, W., B.A. (Victoria), M.A. (Carleton), Ph.D. (McGill).

Instructors

Iwasaki, K. B.A. (Women's Nutrition College), M.A. (Maryland); Kong, Y., B.A. (Harbin Normal), M.A. (Heilongjiang).

8.2.2 Program Information

Asia is home to approximately 60 percent of the world's population. Asian nations are emerging as major economic powers while their populations are asserting their own cultural and historical identities. With this comes an expectation that Western nations will take an interest not only in the economic potential of the continent but also in its rich cultural heritage.

The Asian Studies Centre was established in 1990 to stimulate and organize teaching and research on Asia. Faculty attached to the centre offer instruction in the languages and culture of China, India and Japan. As well, specialists in other departments offer Asia-related courses that can be used for a Major or Minor in Asian Studies.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in HIST 1410 or "C" or better in both ASIA 1420 (HIST 1420) and ASIA 1430 (HIST 1430). For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in HIST 1410 or "C" or better in both ASIA 1420 (HIST 1420) and ASIA 1430 (HIST 1430).

8.2.3 Asian Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
HIST 1410 or both ASIA 1420 (HIST 1420) and ASIA 1430 (HIST 1430)	<ul style="list-style-type: none"> 6 credit hours in one of the language courses numbered at the 1000 level from List A ASIA 2070 or ASIA 2620 and ASIA 2630 6 credit hours in courses numbered at the 2000 level from List A 	6 credit hours from courses in List A numbered above the 2000 level (Students may substitute up to 6 credit hours in Asian language courses numbered at the 2000 level.)	
Students who wish to concentrate heavily on languages may take an Asian language course numbered at the 1000 level in University 1. Students with matriculation in an Asian language may do an Asian language course numbered at the 2000 level in Year 2 and are encouraged to take a language course numbered at the 3000 level language in Year 3.			
MINOR TOTAL: 18 CREDIT HOURS			
HIST 1410 or both ASIA 1420 (HIST 1420) and ASIA 1430 (HIST 1430)	12 credit hours chosen from List A		

List A Course No.	Courses Acceptable for Asian Studies Credit	Credit Hours
Faculty of Arts		
Anthropology		
ANTH 2450	Ethnology of China	3
Asian Studies Asian Languages		
ASIA 1760	Introduction to Chinese (Mandarin)	6
ASIA 1770	Introduction to Japanese	6
ASIA 1780	Basic Sanskrit	6
ASIA 1790	Basic Hindi-Urdu	6
ASIA 2340	Special Studies in Epic and Pauranic Sanskrit 1	3
ASIA 2350	Special Studies in Epic and Pauranic Sanskrit 2	3
ASIA 2360	Mandarin Comprehension	6
ASIA 2760	Intermediate Chinese (Mandarin)	6
ASIA 2770	Intermediate Japanese	6
ASIA 2780	Intermediate Sanskrit	6
ASIA 2790	Intermediate Hindi-Urdu	6
ASIA 3660	Advanced Mandarin Comprehension	6
ASIA 3760	Advanced Chinese (Mandarin)	6
ASIA 3770	Advanced Japanese	6
ASIA 3790	Advanced Hindi-Urdu	6
Asian Studies Other Asian courses		
ASIA 1420	Asian Civilizations to 1500 (Same as HIST 1420)	3
ASIA 1430	Asian Civilizations from 1500 (Same as HIST 1430)	3
ASIA 2070	South Asian Civilization	6
ASIA 2570	History, Culture and Society in Chinese Film	3
ASIA 2580	Women in Chinese Film	3
ASIA 2600	Japanese Film	3
ASIA 2620	Japanese Civilization	3
ASIA 2630	Chinese Civilization	3
ASIA 2650	Premodern Chinese Literature in Translation	3
ASIA 2660	Modern Chinese Literature in Translation	6
ASIA 2670	Modern Japanese Literature in Translation	3
ASIA 3480	Selected Topics in Asian Studies 1	3
ASIA 3490	Selected Topics in Asian Studies 2	3
ASIA 3600	Japanese Popular Culture	3
ASIA 3650	Masterpieces of Asian Literature	6
150.141*	Asian Civilizations (Same as HIST 1410)	6
150.211*	East Asian Civilization	6
History		
HIST 1410	Asian Civilizations (Same as the former 150.141)	6
HIST 1420	Asian Civilizations to 1500 (Same as ASIA 1420)	3
HIST 1430	Asian Civilizations from 1500 (Same as ASIA 1430)	3

HIST 2050	South Asia Since 1947	3
HIST 2130	Emergence of Modern South Asia: 1757-1947	3
HIST 2410	History of India	6
HIST 2650	Modern China and Japan	6
HIST 3090	Studies in Asian History	3
HIST 3580	Topics in Recent World History 1 [Acceptable for credit only when the topic is Asia related]	3
HIST 3960	China, 1911 to the Present	3
HIST 3980	Nationalism on the Indian Sub-Continent in the Twentieth Century	3
HIST 4200	Modern South Asia: Colonialism, Nationalism, and Modernization	3
HIST 4940	Revolutionary China: A Century of Upheaval, 1870 to Present	6
Political Studies		
POLS 2020	Asian Politics	6
Religion		
RLGN 1320	Introduction to World Religions	6
RLGN 1321	Introduction aux religion du monde	6
RLGN 2540	Modern Movements in World Religions	6
RLGN 2570	Indian Religious Art and Architecture	3
RLGN 2660	Religions of Indian Origin	6
RLGN 2700	Religions of China and Japan	6
RLGN 3750	Topics in Indian Religious Art and Architecture	3
020.374*	Studies in Asian Religions	6
020.441*	Masters of Spiritual Life	6
020.445*	Topics in Comparative Religion	6
Sociology		
SOC 3690	Sociology of the Developing Societies	3
School of Art		
FAAH 2100	Survey of Asian Art	3
FAAH 3230	Chinese Art and Architecture	3
FAAH 3240	Japanese Art and Architecture	3
FAAH 3590	Islamic Art and Architecture	3
Clayton H. Riddell Faculty of Environment, Earth, and Resources		
Geography		
GEOG 2490	Geography of Modern China	3
GEOG 3590	Geography of Developing Countries	6

8.2.4 Asian Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 W ASIA 1420 Asian Civilizations to 1500 (B) Cr.Hrs.3 (Formerly 150.142) A study of major themes in the history and culture of China and Japan, the Indian sub-

continent and Southeast Asia from ancient times to around 1500. Also offered as History HIST 1420. May not hold credit with HIST 1420 (or 011.142).

U1 W ASIA 1430 Asian Civilization from 1500 (B) Cr.Hrs.3 (Formerly 150.143) A study of major themes in the history and culture of China and Japan, the Indian subcontinent and Southeast Asia in modern times. Also offered as History HIST 1430. May not hold credit with HIST 1430 (or 011.143).

U1 ASIA 1760 Introduction to Chinese (Mandarin) Cr.Hrs.6 (Formerly 150.176) An introduction to modern vernacular (Mandarin) Chinese in spoken and written form. Grounding in pronunciation, basic grammar, vocabulary, and some written characters. This course is for students with no previous knowledge of Chinese. Students with a knowledge of Chinese characters, regardless of dialect, may not normally enrol. Not open to students who have previously obtained credit for ASIA 2360 (or 150.236), ASIA 2760 (or 150.276), ASIA 3760 (or 150.376), or who have obtained Grade 12 Chinese in Canada or abroad. *Prerequisite:* written consent of instructor.

U1 ASIA 1770 Introduction to Japanese Cr.Hrs.6 (Formerly 150.177) An introduction for non-Japanese speakers to Hiragana, Katakana, and some Kanji. Students will be taught pronunciation, grammar, vocabulary, and about 250 written characters. Not open to students who previously obtained credit for ASIA 2770 (or 150.277) or ASIA 3770 (or 150.377). Students who have obtained Grade 12 Japanese in Canada or abroad must obtain written consent of instructor.

U1 ASIA 1780 Basic Sanskrit Cr.Hrs.6 (Formerly 150.178) Students will first learn the Devanagari script then proceed to reading, writing, conversation, grammar and vocabulary. Not open to students who previously obtained credit for ASIA 2780 (or 150.278).

U1 ASIA 1790 Basic Hindi-Urdu Cr.Hrs.6 (Formerly 150.179) Training in conversation, reading and writing of modern standard Hindi and some elements of Urdu. Students will learn to read and write the Devanagari script, and learn the basic grammar of the language. Not open to students who have previously obtained credit for ASIA 2790 (or 150.279) or ASIA 3790 (or 150.379).

W ASIA 2070 South Asian Civilization Cr.Hrs.6 (Formerly 150.207) An interdisciplinary study of the Indian subcontinent from the ancient to the contemporary period, focusing on geographic, religious, historic, sociological and political developments.

ASIA 2340 Special Studies in Epic and Pauranic Sanskrit 1 Cr.Hrs.3 (Formerly 150.234) Readings in Mahabharata, Ramayana, Bhagavadgita, Puranas, Upanisads, or the Kathasaritsagara. Specific readings vary from year to year depending on the needs of the students. *Prerequisite:* written consent of instructor.

ASIA 2350 Special Studies in Epic and Pauranic Sanskrit 2 Cr.Hrs.3 (Formerly 150.235) Readings in Mahabharata, Ramayana, Bhagavadgita, Puranas, Upanisads, or the Kathasaritsagara. Specific readings vary from year to year depending on the needs of the students. *Prerequisite:* written consent of instructor.

U1 ASIA 2360 Mandarin Comprehension Cr.Hrs.6 (Formerly 150.236) For students with a reading and speaking knowledge of a Chinese dialect other than standard Mandarin. Students will learn the fundamentals of Mandarin phonetics and usage, then proceed to increase their fluency in directed conversation sessions using modern Chinese literature as the major subject of discussion. Not open to students who have previously obtained credit in ASIA 1760 (or 150.176), ASIA 2760 (or 150.276), or ASIA 3760 (or 150.376). *Prerequisite:* written consent of instructor.

ASIA 2570 History, Culture, and Society in Chinese Film Cr.Hrs.3 (Formerly 150.257) This course will focus on the presentation of various aspects of twentieth century Chinese culture through the medium of film. Films will be selected largely from those recently produced in China, Taiwan, and Hong Kong, with some attention to recent North American movies by ethnic Chinese directors.

ASIA 2580 Women in Chinese Film Cr.Hrs.3 (Formerly 150.258) This course will focus on the cinematic presentation of women in Chinese films. Films will be selected largely from those produced recently in China, Taiwan, and Hong Kong, as well as in North America by ethnic Chinese directors. The intention is to review how the image of women as reflected in Chinese cinema has changed with time, place, and modern technology.

ASIA 2600 Japanese Film Cr.Hrs.3 A survey of cinematic art in Japan, with emphasis on the major directors and trends of the postwar period. Films to be studied will be drawn from the work of Mizoguchi, Ozu, Kurosawa, the "New Wave" directors of the 1960s, the comedies of Itami, and films of contemporary directors such as Kitano and Miyazaki.

ASIA 2620 Japanese Civilization Cr.Hrs.3 (Formerly 150.262) An interdisciplinary study of Japanese civilization from earliest times to the Meiji Restoration. All aspects of traditional Japanese culture will be examined, including geography, religion, philosophy, history, sociology, economics and politics. The nature of Japanese cultural identity will be taken as a unifying theme. Students may not hold credit for both ASIA 2620 (or 150.262) and the former 150.211.

ASIA 2630 Chinese Civilization Cr.Hrs.3 (Formerly 150.263) An interdisciplinary study of Chinese civilization from earliest times to the Opium War. All aspects of traditional Chinese culture will be examined, including geography, religion, philosophy, history, sociology, economics, and politics. A central unifying theme will be the examination of Chinese cultural identity. Students may not hold credit for both ASIA 2630 (or 150.263) and the former 150.211.

ASIA 2650 Premodern Chinese Literature in Translation Cr.Hrs.3 A study of pre-modern Chinese literature up to 1911. Includes writings in early history and philosophy, essays, poetry, short stories and novels. Lectures and texts in English.

ASIA 2660 Modern Chinese Literature in Translation Cr.Hrs.6 (Formerly 150.266) A study of 20th century Chinese literature including prose, poetry and drama. Selected works of authors from the Peoples Republic of China, Taiwan, and overseas communities. Lectures and texts in English.

ASIA 2670 Modern Japanese Literature in Translation Cr.Hrs.3 (Formerly 150.267) This course is intended as an introduction to Japanese Literature from the Meiji era (1868-1912) to the present day. Although some attention will be paid to poetry, the emphasis will be on short stories and the novel.

U1 ASIA 2760 Intermediate Chinese (Mandarin) Cr.Hrs.6 (Formerly 150.276) Continues the introduction of basic vocabulary, grammatical structures, and written characters. Emphasis will be given to the development of aural/oral skills. Not open to students who have previously obtained credit for ASIA 3760 (or 150.376). *Prerequisite:* a grade of "C" or better in ASIA 1760 (or 150.176) or written consent of instructor.

U1 ASIA 2770 Intermediate Japanese Cr.Hrs.6 (Formerly 150.277) For students who have taken Japanese ASIA 1770 (or 150.177). Continues the introduction of basic vocabulary, grammatical structures and more written characters. Greater emphasis will be given to the development of aural/oral skills. Not open to students who have previously obtained credit in ASIA 3770 (or 150.377). *Prerequisite:* a grade of "C" or better in ASIA 1770 (or 150.177) or written consent of instructor.

ASIA 2780 Intermediate Sanskrit Cr.Hrs.6 (Formerly 150.278) Advanced grammar, vocabulary, and syntax to enable the student to read epic and pauranic materials. *Prerequisite:* a grade of "C" or better in ASIA 1780 (or 150.178) or written consent of instructor.

ASIA 2790 Intermediate Hindi-Urdu Cr.Hrs.6 (Formerly 150.279) Training in more complex conversation techniques, including narration, persuasion and argumentation. Further readings in Hindi; reading and writing in the Urdu script; reading of 20th-century Hindi and Urdu literature. Not open to students who have previously obtained credit for ASIA 3790 (or 150.379). *Prerequisite:* a grade of "C" or better in ASIA 1790 (or 150.179) or written consent of instructor.

ASIA 3480 Selected Topics in Asian Studies 1 Cr.Hrs.3 (Formerly 150.348) An intensive study of specially selected authors or themes in Asian Studies. The particular subject will vary year to year. *Prerequisite:* written consent of Asian Studies coordinator.

ASIA 3490 Selected Topics in Asian Studies 2 Cr.Hrs.3 (Formerly 150.349) An intensive study of specially selected authors or themes in Asian Studies. The particular subject will vary year to year. *Prerequisite:* written consent of Asian Studies coordinator.

ASIA 3600 Japanese Popular Culture Cr.Hrs.3 (Formerly 150.360) This course examines various examples of popular culture in contemporary Japan, including popular literature, film, television, popular music, and leisure activities. Attention will also be paid to popular culture theory and methods of analysis. *Prerequisite:* a grade of "C" or better in ASIA 2620 (or 150.262) or written consent of instructor.

ASIA 3650 Masterpieces of Asian Literature Cr.Hrs.6 (Formerly 150.365) A study of selected major, and influential works of Asian literature in English translation. Significant works in a variety of genres from the classical and modern periods of India, China, Japan, Korea and South East Asia will be introduced. *Prerequisite:* one year of university study and (normally) senior matriculation standing in English.

ASIA 3660 Advanced Mandarin Comprehension Cr.Hrs.6 (Formerly 150.366) A further level of training intended for students who have completed ASIA 2360 (or 150.236) Mandarin Comprehension (6). There will be further training in oral/aural proficiency while at the same time emphasis will be placed on written expression. Basic English/Chinese translation skills will also be introduced. *Prerequisite:* a grade of "C" or better in ASIA 2360 (or 150.236), or ASIA 3760 (or 150.376) or written consent of instructor.

ASIA 3760 Advanced Chinese (Mandarin) Cr.Hrs.6 (Formerly 150.376) This course is for those who have taken Intermediate Chinese or who have obtained basic language skills in Mandarin Chinese elsewhere. A balanced approach to reading, writing, and aural/oral skills will be employed. Students will use advanced prepared texts and will also be introduced to selected examples of contemporary Chinese literature. Not open to students who previously obtained credit for ASIA 2360 (or 150.236) or ASIA 3660 (or 150.366). *Prerequisite:* a grade of "C" or better in ASIA 2760 (or 150.276) or written consent of instructor.

ASIA 3770 Advanced Japanese Cr.Hrs.6 (Formerly 150.377) This course is designed for those who have taken ASIA 2770 (or 150.277) Intermediate Japanese or have basic linguistic skills in Japanese and wish to improve their ability in the Japanese language previously acquired. *Prerequisite:* a grade of "C" or better in ASIA 2770 (or 150.277) or written consent of instructor.

ASIA 3790 Advanced Hindi-Urdu Cr.Hrs.6 (Formerly 150.379) Students read texts that are in accordance with their interests and abilities. Class discussion is held exclusively in Hindi-Urdu. *Prerequisite:* a grade of "C" or better in ASIA 2790 (or 150.279) or written consent of instructor.

8.3 Canadian Studies Program

Program Coordinator: Kathryn A. Young

Program Office: 315 St. John's College

Telephone: 204 474 8864

E-mail: youngka@cc.umanitoba.ca

Website: www.umanitoba.ca/canadian_studies/

8.3.1 Program Information

This is an interdisciplinary program that is a comprehensive and focused approach to the study of Canada. Students will examine Canadian politics, economics, society and culture within a national and international context. A knowledge of French is an asset but it is not required. Students in the program have access to the Canadian Studies Reading and Resource Room at St. John's College.

The 🌟 symbol placed with the course number identifies courses throughout this *Calendar* that may be used toward partial fulfilment of the requirements for Canadian Studies.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in a full course (or equivalent) from the list of approved courses in Canadian Studies. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluded failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in a full course (or equivalent) from the list of approved courses in Canadian Studies.

Honours Program

For entry to the Honours Program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Single Honours

Single Honours will consist of:

1) 54 credit hours from the list of approved courses in Canadian Studies, to be taken in the three Honours years, of which a maximum of 24 credit hours and minimum of 12 credit hours must be taken in any one department. At least 24 credit hours must be taken in courses designated as Honours courses. One of these may be a 4000-level interdisciplinary Honours seminar in Canadian Studies.

2) The minimum total credit hours that students must hold in order to complete an Honours program in Canadian Studies are 30 in Year 1; 30 in Year 2; 24 in Year 3; and 24 in Year 4.

Double Honours

Double Honours shall consist of:

1) 36 credit hours in one of the participating departments, not necessarily courses in the Canadian field, selected in accordance with the regulations of that department.

2) 36 credit hours chosen from the list of approved courses in Canadian Studies. At least 18 credit hours from the 36 must be Honours courses. One of these may be a 4000-level interdisciplinary seminar in Canadian Studies.

3) The minimum total credit hours that students must hold in order to complete a Double Honours program in Canadian Studies are 30 in Year 1; 30 in Year 2; 24 in Year 3; and 24 in Year 4.

A reading knowledge of French, while not absolutely required, is recommended. Students should note that, for certain specific Honours courses in the Canadian field, a reading knowledge of French is, in fact, a prerequisite.

Each of the participating departments is represented by at least one member on the Canadian Studies Program Committee. The initial student advisor for the program is the committee as a whole or any one of its members. Students who are interested in Canadian Studies may obtain further information from the Canadian Studies Program Coordinator. Students should consult the appropriate department upon entering the program regarding prerequisites for specific courses.

8.3.2 🌟 Canadian Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
MAJOR¹ TOTAL: 30 CREDIT HOURS			
6 credit hours in courses numbered at the 1000 or 2000 level from the list of approved courses in Canadian Studies	24 credit hours from the list of approved courses in Canadian Studies, of which at least 6 credit hours must be numbered at the 3000 level		
MINOR² TOTAL: 18 CREDIT HOURS			
6 credit hours in courses numbered at the 1000 or 2000 level from the list of approved courses in Canadian Studies	12 credit hours from the list of approved courses in Canadian Studies		
HONOURS SINGLE			
6 credit hours in courses numbered at the 1000 or 2000 level from the list of approved courses in Canadian Studies	18 credit hours from the list of approved courses in Canadian Studies, plus 12 credit hours in options (6 credit hours are required in three subject fields)	18 credit hours from the list of approved courses in Canadian Studies, of which at least 6 hours must be in an Honours course, plus 6 credit hours in options	18 credit hours from the list of approved Honours courses in Canadian Studies plus 6 credit hours in options
HONOURS DOUBLE			
6 credit hours in courses numbered at the 1000 or 2000 level from the list of approved courses in Canadian Studies	12 credit hours from the list of approved courses in Canadian Studies, 12 credit hours in other Honours field, plus 6 credit hours in options	12 credit hours in approved courses in Canadian Studies, 12 credit hours in other Honours field	12 credit hours in approved courses in Canadian Studies, at least 12 credit hours in other Honours field

NOTES:

¹ A Major consists of 30 credit hours, chosen from the list of approved courses in Canadian Studies, of which 6 credit hours must be taken from courses numbered at the 3000 level and 12 credit hours, but no more, must be taken in one department on the list. A maximum of 12 credit hours in courses numbered at the 1000 level may be used toward the 30 credit hour major.

² A Minor consists of 18 credit hours including at least 6 credit hours from each of two departments, chosen from the list of approved courses in Canadian Studies. A maximum of 6 credit hours in courses numbered at the 1000 level may be used toward the 18 credit hour minor.

List of Approved Courses in Canadian Studies

In the following list of approved courses the designation (H) indicates an Honours course. Courses designated (CUSB) are offered in French at Collège universitaire de Saint-Boniface.

* In the list below indicates courses no longer offered.

Faculty of Arts

Canadian Studies
CDN 1130 Introduction to Canadian Studies

CDN 3730 Canadian Identity: An Interdisciplinary Approach	3	HIST 2960 The New Dominion: 1867 to 1921 (C)	6
CDN 4410 Seminar in Canadian Studies (H)	6	HIST 2961 Le nouveau Dominion: de 1867 à 1921 (CUSB)	6
Anthropology		HIST 2970 Modern Canada: 1921 to the Present (C)	6
ANTH 2040 Native North America: A Sociocultural Survey (B)	3	HIST 2971 Le Canada moderne: de 1921 à nos jours (CUSB)	6
ANTH 2041 Les Amérindiens de l'Amérique du nord: une étude socioculturelle (B) (CUSB)	3	HIST 3050 Canada since 1945 (C)	6
ANTH 2640 Manitoba Prehistory	3	HIST 3220 The History of Canadian-American Relations (A,C)	6
ANTH 3460 Native North American Ethnology (B)	3	HIST 3250 Canada and the World, 1867 to the Present (C)	6
ANTH 3461 Ethnologie des Amérindiens de l'Amérique du Nord (B) (CUSB)	3	HIST 3690 History of Northern Canada (C)	6
ANTH 3500 Peoples of the Arctic (B)	3	HIST 3721 Histoire du Manitoba (C) (CUSB)	6
ANTH 3501 Peuples de l'Arctique (B) (CUSB)	3	HIST 3730 A History of Western Canada (C)	6
ANTH 3550 Canadian Subcultures	3	HIST 3780 Studies in Canadian History 1 (C)	3
ANTH 3551 Sous-cultures canadiennes (CUSB)	3	HIST 3781 Études choisies en histoire du Canada 1 (CUSB)	3
ANTH 3910 Archaeological Field Training (D,E)	6	HIST 3790 Studies in Canadian History 2 (C)	3
Economics		HIST 3791 Études choisies en histoire du Canada 2 (CUSB)	3
ECON 1210 Introduction to Canadian Economic Issues and Policies	3	HIST 3910 The Ukrainians in Canada (C)	3
ECON 1211 Introduction aux politiques et aux problèmes économiques canadiens (CUSB)	3	HIST 4060 Gender History in Canada (C) (H)	6
ECON 2280 Social Welfare and Human Resources	6	HIST 4280 Topics in the Cultural History of Canada (C)	6
ECON 2310 Canadian Economic Problems	6	HIST 4340 Introduction to Archival Science (G)	6
ECON 2311 Les problèmes économiques du Canada (CUSB)	6	HIST 4390 The History of White Attitudes and Policies towards Native Peoples in North America (C) (H)	6
ECON 2350 Community Economic Development	3	HIST 4700 Canada, 1896 to the Present (C) (H)	6
ECON 2360 Women in the Canadian Economy	6	HIST 4720 History of Manitoba (C) (H)	6
ECON 3300 Canadian Economic History	6	HIST 4890 Canadian Social History (C) (H)	6
ECON 3301 Histoire économique du Canada (CUSB)	6	HIST 4900 The Hudson's Bay Company and British North America (C) (H)	6
ECON 3510 Industrial Relations (Cross-listed with Labour Studies LABR 3510)	6	HIST 4950 History of Quebec (C) (H)	6
ECON 3690 Economic Issues of Health Policy	3	011.133* History of Canada from 1534 (C)	6
ECON 3720 Urban and Regional Economics and Policies	3	011.133F* Histoire du Canada (CUSB)	6
018.352* Introductory Regional Economics	3	011.254* North American Indian (A,C,S)	6
018.353* Intermediate Regional Economics	3	011.324* Protestantism and the Development of the Canadian Community, 1749-1970 (C,S)	6
018.357* Health Economics	3	011.438* Intellectual History of Canada (C) (H)	3
018.360* Workshop in the Economy of Canada	6	011.449* The New Canada, 1867-96 (S) (H)	6
English		Icelandic	
ENGL 2270 Canadian Literature	6	ICEL 2230 Contemporary Icelandic-Canadian Literature	3
ENGL 3270 Studies in Canadian Literature	3	ICEL 2300 Icelandic-Canadian Literature (H)	6
ENGL 3271 Studies in Canadian Literature	3	ICEL 3460 Laura Goodman Salverson	3
004.275* Canadian Literature (H)	6	ICEL 4440 The Icelanders in Canada (H)	3
004.288* Canadian Literature to 1967	3	012.445* Stephan G. Stephansson (H)	3
004.289* Canadian Literature after 1967	3	Labour Studies	
004.377* Canadian Poetry	6	LABR 3510 Industrial Relations (Cross-listed with Economics ECON 3510)	6
004.378* The Canadian Novel	6	Native Studies	
004.388* Studies in Canadian Literature (also offered at CUSB)	6	NATV 1200 The Native Peoples of Canada	6
Film Studies		NATV 1220 The Native Peoples of Canada, Part 1	3
FILM 2430 The Canadian Film	3	NATV 1240 The Native Peoples of Canada, Part 2	3
Français (CUSB)		NATV 1250 Introductory Cree 1	3
FRAN 2831 L'individu et le pays (CUSB)	3	NATV 1260 Introductory Cree 2	3
FRAN 2881 Civilisation canadienne-française (CUSB)	3	NATV 1270 Introductory Ojibway 1	3
FRAN 3531 Le théâtre québécois (CUSB)	3	NATV 1280 Introductory Ojibway 2	3
FRAN 3541 Le théâtre de l'Ouest (CUSB)	3	NATV 1290 Introductory Inuktitut	3
FRAN 3831 L'époque de la contestation (CUSB)	3	NATV 2020 The Métis of Canada	3
FRAN 3841 La révolution tranquille et le roman (CUSB)	3	NATV 2040 Native Peoples of the Northern Plains	3
FRAN 3851 Le théâtre de l'Ouest: poésie, nouvelles (CUSB)	3	NATV 2060 The Native Peoples of the Eastern Woodlands	3
FRAN 3861 Le théâtre de l'Ouest: romans (CUSB)	3	NATV 2070 The Native Peoples of the Subarctic	3
FRAN 4831 Littérature de l'Acadie et des Cajuns (CUSB)	3	NATV 2080 Inuit Society and Culture	3
French, Spanish and Italian		NATV 2220 Native Societies and the Political Process	3
FREN 2700 Poésie et théâtre canadiens-français (B)	3	NATV 2250 Intermediate Cree	6
FREN 3140 Roman canadien-français (B)	3	NATV 2270 Intermediate Ojibway	6
FREN 3850 Civilisation canadienne-française (C)	3	NATV 2300 Cree Literature	3
044.247* French-Canadian Literature in Translation	6	NATV 2320 Structure of the Cree Language	3
044.348* Littérature canadienne-française (H)	3	NATV 2410 Canadian Native Literature	3
044.353* Littérature canadienne-française (B)	3	NATV 2420 Inuit Literature in Translation	3
History		NATV 2450 Images of Indians in North American Society	3
HIST 1390 History of Colonial Canada: 1500-1885 (C)	3	NATV 3000 Selected Topics	3
HIST 1400 History of the Canadian Nation Since 1867 (C)	3	NATV 3240 Native Medicine and Health	3
HIST 1440 History of Canada (C)	6	NATV 3270 The Métis Nation	3
HIST 1441 Histoire du Canada (CUSB)	6	NATV 3280 Aboriginal Peoples and the Canadian Justice System	3
HIST 2191 Histoire économique et sociale canadienne du XIXe siècle (CUSB)	6	NATV 3300 Native Language Planning and Development	3
HIST 2280 Aboriginal History of Canada (C)	6	NATV 3310 Canadian Law and Aboriginal Peoples	3
HIST 2950 Early Canada: from the Earliest Settlement to 1867 (C)	6	NATV 3320 Aboriginal Organizations	3
HIST 2951 Les origines du Canada: depuis la première colonie jusqu'en 1867 (CUSB)	6	NATV 3340 Circumpolar Cultures and Lifestyles	3
		NATV 3370 Political Development in the North	3

NATV 3380 Cultural Constructions of Gender in Canadian Aboriginal Societies	3	Slavic Studies	
NATV 4200 First Nations Government	3	UKRN 2420 Ukrainian Canadian Literature	3
NATV 4210 Seminar in Contemporary and Historical Métis Issues	3	UKRN 2430 Ukrainian Canadian Folklore	3
NATV 4220 Environment, Economy and Aboriginal People	3	Sociology	
NATV 4230 Traditional Knowledge and Native Studies Research	3	SOC 2320 Canadian Society and Culture	3
NATV 4240 Arctic Lifestyles	3	SOC 2321 La société Canadienne et sa culture (CUSB)	3
NATV 4250 Topics on Aboriginal Identities	3	SOC 2370 Ethnic Relations	3
NATV 4260 Sacred Lands and Sacred Spaces of Indigenous Peoples	3	SOC 2371 Rapports ethniques (CUSB)	3
NATV 4280 Missionaries, Colonialism and Aboriginal Peoples	3	SOC 2531 Sociologie du Manitoba (CUSB)	6
032.090* Introductory Cree	6	SOC 2610 Sociology of Criminal Justice and Corrections	3
032.091* Introductory Ojibway	6	SOC 2620 The Sociology of Aging	3
032.121* Intermediate Ojibway	6	SOC 3470 Political Sociology	3
032.130* Intermediate Cree	6	SOC 3471 Sociologie Politique (CUSB)	3
032.205* Coastal Indians of Canada	3	SOC 3700 Sociology of Law	3
032.220* Native Societies and the Political Process	3	Ukrainian Canadian Heritage Studies	
032.321* The Native Identity	6	UCHS 3100 The Ukrainian Arts in Canada	3
032.323* Native Peoples and the Law 2	3	School of Art	
032.325* Native Peoples and the Law 1	6	FAAH 3260 Canadian Art and Architecture to World War II	3
032.373* Art of the North American Native Peoples	3	FAAH 3270 Canadian Art Since World War II	3
Political Studies		FAAH 3430 Inuit Art	3
POLS 2070 Introduction to Canadian Government	6	054.358* Inuit Culture and Art	3
POLS 2071 Introduction au système gouvernemental canadien	6	054.375* Canadian Art 1	3
POLS 2561 Questions d'actualité en politique Canadienne (CUSB)	6	054.376* Canadian Art 2	3
POLS 2570 Introduction to Public Administration	6	Clayton H. Riddell Faculty of Environment, Earth, and Resources	
POLS 2571 Initiation à l'administration publique (CUSB)	6	Geography	
POLS 3100 Gender and Politics in Canada	3	GEOG 2450 The Making of the Prairie Landscape (A)	6
POLS 3170 The Canadian Charter of Rights and Freedoms	3	GEOG 2570 Geography of Canada (A)	3
POLS 3520 Canadian Foreign and Defence Policy	6	GEOG 3431 Géographie du Canada (CUSB)	3
POLS 3561 Politique étrangère canadienne (CUSB)	6	GEOG 3480 Canadian Problems	3
POLS 3670 Canadian Political Parties	3	GEOG 3481 Particularités de la géographie du Canada (CUSB)	3
POLS 3860 Canadian Federalism (H)	3	GEOG 3700 Canada: The Making of the Human Landscape (A)	6
POLS 3960 Canadian Politics (H)	6	GEOG 3701 Canada: évolution de l'écoumène (CUSB)	6
POLS 4180 Provincial Politics in Canada	3	053.369* Historical Geography of Indian Peoples in the Canadian Fur Trade	6
POLS 4190 Manitoba Politics and Government	3	053.378* Historical Geography of Canadian Indians (A)	6
POLS 4660 The State in the Economy (H)	6	053.470* Historical Geography of the Ojibway Indians (H)	3
POLS 4860 The Canadian Policy Process (H)	6	For course descriptions, see departmental listings.	
019.156* Introduction to Canadian Government	6	NOTE: Courses annotated by appearing in the various departmental course listings, may be used toward partial fulfilment of the requirements for Canadian Studies.	
019.156F* Introduction au système gouvernemental Canadienne (CUSB)	6	8.3.3 Canadian Studies Course Descriptions	
019.206* Urban and Local Politics	6	For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.	
019.256* Issues of Canadian Politics	6	U1 W CDN 1130 Introduction to Canadian Studies Cr.Hrs.6 (Formerly 151.113)	
019.266* Human Rights and Civil Liberties	6	This course will introduce students to an interdisciplinary study of Canadian themes and issues from early exploration to the present. The emergence of Canada as a nation will be studied within the context of four themes: the aboriginal past; the land; political and economic structures; art and culture. As a first-year course in Canadian Studies students will be encouraged to develop their writing, research and library skills.	
019.286* Canadian Political Parties	6	CDN 3730 Canadian Identity: An Interdisciplinary Approach Cr.Hrs.3 (Formerly 151.373) An interdisciplinary lecture/seminar (art, economics, history, literature) course which will explore Canadian Identity. Themes to be studied include the Aboriginal past, French/British colonization, Land/regions and Ethnic diversity.	
019.356* Canadian Foreign Policy	6	CDN 4410 Seminar in Canadian Studies Cr.Hrs.6 (Formerly 151.441) A seminar course whose content may vary from year to year. <i>Prerequisite:</i> written consent of instructor.	
019.366* Quebec and the Canadian Political System (H)	3		
019.368* Canadian Defense Policy	3		
019.476* Manitoba Politics and Voting Behaviour	6		
019.487* Government and Public Sector Unionism (H)	6		
Religion			
RLGN 2410 Religion in Canada (C)	6		
RLGN 2411 Les religions au Canada (CUSB)	6		
RLGN 2590 Religion and Social Issues (C)	3		
RLGN 2591 La religion et les problèmes sociaux (CUSB)	3		
020.272* Dimensions of Religiosity in Contemporary Canadian Literature	6		

8.4 Catholic Studies Program

Program Coordinator: David Creamer

Program Office: 118 St. Paul's College

Telephone: 204 474 9165

E-mail: creamer@ms.umanitoba.ca

Website: www.umanitoba.ca/catholic_studies

8.4.1 Program Information

The story of the Roman Catholic Church and its members, and the story of their interactions with history, the arts and sciences, human thinking and belief – all these together, in the dynamism and richness of their interplay,

form the substance of the human culture which is Catholicism. That culture is the subject matter of Catholic Studies.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in CATH 1190 and a grade of "C" or better in at least three credit hours from the List of Approved Courses in Catholic Studies.

8.4.2 Catholic Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
MINOR TOTAL: 18 CREDIT HOURS			
CATH 1190 and at least 3 credit hours from the List of Approved Courses in Catholic Studies	●RLGN 3870 ●9 credit hours from the List of Approved Courses in Catholic Studies		

List of Approved Courses in Catholic Studies

Faculty of Arts

Catholic Studies

CATH 1190 Introduction to Catholic Studies	3
CATH 2000 Special Topics in Catholic Studies	3
CATH 2100 Field Studies in Catholic Culture History	6
HIST 2180 The History of Catholicism to 1540 (G)	3
HIST 2990 The History of Catholicism since 1540 (G)	3
HIST 4820 The Crusades (D)	6
Philosophy	
PHIL 2320 Thomas Aquinas and Medieval Philosophy	6
PHIL 2780 Thomas Aquinas Religion	3
RLGN 2840 The Second Vatican Council (A)	3
RLGN 2850 Contemporary Issues in Roman Catholicism (A)	3
RLGN 3870 The Thought of Bernard Lonergan (A)	3

School of Art

Art History

FAAH 2060 Medieval to Early Renaissance Art and Architecture	3
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FAAH 2070 Renaissance to Baroque Art and Architecture	3
FAAH 3130 Topics in Medieval Art and Architecture	3
FAAH 3140 Topics in Renaissance and Baroque Art and Architecture	3
FAAH 3280 Early Byzantine Art and Architecture	3

8.4.3 Catholic Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 WCATH 1190 Introduction to Catholic Studies Cr.Hrs.3 (Formerly 160.119) An initiation into diversity, richness, and significance of Roman Catholicism in its many different forms and expressions, seeking to highlight the resources and techniques available for pursuing an interdisciplinary study of Catholicism as a field of intellectual inquiry

CATH 2000 Special Topics in Catholic Studies Cr.Hrs.3 The subject matter of this course will vary from year to year, but it will deal with a special topic of current interest in the interdisciplinary program in Catholic Studies. *Prerequisite:* a grade of "C" or better in CATH 1190 (or 160.119) or written consent of program coordinator.

CATH 2100 Field Studies in Catholic Culture Cr.Hrs.6 Offered as part of the Summer Session, this course consists of on-campus study followed by travel to major sites and museums. *Prerequisite:* none, but CATH 1190 (or 160.119) is recommended.

8.5 Central and East European Studies Program

Program Coordinator: Myroslav Shkandrij

Program Office: 327 Fletcher Argue

Telephone: 204 474 6605

E-mail: shkandr@cc.umanitoba.ca

Website: www.umanitoba.ca/central_and_east_european

8.5.1 Program Information

The disintegration of the former Soviet Union has altered the social, political, and economic environment of central and eastern Europe. The emergence of new independent countries and the transition from an environment dominated by Communist political and economic structures continues to reshape Europe. This program offers an array of courses from five departments. It explores past and present issues in the region.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in both six credit hours of Russian, German, Polish, or Ukrainian and six credit hours from either List A or List B below. For students who have taken ad-

ditional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in both six credit hours of Russian, German, Polish, or Ukrainian and six credit hours from either List A or List B below.

Honours Program (Double Honours Only)

For entry to the Honours program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

This program is only available to students registered in the Honours program in Economics, History or Political Studies.

Courses used toward the Major, Minor or Honours may not also be used toward a Major, Minor or Honours in the department in which they are offered.

8.5.2 Central and East European Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours in language from courses numbered at the 1000 or 2000 level in Russian, German, Ukrainian or Polish, plus 6 credit hours from List A	18 credit hours from List B below, of which at least 6 credit hours must be taken from each of 2 different departments		
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours in language from courses numbered at the 1000 or 2000 level in Russian, German, Ukrainian or Polish, plus 6 credit hours from List A	36 credit hours from List B below, of which at least 12 credit hours must be taken from each of two different departments		

MINOR TOTAL: 18 CREDIT HOURS

6 credit hours in language from courses numbered at the 1000 or 2000 level in Russian, German, Ukrainian or Polish, plus 6 credit hours from List A

6 credit hours from List B below

HONOURS DOUBLE¹

6 credit hours in language from courses numbered at the 1000 level² in Russian, German, Ukrainian, Polish, plus 18 credit hours from List A

- either UKRN 2720 or RUSN 2810³
 - 6 credit hours from the following, Economics: ECON 2270; History: HIST 2490, HIST 2600, HIST 2610, HIST 2660, HIST 2680; Slavic Studies: RUSN2280, RUSN2290, UKRN 2770, UKRN 2780
 - 12 credit hours in other Honours field
 - 6 credit hours in options
-

- either RUSN3930 or both URKN3950 and UKRN 3960³
- 6 credit hours from the following, Geography: GEOG 3600; History: HIST 3030; Slavic Studies: UKRN 3670
- minimum of 12 credit hours in other Honours field

- 12 credit hours from the following, Economics: ECON 4450; History: HIST 4300; Political Studies: POLS 4810
 - minimum of 12 hours of credit in other Honours field
-

NOTES:

¹ The double Honours program is only available to students registered in the Honours program in Economics, History, or Political Studies.

² Students should note that while the majority of students begin language instruction with courses numbered at the 1000 level, in exceptional circumstances and with the approval of the committee, students may begin language instruction with courses numbered at the 2000 level.

³ Students who begin with 6 hours of courses numbered beyond the 1000 level in Russian or Ukrainian may take either 6 or 12 credit hours in Russian or Ukrainian or 6 or 12 credit hours in another language approved by the committee.

List A**Faculty of Arts**

Economics

ECON 1200 Principles of Economics 6

History

HIST 1200 An Introduction to the History of Western Civilization or 6

HIST 1350 An Introduction to the History of Western Civilization to 1500 and 3

HIST 1360 An Introduction to the History of Western Civilization from 1500 3

Political Studies

POLS 1500 Introduction to Politics or 6

POLS 2040 Introduction to International Relations 6

Clayton H. Riddell Faculty of Environment, Earth, and Resources

Geography

GEOG 1200 Introductory Geography or 6

GEOG 1280 Introduction to Physical Geography and 3

GEOG 1290 Introduction to Human Geography 3

List B**Faculty of Arts**

Economics

ECON 2270 European Economic History 6

ECON 2510 The Economy of Ukraine	3
ECON 4450 Comparative Economic Systems	6
German and Slavic Studies	
RUSN 2280 Russian Culture 1	3
RUSN 2290 Russian Culture 2	3
RUSN 2750 Contemporary Russian Literature and Film	3
UKRN 2770 Ukrainian Culture 1	3
UKRN 2780 Ukrainian Culture 2	3
UKRN 3670 Contemporary Ukrainian Literature	3
History	
HIST 2490 History of Russia	6
HIST 2600 Introduction to Ukraine	3
HIST 2610 Making of Modern Ukraine	3
HIST 2660 A History of Socialism from the French Revolution to the Present	3
HIST 2840 A History of Russia to 1917	3
HIST 3030 Issues in Ukrainian History	3
HIST 3180 Modern Russian: The Soviet Era and Beyond	6
HIST 4300 Problems in Modern Russian and Soviet History	6
011.255* History of Ukraine	6

Political Studies

POLS 2920 Government, Politics and Society in Ukraine 6

POLS 4810 Seminar in Marxist-Leninist and Contemporary Marxist Political Theory 6

Clayton H. Riddell Faculty of Environment, Earth, and Resources

Geography

GEOG 3600 Geography of Ukraine 3

*indicates course no longer offered.

Students are advised to consult the respective departmental *Calendar* entries for specific information on prerequisites and restrictions.

8.6 Department of Classics

Head: Mark Joyal

General Office: 367 University College

Telephone: 204 474 9502

E-mail: classics@umanitoba.ca

Website: www.umanitoba.ca/classics

8.6.1 Academic Staff**Professor Emeritus**

Berry, E.G., B.A.(Hons.), M.A. (Queen's), Ph.D. (Chicago), F.R.S.C.

Professor

Joyal, M.A., B.A. (Manitoba), Ph.D. (St. Andrews).

Associate Professors

Egan, R.B., B.A. (Assumption), M.A. (Western Ontario), Ph.D. (Southern California); Lawall, M., B.A. (William and Mary), M.A., Ph.D. (Michigan); Stirling, L.M., B.A.(Hons.) (Alberta), M.A., M.A., Ph.D. (Michigan).

Assistant Professor

Howorth, D., B.A., M.A. (Oxford).

8.6.2 Program Information

Classics programs focus on the languages, literature and material cultures of ancient Greece and Rome. The two cultures are considered for their formative role at the beginnings of western civilization and for their con-

tinuing influence on modern civilization. Although courses, and entire programs, are available to students without any Latin or Greek, those intending to pursue specialist studies in any field of classical studies are urged to begin study of the languages as early as possible. The department, through academic staff members with expertise in art history and archaeology, offers a variety of opportunities for travel courses and fieldwork overseas.

The Department of Classics offers Major and Minor programs in Classical Studies, Greek, and Latin.

8.6.3 Classical Studies

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in the first six credit hours in Classics or the first six credit hours from the list of ap-

proved courses offered by other departments as noted below. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in both CLAS 1270 and CLAS 1280, or written permission of the department head.

Minor

A Minor in Classical Studies consists of CLAS 1270 and CLAS 1280, plus 12 credit hours in Classical Studies. Within the 12 credit hours a student may include up to six credit hours in Latin or Greek and may substitute up to nine credit hours from the approved list of courses offered by other departments below.

8.6.4 Classical Studies	
UNIVERSITY 1	YEAR 2
GENERAL MAJOR TOTAL: 30 CREDIT HOURS	
CLAS 1270 and CLAS 1280	24 credit hours in Classical Studies (Within the 24 credit hours, a student may include up to 12 credit hours in Latin or Greek courses and may substitute up to 15 credit hours from the approved list of courses offered by other departments as noted below.)
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS	
CLAS 1270 and CLAS 1280	42 credit hours in Classical Studies (Within the 42 credit hours, a student may include up to 18 credit hours in Latin or Greek courses and may substitute up to 21 credit hours from the approved list of courses offered by other departments as noted below.)
MINOR TOTAL: 18 CREDIT HOURS	
CLAS 1270 and CLAS 1280	12 credit hours in Classical Studies (Within the 12 credit hours, a student may include up to 6 credit hours in Latin or Greek courses and may substitute up to 9 credit hours from the approved list of courses offered by other departments as noted below.)

List A: Approved List of Courses Offered by Other Departments Acceptable for Credit in a Major/Minor in Classical Studies

History		
HIST 3270	Roman Law in Medieval Europe (D)	3
HIST 4740	The Golden Age of Byzantium (D)	6
HIST 4840	The Early Middle Ages	6
011.206*	The Emergence of the Medieval World (D)	3
011.207*	The Early and High Middle Ages, 800-1300 A.D. (D)	3
011.264*	History of the Byzantine Empire	6
Philosophy		
PHIL 2650	Plato	3
PHIL 2660	Aristotle	3
Religion		
RLGN 2550	History of Early Christian Thought	3
RLGN 3640	Religion in the Hellenistic World	3

* No longer offered.

For course descriptions, consult the appropriate department section.

8.6.5 Greek

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in both GRK 1010 and GRK 1020, or written consent of the department head. For students who have taken additional courses toward the Major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in both GRK 1010 and GRK 1020, or written consent of the department head.

8.6.6 Greek	
UNIVERSITY 1	YEAR 2
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS	
GRK 1010 and GRK 1020	GRK 1310, GRK 2770 plus 36 credit hours in Greek
MINOR TOTAL: 18 CREDIT HOURS	
GRK 1010 and GRK 1020	GRK 1310 plus 9 credit hours in Greek

8.6.7 Latin

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in both LATN 1080 and LATN 1090, or written consent of the department head.

For students who have taken additional courses toward the Major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in both LATN 1080 and LATN 1090, or written consent of the department head.

8.6.8 Latin			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
LATN 1080 and LATN 1090	LATN 1320, LATN 2760 plus 36 credit hours in Latin		
MINOR TOTAL: 18 CREDIT HOURS			
LATN 1080 and LATN 1090	LATN 1320 plus 9 credit hours in Latin		

8.6.9 Classics Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Classical Studies

U1 CLAS 1270 Introduction to Ancient Greek Culture Cr.Hrs.3 (Formerly 003.127) Ancient archaeological and literary evidence (in English translation) is the basis for a survey of the major social, political, religious, intellectual, artistic and literary institutions and achievements of the Greeks from the Bronze Age to the early Roman Imperial Period. The Greeks are studied in the context of the ancient Mediterranean world but also with reference to their continuing contributions to world civilization.

U1 CLAS 1280 Introduction to Ancient Roman Culture Cr.Hrs.3 (Formerly 003.128) Ancient archaeological and literary evidence (in English translation) is the basis for a survey of the major social, political, religious, intellectual, artistic and literary institutions and achievements of the Romans, from the period of the monarchy to the onset of the Middle Ages. The Romans are studied in the context of the ancient Mediterranean world but also with reference to their continuing contributions to world civilization.

CLAS 2140 Greek History: Pre-Classical Greece, 1200-479 BC Cr.Hrs.3 This course covers the crucial formative centuries which prefigured the Classical period of Greek history. It focuses upon the Dark Age (ca. 1200-700), when the political framework of later Greece was established, and the subsequent cultural renaissance of the seventh and sixth centuries BC. Students may not hold credit for both CLAS 2140 and the former 003.260.

CLAS 2150 Greek History: Classical Greece, 479-323 BC Cr.Hrs.3 This course covers the heyday of imperial, democratic Athens, her crushing defeat by Sparta, now allied with Persia, and the ensuing crisis of the city-state which culminated in Greek subjection to Macedonian kings, Philip and Alexander. Students may not hold credit for both CLAS 2150 and the former 003.260.

CLAS 2160 Roman History: The Roman Republic, 753-30 BC Cr.Hrs.3 This course covers the history of Rome from its supposed foundation in 753 BC to the end of the Republic in 30 BC. The course considers not only the events of Roman Republican history but also how historians of ancient Rome interpreted these events. Students may not hold credit for both CLAS 2160 and the former 003.261.

CLAS 2170 Roman History: The Roman Empire, 30 BC-AD 337 Cr.Hrs.3 This course covers the history of Rome under emperors, from the ascension of Augustus to the death of Constantine, the first Christian emperor, in AD 337. An important theme in the course is the rise of Christianity. Students may not hold credit for both CLAS 2170 and the former 003.261.

CLAS 2460 Field Studies in Greek Archaeology and History Cr.Hrs.6 (Formerly 003.246) Offered as part of the Summer Evening Session, the course consists of three weeks of on-campus study followed by three weeks of travel to major sites and museums. *Prerequisite:* none, but one or more of CLAS 1270 (or 003.127), CLAS 1280 (or 003.128), CLAS 2140, CLAS 2150, or CLAS 2670 (or 003.267) is recommended.

CLAS 2490 Field Studies in Roman Archaeology and History Cr.Hrs.6 (Formerly 003.249) Offered as part of the Summer Evening Session, the course consists of three weeks of on-campus study followed by three weeks of travel to major sites and museums. *Prerequisite:* none, but one or more of CLAS 1270 (or 003.127), CLAS 1280 (or 003.128), CLAS 2160, CLAS 2170, or CLAS 2680 (or 003.268) is recommended.

CLAS 2520 Greek and Roman Mythology Cr.Hrs.3 (Formerly 003.252) A survey of Greek and Roman myths of creation and the gods with attention to the nature and definition of myth; Greek and Roman legends; the connections of mythology with religious beliefs and cults; and with the literature and arts of Western civilization.

CLAS 2670 Greek Art and Archaeology Cr.Hrs.3 (Formerly 003.267) A survey, illustrated with slides, of the Minoan, Mycenaean, and classical Greek civilizations. The relevant archaeological sites and artistic works will be studied.

CLAS 2680 Roman Art and Archaeology Cr.Hrs.3 (Formerly 003.268) A survey, illustrated with slides, of the civilization and art of the Roman world. The Etruscan civilization and archaeological sites of Hellenistic Greece as they influence the art of Republican and Imperial Rome will be studied.

CLAS 2710 Greek and Latin Elements in English Cr.Hrs.3 (Formerly 003.271) A systematic study of the contribution of the classical languages to modern English, including the vocabulary of the sciences. The course is intended as a practical means of enhancing English vocabulary while it also emphasizes that the linguistic contributions are a reflection of the broad historical and cultural influences of classical antiquity on the modern world.

CLAS 3250 Aegean and Italian Prehistory Cr.Hrs.3 This course provides a detailed archaeological and historical view of Mediterranean culture and society from the Ne-

olithic period of the sixth millennium BC through the early centuries of the first millennium BC. The course ends with a look ahead to the Early Iron Age.

CLAS 3260 Hellenistic Civilization: History and Archaeology Cr.Hrs.3 The Hellenistic period spans the years from the death of Alexander the Great in 323 BC to the death of the Ptolemaic queen Cleopatra VII in 31 BC. This course explores both the political and, more generally, the cultural history of the period using both textual and archaeological sources.

CLAS 3270 The World of Late Antiquity: History and Archaeology Cr.Hrs.3 This course examines the later Roman Empire, beginning with the reign of Constantine in the early fourth century and ending in the early fifth century. It combines historical and archaeological sources for the study of political, religious and social developments within the period.

CLAS 3610 Greek Literature in Translation Cr.Hrs.3 (Formerly 003.361) Study in English of selected works of such major figures in Greek literature as Homer, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, and Plato: discussion of their influence on the arts and literature of the world.

CLAS 3620 Latin Literature in Translation Cr.Hrs.3 (Formerly 003.362) Study in English of selected works of such major figures in Latin literature as Vergil, Ovid, Terence, Livy, Cicero, Horace and Seneca: discussion of their influence on the arts and literature of the world.

CLAS 3650 Religion in Ancient Greece Cr.Hrs.3 (Formerly 003.365) The religious beliefs and practices of the Greeks from the prehistoric period through the beginnings of the Hellenistic period as related to their political, social, intellectual, and domestic institutions; based on the study of both literary and archaeological evidence.

CLAS 3660 Religion in Ancient Rome Cr.Hrs.3 (Formerly 003.366) The religious beliefs and practices of the Romans from earliest times until the reign of Constantine as related to their political, social, intellectual, and domestic institutions; based on the study of both literary and archaeological evidence from Italy and the rest of the Roman world.

CLAS 3680 Studies in a Classical Literary Genre 1 Cr.Hrs.3 (Formerly 003.368) The content of this course will vary, being devoted each time to a particular type of Greek and Roman literature such as epic, tragedy, comedy, satire, rhetoric, the novel, historical writings, scientific writing, etc. Lectures and discussions of the literature and its influence will be based on readings in English translation.

CLAS 3690 Studies in a Classical Literary Genre 2 Cr.Hrs.3 (Formerly 003.369) The content of this course will vary, being devoted each time to a particular type of Greek and Roman literature such as epic, tragedy, comedy, satire, rhetoric, the novel, historical writings, scientific writing, etc. Lectures and discussions of the literature and its influence will be based on readings in English translation.

CLAS 3700 Studies in a Classical Literary Genre 3 Cr.Hrs.3 (Formerly 003.370) The content of this course will vary, being devoted each time to a particular type of Greek and Roman literature such as epic, tragedy, comedy, satire, rhetoric, the novel, historical writings, scientific writing, etc. Lectures and discussions of the literature and its influence will be based on readings in English translation.

CLAS 3710 Aspects of Classical Culture 1 Cr.Hrs.3 (Formerly 003.371) The content of this course will vary, being devoted each time to the investigation of a special area of Classical civilization such as athletics, technology, the erotic, the occult, cuisine, law, medicine, architecture, education. Lectures and discussions will be based on the study of both archaeological and literary evidence.

CLAS 3720 Aspects of Classical Culture 2 Cr.Hrs.3 (Formerly 003.372) The content of this course will vary, being devoted each time to the investigation of a special area of Classical civilization such as athletics, technology, the erotic, the occult, cuisine, law, medicine, architecture, education. Lectures and discussions will be based on the study of both archaeological and literary evidence.

CLAS 3730 Aspects of Classical Culture 3 Cr.Hrs.3 (Formerly 003.373) The content of this course will vary, being devoted each time to the investigation of a special area of Classical civilization such as athletics, technology, the erotic, the occult, cuisine, law, medicine, architecture, education. Lectures and discussions will be based on the study of both archaeological and literary evidence.

Greek

U1 GRK 1010 Introduction to the Reading of Ancient Greek 1 Cr.Hrs.3 (Formerly 003.101) Readings in Ancient Greek poetry and prose with related exercises in grammar and composition intended to prepare students to read Classical and Hellenistic Greek.

U1 GRK 1020 Introduction to the Reading of Ancient Greek 2 Cr.Hrs.3 (Formerly 003.102) Further readings in Ancient Greek poetry and prose with related exercises in grammar and composition intended to prepare students to read Classical and Hellenistic Greek. Students may not hold credit for both GRK 1020 (or 003.102) and GRK

1030 (or 003.103). *Prerequisite:* a grade of "C" or better in GRK 1010 (or 003.101).

U1 GRK 1030 New Testament Greek Cr.Hrs.6 (Formerly 003.103) The grammar and syntax of New Testament Greek. Normally taught only in the Approved Teaching Centres. May be used for credit towards the Major or Minor in Greek only with written consent of department head. Students may not hold credit for GRK 1030 (or 003.103) and GRK 1010 (or 003.101) or GRK 1020 (or 003.102).

U1 GRK 1060 Introductory Modern Greek 1 Cr.Hrs.3 (Formerly 003.106) A practical introduction to the written and spoken language for those with little or no knowledge of Modern Greek. Personal instruction in script, vocabulary, aural comprehension, pronunciation and syntax is supplemented with the use of audio recording in the laboratory or via other media such as the internet. Not for credit towards the Major or Minor in Classical Studies.

U1 GRK 1070 Introductory Modern Greek 2 Cr.Hrs.3 (Formerly 003.107) The continuation of GRK 1060 (or 003.106) with further personal instruction in vocabulary, aural comprehension, pronunciation and syntax supplemented with the use of audio recordings in the laboratory or via other media such as the internet. Not for credit towards the major or minor in Classical Studies. *Prerequisite:* a grade of "C" or better in GRK 1060 (or 003.106) or written consent of department head.

U1 GRK 1310 Intermediate Readings in Ancient Greek Cr.Hrs.3 (Formerly 003.131) Further readings in ancient Greek poetry and prose with related exercises in grammar and composition intended to advance the student's skill at reading Classical and Hellenistic Greek. *Prerequisite:* a grade of "C" or better in GRK 1030 (or 003.103), or GRK 1010 (or 003.101) and GRK 1020 (or 003.102).

U1 GRK 1330 The Acts of the Apostles Cr.Hrs.3 (Formerly 003.133) The complete Book of Acts is read in Greek with attention to related textual, linguistic and historical matters. Students may not hold credit for both GRK 1330 (or 003.133) and the former 003.126. *Prerequisite:* a grade of "C" or better in GRK 1010 (or 003.101) and GRK 1020 (or 003.102), or GRK 1310 (or 003.131), or written consent of department head.

GRK 2060 Intermediate Modern Greek 1 Cr.Hrs.3 (Formerly 003.206) Continued study and practice in oral and written communication in Modern Greek. Course work includes conversation, prose composition and reading of selected texts from Greek literary works and popular media. Not for credit towards a Major or Minor in Classical Studies. *Prerequisite:* a grade of "C" or better in GRK 1070 (or 003.107) or written consent of department head.

GRK 2070 Intermediate Modern Greek 2 Cr.Hrs.3 (Formerly 003.207) Continued study and practice in oral and written communication in Modern Greek. Course work includes conversation, prose composition and reading of selected texts from Greek literary works and popular media. Not for credit towards a Major or Minor in Classical Studies. *Prerequisite:* a grade of "C" or better in GRK 2060 (or 003.206) or written consent of department head.

GRK 2730 Readings on Heroic and Mythological Themes Cr.Hrs.3 (Formerly 003.273) Selected readings from the works of Homer, Herodotus and Sophocles. *Prerequisite:* a grade of "C" or better in GRK 1310 (or 003.131).

GRK 2750 Readings on the Intellectual Life of Classical Athens Cr.Hrs.3 (Formerly 003.275) Selected readings from texts by Euripides, Thucydides and Plato. *Prerequisite:* a grade of "C" or better in GRK 1310 (or 003.131).

GRK 2770 Greek Prose Composition and Sight Translation Cr.Hrs.3 (Formerly 003.277) Assignments in writing Greek prose and practise in the techniques for effective reading of prose and poetry at sight. *Prerequisite:* a grade of "C" or better in GRK 1310 (or 003.131).

GRK 2790 History of the Greek Language Cr.Hrs.3 (Formerly 003.279) A survey of the language from its Indo-European pre-history to the modern era. The phonological, morphological and lexical aspects of the language are investigated in the light of Greek literary and inscriptional documents and some comparative evidence from cognate languages. *Prerequisite:* a grade of "C" or better in GRK 1310 (or 003.131) or a working knowledge of Modern Greek and written consent of the department head.

GRK 2810 Prose Writings of the Hellenistic and Greco-Roman Periods Cr.Hrs.3 (Formerly 003.281) Reading of selected literary and historical documents relating to Judaism and early Christianity. *Prerequisite:* a grade of "C" or better in GRK 1310 (or 003.131) or GRK 1330 (or 003.133).

GRK 3750 Homer Cr.Hrs.3 (Formerly 003.375) At least three complete books of the Iliad or Odyssey are read with attention to compositional technique and metre. *Prerequisite:* a grade of "C" or better in GRK 2730 (or 003.273) or GRK 2750 (or 003.275).

GRK 3770 Greek Poetry of the Archaic Period Cr.Hrs.3 (Formerly 003.377) Reading of selections from Hesiod, the Homeric Hymns and such lyric poets as Sappho, Alcaeus, Anacreon, Pindar and Bacchylides. *Prerequisite:* a grade of "C" or better in GRK 2730 (or 003.273) or GRK 2750 (or 003.275).

GRK 3790 The Greek Tragedians Cr.Hrs.3 (Formerly 003.379) Readings of at least two tragedies from among those of Aeschylus, Sophocles or Euripides. *Prerequisite:* a grade of "C" or better in GRK 2730 (or 003.273) or GRK 2750 (or 003.275).

GRK 3810 Aristophanes Cr.Hrs.3 (Formerly 003.381) Readings of at least two complete comedies. *Prerequisite:* a grade of "C" or better in GRK 2730 (or 003.273) or GRK 2750 (or 003.275).

GRK 3830 The Greek Historians Cr.Hrs.3 (Formerly 003.383) Selected readings from the works of Herodotus and Thucydides and/or the historical works of Xenophon. *Prerequisite:* a grade of "C" or better in GRK 2730 (or 003.273) or GRK 2750 (or 003.275).

GRK 3850 Plato Cr.Hrs.3 (Formerly 003.385) Readings of two of the shorter dialogues or of selections from several dialogues. *Prerequisite:* a grade of "C" or better in

GRK 2730 (or 003.273) or GRK 2750 (or 003.275).

GRK 3870 The Attic Orators Cr.Hrs.3 (Formerly 003.387) Readings from the works of such orators as Isocrates, Lysias and Demosthenes. *Prerequisite:* a grade of "C" or better in GRK 2730 (or 003.273) or GRK 2750 (or 003.275).

GRK 3890 Advanced Studies in Prose Literature of the Classical Period Cr.Hrs.6 (Formerly 003.389) Reading in a particular genre such as philosophy, history, or rhetoric with substantial reading in secondary critical or interpretive literature. *Prerequisite:* written consent of department head.

GRK 3910 Advanced Studies in Greek Poetry Cr.Hrs.6 (Formerly 003.391) Reading in a particular genre such as epic, tragedy, comedy, lyric or epigram with substantial reading in secondary critical or interpretive literature. *Prerequisite:* written consent of department head.

Latin

U1 LATN 1080 Introduction to the Reading of Latin 1 Cr.Hrs.3 (Formerly 003.108) Readings in Latin poetry and prose with related exercises in grammar and composition intended to prepare students to read Classical and Medieval Latin.

U1 LATN 1090 Introduction to the Reading of Latin 2 Cr.Hrs.3 (Formerly 003.109) Further readings in Latin poetry and prose with related exercises in grammar and composition intended to prepare students to read Classical and Medieval Latin. *Prerequisite:* a grade of "C" or better in LATN 1080 (or 003.108).

U1 LATN 1320 Intermediate Readings in Latin Cr.Hrs.3 (Formerly 003.132) Further readings in Latin prose and poetry with related exercises in grammar and syntax as continued preparation for the reading of Classical and Medieval Latin. *Prerequisite:* a grade of "C" or better in LATN 1080 (or 003.108) and LATN 1090 (or 003.109).

LATN 2720 Selected Readings in Republican and Augustan Poetry Cr.Hrs.3 (Formerly 003.272) Readings from among the comedies of Plautus and Terence, the shorter poems of Catullus, and the Metamorphoses of Ovid. *Prerequisite:* a grade of "C" or better in LATN 1320 (or 003.132).

LATN 2740 Selected Readings in Republican and Augustan Prose Cr.Hrs.3 (Formerly 003.274) Readings from among the works of Livy and Caesar and the letters and philosophical writings of Cicero. *Prerequisite:* a grade of "C" or better in LATN 1320 (or 003.132).

LATN 2760 Latin Prose Composition and Sight Translation Cr.Hrs.3 (Formerly 003.276) Assignments in writing Latin prose and practice in the techniques for effective reading of poetry and prose at sight. *Prerequisite:* a grade of "C" or better in LATN 1320 (or 003.132).

LATN 2780 History of the Latin Language Cr.Hrs.3 (Formerly 003.278) A survey of the language from its Indo-European pre-history to its position as the matrix of the Romance languages. Phonological, morphological and lexical aspects of the language are investigated in the light of Latin documents and some comparative evidence from cognate languages. *Prerequisite:* a grade of "C" or better in LATN 1320 (or 003.132).

LATN 2800 Readings in Medieval or Renaissance Latin Cr.Hrs.3 (Formerly 003.280) Selections of prose and poetry written after the beginning of the fourth century after Christ. *Prerequisite:* a grade of "C" or better in LATN 1320 (or 003.132).

LATN 3740 Roman Comedy Cr.Hrs.3 (Formerly 003.374) Reading of at least two plays from among the comedies of Plautus and Terence. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3760 Orations of Cicero Cr.Hrs.3 (Formerly 003.376) Reading of at least two complete speeches from among the political and forensic works of Cicero. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3780 Roman Satire Cr.Hrs.3 (Formerly 003.378) Reading of selected Satires of Horace and Juvenal and of excerpts from the Apocolocyntosis of Seneca and the Satyricon of Petronius. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3800 Lyric and Elegiac Poetry of the Augustan Age Cr.Hrs.3 (Formerly 003.380) Selected Odes and Epodes of Horace and amatory elegies of Propertius, Ovid and Tibullus. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3820 Vergil's Aeneid Cr.Hrs.3 (Formerly 003.382) Reading of at least three books of the Aeneid. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3840 Vergil's Eclogues and Georgics Cr.Hrs.3 (Formerly 003.384) Reading of the Eclogues in their entirety and at least two books of the Georgics. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3860 The Roman Historians Cr.Hrs.3 (Formerly 003.386) Reading of selected passages from the works of Livy, Caesar, Sallust and Tacitus. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3880 Poetry of the Silver Age Cr.Hrs.3 (Formerly 003.388) Reading of one or two tragedies of Seneca with selections from the works of Martial, Statius or Lucan. *Prerequisite:* a grade of "C" or better in LATN 2720 (or 003.272) or LATN 2740 (or 003.274).

LATN 3900 Advanced Studies in Republican or Augustan Poetry Cr.Hrs.6 (Formerly 003.390) Reading in a particular genre such as epic, lyric, comedy or elegy with substantial reading in secondary critical or interpretive literature. *Prerequisite:* written consent of department head.

LATN 3920 Advanced Studies in Latin Prose Literature Cr.Hrs.6 (Formerly 003.392) Reading in a particular genre such as philosophy, history, or rhetoric with substantial reading in secondary critical or interpretive literature. *Prerequisite:* written consent of department head.

8.7 Cross-Disciplinary Programs

The Faculty of Arts offers the following Cross-Disciplinary programs. For course descriptions and prerequisites, refer to departmental sections in this Calendar.

Asian Studies	See Section 8.2
Canadian Studies	See Section 8.3
Catholic Studies	See Section 8.4
Central and East European Studies	See Section 8.5
Drama (Major)	See Section 8.8
Film Studies	See Section 8.11

Global Political Economy	See Section 8.15
History of Art	See Section 9.3
Labour Studies	See Section 8.19
Latin American Studies (Minor)	See Section 8.20
Medieval and Renaissance Studies	See Section 8.22
Theatre (Minor)	See Section 8.30
Ukrainian Canadian Heritage Studies	See Section 8.31
Urban Studies (Minor)	See Section 8.32
Women's Studies	See Section 8.33

8.8 Drama Program

Program Chair: Chris Johnson
General Office: 367 University College
Telephone: 204 474 9581
E-mail: theatre@umanitoba.ca
Website: www.umanitoba.ca/theatre

8.8.1 Academic Staff

Professor

Johnson, C.G., B.A., M.A. (UBC), Ph.D. (Leeds).

Assistant Professors

Groome, M., B.A., M.A., Ph.D. (McGill); Kerr, W., B.A. (Saskatchewan), M.A., Ph.D. (Alberta).

8.8.2 Program Information

This program is comprised of theatre courses and courses in English and Film Studies. The Majors in Drama are valuable for further studies at the academic, practical, or professional training level.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the General Major, the prerequisite is a grade of "C" or better in THTR 1220. For entry to the Advanced Major, the prerequisite is a grade of "C" or better in THTR 1220 and a grade of "C" or better in ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

It is not possible to have a Major in Drama and Minor in Theatre.

Courses used toward the Major in Drama may not be used for a Minor in the other areas (English or Film Studies) and no more than 6 credit hours numbered at the 1000 level in addition to THTR 1220, may be credited towards a Drama Major.

8.8.3 Drama			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
THTR 1220	<ul style="list-style-type: none"> • THTR 2160; THTR 2470 plus 6 credit hours from THTR 2150, THTR 2170, THTR 2180, THTR 2490 • 6 credit hours from THTR 2480, THTR 2600, THTR 2610, THTR 3460, THTR 3470, THTR 3610, THTR 3620, THTR 3630, THTR 3640 • 3 additional credit hours from Theatre courses listed below and/or from List A 		

ADVANCED MAJOR TOTAL: 54 CREDIT HOURS			
THTR 1220; ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340	<ul style="list-style-type: none"> • THTR 2160; THTR 2470 and ENGL 2960 plus 6 credit hours from THTR 2150, THTR 2170, THTR 2180, THTR 2490 • 12 credit hours from THTR 2480, THTR 2600, THTR 2610, THTR 3460, THTR 3470, THTR 3610, THTR 3620, THTR 3630, THTR 3640 • 12 additional credit hours from Theatre courses listed below and/or from List A 		

List of Specified Courses for Drama Major (General and Advanced)

Theatre		THTR 2600	Special Studies 1	3
THTR 1220	Introduction to Theatre	THTR 2610	Special Studies 2	3
THTR 2150	Theatrical Techniques: Onstage	THTR 3460	Theory of Drama and Performance	3
THTR 2160	Theatrical Techniques: Backstage	THTR 3470	Text and Performance	3
THTR 2170	Specialized Practical Training 1	THTR 3610	Special Studies 3	3
THTR 2180	Specialized Practical Training 2	THTR 3620	Special Studies 4	3
THTR 2470	Fundamentals of Dramatic Analysis	THTR 3630	Theatre Practicum 1	3
THTR 2480	Theatre History	THTR 3640	Theatre Practicum 2	6
THTR 2490	Specialized Practical Training 3			
		List A		
		English		
		ENGL 1200	Representative Literary Works	6

ENGL 1300	Literature since 1900	6	the case with the former 004.311 Studies in Renaissance Literature, and the former 004.326 Studies in the Restoration and Eighteenth Century.
ENGL 2270	Canadian Literature	6	
ENGL 2760	Introductory Creative Writing	3	Film Studies
ENGL 2960	Drama 1	3	FILM 1290 The Art of the Film 1
ENGL 3010	Shakespeare	6	FILM 1300 The Art of the Film 2
ENGL 3500	Creative Writing [not available for credit with ENGL 2760]	6	FILM 2280 Film and Literature
ENGL 3520	Studies in the Forms of Discourse	3	FILM 2300 The Popular Film
ENGL 3790	Advanced Creative Writing [not available for credit with ENGL 2760]	6	FILM 2330 Film and Contemporary Thought
ENGL 3960	Drama 2	3	FILM 2370 Experimental Cinema
ENGL xxxx	English Department Special Studies courses approved in advance by the chair of the Theatre Program.		FILM 2380 The International Cinema 1
004.126*	Twentieth-Century Literature in English	6	FILM 2390 The International Cinema 2
004.235*	American Literature of the Twentieth Century	6	FILM 2400 The American Film to 1950
004.238*	Practical Criticism	6	FILM 2410 The American Film from 1950
004.244*	Twentieth-Century British Literature	6	FILM 2420 Realism and Film
004.250*	Poetry and Prose of the Sixteenth Century	3	FILM 2430 The Canadian Film
004.251*	Elizabethan and Jacobean Drama	3	FILM 2460 Film Genres
004.297*	Drama 2	3	FILM 3250 Selected Topics in Film 1
004.310*	Studies in Shakespeare	6	FILM 3260 Selected Topics in Film 2
004.322*	Shakespeare 1 (Introductory Topics)	3	FILM 3400 The Director's Cinema 1
004.323*	Shakespeare 2 (Advanced Topics)	3	FILM 3410 The Director's Cinema 2
004.332*	Shakespeare	6	FILM 3420 Film Theory
004.333*	Drama	6	FILM 3430 Screenwriting
004.353*	Forms of Discourse	6	FILM 3440 Filmmaking
004.359*	Fourteenth-Century Literature	3	FILM 3450 The Animated Film
* Indicates courses no longer offered.			099.121* The Art of the Film
The content of English "Studies" courses varies from year to year; when the proportion of dramatic literature studied is acceptably high, that offering of the course may be used for credit toward a Drama Major; this is frequently			099.224* Studies in the Experimental Cinema
			099.226* Studies in the International Cinema
			099.227* The American Film
			099.231* The Documentary and Canadian Film
			099.232* Film Genres
			099.320* Studies in the Director's Cinema
			099.328* The Theory and History of Narrative Film
			* Indicates courses no longer offered.

8.9 Department of Economics

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8.9.1 Academic Staff

Professor Emeritus

Phillips, P.A., M.A. (Saskatchewan), Ph.D. (London).

Senior Scholars

Gray, J.A., B.S.F. (UBC), M.Sc.(Econ.) (London), Ph.D. (Michigan); **Rempel**, H., B.Comm. (Manitoba), M.A. (Ohio), Ph.D. (Wisconsin).

Professors

Chernomas, R., B.A. (Bridgeport), M.A., Ph.D. (New School of Social Research); **Dean**, J.M., B.Comm. (St. Mary's), M.A. (Dalhousie), Ph.D.(VPI); **Hum**, D., B.Sc.(Hons.) (Mount Allison), M.A. (Oxford), Ph.D. (Toronto); **Lobdell**, R.A., B.A. (Kansas), M.A. (Wisconsin), Ph.D. (McGill); **Loxley**, J., B.A.(Hons.), Ph.D. (Leeds); **Simpson**, W., Ph.D. (London).

Associate Professors

Brown, L., B.A. (Alberta), M.A. (Carleton), Ph.D. (Queen's); **Chuchman**, G., B.A., M.A. (Manitoba), Ph.D. (Western Ontario); **Dennis**, K.G., B.Comm., M.A. (Manitoba), D.Phil.(Oxford); **Dhruvarajan**, P. S., B.Sc. (Mysore), M.A. (Chicago), Ph.D. (Northwestern); **Guard**, J., B.A. (Western Ontario), M.E.S. (York), Ph.D. (Toronto); **Lipnowski**, I.F., M.A. (Manitoba), Ph.D. (London); **Mason**, G.C., Ph.D. (UBC); **Sepehri**, A., B.A. (National University of Iran), M.A., Ph.D. (Alberta); **Troutt**, E., B.S. (Cornell), M.A., Ph.D. (Wisconsin-Madison); **Vorst**, J. I., Ph.D.(Equiv.) (Netherlands School of Economics).

Assistant Professors

Baragar, F., B.A. (Winnipeg), M.A. (Manitoba), Ph.D. (Utah); **Camfield**, D., B.A., M.A., Ph.D. (York); **Compton**, R., B.A. (Winnipeg), M.D.E. (Dalhousie), M.A., Ph.D. (Washington, St. Louis); **Gunay**, H., B.S., M.S. (METU-Turkey), M.A., Ph.D. (Iowa); **Hudson**, I., B.A. (Manitoba), M.A. (Carleton),

Ph.D. (Manitoba); **Serieux**, J., B.A., M.A., Ph.D. (Toronto), M.A. (Cornell); **Tedds**, L., B.A. (Carleton), B.A., M.A. (Victoria), Ph.D. (McMaster).

8.9.2 Program Information

The economy is important to all Canadians, and economics is the field of study that helps us understand our world: wages and employment, economic growth, productivity, wealth and poverty, government budgets and taxation, resource exploitation, business practices, inflation, recession, regional economic differences. In economics we study the history and current reality of these issues. We learn the principles and techniques necessary to gain a sound understanding of the choices and problems facing us during our lifetime.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the General or Advanced Major, the prerequisite is a grade of "C" or better in either ECON 1200 or both ECON 1210 and ECON 1220. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in either ECON 1200 or both ECON 1210 and ECON 1220.

Honours Program

For entry to the Honours program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

It is recommended that students complete ECON 2800, ECON 3800, and ECON 3810 before attempting ECON 4430, ECON 4450, or ECON 4810.

Where it appears appropriate, a senior Honours student may be allowed to substitute a graduate course for an undergraduate course in Economics.

Honours students are advised to select their ancillary options from the following disciplines: Geography, History, Mathematics, Political Studies, Statistics, Sociology and Philosophy. However, other fields may be selected to satisfy study or career interests.

Preparation for Graduate Studies

Honours students contemplating graduate work should normally seek to obtain a good background in both mathematics and statistics. For mathematics, it is strongly recommended that they take ECON 2530 Introduction to Mathematical Economics and seriously consider ECON 3730 Topics in Mathematical Economics. For a good statistics background, STAT 1000 Basic Statistical Analysis 1, STAT 2000 Basic Statistical Analysis 2, ECON 4120 Intermediate Econometrics and ECON 4130 Seminar in Econometrics are highly desirable. Such students are also advised to include at least one course in economic history in their program. These, or equivalents, are required of doctoral candidates at the University of Manitoba.

Other

No student may hold credit for more than six credit hours from the following: ECON 2450(3), ECON 2460(3), ECON 2700(3), ECON 3700(3). No student may hold credit for more than six credit hours from the following: ECON 2470(3), ECON 2480(3), ECON 2800(3), ECON 3800(3).

Combinations of courses for the Major, Minor and Honours programs, other than those listed below, may be permitted by written consent of the department head. Similarly, Honours courses may be taken by students in the General Major or Advanced Major programs with the written consent of the instructor and the department head; an average grade of "B" in all Economics courses is normally required before such consent may be given.

Students may offer the cross-listed courses ABIZ 2390 Introductory Environmental Economics (same as ECON 2390), ABIZ 3080 Introduction to Econometrics (same as ECON 3180), and ABIZ 4120 Intermediate Econometrics (same as ECON 4120) toward any of the above programs.

For information regarding the Canadian Studies program, see Section 8.3; for the Central and East European Studies program, see Section 8.4.

8.9.3 Economics			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR^{1,2} TOTAL: 30 CREDIT HOURS			
ECON 1200 or both ECON 1210 and ECON 1220 ⁹	<ul style="list-style-type: none"> • Two of: ECON 2450², ECON 2460², ECON 2470², ECON 2480² • An additional 18 credit hours in Economics, of which at least 6 hours must be from courses numbered at the 3000 level 		
ADVANCED MAJOR¹ TOTAL: 48 CREDIT HOURS			
ECON 1200 or both ECON 1210 and ECON 1220 ⁹	<ul style="list-style-type: none"> • ECON 2450^{3,4}, ECON 2460^{3,4}, ECON 2470^{3,4}, ECON 2480^{3,4}, ECON 3170⁴, ECON 3180⁴ • ECON 4820⁴ or ECON 4830⁴ • An additional 18 credit hours in Economics 		
MINOR¹ TOTAL: 18 CREDIT HOURS			
ECON 1200 or both ECON 1210 and ECON 1220 ⁹	An additional 12 credit hours in Economics		
HONOURS SINGLE^{5, 6,10}			
ECON 1200 or both ECON 1210 and ECON 1220 ⁹	<ul style="list-style-type: none"> • 54 credit hours in Economics courses, to include the following: <ul style="list-style-type: none"> - ECON 2700, ECON 2800, ECON 3700, ECON 3800, ECON 3810, ECON 4410 - One of the following combinations: ECON 3170 and ECON 3180; ECON 4120 and ECON 4130; STAT 1000 and STAT 2000⁸ - A further 27 credit hours in Economics, of which: no more than 6 additional hours can be from courses numbered at the 2000 level (other than ECON 2530); and at least 6 additional hours must be from courses numbered at the 4000 level • 6 credit hours from the following Mathematics courses: MATH 1300, MATH 1310, MATH 1500, MATH 1510, MATH 1520, MATH 1690, MATH 1700, MATH 1710 • 24 credit hours in ancillary options 		
HONOURS DOUBLE^{5, 7,10}			
ECON 1200 or both ECON 1210 and ECON 1220 ⁹	<ul style="list-style-type: none"> • 36 credit hours in Economics courses, to include the following: <ul style="list-style-type: none"> - ECON 2700, ECON 2800, ECON 3700 - One of the following combinations: ECON 3170 and ECON 3180; ECON 4120 and ECON 4130; STAT 1000 and STAT 2000⁸ - A further 21 credit hours in Economics, of which: no more than 6 additional hours can be from courses numbered at the 2000 level (other than ECON 2530); and at least 6 hours must be from courses numbered at the 4000 level • At least 36 credit hours in other Honours field • At least 6 credit hours in ancillary options 		

NOTES:

¹ For the purposes of satisfying program requirements in the Major, Advanced Major and Minor programs, and of satisfying course prerequisites, Honours courses are acceptable as substitutes for general courses according to the following schedule: ECON 2700 for ECON 2450; ECON 3700 for ECON 2460; ECON 2800 for ECON 2470; ECON 3800 for ECON 2480. For each pair, students may hold credit for only one course.

² In cases where students have been granted three hours of unallocated transfer credit in Economics at the 1000 level, and have achieved additional credits in Economics from The University of Manitoba, and wish to declare Economics as a General Major without having full credit in ECON 1200, then the Years 2-3 requirement for a Major in Economics will be ECON 2450 and ECON 2470, plus an additional 18 credit hours in Economics of which at least 6 hours must be at the 3000 level.

³ Students in the Advanced Major are urged to take ECON 2450, ECON 2460, ECON 2470 and ECON 2480 in Year 2, but must take at least two of these courses in Year 2.

⁴ Course ECON 4820 or ECON 4830 may not be taken until the final year of the program and only after students have successfully completed ECON 3170 and ECON 3180, plus all of the following: ECON 2450, ECON 2460, ECON 2470, ECON 2480. A grade of "C" or better in each course is required.

⁵ For the purpose of satisfying program requirements in the Honours programs and of satisfying course prerequisites, General theory courses are acceptable substitutes for Honours theory courses according to the following schedule: As substitute for ECON 2700, ONE of the following conditions must be satisfied: (i) grades of B or better in each of ECON 2450 and ECON 2460; (ii) a grade of A or better in ECON 2450. As substitute for ECON 2800, ONE of the following conditions must be satisfied: (i) grades of B or better in each of ECON 2470 and ECON 2480; (ii) a grade of A or better in ECON 2470.

⁶ To meet a minimum required background in mathematics, Single Honours students must complete 6 credit hours in Mathematics in Year 2 (or Year 3 with departmental approval). Students contemplating entering the Single Honours Program in Economics are advised to take the Mathematics requirement in their first year of studies. Students contemplating graduate work in Economics should refer to the notes above "Preparation for Graduate Studies".

⁷ Students contemplating Double Honours in Economics and Mathematics are advised to consult the Department of Economics for specific details.

⁸ Statistics STAT 1000 and STAT 2000 are acceptable in place of ECON 3170 and ECON 3180 or in place of ECON 4120 and ECON 4130 but will not count toward the 54 hours of Economics required for Single Honours or toward the 36 hours of Economics required by the Double Honours program. Students contemplating graduate work in Economics should refer to the notes above "Preparation for Graduate Studies".

⁹ A maximum of 6 credit hours at the 1000 level may be used towards a Major, Minor or Honours Program.

¹⁰ Ancillary options are courses taken from outside the Honours field of study.

8.9.4 Economics-Mathematics Joint Honours Program

The Department of Economics and the Department of Mathematics (Faculty of Science) offer a Joint Honours program for students wishing in-depth study in Economics and Mathematics. For Mathematics course listings, refer to the Faculty of Science chapter in the *Calendar*.

Joint Honours Program

Students in the Joint Honours program will follow the regulations outlined in the Honours program, see Section 4.3: Honours Degree Program.

8.9.5 Economics-Mathematics Joint Honours Program

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS TOTAL: 120 CREDIT HOURS			
<ul style="list-style-type: none"> ● ECON 1200 (or both ECON 1210 and ECON 1220); MATH 1300¹; MATH 1500^{1,2}; MATH 1700^{1,2}; STAT 1000³; COMP1010³ ● Plus 9 credit hours of electives⁶ which should include the required "W" course 	<ul style="list-style-type: none"> ● ECON 2700, ECON 2800, MATH 2200, MATH 2350, MATH 2750, MATH 2800 ● Plus 6 credit hours of approved electives⁶ 	<ul style="list-style-type: none"> ● ECON 3700; ECON 3800; ECON 3180³ (or STAT 2000)³; MATH 2600³; MATH 3230; MATH 3300⁵; MATH 3400; MATH 3700 (or MATH 3710); MATH 3740 (or MATH 3760) ● Plus 24 credit hours of approved Economics courses⁴ ● Plus 6 credit hours of Mathematics courses at the 3000 or 4000 level, which must include at least one of MATH 3500, MATH 3510, MATH 3600, MATH 3810, MATH 3820, or any Mathematics course at the 4000 level 	
30 HOURS	30 HOURS	60 HOURS	

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² The combination of MATH 1500 (or MATH 1510 or MATH 1520 or MATH 1530) and MATH 1700 may be replaced by MATH 1690.

³ Some courses may be taken in a different year than indicated; STAT 1000, COMP1010, MATH 2600 and ECON 3180 (or STAT 2000) may be taken in Year 2. The normal prerequisite for ECON 3180 is ECON 3170, which will be waived for students in this program who have completed Year 1.

⁴ Of the 24 credit hours in electives in Economics in Years 3 and 4, no more than 6 credit hours may be at the 2000 level or below (with the exception of ECON 2530) and at least 6 credit hours must be at the 4000 level.

⁵ MATH 3300, plus 3 of the 6 unallocated credit hours in Mathematics in Years 3 and 4, may be replaced by MATH 3350.

⁶ Students are encouraged to consider useful courses in Computer Science and Statistics as electives.

8.9.6 Economics-Statistics Joint Honours Program

The Department of Economics and the Department of Statistics (Faculty of Science) offer a Joint Honours program for students wishing in-depth study in Economics and Statistics. For Statistics course listings, refer to the Faculty of Science chapter in the *Calendar*.

Joint Honours Program

Students in the Joint Honours program will follow the regulations outlined in the Honours program, see Section 4.3: Honours Degree Program.

8.9.7 Economics-Statistics Joint Honours Program

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS TOTAL: 120 CREDIT HOURS			
<ul style="list-style-type: none"> ● ECON 1200 (or ECON 1210 and ECON 1220); MATH 1300¹; MATH 1500^{1,2}; MATH 1700^{1,2}; STAT 1000³; COMP1010³ ● Plus 9 credit hours of electives which should include the required "W" course 	<ul style="list-style-type: none"> ● ECON 2700, ECON 2800, MATH 2200, MATH 2350, MATH 2750, STAT 2000 ● Plus 6 credit hours of approved Economics electives⁴ 	<ul style="list-style-type: none"> ● ECON 3700, ECON 3800, MATH 3740 or MATH 3760, STAT 3470, STAT 3480, STAT 3490, STAT 3500, STAT 3600 ● Plus 3 credit hours of approved Economics electives⁴ 	<ul style="list-style-type: none"> ● ECON 4120, ECON 4130, STAT 4140, STAT 4520, STAT 4530, STAT 4580, STAT 4630 ● Plus 9 credit hours of approved Economics electives⁴
30 HOURS	30 HOURS	30 HOURS	30 HOURS

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² The combination of MATH 1500¹ and MATH 1700¹ may be replaced by MATH 1690.

³ Some courses may be taken in a different year than indicated; STAT 1000, COMP1010, MATH 2600 and ECON 3180 (or STAT 2000) may be taken in Year 2.

⁴ Of the 18 credit hours of electives in Economics in Years 2, 3 and 4, no more than 6 credit hours may be at the 2000 level or below; ECON 2530 and ECON 3180 are recommended in Year 2 or 3. The normal prerequisite for ECON 3180 is ECON 3170, which will be waived for students in this program who have completed Year 1.

8.9.8 Economics Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

U1 ECON 1200 Principles of Economics Cr.Hrs.6 (Formerly 018.120) A study of the principles of economics and some of their applications. Students may not hold credit for ECON 1200 (or 018.120) and any of: ECON 1201 (or 018.120), ECON 1210 (or 018.121), ECON 1211 (or 018.121), ECON 1220 (or 018.122), or ECON 1221 (or 018.122).

ECON 1201 Introduction aux sciences économiques Cr.Hrs.6 (L'ancien 018.120) Étude des principes d'économie et quelques-unes de leurs applications. L'étudiant(e) qui détient les crédits du ECON 1201 (ou 018.120) ne peut se faire créditer aucun des cours ECON 1200 (ou 018.120), ECON 1210 (ou 018.121), ECON 1211 (ou 018.121), ECON 1220 (ou 018.122), ou ECON 1221 (ou 018.122). Donné au Collège universitaire de Saint-Boniface.

U1 ECON 1210 Introduction to Canadian Economic Issues and Policies Cr.Hrs.3 (Formerly 018.121) A survey of some major principles underlying, and influences acting upon the Canadian economy and its regions. Students may not hold credit for ECON 1210 (or 018.121) and any of: ECON 1211 (or 018.121), ECON 1200 (or 018.120), or ECON 1201 (or 018.120).

ECON 1211 Introduction aux politiques et aux problèmes économiques canadiens Cr.Hrs.3 (L'ancien 018.121) Une étude de principes majeurs qui sous-tendent et de certains facteurs qui influencent l'économie canadienne et de ses régions. L'étudiant(e) qui détient les crédits du ECON 1211 ne peut se faire créditer aucun des cours ECON 1210 (ou 018.121), ECON 1200 (ou 018.120), ou ECON 1201 (ou 018.120). Donné au Collège universitaire de Saint-Boniface.

U1 ECON 1220 Introduction to Global and Environmental Economic Issues and Policies Cr.Hrs.3 (Formerly 018.122) A survey of some major principles and policies characterizing the world economy and the environment. Students may not hold credit for ECON 1220 (or 018.122) and any of: ECON 1221 (or 018.122), ECON 1200 (or 018.120), or ECON 1201 (or 018.120).

ECON 1221 Introduction aux politiques et aux problèmes économiques mondiaux Cr.Hrs.3 (L'ancien 018.122) Une étude de peut se faire créditer aucun des cours ECON 1220 (ou 018.122), ECON 1200 (ou 018.120), ou ECON 1201 (ou 018.120). Donné au Collège universitaire de Saint-Boniface.

W ECON 2270 European Economic History Cr.Hrs.6 (Formerly 018.227) A study of the economic aspects of the evolution of Europe from the Middle Ages to the present, with emphasis on the development of modern economic institutions. Students may not hold credit for both ECON 2270 (or 018.227) and ECON 2271 (or 018.227). *Prerequisite:* none.

ECON 2271 Histoire économique de l'Europe Cr.Hrs.6 (L'ancien 018.227) Étude des aspects économiques de l'évolution de l'Europe, du Moyen-Âge à nos jours. L'accent sera mis sur le développement des institutions économiques modernes. L'étudiant(e) ne peut se faire créditer à la fois le ECON 2271 (ou 018.227) et le ECON 2270 (ou 018.227). *Préalable:* aucun. Donné au Collège universitaire de Saint-Boniface.

ECON 2280 Social Welfare and Human Resources Cr.Hrs.6 (Formerly 018.228) Economic and social dimensions of poverty and inequality: income, wealth, housing, health, education, welfare. Problems and policies in Canada and abroad. *Prerequisite:* a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 2310 Canadian Economic Problems Cr.Hrs.6 (Formerly 018.231) Application of economic theory to a broad range of problems such as agriculture, trade, foreign ownership, regional disparities, competition policy, education. Students may not hold credit for both ECON 2310 (or 018.231) and ECON 2311 (or 018.231). *Prerequisite:* a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 2311 Problèmes économiques du Canada Cr.Hrs.6 (L'ancien 018.231) Application de la théorie économique aux problèmes actuels du Canada: les disparités régionales, l'agriculture, l'échange, la pratique concurrentielle, la propriété étrangère et l'éducation, etc. L'étudiant(e) ne peut se faire créditer à la fois le ECON 2311 (ou 018.231) et le ECON 2310 (ou 018.231). *Préalable:* une note minimale de C dans six heures-crédits au niveau 1000 en sciences économiques. Donné au Collège universitaire de Saint-Boniface.

ECON 2350 Community Economic Development Cr.Hrs.3 (Formerly 018.235) A study of the economic development problems of northern and native communities in Manitoba. Students may not hold credit for both ECON 2350 (or 018.235) and NATV 4310 (or 032.431). *Prerequisite:* none.

ECON 2360 Women in the Canadian Economy Cr.Hrs.6 (Formerly 018.236) This course explores the changing role of women in the production of goods and services in Canada, with comparisons with selected other countries. It evaluates these changes and assesses government policy in this area. *Prerequisite:* none.

ECON 2390 Introduction to Environmental Economics Cr.Hrs.3 (Formerly 018.239) The economics of management of water, air and land resource quality, and the economics of conservation. The economic implications of environmental standards, li-

censing, criteria and pollution charges will be illustrated by current issues. Students may not hold credit for both ECON 2390 (or 018.239) and ABIZ 2390 (or 061.239). *Prerequisite:* a grade of "C" or better in six credit hours of 1000 level Economics or written consent of instructor.

ECON 2400 Introduction to Energy Economics Cr.Hrs.3 (Formerly 018.240) A study of the economic relationships in energy production, consumption, demand and supply, pricing and conservation, energy policy and the development of new and renewable energy sources. *Prerequisite:* a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 2410 The Manitoba Economy Cr.Hrs.3 (Formerly 018.241) Application of economic theory to the historical development and present structure of the provincial economy. *Prerequisite:* none.

ECON 2420 Economics of the Labour Process and Labour Relations Cr.Hrs.6 (Formerly 018.242) An examination of theoretical approaches to paid and unpaid work, the organization of labour processes, the production and reproduction of labour, and labour markets in Canada today, as well as possible alternatives. Students may not hold credit for both ECON 2420 (or 018.242) and LABR 2420 (or 153.242). *Prerequisite:* a grade of "C" or better in six credit hours of 1000 level Economics, or both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128).

ECON 2450 Microeconomic Theory and Its Applications 1 Cr.Hrs.3 (Formerly 018.245) Theories of consumer demand, production, cost, factor demand and market structure, with attention to institutional and historical framework, and with policy applications. Students may not hold credit for ECON 2450 (or 018.245) and any of: ECON 2451 (or 018.245) or ECON 2700 (or 018.270). *Prerequisite:* a grade of "C" or better in six credit hours of 1000 level Economics or written consent of department head.

ECON 2451 Théorie microéconomique et ses applications 1 Cr.Hrs.3 (L'ancien 018.245) Théorie de la demande du consommateur, de la production et des coûts, de la demande des facteurs de production et de la structure des marchés dans une perspective historique et institutionnelle. L'étudiant(e) qui détient les crédits du ECON 2451 (ou 018.245) ne peut se faire créditer aucun des cours ECON 2450 (ou 018.245) ou ECON 2700 (ou 018.270). *Préalable:* une note minimale de C dans six heures-crédits au niveau 1000 en sciences économiques ou autorisation écrite du département. Donné au Collège universitaire de Saint-Boniface.

ECON 2460 Microeconomic Theory and Its Applications 2 Cr.Hrs.3 (Formerly 018.246) Theories of factor markets and distribution, general equilibrium, welfare economics, social choice, and market failure, as well as other special topics, with attention to institutional and historical framework and with policy applications. Students may not hold credit for ECON 2460 (or 018.246) and any of: ECON 2461 (or 018.246) or ECON 3700 (or 018.370). *Prerequisite:* a grade of "C" or better in one of: ECON 2450 (or 018.245), ECON 2451 (or 018.245), or ECON 2700 (or 018.270).

ECON 2461 Théorie microéconomique et ses applications 2 Cr.Hrs.3 (L'ancien 018.246) Théorie du marché des facteurs de production, de la distribution et de l'équilibre général, économie du bien-être et faillite des marchés, dans une perspective historique et institutionnelle. L'étudiant(e) qui détient les crédits du ECON 2461 (ou 018.246) ne peut se faire créditer aucun des cours ECON 2460 (ou 018.246) ou ECON 3700 (ou 018.370). *Préalable:* une note minimale de C dans des cours suivants: ECON 2450 (ou 018.245), ECON 2451 (ou 018.245), ou ECON 2700 (ou 018.270). Donné au Collège universitaire de Saint-Boniface.

ECON 2470 Macroeconomic Theory and Its Applications 1 Cr.Hrs.3 (Formerly 018.247) A study of the fluctuations in national income, output, employment, money and prices, and of stabilization policy, within the framework of standard macroeconomic models of a closed economy, with attention to institutional and historical framework. Students may not hold credit for ECON 2470 (or 018.247) and any of: ECON 2471 (or 018.247) or ECON 2800 (or 018.280). *Prerequisite:* a grade of "C" or better in six credit hours of 1000 level Economics or written consent of department head.

ECON 2471 Théorie macroéconomique et ses applications 1 Cr.Hrs.3 (L'ancien 018.247) Étude des fluctuations dans le revenu national, la production, l'emploi, la monnaie et les prix ainsi qu'étude des politiques de stabilisation, dans une perspective historique et institutionnelle. L'analyse s'effectue à partir d'un modèle macroéconomique d'une économie fermée. L'étudiant(e) qui détient les crédits du ECON 2471 (ou 018.247) ne peut se faire créditer aucun des cours ECON 2470 (ou 018.247) ou ECON 2800 (ou 018.280). *Préalable:* une note minimale de C dans six heures-crédits au niveau 1000 en sciences économiques ou autorisation écrite du département. Donné au Collège universitaire de Saint-Boniface.

ECON 2480 Macroeconomic Theory and Its Applications 2 Cr.Hrs.3 (Formerly 018.248) Theories of national income, employment, inflation, balance of payments, stabilization policy and economic growth within the framework of macroeconomic models of an open economy and with attention to institutional and historical framework. Students may not hold credit for ECON 2480 (or 018.248) and any of: ECON 2481 (or 018.248) or ECON 3800 (or 018.380). *Prerequisite:* a grade of "C" or better in one of: ECON 2470 (or 018.247), ECON 2471 (or 018.247), or ECON 2800 (or 018.280).

ECON 2481 Théorie macroéconomique et ses applications 2 Cr.Hrs.3 (L'ancien 018.248) Théorie du revenu national, de l'emploi, de l'inflation, de la balance des

paiements. Politiques de stabilisation et croissance économique. L'analyse s'effectue à partir d'un modèle macroéconomique d'une économie ouverte dans une perspective historique et institutionnelle. L'étudiant(e) qui détient les crédits du ECON 2481 (ou 018.248) ne peut se faire créditer aucun des cours ECON 2480 (ou 018.248) ou ECON 3800 (ou 018.380). *Préalable*: une note minimale de C dans un des cours suivants: ECON 2470 (ou 018.247), ECON 2471 (ou 018.247), ou ECON 2800 (ou 018.280). Donné au Collège universitaire de Saint-Boniface.

ECON 2490 Economic Accounting Cr.Hrs.3 (Formerly 018.249) Examination of accounting concepts and relationships underlying stock and flow accounts at the household, firm, government and national levels; reconciliation of stock and flow accounts at these levels. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 2500 Labour and Technology Cr.Hrs.3 (Formerly 018.250) Examination of the relationship between technological changes and levels of employment, organization/quality of work and division of labour. Same as Labour Studies LABR 2450 (or 153.245) Labour and Technology (3). Students may not hold credit for both ECON 2500 (or 018.250) and LABR 2450 (or 153.245). *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics, or LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the department head.

ECON 2510 The Economy of Ukraine Cr.Hrs.3 (Formerly 018.251) A study of the Ukrainian economy in Eastern Europe: socioeconomic history, state and structure of the Ukrainian economy within the former Soviet Union, prospects and problems of economic restructuring. *Prerequisite*: none.

ECON 2520 Economics of Sports and Leisure Cr.Hrs.3 (Formerly 018.252) Economic analysis of current issues in professional and amateur sports, and leisure. *Prerequisite*: none.

ECON 2530 Introduction to Mathematical Economics Cr.Hrs.3 (Formerly 018.253) Introduction to mathematical methods used in economic analysis, including comparative-static analysis and optimization. *Prerequisite*: a grade of "C" or better in MATH 1500 (or 136.150).

ECON 2540 Political Economy 1: Production and Distribution Cr.Hrs.3 (Formerly 018.254) A study of the theories, institutions, policies and relations of power in national and global economic society with reference to the production of market and non-market goods and services and the distribution of necessary and surplus output. Particular attention will be given to the role of the state in the regulation of markets and the distribution of surplus. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 2550 Political Economy 2: Economic Growth and Fluctuations in a Global Economic Environment Cr.Hrs.3 (Formerly 018.255) A study of the theories, institutions, policies and relations of power in national and global economic society with reference to economic growth, international trade and finance, economic fluctuations, inflation and unemployment. Particular attention will be given to the role of the state in the regulations of macroeconomic activity. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 2560 Corporations in the Global Economy Cr.Hrs.3 (Formerly 018.256) A study of the nature of the corporate form of business enterprise, its history, behaviour and performance, and the economic policy issues arising out of its prominence in today's global economy. Students may not hold credit for both ECON 2560 (or 018.256) and ECON 2610 (or 018.261) when titled Corporations in the Global Economy or ECON 2620 (or 018.262) Special Topics in Economics when titled Introduction to the World's Economies. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics.

W ECON 2580 Economics of the European Union Cr.Hrs.3 (Formerly 018.258) A brief overview of the history of European unification from the Second World War to the Economic and Monetary Union. Performance and policies in the areas of labour markets, social welfare and cohesion, agriculture, environment, competition, public finance, monetary integration, and trade relations with non-Members. Students may not hold credit for ECON 2580 (or 018.258) and either of ECON 2610 (or 018.261) when titled European Union, or the former 018.358. *Prerequisite*: none.

ECON 2610 Special Topics in Economics Cr.Hrs.3 (Formerly 018.261) This course will vary from year to year depending on the needs of students and the interests and availability of instructors. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics or written consent of instructor.

ECON 2620 Special Topics in Economics Cr.Hrs.6 (Formerly 018.262) This course will vary from year to year depending on the needs of students and the interests and availability of instructors. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics or written consent of instructor.

ECON 2630 An Introduction to the World's Economies Cr.Hrs.6 (Formerly 018.263) An examination of the world's economies from a broad-based economics perspective (including economic theories, institutional perspectives and historical evidence) to explain the development and limits of the world's changing and differing economies, and economic growth patterns in the light of the private business sector, labour relations and the role of the state. Students may not hold credit for both ECON 2630 (or 018.263) and ECON 2620 (or 018.262) Special Topics in Economics when titled Introduction to the World's Economies. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 3170 Introduction to Quantitative Methods in Economics Cr.Hrs.3 (Formerly 018.317) Quantification of economic models; organization and presentation of economic data; probability; statistical estimation and testing of hypotheses with economic applications; simple regression. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics or written consent of instructor.

ECON 3180 Introduction to Econometrics Cr.Hrs.3 (Formerly 018.318) The application of statistical tools, especially regression analysis for estimating economic relationship and testing economic hypotheses. Also offered as ABIZ 3080 by Agricultural

Economics. May not hold be held with ABIZ 3080 (or 061.308). *Prerequisite*: a grade of "C" or better in ECON 3170 (or 018.317) or written consent of department head.

★ **ECON 3300 Canadian Economic History Cr.Hrs.6** (Formerly 018.330) A study of Canada's economic growth with emphasis on the influence of Europe and the United States. Students may not hold credit for both ECON 3300 (or 018.330) and ECON 3301 (or 018.330). *Prerequisite*: none.

★ **ECON 3301 Histoire économique du Canada Cr.Hrs.6** (L'ancien 018.330) Étude de la croissance économique du Canada en soulignant l'influence de l'Europe et des États-Unis. L'étudiant(e) ne peut se faire créditer à la fois le ECON 3301 (ou 018.330) et le ECON 3300 (ou 018.330). *Préalable*: aucun. Donné au Collège universitaire de Saint-Boniface.

ECON 3360 Labour Economics Cr.Hrs.6 (Formerly 018.336) The labour force, labour markets, wage theories and wage determination, theories of employment, social insurance. *Prerequisite*: a grade of "C" or better in one of the following (combination of) courses: one of ECON 2450 (or 018.245), ECON 2451 (or 018.245) or ECON 2700 (or 018.270); and one of ECON 2460 (or 018.246), ECON 2461 (or 018.246), ECON 3700 (or 018.370), ECON 2470 (or 018.247), ECON 2471 (or 018.247), ECON 2800 (or 018.280), ECON 2480 (or 018.248), ECON 2481 (or 018.248) or ECON 3800 (or 018.380); GGMT 3160 (or 027.316), ECON 2420 (or 018.242) or LABR 2420 (or 153.242) is recommended.

ECON 3370 Public Finance Cr.Hrs.6 (Formerly 018.337) The economic theory of public expenditure, taxation, intergovernmental fiscal relations, and allocative and redistributive effects of government policies. *Prerequisite*: a grade of "C" or better in one of: ECON 2450 (or 018.245), ECON 2451 (or 018.245) or ECON 2700 (or 018.270).

ECON 3390 Development Economics Cr.Hrs.6 (Formerly 018.339) Processes and problems of development policies to accelerate change. Economic relations between developed and developing regions. *Prerequisite*: a grade of "C" or better in any two of: ECON 2450 (or 018.245), ECON 2451 (or 018.245), ECON 2700 (or 018.270), ECON 2460 (or 018.246), ECON 2461 (or 018.246), ECON 3700 (or 018.370), ECON 2470 (or 018.247), ECON 2471 (or 018.247), ECON 2800 (or 018.280), ECON 2480 (or 018.248), ECON 2481 (or 018.248), ECON 3800 (or 018.380).

★ **ECON 3510 Industrial Relations Cr.Hrs.6** (Formerly 018.351) A study of comparative employer-employee relationships in Canada and other selected countries as affected by market forces, social traditions, and government action. Students may not hold credit for both ECON 3510 (or 018.351) and LABR 3510 (or 153.351). *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics, or LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128).

ECON 3610 Special Studies Cr.Hrs.3 (Formerly 018.361) This reading course will vary from year to year depending on the needs of students and the interests of instructors. *Prerequisite*: written consent of instructor.

ECON 3620 Special Studies Cr.Hrs.6 (Formerly 018.362) This reading course will vary from year to year depending on the needs of students and the interests of instructors. *Prerequisite*: written consent of instructor.

ECON 3640 Economics of the Financial System Cr.Hrs.3 (Formerly 018.364) Flows of funds through the financial system; savings and investment and asset choices of households and firms; intermediation by financial institutions; arbitrage between and within countries, government financial policy, with special reference to Canada. Students may not hold credit for ECON 3640 (or 018.364) and any of: ECON 3641 (or 018.364) or FIN 3460 (or 009.346). *Prerequisite*: a grade of "C" or better in one of: ECON 2450 (or 018.245), ECON 2451 (or 018.245), ECON 2460 (or 018.246), ECON 2461 (or 018.246), ECON 2700 (or 018.270), ECON 3700 (or 018.370).

ECON 3641 L'économie et le système financier Cr.Hrs.3 (L'ancien 018.364) Les flux des fonds prêtables et le système financier. L'épargne et l'investissement: l'offre et la demande d'actifs financiers des ménages et des entreprises. Théorie bancaire et intermédiaires financiers. L'arbitrage parmi les marchés financiers et les pays; politiques gouvernementales avec attention particulière au contexte canadien. L'étudiant(e) qui détient les crédits du ECON 3641 (ou 018.364) ne peut se faire créditer aucun des cours ECON 3640 (ou 018.364) ou FIN 3460 (ou 009.346). *Préalable*: une note minimale de C dans un des cours suivants: ECON 2450 (ou 018.245), ECON 2451 (ou 018.245), ECON 2460 (ou 018.246), ECON 2461 (ou 018.246), ECON 2700 (ou 018.270), ECON 3700 (ou 018.370). Donné au Collège universitaire de Saint-Boniface.

ECON 3650 Monetary Macroeconomics and Policy Cr.Hrs.3 (Formerly 018.365) Demand for and supply of money; term structure of interest rates; tools of central banking; design and conduct of monetary policy. Students may not hold credit for both ECON 3650 (or 018.365) and ECON 3651 (or 018.365). *Prerequisite*: a grade of "C" or better in one of: ECON 2470 (or 018.247), ECON 2471 (or 018.247), ECON 2480 (or 018.248), ECON 2481 (or 018.248), ECON 2800 (or 018.280), or ECON 3800 (or 018.380).

ECON 3651 Théorie et politique monétaires Cr.Hrs.3 (L'ancien 018.365) La demande et l'offre de monnaie. La structure des taux d'intérêts. Les outils de la politique monétaire. La gestion monétaire par la banque centrale et le gouvernement. L'étudiant(e) ne peut se faire créditer à la fois le ECON 3651 (ou 018.365) et le ECON 3650 (ou 018.365). *Préalables*: une note minimale de C dans un des suivants: ECON 2470 (ou 018.247), ECON 2471 (ou 018.247), ECON 2480 (ou 018.248), ECON 2481 (ou 018.248), ECON 2800 (ou 018.280), ou ECON 3800 (ou 018.380). Donné au Collège universitaire de Saint-Boniface.

ECON 3660 Economic Ideas and Social Institutions Cr.Hrs.6 (Formerly 018.366) A study of the nature and development of economic ideas: how they influence and are influenced by changing material and intellectual conditions and how they interact with evolving institutions in society. Students may not hold credit for both ECON 3660 (or 018.366) and ECON 3661 (or 018.366). *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics or written consent of instructor.

ECON 3661 La pensée économique et les institutions sociales Cr.Hrs.6 (L'ancien

018.366) L'évolution de la pensée économique dans son interaction avec l'évolution des institutions sociales et les conditions matérielles et intellectuelles des diverses époques. L'étudiant(e) ne peut se faire créditer à la fois le ECON 3661 (ou 018.366) et le ECON 3660 (ou 018.366). *Préalable*: une note minimale de C dans six heures-crédits au niveau 1000 en sciences économiques ou autorisation écrit du professeur. Donné au Collège universitaire de Saint-Boniface.

ECON 3670 International Trade Cr.Hrs.3 (Formerly 018.367) A study of the theory of international trade and modern trade issues including the effect of economic integration on growth, distribution, national policy and the environment. *Prerequisite*: a grade of "C" or better in one of: ECON 2450 (or 018.245), ECON 2451 (018.245) or ECON 2700 (or 018.270); ECON 2460 (or 018.246) or ECON 2461 (or 018.246) is recommended.

ECON 3680 International Finance Cr.Hrs.3 (Formerly 018.368) A study of the theory of international financial markets and issues in open economy macroeconomics focusing on the balance of payments, exchange rates and the effects of international financial integration on national economies. *Prerequisite*: a grade of "C" or better in one of: ECON 2470 (or 018.247), ECON 2471 (or 018.247), or ECON 2800 (or 018.280); ECON 2480 (or 018.248) or ECON 2481 (or 018.248) is recommended.

★ **ECON 3690 Economic Issues of Health Policy Cr.Hrs.3** (Formerly 018.369) The structure, functioning and financing of the Canadian health care delivery system and the demand for health care in Canada. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics.

ECON 3710 Sustainable Development: Issues and Policy Cr.Hrs.3 (Formerly 018.371) An examination of the theory and practice of economic sustainability, ecological sustainability, and social sustainability, with emphasis on analysing current issues and designing policies to achieve sustainable development. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics.

★ **ECON 3720 Urban and Regional Economics and Policies Cr.Hrs.3** (Formerly 018.372) An introduction to the study of the determinants of the spatial distribution of economic activity among urban centres and regions. Particular attention will be paid to such contemporary Canadian problems as regional disparities, urban and environmental decay, and urban renewal, and the policy issues involved in dealing with these problems. *Prerequisite*: a grade of "C" or better in six credit hours of 1000 level Economics, or LABR 1270 (or 153.127).

ECON 3730 Topics in Mathematical Economics Cr.Hrs.3 (Formerly 018.373) Mathematical methods used in economic analysis. Topics will vary from year to year depending on the interests of instructors and students. *Prerequisite*: a grade of "C" or better in ECON 2530 (or 018.253) or written consent of instructor.

ECON 3740 Economics of Industry Cr.Hrs.6 (Formerly 018.374) A study of the business sector, its organization and performance, with a view to public policy issues in a Canadian and global setting. Students may not hold credit for both ECON 3740 (or 018.374) and the former 018.342. *Prerequisite*: a grade of "C" or better in one of: ECON 2450 (or 018.245), ECON 2451 (or 018.245), or ECON 2700 (or 018.270).

ECON 4820 Workshop on Canadian Economic Policy Cr.Hrs.6 (Formerly 018.482) In depth examination of policy issues on selected topics such as unemployment, inflation, international trade, transfer payments, health care, the environment. A major research paper will be expected of all students. Students may not hold credit for both ECON 4820 (or 018.482) and ECON 4830 (or 018.483). *Prerequisite*: formal declaration of an Advanced Major in Economics or Honours Economics program; a grade of "C" or better in each of ECON 3170 (or 018.317) and ECON 3180 (or 018.318); and a grade of "C" or better in all of the following courses: one of ECON 2450 (or 018.245), ECON 2451 (or 018.245), or ECON 2700 (or 018.270); one of ECON 2460 (or 018.246), ECON 2461 (or 018.246), or ECON 3700 (or 018.370); one of ECON 2470 (or 018.247), ECON 2471 (or 018.247) or ECON 2800 (or 018.280); one of ECON 2480 (or 018.248), ECON 2481 (or 018.248), or ECON 3800 (or 018.380).

ECON 4830 Economics Field Placement Cr.Hrs.6 (Formerly 018.483) An educationally directed field experience in an economics-related area. Options include government, non-governmental agency, private industry, community-based projects. Students will work under supervision on a non-paid basis for the equivalent of one day per week and will write an essay based on this experience, relating theory and practice. Students may not hold credit for both ECON 4830 (or 018.483) and ECON 4820 (or 018.482). *Prerequisite*: formal declaration of an Advanced Major in Economics or Honours Economics program; a grade of "C" or better in each of ECON 3170 (or 018.317) and ECON 3180 (or 018.318); and a grade of "C" or better in all of the following courses: one of ECON 2450 (or 018.245), ECON 2451 (or 018.245), or ECON 2700 (or 018.270); one of ECON 2460 (or 018.246), ECON 2461 (or 018.246), or ECON 3700 (or 018.370); one of ECON 2470 (or 018.247), ECON 2471 (or 018.247) or ECON 2800 (or 018.280); one of ECON 2480 (or 018.248), ECON 2481 (or 018.248), or ECON 3800 (or 018.380).

Honours Courses

ECON 2700 Microeconomic Analysis 1 Cr.Hrs.3 (Formerly 018.270) An introduction to the principles and techniques of microeconomic analysis including consumer theory, income and substitution effects, production, cost, and general equilibrium. Students may not hold credit for ECON 2700 (or 018.270) and any of: ECON 2450 (or 018.245), ECON 2451 (or 018.245), ECON 2460 (or 018.246), or ECON 2461 (or 018.246). *Prerequisite*: written consent of department head.

ECON 2800 Macroeconomic Analysis 1 Cr.Hrs.3 (Formerly 018.280) An introduction to the study of fluctuations in national income, employment and prices, and of stabilization policy in open and closed economies. Students may not hold credit for ECON 2800 (or 018.280) and any of: ECON 2470 (or 018.247), ECON 2471 (or 018.247), ECON 2480 (or 018.248), or ECON 2481 (or 018.248). *Prerequisite*: written consent of department head.

ECON 3430 Population Theory and Demographic Methods Cr.Hrs.6 (Formerly 018.343) Concepts and theories of population and the nature and use of demographic

measures, particularly as these relate to the performance of the economy. *Prerequisite*: written consent of department head.

ECON 3700 Microeconomic Analysis 2 Cr.Hrs.3 (Formerly 018.370) An intensive study of the principles and techniques of microeconomic analysis including consumer theory, theory of the firm, market structures, factor markets and externalities. Students may not hold credit for ECON 3700 (or 018.370) and any of: ECON 2450 (or 018.245), ECON 2451 (or 018.245), ECON 2460 (or 018.246) or ECON 2461 (or 018.246). *Prerequisite*: written consent of department head.

ECON 3800 Macroeconomic Analysis 2 Cr.Hrs.3 (Formerly 018.380) An intensive study of the mainstream approaches to explaining output and inflation, including their mathematical structure and empirical implications. Students may not hold credit for ECON 3800 (or 018.380) and any of: ECON 2470 (or 018.247), ECON 2471 (or 018.247), ECON 2480 (or 018.248), or ECON 2481 (or 018.248). *Prerequisite*: written consent of department head.

ECON 3810 Alternative Approaches to Macroeconomic Analysis Cr.Hrs.3 (Formerly 018.381) A survey of Post-Keynesian, Cambridge, Marxian, and institutionalist approaches to macroeconomic fluctuations, contrasting their theoretical and policy frameworks with those of mainstream macroeconomics. *Prerequisite*: written consent of department head.

ECON 4120 Intermediate Econometrics Cr.Hrs.3 (Formerly 018.412) A course in applied econometrics that explores the regression model and how it may be used to test economic theory. Special emphasis is placed on violations of the assumptions of least squares, specification error, and applying the model to production, forecasting and economic theory. This course assumes students have had a sound background in economic theory (i.e. micro and macro), as well as single-variable calculus, linear algebra and basic statistics. Also offered as ABIZ 4120 by Agricultural Economics. May not hold credit with ABIZ 4120 (or 061.412). *Prerequisite*: written consent of department head.

ECON 4130 Seminar in Econometrics Cr.Hrs.3 (Formerly 018.413) This course explores econometrics to estimate limited dependent variable models, dynamic economic relationships, time series, and feedback processes that use simultaneous equation systems. The emphasis is on applying econometrics to a range of problems in micro- and macroeconomics. *Prerequisite*: a grade of "C" or better in ECON 4120 (or 018.412) and written consent of department head.

ECON 4140 Evaluation of Economic Policy and Programs Cr.Hrs.3 Examination of government programs and policies, using cost-benefit analysis, cost-effectiveness, program evaluation, decision-making under uncertainty, and emerging approaches. Case studies will draw upon poverty, health, transportation, environment, development and other areas. *Prerequisite*: written consent of department head.

ECON 4410 History of Economic Thought Cr.Hrs.6 (Formerly 018.441) The history of economic theory; the evolution of its main concepts, the people who developed them, and the environment in which they worked. *Prerequisite*: written consent of department head.

ECON 4430 Theories of Economic Development Cr.Hrs.6 (Formerly 018.443) A study of theories, problems, and policies of economic growth and development both for advanced and underdeveloped countries. *Prerequisite*: written consent of department head; ECON 2800 (or 018.280) and ECON 3800 (or 018.380) are/is recommended but not required.

ECON 4450 Comparative Economic Systems Cr.Hrs.6 (Formerly 018.445) A comparative analysis of traditional, market, and command economies. *Prerequisite*: written consent of department head; ECON 2800 (or 018.280) and ECON 3800 (or 018.380) are/is recommended but not required.

ECON 4470 Natural Resource Economics Cr.Hrs.6 (Formerly 018.447) The application of economic theory to the study of natural resource development and resource problems. Emphasis is on the implications for resource management and policy. *Prerequisite*: written consent of department head.

ECON 4490 Special Studies Cr.Hrs.3 (Formerly 018.449) This readings course will vary from year to year depending on the needs of students and the interests of instructors. *Prerequisite*: written consent of instructor.

ECON 4500 Special Studies Cr.Hrs.6 (Formerly 018.450) This readings course will vary from year to year depending on the needs of students and interests of instructors. *Prerequisite*: written consent of instructor.

ECON 4510 Economy and State in the Modern Period: Western Europe and North America Cr.Hrs.6 (Formerly 018.451) The evolution of the capitalist economies of Western Europe and North America from the late 19th century with specific attention to the changing economic role of the state. *Prerequisite*: written consent of department head; ECON 2270 (or 018.227) or ECON 2271 (or 018.227) or ECON 3300 (or 018.330) or ECON 3301 (or 018.330) is recommended but not required.

ECON 4700 Classical and Neoclassical General Equilibrium Theory Cr.Hrs.3 (Formerly 018.470) Development of simple linear general equilibrium models of production and exchange. The course will stress the assumptions responsible for the different forms and the differing results of the classical (Smith, Ricardo, Marx) and neoclassical models (Walras). *Prerequisite*: written consent of department head.

ECON 4710 Topics in Microeconomics of Uncertainty and Optimization Over Time Cr.Hrs.3 (Formerly 018.471) An introduction to the study of microeconomic theories and models dealing with problems of uncertainty, incomplete and asymmetric information, strategic behaviour, interest, capital theory and optimization over time. *Prerequisite*: written consent of department head.

ECON 4810 Stabilization Policy Cr.Hrs.3 (Formerly 018.481) Analysis of the actual and optimal behaviour of governments in designing rules for the conduct of monetary, fiscal, and other stabilization policies. *Prerequisite*: written consent of department head.

8.10 Department of English

Head: David Arnason

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8.10.1 Academic Staff

Distinguished Professor Emeritus

Kroetsch, R.P., B.A. (Alberta), M.A. (Middlebury), Ph.D. (Iowa), F.R.S.C.

Professors Emeriti

Teunissen, J. J., B.A.(Hons.), M.A. (Saskatchewan), Ph.D. (Roch.); **Weil**, H.S., B.A. (Tulane), M.A., Ph.D. (Stanford); **Weil**, J.R., B.A. (Middlebury), M.A., Ph.D. (Stanford).

Senior Scholars

Hoople, R. P., B.A., M.A. (Syracuse), Ph.D. (Minnesota); **Ogden**, J.T., A.B. (Princeton), M.A.T. (Johns Hopkins), Ph.D. (Illinois).

Professors

Arnason, D.E., B.A., Cert.Ed., M.A. (Manitoba), Ph.D. (New Brunswick); **Cooley**, D.O., B.Ed., B.A.(Hons.), M.A. (Saskatchewan), Ph.D. (Roch.); **de Toro**, F., B.A., M.A. (Carleton), Ph.D. (Montreal); **Finnegan**, R.E., B.A. (St. Peter's), M.A., Ph.D. (Notre Dame); **Johnson**, C.G., B.A., M.A.(UBC), Ph.D. (Leeds); **O'Kell**, R.P., B.A.(Hons.) (Carleton), A.M., Cert.Vict.Studies, Ph.D. (Indiana); **Snyder**, W.S., B.A., M.A. (Idaho), Ph.D. (Florida); **Toles**, G.E., B.A. (New York), M.A., Ph.D. (Virginia); **Walz**, E.P., B.A. (St. John Fisher), M.A. (Indiana), Ph.D. (Massachusetts); **Williams**, D.L., B.A.(Hons.) (Saskatchewan), M.A., Ph.D. (Massachusetts).

Associate Professors

Calder, A.C., B.A. (Saskatchewan), M.A., Ph.D. (Western Ontario); **Lenoski**, D. S., B.A.(Hons.), M.A. (Manitoba), Ph.D. (Queen's); **Medoro**, D., B.A.(Toronto), M.A. (Queen's), B.Ed. (Western Ontario), Ph.D. (Queen's); **Owens**, J., B.A., M.A., Ph.D. (Manitoba); **Perkins**, P., B.A. (Utah); M.A., Ph.D. (Dalhousie); **Rempel**, W.J., B.A. (UBC), Ph.D. (Texas); **Young**, A.D., B.A., M.A. (Manitoba), M.A., Ph.D. (Cornell).

Assistant Professors

Austin-Smith, B.L., B.A. (Acadia), M.A. (Victoria), Ph.D. (Manitoba); **Cariou**, W., B.A.(Hons.) (Saskatchewan), M.A., Ph.D. (Toronto); **Clark**, G., B.A. (UBC), M.A., Ph.D. (Chicago); **Faubert**, M.R., B.A., M.A. (Regina), Ph.D. (Toronto); **Groome**, M., B.A., M.A., Ph.D. (McGill); **Kerr**, W., B.A. (Saskatchewan), M.A., Ph.D. (Alberta); **Libin**, M.I., B.A. (Calgary), M.A. (Toronto), Ph.D. (Manitoba); **Muller**, A., B.A. (Calgary), M.A. (Alberta), Ph.D. (McGill); **Sinclair**, S., B.A.(Hons.), M.A. (McGill), Ph.D. (Cardiff); **Tromly**, L., B.A., M.A. (Queen's), Ph.D. (Toronto); **Warne**, V.K., B.A., M.A., Ph.D. (Queen's); **Watt**, D., B.A., M.A. (Alberta), Ph.D. (Oxford).

8.10.2 Program Information

English literature connects us in vital ways to times, places, and cultures, including our own; engages us in important moral and social questions; encourages us to reflect upon the capacities of the human mind and imagination; invites us to probe connections between language, form, structure,

and meaning; and entertains, surprises, shocks, and moves us. Through its offerings of courses in contemporary and historical literature and in creative writing, our program promotes the study of English from this wide range of perspectives.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate, including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in ENGL 1200 or ENGL 1300(or the former 004.126) or both ENGL 1310 and ENGL 1340.

Honours Program

For entry to the Honours Program see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A. A grade of "B" or better is required in ENGL 1200 or ENGL 1300 (or the former 004.126) or in both ENGL 1310 and ENGL 1340; ENGL 1200 is strongly recommended. Students may also be admitted to Honours in English in the third year of undergraduate study, in consultation with the department. Honours students must have their programs approved by the department each year. Normally, to continue in the Honours Program, a minimum grade of "B" must be obtained in all English courses.

Honours courses are also open to students who have been accepted into the pre-M.A. program and to students who have obtained the written consent of the department head.

Honours students who revert to a general program in English must meet the literature prior to the twentieth century requirement for a Major or Minor, and they should consult the department head before continuing.

Students taking Single Honours should, if possible, take at least 12 credit hours in one of the following languages: French, German, Greek, Icelandic, Italian, Latin, Russian, Spanish.

Study Resources

All students taking English should own a writing handbook and a good dictionary such as Webster's *New Collegiate*, Funk and Wagnall's *Standard College*, *The Concise Oxford*, *The Gage Canadian*, or *The New World*. Students will also find useful *The MLA Handbook* and M.H. Abrams, *A Glossary of Literary Terms*.

8.10.3 English			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR ^{1, 2, 3, 5} TOTAL: 30 CREDIT HOURS			
ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340	24 credit hours in general courses to include at least 9 credit hours of literature prior to the twentieth century ⁵ [of the credit hours listed above, at least 6 credit hours must be at the 3000 level].		
ADVANCED MAJOR ^{1, 2, 3, 5} TOTAL: 48 CREDIT HOURS			
ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340	42 credit hours in general courses ⁴ to include at least 15 credit hours of literature prior to the twentieth century ⁵ [of the credit hours listed above, at least 9 credit hours must be at the 3000 level].		
MINOR ^{1, 3, 5} TOTAL: 18 CREDIT HOURS			
ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340	12 credit hours in general courses to include at least 6 credit hours of literature prior to the twentieth century ⁵ [of the credit hours listed above, at least 3 credit hours must be at the 3000 level].		

HONOURS SINGLE ^{1, 5, 6, 8}

- ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340
- ENGL 2640 (in Year 2)
 - 24 credit hours of literature prior to the twentieth century⁵, of which 12 credit hours is to be in literature prior to 1700 selected from the following English courses: ENGL 2070, ENGL 2080, ENGL 2090, ENGL 3000, ENGL 3010, ENGL 3020, ENGL 3030, ENGL 3050, ENGL 3080, ENGL 3090, ENGL 3180
 - 6 credit hours in Canadian literature, selected from the following English courses: ENGL 2270, ENGL 3270⁷
 - 12 credit hours in other literature after 1900, selected from the following English courses: ENGL 2160, ENGL 2180, ENGL 2830, ENGL 2840, ENGL 3980, ENGL 3990⁷
 - 9 credit hours in other English courses [of the credit hours listed above, at least 9 credit hours must be at the 3000 level].
 - 9 credit hours in Honours seminars (4000 level) in Years 3 and 4. Honours seminars that are double-numbered with a graduate course will be limited to fourth-year Honours students.
 - 24 credit hours in ancillary options

HONOURS DOUBLE ^{1, 3, 5, 8}

- ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340
- ENGL 2640 (in Year 2)
 - 18 credit hours of Literature prior to the twentieth century⁵
 - 6 credit hours in other English courses [of the credit hours listed above, at least 6 credit hours must be at the 3000 level].
 - 6 credit hours in Honours seminars (4000 level). Honours seminars that are double-numbered with a graduate course will be limited to fourth-year Honours students.
 - 36 credit hours in second honours field
 - 6 credit hours in ancillary options

NOTES:

- ¹ See "(B) Introductory Courses" below for restrictions on the number of courses numbered at the 1000 level that may be taken for credit.
² Students may offer up to 6 credit hours in Film Studies courses, with the exception of FILM 1290 and FILM 1300, toward both the 3-year and the 4-year Major in English. Any Film Studies course so applied may not also be offered toward a Minor in Film Studies.
³ Film Studies course FILM 2280 may be used as an English course to satisfy the English course requirements. If it is used as such, it may not also be applied to a minor in Film Studies or as an ancillary option in Honours.
⁴ Credit in ENGL 2000 may be offered toward the 48 hours in general courses required for a Major (Advanced).
⁵ Students may offer up to 6 credit hours in ENGL 2490 Literature in Translation to satisfy requirements for a General Major, Advanced Major, Single Honours or Double Honours. Students may offer up to 3 credit hours in ENGL 2490 to satisfy the "literature prior to the twentieth century" requirement for a General Major, Advanced Major, Single Honours or Double Honours. Students may not offer ENGL 2490 to satisfy the requirements for a Minor.
⁶ Film and Theatre courses, other than Introductory (1000 level), may be used for credit towards an Honours program (Single).
⁷ Certain courses that vary in content from year to year, such as Honours seminars and Special Topics courses, may also satisfy this requirement, as determined by the Department.
⁸ Ancillary options are courses taken from outside the Honours field of study.

Literature Prior to the Twentieth Century

Students declaring a four-year Major in English must take at least 15 credit hours from the courses listed below. Students declaring a three-year Major in English must take at least 9 credit hours from the list. Students declaring a Minor in English must take at least 6 credit hours from the list. Courses chosen from this list will be deemed to satisfy the previous "Special List" requirement for students in progress towards a degree with previously declared Majors or Minors in English. [NOTE: From year to year, other courses may meet this requirement. Please refer to the on-line course timetable for additional information on these courses.]

Course	Credit Hours
English	
ENGL 2070 Literature of the Sixteenth Century	6
ENGL 2080 Medieval Literature	6
ENGL 2090 Literature of the Seventeenth Century	6
ENGL 2120 Literature of the Restoration and Eighteenth Century	6
ENGL 2130 Literature of the Romantic Period	6
ENGL 2140 Literature of the Victorian Period	6
ENGL 2170 American Literature to 1900	6
ENGL 3000 Chaucer	6
ENGL 3010 Shakespeare	6
ENGL 3020 Milton	6
ENGL 3030 Studies in Sixteenth-Century Literature	3
ENGL 3050 Studies in Old English	6
ENGL 3080 Studies in Medieval Literature	3
ENGL 3090 Studies in Seventeenth-Century Literature	3
ENGL 3120 Studies in Restoration and Eighteenth-Century Literature	3
ENGL 3130 Studies in the Romantics	3
ENGL 3140 Studies in the Victorians	3
ENGL 3180 Studies in Renaissance Literature	3
004.206* Medieval Literature	3
004.210* English Literature of the Sixteenth Century	3
004.215* English Literature of the Seventeenth Century	3

004.226*	English Literature of the Restoration and Eighteenth Century	3
004.228*	Literature of the Romantic Period	3
004.229*	Literature of the Victorian Period	3
004.253*	A History of Critical Theory	3
004.286*	American Literature to 1900	3
004.306*	Studies in Middle English	6
004.307*	Studies in Chaucer	6
004.310*	Studies in Shakespeare	6
004.311*	Studies in Renaissance Literature	6
004.315*	Studies in Seventeenth-Century Literature	6
004.316*	Studies in Milton	6
004.326*	Studies in the Restoration and Eighteenth-Century Literature	6
004.328*	Studies in the Romantics	6
004.329*	Studies in the Victorians	6
The following courses may be used for credit in English; however, some restrictions apply - see program note 5. Contact the department for further information on restrictions.		
Classics (Classical Studies)		
CLAS 3610	Greek Literature in Translation	3
CLAS 3620	Latin Literature in Translation	3
003.269*	Greek Literature in Translation	3
003.270*	Latin Literature in Translation	3
Icelandic		
ICEL 3320	Old Norse Mythology	3
ICEL 3330	Icelandic Sagas in Translation	3
* Indicates course no longer offered.		

8.10.4 English Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given in French at Collège universitaire de Saint-Boniface.

Types of Courses

A – Preliminary Courses

These courses are not designed to teach English as a second language.

For students who need help with basic writing skills, the Department of English offers two half courses: ENGL 0930 English Composition and ENGL 0940 Writing About Literature. These courses are limited in size. Both ENGL 0930 and ENGL 0940 are acceptable for credit towards a degree in Arts or Science, but they may not be counted for credit in the 48 hours for a Major (Advanced), the 30 hours for a Major (General), or the 18 hours for a Minor. Either or both will, however, be included in the total number of hours a student is allowed to take in the combined Major and Minor. There is no prerequisite for entry into ENGL 0930 or ENGL 0940, and these courses are not required for admission to subsequent English courses.

U1 W ENGL 0930 English Composition Cr.Hrs.3 (Formerly 004.093) Designed to help students write better essays. Course focuses on effective expression; sentence, paragraph, and essay construction; and the writing process. A great deal of writing is required; instructors address the particular needs of individual students. Students may not enter English courses numbered above the 1000 level directly from this course. This course is not designed to teach English as a second language.

U1 W ENGL 0940 Writing About Literature Cr.Hrs.3 (Formerly 004.094) Designed to supplement and to complement ENGL 0930 (or 004.093), the course may be taken by itself. The course focuses on writing about literature through the study of the short story and poetry. Students may not normally enter English courses numbered above the 1000 level directly from this course. This course is not designed to teach English as a second language.

ENGL 1061 Anglais langue seconde I Cr.Hrs.3 (L'ancien 004.106) Révision et approfondissement de la grammaire anglaise. Élargissement du vocabulaire propre à la langue soutenue et sensibilisation aux pièges posés par les gallicismes d'ordre lexical et syntaxique. Étude des principes fondamentaux de rédaction: style, organisation et argumentation. Étude pratique de l'anglais parlé dans diverses situations. Expressions idiomatiques. Amélioration de la prononciation. Apprentissage des principes de base et exercices pratiques d'art oratoire en anglais. On ne peut se faire créditer le ENGL 1061 (ou 004.106) et l'ancien 004.104. *Préalable:* Réussite du test de classement. Ce test est assorti d'un seuil minimum et d'un seuil maximum afin d'exclure les étudiants et étudiantes dont la connaissance de l'anglais est trop faible ou trop forte aux fins du cours. Donné au Collège universitaire de Saint-Boniface.

ENGL 1071 Anglais langue seconde II Cr.Hrs.3 (L'ancien 004.107) Suite du ENGL 1061 (ou 004.106). Révision et approfondissement de la grammaire anglaise. Élargissement du vocabulaire propre à la langue soutenue et sensibilisation aux pièges posés par les gallicismes d'ordre lexical et syntaxique. Étude des principes fondamentaux de rédaction: style, organisation et argumentation. Étude pratique de l'anglais parlé dans diverses situations. Expressions idiomatiques. Amélioration de la prononciation. Apprentissage des principes de base et exercices pratiques d'art oratoire en anglais. On ne peut se faire créditer le ENGL 1071 (ou 004.107) et l'ancien 004.105. *Préalable:* une note minimale de C dans le ENGL 1061 (ou 004.106) ou l'ancien 004.104 ou la recommandation du Service de perfectionnement linguistique. Donné au Collège universitaire de Saint-Boniface.

B – Introductory Courses

A grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), or in both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126 is normally required for entry to a Major or Minor program in English and is the normal prerequisite for any English course beyond the introductory level. For admission to Honours courses or the Honours program see Honours Program above. Up to 12 hours of courses at the 1000 level may be taken for credit but students may offer only 6 hours of courses numbered at the 1000 level for credit in the minimum number of hours required for a three-year Major or a Minor in English. If 9 or 12 hours are taken, however, they will be included in the total number of hours a student is allowed to take in the combined Major and Minor. In the four-year Major only, a student may offer 6, 9 or 12 hours of courses numbered at the 1000 level courses for credit in the minimum number of hours required.

U1 W ENGL 1200 Representative Literary Works Cr.Hrs.6 (Formerly 004.120) An introduction to the study of literature, with emphasis on the development of reading and writing skills. Poetry, prose and drama from various historical periods. Texts for each section will be announced. Students may not hold credit for ENGL 1200 (or 004.120) and any of: ENGL 1201 (or 004.120) or the former 004.124. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted.

W ENGL 1201 Representative Literary Works Cr.Hrs.6 (L'ancien 004.120) An introduction to the study of literature, with emphasis on the development of reading and writing skills. Poetry, prose and drama from various historical periods. Texts for each section will be announced. Students may not hold credit for ENGL 1201 (or 004.120) and any of: ENGL 1200 (or 004.120) or the former 004.124. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted. Given at Collège universitaire de Saint-Boniface.

U1 W ENGL 1300 Literature since 1900 Cr.Hrs.6 (Formerly 004.130) An introduc-

tion to the study of literature, with emphasis on the development of reading and writing skills. Poetry, prose and drama from Canada, Britain, the United States and other countries. Texts for each section will be announced. Students may not hold credit for ENGL 1300 (or 004.130) and any of: ENGL 1301 (or 004.130) or the former 004.126. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted.

W ENGL 1301 Literature since 1900 Cr.Hrs.6 (L'ancien 004.130) An introduction to the study of literature, with emphasis on the development of reading and writing skills. Poetry, prose and drama from Canada, Britain, the United States and other countries. Texts for each section will be announced. Students may not hold credit for ENGL 1301 (or 004.130) and any of: ENGL 1300 (or 004.130) or the former 004.126. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted. Given at Collège universitaire de Saint-Boniface.

U1 W ENGL 1310 Literary Topics 1 Cr.Hrs.3 (Formerly 004.131) Topics relating to literature and culture will vary yearly. See the Registration Guide for a list of current topics and the Department of English Course List for a brief description of each section. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted.

U1 W ENGL 1340 Introduction to Literary Analysis Cr.Hrs.3 (Formerly 004.134) This course is intended to prepare students who have completed ENGL 1310 (or 004.131) or the former 004.132 for further study in English. It will provide them with the additional reading and writing skills and experience required for successful study in upper-level courses. *Prerequisite:* a grade of "C" or better in ENGL 1310 (or 004.131) or the former 004.132.

C- Intermediate Courses (2000 level)

These courses are open to any student who has a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), or in both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126, or who has written consent of the department head.

W ENGL 2000 Intermediate Writing and Research Cr.Hrs.6 (Formerly 004.200) Designed to teach students how to read, write, and research at the university level, this course stresses effective expository writing, prose reading, and research skills. There is no prerequisite for this course. NOTE: Credit in ENGL 2000 (or 004.200) is acceptable toward a degree in Arts or Science, but does not satisfy the humanities requirement in the Faculty of Arts. It may not be offered for credit in the 30 hours for a Major (General) or the 18 hours for a Minor but may be offered for credit in the 48 hours for the Major (Advanced).

W ENGL 2001 Intermediate Writing and Research Cr.Hrs.6 (L'ancien 004.200) Designed to teach students how to read, write, and research at the university level, this course stresses effective expository writing, prose reading, and research skills. There is no prerequisite for this course. Note: Credit in ENGL 2001 (or 004.200) is acceptable toward a degree in Arts or Science, but does not satisfy the humanities requirement in the Faculty of Arts. It may not be offered for credit in the 30 hours for a Major (General) or the 18 hours for a Minor but may be offered for credit in the 48 hours for the Major (Advanced). Given at Collège universitaire de Saint-Boniface.

ENGL 2070 Literature of the Sixteenth Century Cr.Hrs.6 (Formerly 004.207) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for ENGL 2070 (or 004.207) and any of: ENGL 2071 (or 004.207) or the former 004.210. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), or both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2071 Literature of the Sixteenth Century Cr.Hrs.6 (L'ancien 004.207) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for ENGL 2071 (or 004.207) and any of: ENGL 2070 (or 004.207) or the former 004.210. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), or both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126. Given at Collège universitaire de Saint-Boniface.

ENGL 2080 Medieval Literature Cr.Hrs.6 (Formerly 004.208) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold for credit both ENGL 2080 (or 004.208) and the former 004.206. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), or both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2090 Literature of the Seventeenth Century Cr.Hrs.6 (Formerly 004.209) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for ENGL 2090 (or 004.209) and any of: ENGL 2091 (or 004.209) or the former 004.215. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), or both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2091 Literature of the Seventeenth Century Cr.Hrs.6 (L'ancien 004.209) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for ENGL 2091 (or 004.209) and any of: ENGL 2090 (or 004.209) or the former 004.215. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), or both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126. Given at Collège universitaire de Saint-Boniface.

ENGL 2120 Literature of the Restoration and Eighteenth Century Cr.Hrs.6 (Formerly 004.212) A survey of poetry, prose and drama by major and minor writers in historical

context. Students may not hold credit for both ENGL 2120 (or 004.212) and the former 004.226. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2130 Literature of the Romantic Period Cr.Hrs.6 (Formerly 004.213) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for both ENGL 2130 (or 004.213) and the former 004.228. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2140 Literature of the Victorian Period Cr.Hrs.6 (Formerly 004.214) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for both ENGL 2140 (or 004.214) and the former 004.229. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2160 British Literature since 1900 Cr.Hrs.6 (Formerly 004.216) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for ENGL 2160 (or 004.216) and any of: ENGL 2161 (or 004.126) or the former 004.285. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2161 British Literature since 1900 Cr.Hrs.6 (L'ancien 004.216) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for ENGL 2161 (or 004.216) and any of: ENGL 2160 (or 004.126) or the former 004.285. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126. Given at Collège universitaire de Saint-Boniface.

ENGL 2170 American Literature to 1900 Cr.Hrs.6 (Formerly 004.217) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for both ENGL 2170 (or 004.217) and the former 004.286. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2180 American Literature since 1900 Cr.Hrs.6 (Formerly 004.218) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for both ENGL 2180 (or 004.218) and the former 004.287. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2190 Special Topics Cr.Hrs.3 (Formerly 004.219) *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

✳ **ENGL 2270 Canadian Literature Cr.Hrs.6** (Formerly 004.227) A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold credit for both ENGL 2270 (or 004.227) and the former 004.288 or the former 004.289. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2470 English Language Cr.Hrs.3 (Formerly 004.247) An introduction to modern English sounds and sentences and to the historical development of the English language. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2490 Literature in Translation Cr.Hrs.3 (Formerly 004.249) Content of this course will vary from year to year and from section to section. See the course descriptions available from the English Department. Each section of this course will be double-numbered with the department of the instructor teaching the course. Restrictions: See note 5 in the program table under section 8.10.3 English. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2550 Critical Practise Cr.Hrs.3 (Formerly 004.255) An introduction to the critical idioms and methods for the analysis of literary texts. Students may not hold credit for both ENGL 2550 (or 004.255) and ENGL 2800 (or 004.280). *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2570 The Novel Cr.Hrs.6 (Formerly 004.257) A survey of the development of the novel as a genre. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2600 Writing and Gender Cr.Hrs.3 (Formerly 004.260) The literary representation of gender, the influence of the author's gender on writing, and other issues of gender in literature. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2640 History of Critical Theory: From Plato to the Present Cr.Hrs.6 (Formerly 004.264) A survey of critical theory, with some emphasis on application. Students

may not hold for credit both ENGL 2640 (or 004.264) and the former 004.253 or the former 004.254. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2760 Introductory Creative Writing Cr.Hrs.3 (Formerly 004.276) Offers students the chance to explore the basic forms of creative writing - poetry, fiction, and drama - whether or not they have made previous formal attempts to write in these forms. A sample of the student's writing is not required for admission to this course. The format is seminar and workshop and will include, as needed, lectures on the fundamentals of creative writing. Students may not register concurrently for ENGL 2760 (or 004.276) or any of: ENGL 3500 (or 004.350) or ENGL 3790 (or 004.379). Not open to students who have previously obtained credit for any of ENGL 3500 (or 004.350) or ENGL 3790 (or 004.379). *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2830 Literature of Africa and/or the Caribbean Cr.Hrs.3 (Formerly 004.283) This course will explore the literatures of Africa and the Caribbean by writers from Nigeria, South Africa, Kenya, Zimbabwe, Grenada, Jamaica, and/or Trinidad. We will also examine the theories often associated with postcolonialism. theories of marginality, power, alterity, ethnicity, race, locality, space, the subaltern, mimicry, hybridity, nationalism, diaspora, class, migration, multiculturalism, minority discourse, resistance, and historical revisionism. in a comparative context. Accordingly, we will be reading both fictional and theoretical works. The central objective of this course is to offer an overview of some contemporary world literature written in English. Students will also be encouraged to examine the texts from a variety of complimentary literary perspectives including new historicism, feminism, and Marxism. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2840 Literature of Australia, New Zealand, and/or South Asia Cr.Hrs.3 (Formerly 004.284) This course will explore the literatures of Australia, New Zealand, the Pacific Islands, Singapore, India, Pakistan, and/or Bangladesh. We will also examine the theories often associated with postcolonialism. theories of marginality, power, alterity, ethnicity, race, locality, space, the subaltern, mimicry, hybridity, nationalism, diaspora, class, migration, multiculturalism, minority discourse, resistance, and historical revisionism. in a comparative context. Accordingly, we will be reading both fictional and theoretical works. The central objective of this course is to offer an overview of some contemporary world literature written in English. Students will also be encouraged to examine the texts from a variety of complimentary literary perspectives including new historicism, feminism, and Marxism. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2900 Genre Cr.Hrs.3 (Formerly 004.290) Selections in literature of a particular genre. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2930 International Literature Cr.Hrs.3 (Formerly 004.293) Literature of Canada, the United States, and/or Britain in the contexts of world literature. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2940 Short Fiction I Cr.Hrs.3 (Formerly 004.294) Representative writers. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2960 Drama 1 Cr.Hrs.3 (Formerly 004.296) An introduction to dramatic forms and conventions. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

ENGL 2961 Drama 1 Cr.Hrs.3 (L'ancien 004.296) An introduction to dramatic forms and conventions. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126. Given at Collège universitaire de Saint-Boniface.

ENGL 2980 Poetry 1 Cr.Hrs.3 (Formerly 004.298) Introduction to poetic language and forms. *Prerequisite:* a grade of "C" or better in one of: ENGL 1200 (or 004.120), ENGL 1201 (or 004.120), ENGL 1300 (or 004.130), ENGL 1301 (or 004.130), both ENGL 1310 (or 004.131) and ENGL 1340 (or 004.134), or the former 004.126.

D- Advanced Courses (3000 level)

Major Literary Figures

ENGL 3000 Chaucer Cr.Hrs.6 (Formerly 004.300) Critical study of the works of this author, including historical context. Students may not hold credit for both ENGL 3000 (or 004.300) and the former 004.307. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3010 Shakespeare Cr.Hrs.6 (Formerly 004.301) Critical study of the works of this author, including historical context. Students may not hold credit for ENGL 3010 (or 004.301) and any of: ENGL 3011 (or 004.301) or the former 004.310. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3011 Shakespeare Cr.Hrs.6 (L'ancien 004.301) Critical study of the works of this author, including historical context. Students may not hold credit for ENGL 3011

(or 004.301) and any of: ENGL 3010 (or 004.301) or the former 004.310. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level. Given at Collège universitaire de Saint-Boniface.

ENGL 3020 Milton Cr.Hrs.6 (Formerly 004.302) Critical study of the works of this author, including historical context. Students may not hold credit for ENGL 3020 (or 004.302) and any of: ENGL 3021 (or 004.302) or the former 004.316. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3021 Milton Cr.Hrs.6 (L'ancien 004.302) Critical study of the works of this author, including historical context. Students may not hold credit for ENGL 3021 (or 004.302) and any of: ENGL 3020 (or 004.302) or the former 004.316. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level. Given at Collège universitaire de Saint-Boniface.

Other 3000 level courses

NOTE: The content of the following 3000-level "Studies" courses will vary from year to year. See the Department of English Handbook for detailed course descriptions.

ENGL 3030 Studies in Sixteenth-Century Literature Cr.Hrs.3 (Formerly 004.303) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3050 Studies in Old English Cr.Hrs.6 (Formerly 004.305) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3080 Studies in Medieval Literature Cr.Hrs.3 (Formerly 004.308) Students may not hold credit for both ENGL 3080 (or 004.308) and the former 004.306. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3090 Studies in Seventeenth-Century Literature Cr.Hrs.3 (Formerly 004.309) Students may not hold credit for both ENGL 3090 (or 004.309) and the former 004.315. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3120 Studies in Restoration and Eighteenth-Century Literature Cr.Hrs.3 (Formerly 004.312) Students may not hold credit for both ENGL 3120 (or 004.312) and the former 004.326. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3130 Studies in the Romantics Cr.Hrs.3 (Formerly 004.313) Students may not hold credit for both ENGL 3130 (or 004.313) and the former 004.328. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3140 Studies in the Victorians Cr.Hrs.3 (Formerly 004.314) Students may not hold credit for ENGL 3140 (or 004.314) and any of: ENGL 3141 (or 004.314) or the former 004.329. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3141 Studies in the Victorians Cr.Hrs.3 (L'ancien 004.314) Students may not hold credit for ENGL 3141 (or 004.314) and any of: ENGL 3140 (or 004.314) or the former 004.329. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level. Given at Collège universitaire de Saint-Boniface.

ENGL 3170 Studies in American Literature Cr.Hrs.3 (Formerly 004.317) Students may not hold credit for both ENGL 3170 (or 004.317) and the former 004.387. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3180 Studies in Renaissance Literature Cr.Hrs.3 (Formerly 004.318) Students may not hold credit for both ENGL 3180 (or 004.318) and the former 004.311. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3190 Studies in Special Topics Cr.Hrs.6 (Formerly 004.319) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

✳️ **ENGL 3270 Studies in Canadian Literature Cr.Hrs.3** (Formerly 004.327) Students may not hold credit for ENGL 3270 (004.327) and any of: ENGL 3271 (or 004.327) or the former 004.388. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

✳️ **ENGL 3271 Studies in Canadian Literature Cr.Hrs.3** (L'ancien 004.327) Students may not hold credit for ENGL 3271 (004.327) and any of: ENGL 3270 (or 004.327) or the former 004.388. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3500 Creative Writing Cr.Hrs.6 (Formerly 004.350) Classroom hours will be arranged. Students may concentrate on poetry or on prose alone. Enrolment will be limited to allow for the particular interests of students. Written consent of the instructor, based on a sample of the student's work, must be obtained before registration. Samples of writing (with name, address, and telephone number) are to be submitted to the department general office not later than July 31. Students may offer only one of ENGL 3500 (or 004.350) and ENGL 3790 (or 004.379) for credit for a Major.

NOTE: Students may offer only one of ENGL 3500 (or 004.350) and ENGL 3790 (or 004.379) for credit for a Major. If both courses are taken, however, they will be included in the total number of hours that a student has in the Major.

ENGL 3520 Studies in Forms of Discourse Cr.Hrs.3 (Formerly 004.352) Students may not hold credit for both ENGL 3520 (or 004.352) and the former 004.353. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3550 Studies in British Literature since 1900 Cr.Hrs.3 (Formerly 004.355) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3630 Studies in Critical Theory Cr.Hrs.3 (Formerly 004.363) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3660 Special Studies Cr.Hrs.6 (Formerly 004.366) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3670 Studies in the Novel Cr.Hrs.6 (Formerly 004.367) Prerequisite: a grade

of "C" or better in six hours of English at the 2000 level. Students may not hold credit for both ENGL 3670 (or 004.367) and ENGL 3671 (or 004.367).

ENGL 3671 Studies in the Novel Cr.Hrs.6 (L'ancien 004.367) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level. Students may not hold credit for both ENGL 3671 (or 004.367) and ENGL 3670 (or 004.367). Given at Collège universitaire de Saint-Boniface.

ENGL 3790 Advanced Creative Writing Cr.Hrs.6 (Formerly 004.379) An intensive workshop among other students at a high level of talent. The instructor will work closely with each student through individual conferences. Students will normally have taken ENGL 3500 (or 004.350) as a prerequisite to this course; however, standing in either does not automatically guarantee admission to ENGL 3790 (or 004.379). Written consent of the instructor, based on a sample of the student's work, must be obtained before registration. Samples of writing (with name, address and telephone number) are to be submitted at the department general office no later than July 31. Students may offer only one of ENGL 3790 (or 004.379) and ENGL 3500 (or 004.350) for credit for a Major.

NOTE: Students may offer only one of ENGL 3500 (or 004.350) and ENGL 3790 (or 004.379) for credit for a Major. If both courses are taken, however, they will be included in the total number of hours that a student has in the Major.

ENGL 3800 Special Studies 1 Cr.Hrs.3 (Formerly 004.380) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3890 Studies in Writing and Gender Cr.Hrs.3 (Formerly 004.389) Students may not hold credit for both ENGL 3890 (or 004.389) and the former 004.360. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3900 Studies in Genre Cr.Hrs.6 (Formerly 004.390) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3930 Studies in International Literature Cr.Hrs.6 (Formerly 004.393) Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3950 Short Fiction 2 Cr.Hrs.3 (Formerly 004.395) Advanced study of selected topics. Students may not hold credit for both ENGL 3950 (or 004.395) and the former 004.295. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3960 Drama 2 Cr.Hrs.3 (Formerly 004.396) Advanced study of selected topics. Students may not hold credit for ENGL 3960 (or 004.396) and any of: ENGL 3961 (or 004.396) or the former 004.297. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3961 Drama 2 Cr.Hrs.3 (L'ancien 004.396) Advanced study of selected topics. Students may not hold credit for ENGL 3961 (or 004.396) and any of: ENGL 3960 (or 004.396) or the former 004.297. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level. Given at Collège universitaire de Saint-Boniface.

ENGL 3970 Poetry 2 Cr.Hrs.3 (Formerly 004.397) Advanced study of selected topics. Students may not hold credit for both ENGL 3970 (or 004.397) and the former 004.299. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3980 Studies in Modernism Cr.Hrs.3 (Formerly 004.398) Students may not hold credit for both ENGL 3980 (or 004.398) and the former 004.391. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

ENGL 3990 Studies in Post-Modernism Cr.Hrs.3 (Formerly 004.399) Students may not hold credit for both ENGL 3990 (or 004.399) and the former 004.392. Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

E- Honours Courses

ENGL 2800 Principles and Methods of Literary Analysis Cr.Hrs.6 (Formerly 004.280) An introduction to the critical idioms and methods available for the analysis of literary texts. Selected texts will be used to teach the art of close reading and to illustrate a variety of critical approaches to literature. Prerequisite: written consent of department head.

ENGL 4630 Honours Seminar 1 Cr.Hrs.3 (Formerly 004.463) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

ENGL 4640 Honours Seminar 2 Cr.Hrs.3 (Formerly 004.464) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

ENGL 4650 Honours Seminar 3 Cr.Hrs.3 (Formerly 004.465) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

ENGL 4660 Honours Seminar 4 Cr.Hrs.3 (Formerly 004.466) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

ENGL 4770 Honours Seminar 1 Cr.Hrs.6 (Formerly 004.477) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

ENGL 4780 Honours Seminar 2 Cr.Hrs.6 (Formerly 004.478) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

ENGL 4790 Honours Seminar 3 Cr.Hrs.6 (Formerly 004.479) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

ENGL 4800 Honours Seminar 4 Cr.Hrs.6 (Formerly 004.480) This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head.

8.11 Film Studies Program

Chair: George Toles

Program Office: 367 University College

Telephone: 204 474 9581

E-mail: filmstudies@umanitoba.ca

Website: www.umanitoba.ca/film

8.11.1 Academic Staff

Professors

Snyder, W.S., B.A., M.A. (Idaho), Ph.D. (Florida); **Toles**, G.E., B.A. (New York), M.A., Ph.D. (Virginia); **Walz**, E.P., B.A. (St. John Fisher), M.A. (Indiana), Ph.D. (Massachusetts).

Assistant Professor

Austin-Smith, B.L., B.A. (Acadia), M.A. (Victoria), Ph.D. (Manitoba).

8.11.2 Program Information

Film is the most important popular culture art form of the 20th century. Our knowledge and perception of the modern world is shaped by film or its related media — video and television. Film is a social, cultural, and historical document that in addition to being worthwhile for study as an artistic medium, also shares issues with philosophy, sociology, political studies, and

other disciplines. Instructors include people who have made and written about films, who are well prepared to discuss film history, film as cultural artifacts and the connections between film and other disciplines.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of “C” or better in both FILM 1290 and FILM 1300. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of “C” or better in both FILM 1290 and FILM 1300.

8.11.3 Film Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
FILM 1290 and FILM 1300	24 credit hours in Film Studies courses, including FILM 3420		
ADVANCED MAJOR TOTAL: 60 CREDIT HOURS			
FILM 1290 and FILM 1300	<ul style="list-style-type: none"> 42 credit hours in Film Studies including FILM 3420 and an additional 6 credit hours in courses numbered at the 3000 level 12 credit hours from List A and B of which at least 6 credit hours must be from List A 		
MINOR TOTAL: 18 CREDIT HOURS			
FILM 1290 and FILM 1300	12 credit hours in Film Studies courses		

List A

Faculty of Arts

Classics

CLAS 3610	Greek Literature in Translation	3
CLAS 3620	Latin Literature in Translation	3
CLAS 3680	Studies in a Classical Literary Genre 1	3
CLAS 3690	Studies in a Classical Literary Genre 2	3
CLAS 3700	Studies in a Classical Literary Genre 3	3
003.269*	Greek Literature in Translation	3
003.270*	Latin Literature in Translation	3
English		
ENGL 1200	Representative Literary Works	6
ENGL 1300	Literature since 1900	6
ENGL 2170	American Literature to 1900	6
ENGL 2180	American Literature since 1900	6
ENGL 2270	Canadian Literature	6
ENGL 2960	Drama 1	3
ENGL 3010	Shakespeare	6
ENGL 3270	Studies in Canadian Literature	3
ENGL 3500	Creative Writing	6
ENGL 3670	Studies in the Novel	6
ENGL 3790	Advanced Creative Writing	6
ENGL 3960	Drama 2	3
ENGL 3980	Studies in Modernism	3
004.126*	Twentieth-Century Literature in English	6
004.285*	British Literature of the Twentieth Century	3
004.286*	American Literature to 1900	3
004.287*	American Literature of the Twentieth Century	3
004.288*	Canadian Literature to 1967	3
004.289*	Canadian Literature after 1967	3
004.297*	Drama 2	3
004.310*	Studies in Shakespeare	6
004.388*	Studies in Canadian Literature	6
004.391*	Studies in Modern Literature	6
French, Spanish and Italian		

FREN 3500	Littérature du 17e siècle (B)	3
FREN 3580	Travail indépendant (A, B)	3
044.240*	Le roman du 19e siècle (B)	3
044.241*	Littérature du 18e siècle (B)	3
044.242*	Le théâtre du 20e siècle (B)	3
044.243*	Civilisation française (B)	3
044.351*	Roman du 20e siècle (B)	3
044.352*	Poésie des 19e et 20e siècles (B)	3
044.353*	Littérature canadienne-française (B)	3
German and Slavic Studies (German)		
GRMN 2370	Modern German Literature in Translation	6
008.223*	A Survey of German Culture	6
008.459*	Nineteenth-Century German Prose	3
008.460*	Twentieth-Century German Drama	3
German and Slavic Studies (Polish)		
POL 2320	An Outline of Polish Literature	6
German and Slavic Studies (Ukrainian)		
UKRN 2420	Ukrainian Canadian Literature	3
UKRN 3660	Ukrainian Literature in the West	3
UKRN 3670	Contemporary Ukrainian Literature	3
Near Eastern and Judaic Studies		
SEM 2210	Modern Hebrew Literature	6

List B

Faculty of Arts

Theatre

THTR 1220	Introduction to Theatre	6
THTR 2150	Theatrical Techniques: Onstage	6
THTR 2470	Fundamentals of Dramatic Analysis	3
THTR 2480	Theatre History	3
THTR 3460	Theory of Drama and Performance	3
THTR 3470	Text and Performance	3
099.206*	History of the Theatre	6
099.321*	Contemporary Theatre Forms	6

School of Art		
FAAH 1030	Introduction to Art 1A	3
FAAH 1040	Introduction to Art 2A	3
FAAH 1050	Introduction to Art 1B	3
FAAH 1060	Introduction to Art 2B	3
054.124*	Introduction to Art A	6
054.130*	Introduction to Art B	6
054.368*	Modern Art 1	3
054.369*	Modern Art 2	3
054.370*	Modern Art 3	3

*Indicates course no longer offered.

8.11.4 Film Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 FILM 1290 The Art of the Film 1 Cr.Hrs.3 (Formerly 152.129) The study of film as an art form, entertainment and document.

U1 FILM 1300 The Art of the Film 2 Cr.Hrs.3 (Formerly 152.130) Representative works of the world's cinema discussed in the context of the historical development of film narrative. *Prerequisite:* a grade of "C" or better in FILM 1290 (or 152.129) or written consent of instructor.

FILM 2280 Film and Literature Cr.Hrs.6 (Formerly 152.228) The interrelationships between literature and film through an analysis of significant films, novels, poems and plays. Special attention to adaptations of Shakespeare, modern drama, the 19th century novel, the modern novel, and popular fiction. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 2300 The Popular Film Cr.Hrs.3 (Formerly 152.230) Current trends in film as a form of culture. Emphasis on recently released films as mirrors of existing social myths and values. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 2330 Film and Contemporary Thought Cr.Hrs.3 (Formerly 152.233) Recent films viewed in the light of current intellectual developments. Screenings are complemented by readings in contemporary political theory, philosophy, art, psychology, critical theory, etc. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 2370 Experimental Cinema Cr.Hrs.3 (Formerly 152.237) Formal innovations in avant-garde and underground films and videos, their significance and influence on the feature film industry.

FILM 2380 The International Cinema 1 Cr.Hrs.3 (Formerly 152.238) An examination of major works of international cinema, focusing upon the contributions of individual countries, or relevant global issues. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 2390 The International Cinema 2 Cr.Hrs.3 (Formerly 152.239) An examination of major works of international cinema, focusing upon the contributions of individual countries, or relevant global issues. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 2400 The American Film to 1950 Cr.Hrs.3 (Formerly 152.240) The aesthetic development of the American Film from the early days until the beginning of television. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 2410 The American Film from 1950 Cr.Hrs.3 (Formerly 152.241) An examination of the Hollywood film from the decline of the studio system. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 2420 Realism and Film Cr.Hrs.3 (Formerly 152.242) Theories and forms of the non-fiction film as an art form, an information carrier and a propaganda tool.

◆ **FILM 2430 The Canadian Film Cr.Hrs.3** (Formerly 152.243) The development of the film industry in Canada in its varied forms, with emphasis upon key films, regional differences and Manitoba contributions.

FILM 2460 Film Genres Cr.Hrs.3 (Formerly 152.246) An examination of a major cinematic genre (e.g. the gangster film, the western, the musical) with emphasis upon the permanence and evolution of generic conventions and the ability of filmmakers to register personal visions within these conventions. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3250 Special Topics in Film 1 Cr.Hrs.3 (Formerly 152.325) An intensive examination of selected topics in film. Contents of the course will vary according to the needs and interests of students and faculty. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3260 Special Topics in Film 2 Cr.Hrs.3 (Formerly 152.326) An intensive examination of selected topics in film. Contents of the course will vary according to the needs and interests of students and faculty. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3400 The Director's Cinema 1 Cr.Hrs.3 (Formerly 152.340) An intensive critical look at the career of one or two major filmmakers. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3410 The Director's Cinema 2 Cr.Hrs.3 (Formerly 152.341) An intensive critical look at the career of one or two major filmmakers. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3420 Film Theory Cr.Hrs.3 (Formerly 152.342) A survey of Film Theory from its beginnings to the present: Eisenstein to André Bazin to Christian Metz and others (film theories, not reviewers). *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3430 Screenwriting Cr.Hrs.3 (Formerly 152.343) An introduction to the techniques and procedures of screenwriting. Students will be expected to complete a screenplay. Students may not hold credit for both FILM 3430 (or 152.343) and Screenwriting as previously offered under the title of Special Topics. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3440 Filmmaking Cr.Hrs.3 (Formerly 152.344) Basic 16mm filmmaking equipment is used to understand the rudiments of cinematography, editing, and lighting. Students will make two films and edit some pre-shot footage. Students may not hold credit for both FILM 3440 (or 152.344) and Filmmaking previously offered under the title of Special Topics. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3450 The Animated Film Cr.Hrs.3 (Formerly 152.345) The art of animation from early cell and puppet films to computer animation and current experimentation. Special attention is given to the "Golden Age of Animation" and to Canada's continuing contribution. *Prerequisite:* a grade of "C" or better in both FILM 1290 (or 152.129) and FILM 1300 (or 152.130) or written consent of instructor.

FILM 3650 Advanced Filmmaking Cr.Hrs.3 (Formerly 152.365) This course is for students who have taken FILM 3440 (or 152.344) Basic Filmmaking and offers an opportunity to pursue longer, more technically ambitious work. Students are required to shoot one (1) 10 minute 16mm film; transfer that film to video; edit and soundtrack it. *Prerequisite:* a grade of "C+" or better in FILM 3440 (or 152.344) and written consent of instructor.

8.12 Department of French, Spanish and Italian

Acting Head: Constance Cartmill

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Telephone: 204 474 9313

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8.12.1 Academic Staff

Professors Emeriti

Gordon, A.L., M.A.(Hons.) (Aberdeen), Docteur de l'Université (Paris), Chevalier Ordre Palmes Acad.; **Gordon, D.K.,** B.A., M.A., Ph.D. (Toronto); **Jensen, C.A. E.,** B.A.(Hons.) (Western Ontario), M.A. (Toronto), Ph.D. (Chicago), Officier Ordre Palmes Acad.

Senior Scholars

Allen, J., B.A. (SUNY Buffalo), M.A. (Syracuse), Ph.D.(Michigan); **Annardale, E.T.,** B.A.(Hons.) (Manitoba), Ph.D. (London); **Norell, D.,** B.Comm., B.A., M.A., Ph.D. (Manitoba).

Professor

Boutin, F., B.A. (Ottawa), B.Ed.(Montreal), M.A. (NYS), Ph.D. (Ohio State).

Associate Professors

Cartmill, C., B.A.(Hons.) (Toronto), M.A., Ph.D. (Queen's); **Clark, P.F.,** B.A.(Hons.) (Toronto), M.A., Ph.D. (Western Ontario); **Fernandez, E.,** Lic. (Oviedo), M.A. (Calgary), Ph.D. (Princeton); **Laporte, D.,** B.A., M.A., Ph.D. (Laval); **MacDonell, A.,** B.A. (Lakehead), M.A., Ph.D. (Manitoba); **Renée, L.,** B.A., M.A., Ph.D. (Manitoba).

Assistant Professors

Martinez, M.I., B.A. (Universidad Javeriana), M.A. (Ottawa), Ph.D. (Montreal); **Rocheville, S.,** B.A., M.A. (McGill), Ph.D. (Montreal); **St-Martin, A.,** B.A., B.Ed., M.A. (Manitoba), Docteur de l'Université (Paris VIII).

Senior Instructors

Osborne, A., B.A., B.Ed., M.A. (Manitoba); **Reitano, C.,** B.A. (Hons.), M.A. (Carleton), B.Ed. (Western Ontario).

Instructor

Torquato, S., B.Ed. (Manitoba), M.A. (Toronto).

8.12.2 Program Information

Romance languages — French, Spanish and Italian — are descendants of Latin and are the most widely spoken of the Romance languages. The department offers language instruction and a rich variety of literature courses, with a particular emphasis on French Canadian literature. French language instruction also includes courses in translation.

8.12.3 French

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of “C” or better in FREN 1190 or FREN 1200; students with a grade of “B” or better in FREN 1250 who have taken and passed a special written test may also declare a Major as well as take any courses numbered at the 2000 level. Only one of FREN 1190, FREN 1200, FREN 1250 may be used for credit in the 30 hour Major but all will be included in the degree. For students who have taken addi-

tional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of “C” or better in FREN 1190 or FREN 1200. Students with a grade of “B” or better in FREN 1250 who take and pass a special written test may also declare a Minor as well as take 2000-level courses. Only one of FREN 1190, FREN 1200, FREN 1250 may be used for credit in the 18 hour Minor but all will be included in the degree.

Honours Program

For entry to the Honours program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

French, Spanish and Italian			
8.12.4 French			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
FREN 1190 or FREN 1200	12 credit hours from courses numbered at the 2000 level of which at least 3 credit hours must be language and 3 credit hours must be literature	12 credit hours from courses numbered at the 3000 level of which at least 3 credit hours must be language and 3 credit hours must be literature	
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
FREN 1190 or FREN 1200	<ul style="list-style-type: none"> ● 18 credit hours of French courses numbered at the 2000 level, including at least 3 credit hours in language and 3 credit hours in literature ● 18 credit hours of French courses numbered at the 3000 level, including at least 3 credit hours in language and 3 credit hours in literature ● 6 credit hours of French courses numbered at the 4000 level, including at least 3 credit hours in language and 3 credit hours in literature 		
MINOR¹ TOTAL: 18 CREDIT HOURS			
FREN 1190 or FREN 1200	3 credit hours in a language course numbered at the 2000 level and 3 credit hours in a literature course numbered at the 2000 level	3 credit hours in a language course numbered at the 3000 level and 3 credit hours in a literature course numbered at the 3000 level	
HONOURS SINGLE^{1,3}			
FREN 1190 or FREN 1200	<ul style="list-style-type: none"> ● FREN 2660, FREN 2870, FREN 2910 ● FREN 2700 or FREN 3140 ● FREN 2740 or FREN 3160 ● 3 credit hours of French language or civilization courses numbered at the 2000 or 3000 level ● 12 credit hours of ancillary options 	<ul style="list-style-type: none"> ● FREN 3100, FREN 3500, FREN 3870, FREN 3910 ● One of FREN 2680, FREN 2720, FREN 2760, FREN 3120 ● 3 credit hours of French language or civilization courses numbered at the 2000 or 3000 level ● 6 credit hours of ancillary options 	<ul style="list-style-type: none"> ● FREN 4400, FREN 4610, FREN 4620, FREN 4640, FREN 4710, FREN 4730 ● 6 credit hours of ancillary options
HONOURS DOUBLE^{1,3}			
FREN 1190 or FREN 1200	<ul style="list-style-type: none"> ● FREN 2660 ● FREN 2870 or FREN 2910 ● 3 credit hours of French language or civilization courses numbered at the 2000 or 3000 level ● 3 credit hours of French literature courses numbered at the 2000 or 3000 level ● 12 credit hours from second Honours field ● 6 credit hours of ancillary options 	<ul style="list-style-type: none"> ● FREN 3100 or FREN 3500 ● FREN 3870 or FREN 3910 ● 3 credit hours of French language or civilization courses numbered at the 2000 or 3000 level ● 3 credit hours of French literature courses numbered at the 2000 or 3000 level ● 12 credit hours from second Honours field 	<ul style="list-style-type: none"> Option 1 ● FREN 4710 ● FREN 4730 ● 6 credit hours of French literature courses at the 4000 level ● 12 credit hours from second Honours field Option 2² ● FREN 4710 or FREN 4730 ● 9 credit hours of French literature courses at the 4000 level ● 12 credit hours from second Honours field

NOTES:

¹ Students in Year 2 will normally take courses numbered at the 2000 level and students in Year 3 will normally take courses numbered at the 3000 level.

² Option 2 is recommended for students intending to proceed to graduate studies in French at this university.

³ Ancillary options are courses taken from outside the Honours field of study.

The three areas of study are identified in the course listing with the following letters in brackets after the course title:

- A: French Language
- B: French Literature
- C: French Civilization

NOTE: Civilization courses FREN 2810 and FREN 3850 may be counted as either French language or literature credits, but not both.

The language of instruction in all French courses except FREN 1150 and FREN 1200 is French. In courses FREN 1150 and FREN 1200, at the discretion of the instructor, English may be used to clarify difficult points of grammar and critical analysis of literature.

With written permission of the department head, students registered on the Fort Garry campus may take courses in French language and literature at Collège universitaire de Saint-Boniface.

For information regarding Canadian Studies, see Section 8.3.

8.12.5 French Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

For courses offered at Collège universitaire de Saint-Boniface, see Section 8.12.14.

U1 FREN 1150 Introductory French Cr.Hrs.6 (Formerly 044.115) A study of the fundamental structures of French, with oral and written practise. For students with no prior knowledge of French, or who have studied French up to and including Senior 3 level or its equivalent. Students with Senior 4 French may not normally take the course. Not open to students who have previously obtained credit in FREN 1190 (or 044.119), FREN 1200 (or 044.120) or FREN 1250 (or 044.125). Not for credit in French Major or Minor.

U1 FREN 1190 Français Cr.Hrs.6 (Formerly 044.119) Un cours comportant des éléments de langue, de linguistique et de littérature destiné aux étudiants issus des écoles françaises ou aux étudiants de la filière immersion. Students may not hold credit for both FREN 1190 (or 044.119) and FREN 1200 (or 044.120). *Prerequisite:* Senior Matriculation French or written consent of department head.

U1 FREN 1200 French 1 Cr.Hrs.6 (Formerly 044.120) Language study and practise in the classroom and language laboratory, and readings in French and French-Canadian culture. Students may not hold credit for both FREN 1200 (or 044.120) and FREN 1190 (or 044.119). *Prerequisite:* Senior Matriculation French or "C" or better in FREN 1150 (or 044.115).

U1 FREN 1250 Français oral 1 Cr.Hrs.6 (Formerly 044.125) For students whose mother tongue is not French, and who wish to improve their understanding, fluency and correctness in spoken French. Regular attendance is obligatory. Direct access to FREN 2610 (or 044.261); access to other 2000-level courses of Major or Minor program upon successful completion of a special written test. Not open to students from Français or Immersion high school programs. *Prerequisite:* French 40S, 40G, or the former French 300 or 301 or "B" or better in FREN 1150 (or 044.115), or "C" or better in FREN 1200 (or 044.120); or a brief interview and written consent of department head.

FREN 2610 Français oral 2 (A) Cr.Hrs.3 (Formerly 044.261) Ce cours vise à l'amélioration de la compréhension du français parlé ainsi qu'au développement de la facilité et de la correction de l'expression orale. Une attention particulière sera vouée au développement du vocabulaire ainsi qu'à la maîtrise des structures grammaticales. Le cours n'a pas été conçu pour les étudiants qui sont déjà bilingues. *Prerequisite:* a grade of "B" or better in FREN 1250 (or 044.125), or written consent of department head.

FREN 2620 Grammaire et lexique (A) Cr.Hrs.3 (Formerly 044.262) Révision intensive de la grammaire et enrichissement du vocabulaire. *Prerequisite:* Exactly a "C" in FREN 1190 (or 044.119) or exactly a "C" or "C+" in FREN 1200 (or 044.120), or written consent of department head.

FREN 2630 Special Studies (A) Cr.Hrs.3 (Formerly 044.263) The content of this course will vary from year to year depending on the needs and interests of instructors and students. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2640 Special Studies (B) Cr.Hrs.3 (Formerly 044.264) The content of this course will vary from year to year depending on the needs and interests of instructors and students. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2660 Analyses textuelles (A) Cr.Hrs.3 (Formerly 044.266) A partir de textes courts en prose et en vers, l'étudiant(e) apprendra à reconnaître les moyens linguistiques et stylistiques dont dispose l'auteur pour créer l'expressivité de son texte. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in

FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

†FREN 2680 Littérature féminine française (B) Cr.Hrs.3 (Formerly 044.268) Une étude de textes écrits par des femmes et analysés selon la perspective des théories féministes contemporaines. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

✦FREN 2700 Poésie et théâtre canadiens-français (B) Cr.Hrs.3 (Formerly 044.270) Introduction à la poésie et au théâtre canadiens-français. Parmi les poètes se trouveront Nelligan, Saint-Denis Garneau et Anne Hébert. Sur la liste des dramaturges figureront Michel Tremblay, Marcel Dubé et Gratien Gélinas. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2720 Roman français du vingtième siècle (B) Cr.Hrs.3 (Formerly 044.272) Ce cours est destiné à initier l'étudiant(e) au roman français du vingtième siècle. Les romanciers étudiés seront choisis parmi les plus connus, tels que Proust, Gide, Colette, Mauriac, Cocteau, Camus, Robbe-Grillet, Duras, Cardinal et Yourcenar. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2740 Théâtre et poésie du dix-neuvième siècle (B) Cr.Hrs.3 (Formerly 044.274) Initiation aux poètes et aux dramaturges représentatifs des mouvements romantique, symboliste et réaliste. Parmi les auteurs choisis figureront Hugo, Vigny, Musset, Baudelaire, Rimbaud, Scribe, Dumas fils, Rostand. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2760 Le théâtre français du vingtième siècle (B) Cr.Hrs.3 (Formerly 044.276) Une étude des tendances les plus diverses et les plus marquantes du théâtre français moderne. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2810 Civilisation française moderne (A, B, C) Cr.Hrs.3 (Formerly 044.281) Ce cours a pour objet l'étude de la civilisation française au plus tôt depuis le XVII^e siècle, au plus tard depuis la Révolution. Il portera sur les transformations connues par la France dans ses structures politiques, sociales et ses modes de vie. Il s'attachera simultanément au mouvement des idées et à la création artistique dans les domaines de l'architecture, de la sculpture, de la peinture et de la musique. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2850 Phonétique française (A) Cr.Hrs.3 (Formerly 044.285) Étude des principaux aspects de la phonétique française. L'alphabet phonétique international et la transcription phonétique. Exercices pratiques au laboratoire de langues. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2870 Stylistique comparée 1 (A) Cr.Hrs.3 (Formerly 044.287) Initiation à la stylistique comparée du français et de l'anglais. Ce cours comporte des exercices de traduction et d'analyse de traductions. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 2910 Expression écrite 1 (A) Cr.Hrs.3 (Formerly 044.291) Une étude des techniques de composition libre. Le cours comportera notamment une révision de la phrase complexe et une analyse d'éléments de rhétorique particulièrement utiles pour la rédaction en français. *Prerequisite:* a grade of "C" or better in FREN 1190 (or 044.119), or "C+" or better in FREN 1200 (or 044.120), or "C" or better in FREN 2620 (or 044.262), or written consent of department head.

FREN 3100 Littérature française du dix-huitième siècle (B) Cr.Hrs.3 (Formerly 044.310) Après une introduction portant sur le dix-huitième siècle en France, on étudiera quelques-uns des grands auteurs et dramaturges de ce siècle, tels Montesquieu, Voltaire, Prévost, Marivaux, Beaumarchais et Rousseau. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3120 Poésie française du vingtième siècle (B) Cr.Hrs.3 (Formerly 044.312) Ce cours offre une vue panoramique de l'évolution de la poésie française du vingtième siècle. Au programme seront des oeuvres d'Apollinaire, Breton, Ponge, Michaux, Jacottet, etc. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

✦FREN 3140 Roman canadien-français (B) Cr.Hrs.3 (Formerly 044.314) Ce cours est destiné à initier l'étudiant(e) au roman canadien-français. Parmi les auteurs étudiés se trouveront Hubert Aquin, Marie-Claire Blais, Roch Carrier. Un accent particulier sera mis sur l'interprétation historique. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3160 Roman et nouvelle français du dix-neuvième siècle (B) Cr.Hrs.3 (Former-

ly 044.316) Étude des principaux romanciers romantiques, réalistes et naturalistes: un choix de Chateaubriand, Constant, Balzac, Sand, Flaubert, Zola, Maupassant. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3350 Français oral 3 (A) Cr.Hrs.3 (Formerly 044.335) Ce cours vise au perfectionnement de la facilité d'expression, de la correction et de la compréhension du français oral. Le professeur se servira de certains aspects de la culture canadienne-française, et dans une moindre mesure de la culture française, pour stimuler la conversation. *Prerequisite:* a grade of "B" or better in FREN 2610 (or 044.261) or written consent of department head.

FREN 3500 Littérature du 17e siècle (B) Cr.Hrs.3 (Formerly 044.350) Ce cours constitue une analyse d'ouvrages marquants tirés du domaine de la littérature française classique. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3580 Travail indépendant (A, B) Cr.Hrs.3 (Formerly 044.358) Ce demi-cours s'étendra sur toute la durée des deux trimestres. Chaque étudiant sera placé sous la direction d'un professeur qui l'assistera dans l'établissement d'un programme de lectures relatif à un domaine d'intérêt particulier pour l'étudiant en question. A la fin du cours l'étudiant présentera un mémoire à son directeur. Not available for credit towards a Major or Minor in French. *Prerequisite:* written consent of department head.

FREN 3810 Français commercial (A) Cr.Hrs.3 (Formerly 044.381) Étude intensive du français commercial. On aura recours à divers documents commerciaux. Les différences entre le vocabulaire commercial de l'Europe et celui du Canada seront prises en considération. *Prerequisite:* a grade of "B" or better in any 2000-level French course, or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3830 Special Studies (A) Cr.Hrs.3 (Formerly 044.383) The content of this course will vary from year to year depending on the needs and interests of instructors and students. *Prerequisite:* a grade of "C" or better in any 2000-level French course; FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3840 Special Studies (B) Cr.Hrs.3 (Formerly 044.384) The content of this course will vary from year to year depending on the needs and interests of instructors and students. *Prerequisite:* a grade of "C" or better in any 2000-level French course; FREN 2610 (or 044.261) may not be used as a *prerequisite*.

✦ **FREN 3850 Civilisation canadienne-française (A, B, C) Cr.Hrs.3** (Formerly 044.385) Aspects du développement de la culture du Canada français. Éléments de la vie politique, sociale et artistique des Québécois et des francophones hors Québec surtout au 20e siècle. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head.

† **FREN 3860 Études sur Beauvoir (B) Cr.Hrs.3** (Formerly 044.386) Le but de ce cours est d'étudier l'oeuvre et la pensée de Simone de Beauvoir dont l'importance dans les études féministes continue d'être très marquée. Un choix de textes sera effectué parmi ses essais philosophiques, ses romans et son autobiographie. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3870 Stylistique comparée 2 (A) Cr.Hrs.3 (Formerly 044.387) Étude approfondie des principes et techniques de la traduction accompagnée d'exercices et d'analyses de traductions d'un niveau élevé. *Prerequisite:* a grade of "C" or better in FREN 2870 (or 044.287) and a grade of "B" or better in any other 2000-level French course, or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3890 Français du travail et des loisirs (A) Cr.Hrs.3 (Formerly 044.389) Initiation au vocabulaire spécialisé (éducation, gouvernement, etc.) et à la correspondance commerciale. Ce cours a pour but d'initier l'étudiant(e) au langage du monde des affaires, du commerce, de l'industrie et de la fonction publique. *Prerequisite:* a grade of "B" or better in any 2000-level French course or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

FREN 3910 Expression écrite 2 (A) Cr.Hrs.3 (Formerly 044.391) Ce cours est une étude des techniques de composition libre à un niveau avancé. Il comportera notamment des exercices avec la phrase complexe et l'étude et la pratique d'un certain nombre de genres de français écrit. *Prerequisite:* a grade of "C" or better in FREN 2910 (or 044.291), and a grade of "B" or better in any other 2000-level French course, or written consent of department head. FREN 2610 (or 044.261) may not be used as a *prerequisite*.

Honours Courses

FREN 4400 Littérature de la Renaissance (B) Cr.Hrs.3 (Formerly 044.440) Poésie des grands rhétoriciens jusqu'à la Pléiade; prose de Rabelais, Marguerite de Navarre et

Montaigne. *Prerequisite:* written consent of department head.

FREN 4610 Études spécialisées Cr.Hrs.3 Le contenu de ce cours variera d'année en année selon les besoins et les intérêts des étudiants et du professeur. *Prerequisite:* written consent of department head.

FREN 4620 Pratiques et théories critiques (B) Cr.Hrs.3 (Formerly 044.462) Ce cours est destiné à initier l'étudiant(e) à l'analyse critique de textes littéraires. Le choix des pratiques et des théories critiques dépendra de l'instructeur. *Prerequisite:* written consent of department head.

FREN 4640 Séminaire: Littérature française du vingtième siècle (B) Cr.Hrs.3 (Formerly 044.464) Le but de ce cours est d'offrir à l'étudiant(e) une introduction à certaines oeuvres littéraires complexes, mais essentielles, de ce siècle, dans les différents ordres de la poésie, du théâtre et du roman. Elles pourraient être prises à des auteurs comme Claudel, Valéry, Saint-John Perse, Antonin Artaud, Proust, Gide, Sartre, Yourcenar. *Prerequisite:* written consent of department head.

FREN 4710 Séminaire de langue (A) Cr.Hrs.3 (Formerly 044.471) L'objet de ce cours est d'affermir la maîtrise du français chez l'étudiant(e) par des études de grammaire approfondie, une approche méthodique des problèmes majeurs de rhétorique et de la stylistique, ainsi que par une pratique régulière de l'expression orale destinée à en assurer l'aisance et la correction. *Prerequisite:* written consent of department head.

FREN 4730 Traduction (A) Cr.Hrs.3 (Formerly 044.473) Une formation dans la traduction d'extraits tirés d'oeuvres de prosateurs anglais et français. Seront également traduits des textes de nature technique traitant de l'actualité politique, sociale, économique, juridique, etc. *Prerequisite:* written consent of department head.

8.12.6 Spanish

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in SPAN 1180, or a grade of "C" or better in both SPAN 1260 and SPAN 1270, or a grade of "C" or better in both SPAN 1280 and 3 credit hours from Spanish courses numbered at the 2000 level. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

It is recommended that students who wish to Major in Spanish take the introductory course in the Summer Session prior to entering the fall program, or take SPAN 1260 and SPAN 1270 in the Summer Session prior to their entry into the second year. This will allow for a wider variety of course selections in the final two years.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in SPAN 1180, or a grade of "C" or better in both SPAN 1260 and SPAN 1270, or a grade of "C" or better in both SPAN 1280 and 3 credit hours from Spanish courses numbered at the 2000 level.

Other

Students entering the university with prior knowledge of Spanish may be allowed 'prerequisite standing' in course SPAN 1180 by the Spanish section of the department. Special permission is required to enter a higher numbered course.

All Spanish courses except SPAN 1180 are taught in Spanish.

For information regarding the Minor program in Latin American Studies, see Section 8.20.

8.12.7 Spanish

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

GENERAL MAJOR (OPTION 1)¹ TOTAL: 30 CREDIT HOURS

SPAN 1180

SPAN 1260, SPAN 1270

● SPAN 2550

● 9 credit hours from Spanish courses numbered at the 2000 level

● 6 credit hours from Spanish courses numbered at the 3000 level

GENERAL MAJOR (OPTION 2)¹ TOTAL: 30 CREDIT HOURS			
SPAN 1260 and SPAN 1270	<ul style="list-style-type: none"> ● SPAN 2550 ● 9 credit hours from Spanish courses numbered at the 2000 level 	12 credit hours from Spanish courses numbered at the 3000 level	
GENERAL MAJOR (OPTION 3)² TOTAL: 30 CREDIT HOURS			
SPAN 1280 and 3 credit hours from Spanish courses numbered at the 2000 level	<ul style="list-style-type: none"> ● SPAN 2550 ● 9 credit hours from Spanish courses numbered at the 2000 level 	12 credit hours from Spanish courses numbered at the 3000 level	
ADVANCED MAJOR (OPTION 1)¹ TOTAL: 51 CREDIT HOURS			
SPAN 1180	SPAN 1260 and SPAN 1270	<ul style="list-style-type: none"> ● SPAN 2550 ● 12 credit hours from Spanish courses numbered at the 2000 level ● 6 credit hours from Spanish courses numbered at the 3000 level 	18 credit hours from Spanish courses numbered at the 3000 level
ADVANCED MAJOR (OPTION 2)¹ TOTAL: 51 CREDIT HOURS			
SPAN 1260 and SPAN 1270	<ul style="list-style-type: none"> ● SPAN 2550 ● 9 credit hours from Spanish courses numbered at the 2000 level 	<ul style="list-style-type: none"> ● 6 credit hours from Spanish courses numbered at the 2000 level ● 9 credit hours from Spanish courses numbered at the 3000 level 	18 credit hours from Spanish courses numbered at the 3000 level
ADVANCED MAJOR (OPTION 3)² TOTAL: 51 CREDIT HOURS			
SPAN 1280 and 3 credit hours from Spanish courses numbered at the 2000 level	<ul style="list-style-type: none"> ● SPAN 2550 ● 9 credit hours from Spanish courses numbered at the 2000 level 	<ul style="list-style-type: none"> ● 6 credit hours from Spanish courses numbered at the 2000 level ● 9 credit hours from Spanish courses numbered at the 3000 level 	18 credit hours from Spanish courses numbered at the 3000 level
MINOR (OPTION 1)¹ TOTAL: 18 CREDIT HOURS			
SPAN 1180	SPAN 1260 and SPAN 1270	6 credit hours from Spanish courses numbered at the 2000 level	
MINOR (OPTION 2)¹ TOTAL: 18 CREDIT HOURS			
SPAN 1260 and SPAN 1270	6 credit hours from Spanish courses numbered at the 2000 level	6 credit hours from Spanish courses numbered at the 3000 level	
MINOR (OPTION 3)² TOTAL: 18 CREDIT HOURS			
SPAN 1280 and 3 credit hours from Spanish courses numbered at the 2000 level	6 credit hours from Spanish courses numbered at the 2000 level	6 credit hours from Spanish courses numbered at the 3000 level	

NOTES:

¹ Options 1 and 2 are not open to students with native oral fluency in Spanish. Students with native oral fluency in Spanish are advised to follow Option 3.

² Option 3 is open to students with native oral fluency in Spanish. Such students may enter Spanish courses numbered at the 2000 level with a grade of "C" or better in SPAN 1280.

NOTE: With written permission of the department head, students registered on the Fort Garry campus may take courses in Spanish language and literature at Collège universitaire de Saint-Boniface.

8.12.8 Spanish Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

General Courses

U1 SPAN 1180 Introductory Spanish Cr.Hrs.6 (Formerly 044.118) A course designed for those with little or no previous knowledge of Spanish. The course includes grammar, reading and oral practice, with language laboratory exercises. An oral approach is utilized. The student is given glimpses of cultural aspects of Spain and Spanish America. Students with Senior 4 Spanish may not normally take the course for credit. Not open to students with native oral fluency. Students may not hold credit for SPAN 1180 and any of: SPAN 1260 (or 044.126), TRAD 1261 (or 122.126), SPAN 1280, or TRAD 1181 (or 122.118).

U1 SPAN 1260 Intermediate Spanish Language Review Cr.Hrs.3 (Formerly 044.126) Intensive language review for students who have completed SPAN 1180 (or 044.118) (TRAD 1181 or 122.118) or who have been granted *prerequisite* standing in SPAN 1180 (or 044.118) (TRAD 1181 or 122.118). Language study and practice in the classroom and language laboratory. Not open to students with native oral fluency. Students may not hold credit for SPAN 1260 and any of: SPAN 1280 or TRAD 1261 (or 122.126). *Prerequisite:* a grade of "C" or better in SPAN 1180 (or 044.118) (TRAD 1181 or 122.118), Senior 4 Spanish, or written consent of department head.

U1 SPAN 1270 Spanish Oral 1 Cr.Hrs.3 (Formerly 044.127) For students who do not have native oral fluency in Spanish and who wish to improve their understanding and correctness in spoken Spanish. Intensive oral practice in the classroom and language laboratory at the intermediate level discussing contemporary issues and topics relating to Hispanic current events, politics and culture. Not open to students with native oral fluency. Students may not hold credit for both SPAN 1270 and any of: SPAN

1280 or TRAD 1271 (or 122.127). *Prerequisite:* a grade of "C" or better in SPAN 1260 (or 044.126) (TRAD 1261 or 122.126) or written consent of department head.

U1 SPAN 1280 Spanish for Native Speakers Cr.Hrs.3 A survey of grammar and writing for people with an advanced level of oral Spanish. All the class exercises, readings, activities and examinations will be in Spanish. Students may not hold credit for SPAN 1280 and any of: SPAN 1180 (or 044.118), TRAD 1181 (or 122.118), SPAN 1260 (or 044.126), TRAD 1261 (or 122.126), SPAN 1270 (or 044.127), or TRAD 1271 (or 122.127). *Prerequisite:* written consent of department head.

SPAN 2200 Spanish American Culture and Civilization Cr.Hrs.3 (Formerly 044.220) A picture of the geographical, political, economic, social, artistic and cultural forces in Latin America. Essays, cultural readings, newspaper articles, magazines and films are utilized to enhance awareness and to stimulate discussion. *Prerequisite:* a grade of "C" or better in one of SPAN 1260 (or 044.126) (TRAD 1261 or 122.126), SPAN 1270 (or 044.127) (TRAD 1271 or 122.127), SPAN 1280, or written consent of department head.

SPAN 2510 Survey of Spanish Civilization Cr.Hrs.3 (Formerly 044.251) A study of the history of Spanish culture with special stress on its non-literary arts, and selected aspects of Spanish life. *Prerequisite:* a grade of "C" or better in one of SPAN 1260 (or 044.126) (TRAD 1261 or 122.126), SPAN 1270 (or 044.127) (TRAD 1271 or 122.127), SPAN 1280, or written consent of department head.

SPAN 2520 Introduction to Spanish Literature Cr.Hrs.3 (Formerly 044.252) This course will consist of an introduction to Spanish literary characteristics and the study of selected works from the Major historical periods and genres. *Prerequisite:* a grade of "C" or better in one of: SPAN 1260 (or 044.126), SPAN 1270 (or 044.127), SPAN 1280, TRAD 1261 (or 122.126), TRAD 1271 (or 122.127), or written consent of department head.

SPAN 2530 Spanish American Literature 1 Cr.Hrs.3 (Formerly 044.253) Spanish American Literature from Colonial Times to Modernism. The chronicles, lyric poetry, and age of rebellion, romanticism, modernism, are studied through selections from the works of Major figures. *Prerequisite:* a grade of "C" or better in one of: SPAN 1260

(or 044.126), SPAN 1270 (or 044.127), SPAN 1280, TRAD 1261 (or 122.126), TRAD 1271 (or 122.127), or written consent of department head.

SPAN 2540 Spanish American Literature 2 Cr.Hrs.3 (Formerly 044.254) Spanish American Literature from Realism to Post-vanguardism. Realism, the novel of the Mexican revolution, post-modernist to post-vanguardist poetry, the contemporary narrative, are studied through selections from the works of Major figures. *Prerequisite:* a grade of "C" or better in one of: SPAN 1260 (or 044.126), SPAN 1270 (or 044.127), SPAN 1280, TRAD 1261 (or 122.126), TRAD 1271 (or 122.127), or written consent of department head.

SPAN 2550 Advanced Spanish Composition Cr.Hrs.3 (Formerly 044.255) Designed to enhance the student's ability in writing Spanish. Emphasis on advanced grammatical concepts and clarity of expression. *Prerequisite:* a grade of "C" or better in one of: SPAN 1260 (or 044.126), SPAN 1280, TRAD 1261 (or 122.126), or written consent of department head.

SPAN 2560 Advanced Spanish Conversation Cr.Hrs.3 (Formerly 044.256) Designed to enhance the student's conversational skills. Intensive oral practise as well as written exercises based on contemporary issues. Not open to students with native oral fluency. *Prerequisite:* a grade of "C" or better in SPAN 1260 (or 044.126) and SPAN 1270 (or 044.127), or written consent of department head.

SPAN 2570 Special Studies Cr.Hrs.3 (Formerly 044.257) The content of this course is variable, depending on the needs and interests of students and instructors. A tutorial form is used. *Prerequisite:* a grade of "C" or better in any 1000-level Spanish course or written consent of department head.

SPAN 3070 Dali, Lorca, Buñuel Cr.Hrs.3 Study of the three most representative members of Spanish surrealism and avant-gardism in the twentieth century. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3220 Contemporary Spanish Cinema Cr.Hrs.3 (Formerly 044.322) A survey of Contemporary Spain through its cinema and other cultural manifestations. All the class readings, class lectures, movies and examinations are in Spanish. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3230 Spanish American Fiction Since 1950 Cr.Hrs.3 (Formerly 044.323) Study of selected novels and short stories. Includes the psychological and suprarrealistic novels and short stories of magic realism. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3240 Twentieth-Century Spanish Novel Cr.Hrs.3 (Formerly 044.324) A study of selected novels by authors from the generation of '98 to present times, including Unamuno, Pio Baroja, Cela, Ana Maria Matute, Carmen Laforet, etc. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3250 Realism in Spanish American Fiction Cr.Hrs.3 (Formerly 044.325) Study of selected novels and short stories from the first half of the twentieth century. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3260 Twentieth-Century Theatre and Poetry in Spanish America Cr.Hrs.3 (Formerly 044.326) The philosophical theatre and the theatre of the absurd. Vanguardist to post-vanguardist poetry. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3270 Special Studies Cr.Hrs.3 (Formerly 044.327) The content of this course is variable, depending on the needs and interests of students and instructors. A tutorial format is used. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3280 Spanish Phonetics and Syntax Cr.Hrs.3 (Formerly 044.328) This course includes applied Spanish phonetics and a thorough study of advanced Spanish syntax and grammar. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3290 The Art of Translation Cr.Hrs.3 (Formerly 044.329) A course on the basic techniques of translation and a study of specialized vocabulary related to the professions. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3650 Twentieth-Century Spanish Drama and Poetry Cr.Hrs.3 (Formerly 044.365) A study of some of the major Spanish dramatists and poets of the twentieth century including Antonio Machado, Juan Ramon Jiménez, Benavente, Garcia Lorca, and the generation of '27. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3670 Poetry and Novel of the Golden Age Cr.Hrs.3 (Formerly 044.367) This course will concentrate on major poets and novelists of the sixteenth and seventeenth centuries such as Garcilaso de la Vega, Fray Luis de Leon, S. Juan de la Cruz, Lope de Vega, Gongora, and Cervantes. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3680 Drama of the Golden Age Cr.Hrs.3 (Formerly 044.368) A study of representative works by the principal dramatists of the Spanish classical period, such as Lope de Vega, Tirso de Molina, Vélez de Guevara, and Calderon de la Barca. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3690 Nineteenth-Century Theatre and Poetry in Spanish America Cr.Hrs.3 (Formerly 044.369) A consideration of "costumbrista", historical and psychological plays, and of the poetry of romanticism and modernism through the study of selected works. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3710 Nineteenth-Century Spanish Poetry and Drama Cr.Hrs.3 (Formerly 044.371) A study of Spanish poetry and drama from the romantic period to Echegaray. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3720 Nineteenth-Century Spanish Novel Cr.Hrs.3 (Formerly 044.372) A study of the evolution of the Spanish novel from the Romantic period to the age of Realism and Naturalism. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3780 Short Fiction in Spanish Cr.Hrs.3 (Formerly 044.378) A study of short narrative fiction as a genre in Spain and Latin America through the close reading of representative works. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

SPAN 3790 Latin American Cinema and Society Cr.Hrs.3 (Formerly 044.379) A survey of contemporary Latin American society through its cinema. The course will be taught in Spanish. All class readings, movies and examinations are in Spanish. *Prerequisite:* a grade of "C" or better in any 2000-level Spanish course or written consent of department head.

8.12.9 Italian

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in ITLN 1080.

It is not possible to have a Minor in Italian and a Major in Italian Studies.

Other

All Italian courses except ITLN 1080 are taught in Italian.

Travel/study courses in Italian may be offered in the Summer Session; see department for information.

8.12.10 Italian

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
MINOR TOTAL: 18 CREDIT HOURS			
ITLN 1080	6 credit hours selected from Italian courses numbered at the 2000 level	6 credit hours selected from Italian courses numbered at the 3000 level	

8.12.11 Italian Studies

The Major (General and Advanced) in Italian Studies is an interdisciplinary program designed to provide advanced reading, writing, oral, and translation skills in contemporary Italian language, in the context of a broad appreciation for Italian/Roman history and its contributions to art and culture. For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in ITLN 1080. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

It is not possible to have a Major in Italian Studies and a Minor in Italian.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

8.12.12 Italian Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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GENERAL MAJOR TOTAL: 30 CREDIT HOURS

ITLN 1080	ITLN 2080, or ITLN 2090 and ITLN 2100	6 credit hours selected from ITLN 3050, ITLN 3060, ITLN 3760, ITLN 3770
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Plus at least 12 credit hours of courses selected from List A

ADVANCED MAJOR TOTAL: 48 CREDIT HOURS

ITLN 1080	ITLN 2080, or ITLN 2090 and ITLN 2100	6 credit hours selected from ITLN 3050, ITLN 3060, ITLN 3760, ITLN 3770
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Plus at least 30 credit hours of courses selected from List A

List A**Faculty of Arts****Italian**

ITLN 3050	Italian Through Literature	3
ITLN 3060	Italian Through Film	3
ITLN 3760	Italian Translation Workshop	3
ITLN 3770	Modern Italian Usage	3

Classics

CLAS 1280	Introduction to Ancient Roman Culture	3
CLAS 2160	Roman History: The Roman Republic, 753-30 BC	3
CLAS 2170	Roman History: The Roman Empire, 30 BC-AD 337	3
CLAS 2680	Roman Art and Archaeology	3
CLAS 3620	Latin Literature in Translation	3
003.261*	Roman History	6
LATN 1080	Introduction to the Reading of Latin 1	3
LATN 1090	Introduction to the Reading of Latin 2	3
LATN 1320	Intermediate Readings in Latin	3
LATN 2720	Selected Readings in Republican and Augustan Poetry	3
LATN 2740	Selected Readings in Republican and Augustan Prose	3
LATN 2780	History of the Latin Language	3
LATN 2800	Readings in Medieval or Renaissance Latin	3
LATN 3740	Roman Comedy	3
LATN 3760	Orations of Cicero	3
LATN 3780	Roman Satire	3
LATN 3800	Lyric and Elegiac Poetry of the Augustan Age	3
LATN 3820	Virgil's Aeneid	3
LATN 3840	Virgil's Eclogues and Georgics	3
LATN 3860	The Roman Historians	3
LATN 3880	Poetry of the Silver Age	3

History

HIST 2370	History of Europe since the French Revolution (3)	6
HIST 2900	Topics in Social History (G) (when taught as "Topic: Italy")	6
HIST 3120	Topics in History 2 (G) (when taught as "Topic: Italy")	3
HIST 3270	Roman Law in Medieval Europe (D)	3
HIST 3680	Europe, 1870-1945 (E)	6
HIST 4530	Europe, 1870-1914 (E)	6

School of Art

FAAH 2060	Medieval to Early Renaissance Art and Architecture	3
FAAH 2070	Renaissance to Baroque Art and Architecture	3
FAAH 3130	Topics in Medieval Art and Architecture	3
FAAH 3140	Topics in Renaissance and Baroque Art and Architecture	3

Faculty of Music

MUSC 1070	Introduction to the History of Music	3
MUSC 1080	History of Music 2	3
MUSC 3100	Opera Repertoire	3

*indicates course no longer offered.

For course descriptions, see departmental listings.

8.12.13 Italian Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

General Courses**8.12.11 Italian Course Descriptions**

U1 ITLN 1080 Introductory Italian Cr.Hrs.6 (Formerly 044.108) An introduction to the Italian language for students with little or no knowledge of Italian. The course emphasizes the learning and practise of vocabulary, grammar and the development of both written and spoken Italian. A language laboratory will help students practise and improve their oral Italian. Not open to students who have previously obtained credit in ITLN 2080 (or 044.208).

ITLN 2080 Intermediate Italian Cr.Hrs.6 (Formerly 044.208) This course consists of a thorough review of grammatical structures for students with previous knowledge of Italian. Readings of a number of twentieth-century Italian authors are used as a basis for discussion. Language study and practise is emphasized in the classroom and in the language laboratory. *Prerequisite:* ITLN 1080 (or 044.108) or written consent of department head.

ITLN 2090 Speaking in Italian Cr.Hrs.3 (Formerly 044.209) Offers extensive practice in idiomatic spoken language. Grammar review with a focus on oral fluency. Conversation will be based on social, political, and cultural aspects of Italian life. *Prerequisite:* a grade of "C" or better in ITLN 1080 (or 044.108) or written consent of department head.

ITLN 2100 Writing in Italian Cr.Hrs.3 (Formerly 044.210) This course strengthens writing skills in Italian, with special emphasis on the grammatical structure of the Italian language for effective communication. *Prerequisite:* a grade of "C" or better in ITLN 1080 (or 044.108) or written consent of department head.

ITLN 3050 Italian Through Literature Cr.Hrs.3 Through the study of selected works and authors, students will gain a better understanding of Italy's history and culture. *Prerequisite:* a grade of "C" or better in each of ITLN 2090 (or 044.209) and ITLN 2100 (or 044.210), or written consent of department head.

ITLN 3060 Italian Through Film Cr.Hrs.3 The aim of this course is to better understand modern and contemporary Italy, by viewing, meditating upon and discussing those films produced in Italy which most reflect the country, its language and culture, and its literature. *Prerequisite:* a grade of "C" or better in ITLN 2080 (or 044.208), or a grade of "C" or better in each of ITLN 2090 (or 044.209) and ITLN 2100 (or 044.210), or written consent of department head.

ITLN 3760 Italian Translation Workshop Cr.Hrs.3 (Formerly 044.376) A practical course on translating many types of text from and into Italian, as well as terminology development. Special emphasis on the use of the Internet and other computer-mediated resources. *Prerequisite:* a grade of "C" or better in ITLN 2080 (or 044.208), or a grade of "C" or better in each of ITLN 2090 (or 044.209) and ITLN 2100 (or 044.210) or written consent of department head.

ITLN 3770 Modern Italian Usage Cr.Hrs.3 (Formerly 044.377) Polish your Italian for business and professional work situations from client relations to terminology, including e-mail and Internet. Course will be customized according to students' professional interests. *Prerequisite:* a grade of "C" or better in ITLN 2080 (or 044.208), or a grade of "C" or better in each of ITLN 2090 (or 044.209) and ITLN 2100 (or 044.210) or written consent of department head.

8.12.14 Cours donnés au Collège universitaire de Saint-Boniface: Français

NOTE: With written permission of the head of the Department of French, Spanish and Italian at the University of Manitoba, students registered on the Fort Garry campus may take courses in French language and literature offered at Collège universitaire de Saint-Boniface.

Cours donnés au Collège universitaire de Saint-Boniface: Traduction

NOTE: Les cours de traduction (sauf le TRAD 2070 et le TRAD 4020) sont exclusivement réservés aux étudiants ayant subi avec succès l'examen d'admission en traduction.

Students planning to register in either the Certificate or the Honours program in translation should consult the Collège universitaire de Saint-Boniface for the details pertaining to the course requirements and the regulations governing the programs.

Students completing degrees on the main campus, but planning to register for any of the following courses, must have prior written approval from the head, Department of French, Spanish and Italian.

FRAN 1001 Grammaire de l'écrit Cr.Hrs.6 (L'ancien 144.100) Perfectionnement du français par l'entremise d'activités de compréhension et de production de textes divers menant à une étude approfondie de la grammaire, à l'enrichissement du vocabulaire et à un aperçu de la stylistique interne. Développement d'habitudes de travail telles que l'utilisation des outils de rédaction et l'autocorrection. Mise en pratique des notions apprises dans le cours et activités orales dans le cadre du laboratoire obligatoire. Donné au Collège universitaire de Saint-Boniface.

FRAN 1021 L'art de parler Cr.Hrs.3 (L'ancien 144.102) Correction et amélioration du français parlé (structures de phrases, aspects grammaticaux d'erreurs courantes). Distinction entre la langue parlée et la langue écrite. Prise de conscience des différents registres de la langue en fonction des différentes situations de communication. Apprentissage des techniques de l'expression orale: exposé, débat, discours. Donné au Collège universitaire de Saint-Boniface.

FRAN 1071 Lectures dirigées Cr.Hrs.3 (L'ancien 144.107) Lecture et analyse de divers textes d'actualité, accompagnés d'exercices de compréhension et de rédaction. Donné au Collège universitaire de Saint-Boniface.

FRAN 1091 Rédaction universitaire Cr.Hrs.3 (L'ancien 144.109) Initiation aux méthodes de travail universitaire: les techniques du résumé, du compte rendu et de la dissertation. Donné au Collège universitaire de Saint-Boniface.

FRAN 1111 Grammaire et laboratoire Cr.Hrs.3 (L'ancien 144.111) Approfondissement des notions de la grammaire. Une attention particulière sera accordée à l'analyse de la phrase. Donné au Collège universitaire de Saint-Boniface.

FRAN 2521 Atelier de théâtre Cr.Hrs.3 (L'ancien 144.252) Étude de diverses disciplines théâtrales: le jeu, la scénographie, la technique, la mise en scène, l'administration d'une production. Mise en pratique de ces éléments dans une production théâtrale. Donné au Collège de Saint-Boniface. Préalable: autorisation du écrit professeur.

FRAN 2531 Introduction au théâtre 1 Cr.Hrs.3 (L'ancien 144.253) Étude de plusieurs oeuvres, des principaux aspects techniques et de diverses théories dramatiques - du théâtre grec au théâtre de XIXe siècle. *Préalable:* une note minimale de C dans le FRAN 1091 (144.109) et un cours choisi parmi les suivants: FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107), ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2541 Introduction au théâtre 2 Cr.Hrs.3 (L'ancien 144.254) Étude de plusieurs oeuvres, des principaux aspects techniques et de diverses théories dramatiques. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un cours choisi parmi les suivants: FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2631 Poésie et chanson dans la littérature française Cr.Hrs.3 (L'ancien 144.263) Étude des étapes de la poésie françaisainsi que des liens qu'elle a eues avec la chanson à travers les âges. Une attention particulière sera accordée aux époques où les deux formes sont étroitement liées ou inséparables. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un cours choisi parmi les suivants: FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège de Saint-Boniface.

FRAN 2641 Le discours amoureux dans la littérature française Cr.Hrs.3 (L'ancien 144.264) Étude des diverses formes du discours amoureux et de ses stratégies rhétoriques et linguistiques dans la littérature romanesque française. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un cours choisi parmi les suivants: FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107), ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2651 La nature dans la littérature française Cr.Hrs.3 (L'ancien 144.265) Étude de diverses attitudes et réflexions associées à l'idée de nature. Un parcours historique qui tiendra compte de l'évolution des thèmes, permettra de suivre la filiation du discours ininterrompu sur les rapports, réels ou mythiques, que l'homme entretient avec la nature. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109), et un cours choisi parmi les suivants: FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2661 La fantaisie dans la littérature française Cr.Hrs.3 (L'ancien 144.266) Aperçu historique des diverses formes que la fantaisie a prises dans la littérature française du XVIe au XVIIIe siècles. Étude approfondie des courants fantaisistes qui ont animé les oeuvres littéraires aux XIXe et XXe siècles. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un cours choisi parmi les suivants: FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107), ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2681 Civilisation française Cr.Hrs.3 (L'ancien 144.268) Étude des éléments représentatifs due deuples français: grands courants de pensée, mouvements de l'histoire, é de la société et de la mentalité. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109), et un des FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège de Saint-Boniface.

☛ **FRAN 2831 L'individu et le pays Cr.Hrs.3** (L'ancien 144.283) Un aperçu général de la production littéraire au Canada français depuis ses origines à nos jours, d'une étude de textes ayant comme thème: l'individu et le pays. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un des FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2841 La quête du bonheur Cr.Hrs.3 (L'ancien 144.284) Un aperçu général de la production littéraire au Canada français depuis ses origines à nos jours, d'après une étude de textes ayant comme thèmes la quête du bonheur. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un des FRAN 1021 (ou 144.102),

FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2851 Le folklore et la littérature orale Cr.Hrs.3 (L'ancien 144.285) Une étude des moeurs et coutumes au Canada français: une attention particulière sera accordée aux proverbes, récits et chansons traditionnels. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un des FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2861 L'influence de la littérature orale Cr.Hrs.3 (L'ancien 144.286) Ce cours proposera l'étude de la littérature orale fixée (contes, légendes, mythes) ainsi que de textes modernes du XXe siècle (romans, poésie, nouvelles), produits au Canada français qui illustrent les influences certaines de cette littérature orale. En étudiant les contes, légendes et mythes, venant surtout du Canada, l'étudiant(e) verra comment cette source peut nourrir la veine inspiratrice d'un auteur. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un des FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

☛ **FRAN 2881 Civilisation canadienne-française Cr.Hrs.3** (L'ancien 144.288) Étude des éléments représentatifs du peuple canadien-français: grands courants de pensées, mouvements de l'histoire, évolution de la société et de la mentalité. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un des FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2911 Procédés d'écriture Cr.Hrs.3 (L'ancien 144.291) Étude des diverses formes de la communication: non verbale, verbale, orale, écrite. Une attention particulière sera accordée au contexte de la communication: registres de langue, ambiguïtés de langage et polysémie de l'expression. *Préalables:* une note minimale de C dans le FRAN 1091 (ou 144.109) et un des FRAN 1021 (ou 144.102), FRAN 1071 (ou 144.107) ou FRAN 1111 (ou 144.111). Note: le FRAN 1111 (ou 144.111) est fortement recommandé. Donné au Collège universitaire de Saint-Boniface.

FRAN 2921 Cours de phonétique française Cr.Hrs.3 (L'ancien 144.292) Étude approfondie du système phonétique et de la transcription phonétique de la langue française. Exercices systématiques portant sur l'articulation, l'accent, l'intonation, le rythme, la pause, la liaison et l'élosion. *Préalable:* une note minimale de C dans le FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2931 Initiation à la linguistique Cr.Hrs.3 (L'ancien 144.293) Dégagement des instruments linguistiques nécessaires à la compréhension des mécanismes de la langue française. Description des structures internes pour que l'étudiant(e) puisse prendre connaissance de ses éléments constitutifs. *Préalable:* une note minimale de C dans le FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2941 Structures du français contemporain Cr.Hrs.3 (L'ancien 144.294) Étude systématique de la syntaxe du français dans la perspective de la linguistique générative et transformationnelle. *Préalable:* une note minimale de C dans le FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2991 Création de textes variés Cr.Hrs.3 (L'ancien 144.299) Pratique des divers procédés d'écriture présentés au FRAN 2911 (ou 144.291). Rédaction de textes argumentatifs, incitatifs, expressifs, narratifs, descriptifs. *Préalable:* une note minimale de C dans le FRAN 2911 (ou 144.291). Donné au Collège universitaire de Saint-Boniface.

☛ **FRAN 3531 Le théâtre québécois Cr.Hrs.3** (L'ancien 144.353) Aperçu historique et étude de théâtre québécois de Lescaillot à Tremblay. Étude des oeuvres de Gratien Gélinas, Marcel Dubé, Michel Tremblay, etc. *Préalable:* un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

☛ **FRAN 3541 Le théâtre de l'Ouest Cr.Hrs.3** (L'ancien 144.354) Étude d'oeuvres d'auteurs franco-manitobains, tels que Auger, Dorge, Ferland, etc. *Préalable:* un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3631 Les romanciers du XXe siècle Cr.Hrs.3 (L'ancien 144.363) Étude de romans ayant le plus marqué le paysage littéraire du XXe siècle. Auteurs tels que: Gide, Colette, Sartre, de Beauvoir, Duras. *Préalable:* un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3641 Le rire dans la littérature française Cr.Hrs.3 (L'ancien 144.364) Étude du développement de la veine comique à travers la littérature française, de son origine au Moyen-Age jusqu'aux temps modernes en passant par ses manifestations au cours des différents siècles. *Préalable:* un cours (3 crédits) avec une note minimale de C de littérature de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3651 Littérature et vision tragique du monde Cr.Hrs.3 (L'ancien 144.365) Étude du développement de la veine tragique à travers la littérature française, de son origine au Moyen-Age jusqu'aux temps modernes en passant par ses manifestations au cours des différents siècles. *Préalable:* un cours (3 crédits) avec une note minimale de C de littérature de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3661 L'esprit de la révolution française Cr.Hrs.3 (L'ancien 144.366) Le maintien des formes classiques qui atteignent, au début du XVIIIe siècle, un summum d'élégance et de raffinement et l'apparition, d'une part, des idées nouvelles qui entraîneront la chute de l'ancien régime et, d'autre part, d'une sensibilité annonciatrice d'un âge nouveau. *Préalable:* un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3671 Études de poésie Cr.Hrs.3 (L'ancien 144.367) Étude des formes poétiques de la Renaissance (Marot, poètes de la Pléiade, poètes baroques), du Romantisme (Lamartine, Musset, Vigny, Hugo), du Parnasse (Gautier) et du début du Symbolisme (Baudelaire). *Préalable:* un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3681 Thèmes romantiques Cr.Hrs.3 (L'ancien 144.368) Les origines et les caractéristiques du Romantisme. Sa persistance et ses déboires à travers les grands mouvements littéraires du XIXe siècle - Réalisme, Naturalisme, Parnasse et Symbolisme. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3731 Initiation aux littératures francophones Cr.Hrs.3 (L'ancien 144.373) Introduction générale portant sur l'ensemble de la production littéraire dans les pays francophones autres que le Canada français et la France. Étude des contextes socio-historiques qui ont favorisé l'épanouissement de cette littérature. Étude de thèmes majeurs, de structures et d'esthétiques particulières retrouvées dans une sélection d'oeuvres choisies. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

✱ **FRAN 3831 L'époque de la contestation Cr.Hrs.3** (L'ancien 144.383) Étude approfondie de la société québécoise et des signes précurseurs de cet éclatement qui eut lieu au début des années 60 appelé la Révolution tranquille. Une attention particulière sera accordée à la poésie, la chanson, les nouvelles et aux essais produits pendant cette période de revendication populaire. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

✱ **FRAN 3841 La révolution tranquille et le roman Cr.Hrs.3** (L'ancien 144.384) Étude approfondie de la genèse du roman et à l'explosion des nouvelles formes de littérature depuis la Révolution tranquille au Québec. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

✱ **FRAN 3851 Littérature de l'Ouest: Poésie, nouvelles Cr.Hrs.3** (L'ancien 144.385) Une étude de la poésie et des nouvelles produites dans l'Ouest francophone du Canada depuis le siècle dernier: l'étudiant(e) pourra apprécier l'évolution des styles et des thèmes par l'analyse de textes choisis. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

✱ **FRAN 3861 Littérature de l'Ouest: Roman Cr.Hrs.3** (L'ancien 144.386) Une étude des romans produits dans l'Ouest francophone du Canada depuis le siècle dernier. L'étudiant(e) suivra l'évolution du genre romanesque de style et d'inspiration classique et traditionnelle jusqu'à l'expression moderne et post-moderne des écrivains franco-canadiens de l'Ouest. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000. Donné au Collège universitaire de Saint-Boniface.

FRAN 3911 Procédés et analyses stylistiques Cr.Hrs.3 (L'ancien 144.391) Étude détaillée de la structure des textes et des procédés stylistiques mis en oeuvre par des écrivains et des journalistes. Une place importante sera accordée à la presse, à la publicité et aux réalités sociales les plus proches des étudiants. *Préalable*: une note minimale de C dans le FRAN 2911 (ou 144.291). Donné au Collège universitaire de Saint-Boniface.

FRAN 3931 Lexicologie et lexicographie Cr.Hrs.3 (L'ancien 144.393) Objectifs de la lexicologie; étude des unités lexicales dans le cadre de la théorie linguistique; analyses lexicales à partir de textes choisis. Problèmes théoriques et pratiques de la lexicographie. *Préalable*: une note minimale de C dans le FRAN 2931 (ou 144.293). Donné au Collège universitaire de Saint-Boniface.

FRAN 3941 Syntaxe du français contemporain Cr.Hrs.3 (L'ancien 144.394) Étude des modèles fonctionnel, distributionnel et transformationnel de la syntaxe. Approfondissement du modèle transformationnel par l'analyse des transformations binaires. *Préalable*: une note minimale de C dans le FRAN 2941 (ou 144.294). Donné au Collège universitaire de Saint-Boniface.

FRAN 3951 Évolution de la langue Cr.Hrs.3 (L'ancien 144.395) Place du français dans le tableau des grandes familles de langues. Origines de la langue française et sa naissance. Les dialectes de l'ancien français. Étude de quelques textes illustrant l'évolution du français du Moyen-Age au XVIIe siècle. *Préalable*: une note minimale de C dans le FRAN 2911 (ou 144.291) ou FRAN 2931 (ou 144.293). Donné au Collège universitaire de Saint-Boniface.

FRAN 3991 Création littéraire: conte et nouvelle Cr.Hrs.3 (L'ancien 144.399) Création de contes, de nouvelles et d'autres textes fictifs à partir d'une étude détaillée des genres narratifs. Une partie du cours sera consacrée à l'étude des divers types de phrase et des contextes où ils pourraient être employés. *Préalable*: une note minimale de C dans le FRAN 2911 (ou 144.291). Donné au Collège universitaire de Saint-Boniface.

FRAN 4011 Sociocritique Cr.Hrs.3 (L'ancien 144.401) Initiation aux méthodes critiques du XXe siècle se fondant sur les principes de la sociologie moderne. *Préalables*: une note minimale de C dans le FRAN 2911 (ou 144.291) et un cours (3 crédits) de littérature de niveau 2000, 3000 ou 4000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4021 Critique féministe Cr.Hrs.3 (L'ancien 144.402) Étude de différents courants de la critique féministe, en rapport avec les théories de la critique littéraire moderne. Problématique d'une écriture au féminin et d'une lecture féministe d'oeuvres littéraires, françaises et québécoises. *Préalables*: une note minimale de C dans le FRAN 2911 (ou 144.291) et un cours (3 crédits) de littérature de niveau 2000, 3000 ou 4000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4031 Psychocritique Cr.Hrs.3 (L'ancien 144.403) Initiation aux méthodes critiques du XXe siècle se fondant sur les principes de la psychologie et de la psychanalyse. *Préalables*: une note minimale de C dans le FRAN 2911 (ou 144.291) et un cours (3 crédits) de littérature de niveau 2000, 3000 ou 4000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4061 La femme dans la littérature Cr.Hrs.3 (L'ancien 144.406) Ce cours portera sur le rôle de la femme dans la littérature. La littérature française et la littérature canadienne-française serviront de principaux modèles. Le cours touchera trois aspects différents concernant le rôle des femmes dans la littérature: les auteurs féminins, l'image de la femme dans des oeuvres écrites par des auteurs masculins et la question

d'une typologie féminine. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4071 Sujets particuliers Cr.Hrs.3 (L'ancien 144.407) Le contenu de ce cours variera d'année en année selon les besoins des étudiant(e)s, selon la spécialité du professeur. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4081 Littérature et cinéma Cr.Hrs.3 (L'ancien 144.408) Étude d'oeuvres littéraires et de leur réalisation cinématographique conduisant à un examen de problèmes de l'adaptation à l'écran d'une oeuvre littéraire ainsi qu'à une comparaison des techniques d'expression des deux arts et à une réflexion sur la création dans les deux langages spécifiques, le langage textuel et le langage visuel. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4551 L'âge d'or du théâtre français Cr.Hrs.3 (L'ancien 144.455) Étude thématique, dramatique et esthétique de six pièces représentatives de l'école classique du théâtre français (XVIIe siècle). *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4561 Le théâtre français du XVIIIe siècle Cr.Hrs.3 (L'ancien 144.456) Étude du renouveau des formes dramatiques dans quelques oeuvres du théâtre français du XVIIIe siècle. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4591 Création littéraire: théâtre Cr.Hrs.3 (L'ancien 144.459) Étude des procédés d'écriture d'une pièce de théâtre. Ateliers d'écriture, débouchant sur la création d'une pièce. *Préalable*: une note minimale de C dans le FRAN 2911 (ou 144.291) et un cours (3 crédits) de théâtre de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4631 Métamorphoses du roman Cr.Hrs.3 (L'ancien 144.463) Les origines du roman et la correspondance entre les différentes structures romanesques et les structures sociales sous l'Ancien Régime. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4641 Réalisme et engagement Cr.Hrs.3 (L'ancien 144.464) Les rapports du roman avec la société de l'histoire au XIXe et XXe siècles. Étude de la peinture de la société dans le roman. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4651 Poésie féminine Cr.Hrs.3 (L'ancien 144.465) Étude de la poésie au féminin, des origines à nos jours. Interrogation sur une spécificité de l'écriture féminine à travers les âges, au delà des courants idéologiques de l'époque à laquelle appartiennent les auteurs. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4661 Nouveaux visages du roman Cr.Hrs.3 (L'ancien 144.466) Étude détaillée de quelques oeuvres romanesques produites depuis le début des années 1980 (romans de Le Clézio, Percec, Duras, Sarraute, etc.). *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4731 Littérature africaine Cr.Hrs.3 (L'ancien 144.473) Une introduction à la littérature des pays africains francophones. Études de textes qui ont marqué le XXe siècle, avec une accentuation sur les productions après l'ère des indépendances. *Préalable*: une note minimale de C dans le FRAN 3731 (ou 144.373). Donné au Collège universitaire de Saint-Boniface.

FRAN 4741 Littérature maghrébine Cr.Hrs.3 (L'ancien 144.474) Étude d'une sélection d'oeuvres francophones choisies et écrites par les auteurs connus des pays maghrébins. Certains aspects particuliers à cette littérature seront abordés: histoire, culture, thèmes, structures, langue, technique et style. *Préalable*: une note minimale de C dans le FRAN 3731 (ou 144.373). Donné au Collège universitaire de Saint-Boniface.

FRAN 4751 Littérature antillaise Cr.Hrs.3 (L'ancien 144.475) Introduction générale à la littérature antillaise avec une mise en situation historique et socio-culturelle. Étude des thèmes majeurs, des particularités stylistiques dans quelques oeuvres choisies parmi les plus représentatives des tendances littéraires des XIXe et XXe siècles. *Préalable*: une note minimale de C dans le FRAN 3731 (ou 144.373). Donné au Collège universitaire de Saint-Boniface.

✱ **FRAN 4831 Littérature de l'Acadie et des Cajuns Cr.Hrs.3** (L'ancien 144.483) Introduction portant sur l'ensemble de la littérature acadienne et cajune (de la Louisiane) avec une mise en contexte géographique, historique et socio-culturelle. Étude thématique stylistique et formelle de quelques oeuvres représentatives des tendances littéraires des XIXe et XXe siècles. *Préalable*: avoir suivi un cours (3 crédits) de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4841 Le roman du terroir Cr.Hrs.3 (L'ancien 144.484) Aperçu général de l'histoire de la littérature canadienne-française depuis la fin du XIXe siècle jusqu'en 1945. Études d'oeuvres représentatives de chacune des périodes considérées (roman d'aventures, roman du terroir, roman régionaliste, etc.). *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4851 Du classicisme à l'exotisme Cr.Hrs.3 (L'ancien 144.485) Une initiation à la poésie et à la chanson canadienne-française depuis leurs origines jusqu'à la Deuxième Guerre mondiale. Une attention particulière sera accordée à l'étude de l'évolution des styles et des thèmes du classicisme vers l'exotisme. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4921 Les parlers régionaux Cr.Hrs.3 (L'ancien 144.492) À travers des documents audio-visuels et écrits, étude des principales caractéristiques phonétiques, syntaxiques, morphologiques, sémantiques et lexicales de certaines variantes régionales du français (ex. de France, d'Afrique, des Antilles, d'Amérique du Nord). *Préalables*:

une note minimale de C dans FRAN 2911 (ou 144.291) et FRAN 2931 (ou 144.293).
Donné au Collège universitaire de Saint-Boniface.

FRAN 4931 La langue dans la littérature Cr.Hrs.3 (L'ancien 144.493) Étude détaillée de textes littéraires allant du XVIII au XXe siècle et visant l'appréciation des différents styles et l'initiation aux différentes méthodes d'analyse de textes. *Préalable*: une note minimale de C dans le FRAN 2911 (ou 144.291) ou FRAN 2931 (ou 144.293). Donné au Collège universitaire de Saint-Boniface.

FRAN 4971 Sociolinguistique Cr.Hrs.3 (L'ancien 144.497) Initiation aux rapports que l'on peut établir entre la langue et la société, aux domaines d'étude et aux méthodes de la sociolinguistique. *Préalable*: une note minimale de C dans le FRAN 2931 (ou 144.293). Donné au Collège universitaire de Saint-Boniface.

FRAN 4981 Création littéraire: Roman Cr.Hrs.3 (L'ancien 144.498) Mise en pratique des techniques de création romanesque (composition, narration, description, portrait, etc.) pour réalisation d'un roman. Cette pratique fera suite à l'étude détaillée de quelques types de romans (roman policier, roman d'amour, d'aventure, etc.). *Préalables*: une note minimale de C dans FRAN 2911 (ou 144.291) et FRAN 3911 (ou 144.391) et un cours (3 crédits) de littérature de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

FRAN 4991 Création littéraire: Poésie Cr.Hrs.3 (L'ancien 144.499) Mise en pratique de techniques de création poétique (étude des rythmes, des images, des sonorités, etc.) pour la réalisation d'œuvres poétiques originales. *Préalables*: une note minimale de C dans le FRAN 2911 (ou 144.291) et un cours (3 crédits) de poésie de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

Cours donnés au Collège universitaire de Saint-Boniface: Traduction

Note: Les cours de traduction (sauf le TRAD 2071 et le TRAD 4021) sont exclusivement réservés aux étudiants ayant subi avec succès l'examen d'admission en traduction.

Students planning to register in either the Certificate or the Honours program in translation should consult the Collège universitaire de Saint-Boniface for the details pertaining to the course requirements and the regulations governing the programs.

Students completing their degrees on the main campus, but planning to register for any of the following courses, must have prior written approval from the head, Department of French, Spanish and Italian.

TRAD 1181 Introduction à l'espagnol Cr.Hrs.6 (L'ancien 122.118) Ce cours est destiné aux étudiants et étudiantes n'ayant aucune connaissance de l'espagnol ou n'en ayant qu'une connaissance, minime. L'accent sera mis sur le vocabulaire, la grammaire et l'acquisition d'aptitudes orales et écrites au moyen d'exercices divers et de pratique au laboratoire. Les activités de laboratoire alterneront avec des sessions de conversation en groupes. La participation active de l'étudiante ou de l'étudiant est une exigence du cours. On ne peut se faire créditer à la fois le TRAD 1181 et les TRAD 1261 (ou 122.126) (ou en SPAN 1260 ou 044.126), SPAN 1180 (ou 044.118), ou SPAN 1280. Les étudiants et les étudiantes dont l'espagnol est la langue maternelle et ceux qui possèdent déjà les crédits du cours d'espagnol de secondaire 4 ou l'équivalent ne peuvent s'inscrire à ce cours. Donné au Collège universitaire de Saint-Boniface.

TRAD 1261 Espagnol intermédiaire Cr.Hrs.3 (L'ancien 122.126) Révision intensive de la grammaire et du vocabulaire étudiés en TRAD 1181 (ou SPAN 1180) ou en Espagnol 40S. Pratique et perfectionnement des connaissances en classe et au laboratoire. On ne peut se faire créditer le TRAD 1261 et les SPAN 1260 (ou 044.126) ou SPAN 1280. *Préalable*: au moins "C" dans le TRAD 1181 (ou 122.118) (ou en SPAN 1180 ou 044.118) ou l'équivalent en Espagnol 40S, ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

TRAD 1271 Espagnol oral 1 Cr.Hrs.3 (L'ancien 122.127) Ce cours s'adresse aux étudiants de niveau intermédiaire qui ne parlent pas couramment l'espagnol et souhaitent perfectionner leurs compétences orales (compréhension, correction grammaticale). Pratique intensive de la langue parlée en classe et au laboratoire de langue à partir de thèmes de discussion contemporains et de sujets d'actualité, de politique et de culture, en rapport avec le monde hispanique. On ne peut se faire créditer le TRAD 1271 et les SPAN 1270 (ou 044.127) ou SPAN 1280. *Préalable*: au moins "C" dans le TRAD 1261 (ou 122.126) (ou en SPAN 1260 ou 044.126) ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

TRAD 2071 Grammaire normative Cr.Hrs.6 (L'ancien 122.207) Dans le cadre d'une révision approfondie de la grammaire, l'étudiant apprendra à maîtriser les particularités orthographiques du français. On étudiera les formes et les fonctions des parties du discours en insistant sur le verbe et ses conjugaisons ainsi que sur les règles d'accord et de concordance à l'intérieur de la phrase simple et de la phrase complexe. *Préalable*: avoir réussi l'examen d'admission aux programmes de traduction ou avoir obtenu la note B à l'issue des cours FRAN 1091 (ou 144.109) et FRAN 1111 (ou 144.111). Donné au Collège universitaire de Saint-Boniface.

TRAD 2101 Analyse et résumé de textes 1 Cr.Hrs.3 (L'ancien 122.210) Apprentissage des techniques d'analyse et de résumé de textes pragmatiques français de façon à développer l'aptitude interprétative (extraction du sens) et les capacités expressives (reformulation) chez l'étudiant(e). Les textes, écrits ou audiovisuels, touchent à l'actualité et aux divers domaines avec lesquels le traducteur sera appelé à se familiariser. *Préalable*: avoir réussi l'examen d'admission ou obtenu B+ au FRAN 1111 (ou 144.111), ou bien avoir reçu l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 2111 Informatique et traduction Cr.Hrs.3 (L'ancien 122.211) Introduction à l'usage des ordinateurs en traduction: banques de données terminologiques, dictionnaires électroniques, traduction assistée par ordinateur. Introduction à la traduction automatique. *Préalable*: avoir réussi l'examen d'admission ou obtenu l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-

Boniface.

TRAD 2151 Introduction à la traduction Cr.Hrs.3 (L'ancien 122.215) Introduction à l'histoire de la traduction et au rôle que celle-ci a joué aux diverses époques. Réflexion sur la responsabilité du traducteur vis-à-vis de ceux qu'il traduit (auteurs, représentants politiques, etc.) et de ses lecteurs. Méthodes et théories en traduction. Initiation à la traductologie. *Préalable*: avoir réussi l'examen d'admission ou obtenu l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 2301 Culture générale 1 Cr.Hrs.3 (L'ancien 122.230) Cours autodidactique pluridisciplinaire. L'étudiant(e) établit son corpus à partir d'une liste de lecture et en accord avec le(la) responsable de son programme d'étude. Donné au Collège universitaire de Saint-Boniface.

TRAD 2361 Espagnol commercial Cr.Hrs.3 (L'ancien 122.236) Initiation au vocabulaire commercial et aux techniques d'écriture dans le domaine des affaires. L'accent sera mis sur la composition appliquée au domaine commercial: rédaction de lettres, comptes rendus d'activités ou de réunions, etc. *Préalable*: une note minimale de C dans le TRAD 1261 (ou 122.126) ou SPAN 1260 (ou 044.126) ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

TRAD 2571 El español a través del cine hispanoamericano Cr.Hrs.3 (L'ancien 122.257) Ce cours vise à familiariser les étudiants avec les cultures espagnole et latino-américaine à partir d'œuvres cinématographiques issues de ces cultures. L'accent sera mis sur la discussion et l'expression orale. *Préalable*: au moins C dans le TRAD 1271 (ou 122.127) ou SPAN 1270 (ou 044.127) ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

TRAD 3011 Lexicologie comparée Cr.Hrs.3 (L'ancien 122.301) Étude des domaines abordés par la lexicologie et comparaison des structures lexicosémantiques de l'anglais et du français dans l'optique de la traduction. Ce cours abordera entre autres des notions telles que la contextualisation; la cooccurrence; les interférences linguistiques (anglicismes, gallicismes, faux amis); et la modulation lexicale en traduction. *Préalable*: avoir réussi l'examen d'admission ou obtenu l'autorisation du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 3051 Syntaxe comparée Cr.Hrs.3 (L'ancien 122.305) Étude contrastive des structures syntaxiques de l'anglais et du français dans l'optique de la traduction. Apprentissage des techniques de transfert et particulièrement de la transposition syntaxique à l'aide de nombreux exercices pratiques. Correction des problèmes des syntaxes provenant d'interférences linguistiques; calques, mauvais emplois des prépositions, des temps, etc. L'étudiant ou l'étudiante ne peut se faire créditer le TRAD 3051 (ou 122.305) et l'ancien 044.363. *Préalable*: avoir réussi l'examen d'admission ou obtenu l'autorisation du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 3101 Analyse et résumé de textes 2 Cr.Hrs.3 (L'ancien 122.310) Pratique des techniques d'analyse et de résumé à partir de textes français ou anglais. La reformulation en français sera l'occasion d'un exercice intellectuel proche de la traduction. Les recherches documentaires viseront non seulement à l'amélioration des connaissances générales mais aussi à l'établissement de glossaires. *Préalable*: une note minimale de C dans le TRAD 2101 (ou 122.210). Donné au Collège universitaire de Saint-Boniface.

TRAD 3111 Laboratoire 1 Cr.Hrs.3 (L'ancien 122.311) Ce cours a pour but de donner la possibilité aux étudiants de pratiquer leur futur métier dans des conditions semblables à ce qu'elles seront dans un bureau de traduction (qualité du produit fini, présentation, échéances, etc.) tout en étant guidés par leur professeur qui jouera ici le rôle de réviseur. Les textes pourront être des articles susceptibles d'être utiles aux professeurs de diverses matières au CUSB. Le laboratoire s'étendra sur toute l'année, à raison de 3 heures par semaine. *Préalables*: une note minimale de C dans les TRAD 2101 (ou 122.210) et TRAD 3101 (ou 122.310). Donné au Collège universitaire de Saint-Boniface.

TRAD 3121 Lexicographie comparée Cr.Hrs.3 (L'ancien 122.312) Étude contrastive de dictionnaires unilingues et bilingues anglais/français. Lecture de manuels de lexicographie et comparaison de divers dictionnaires unilingues et bilingues. *Préalable*: avoir réussi l'examen d'admission ou obtenu l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 3131 Terminologie bilingue et documentation Cr.Hrs.3 (L'ancien 122.313) Initiation aux diverses méthodes d'acquisition de la documentation permettant une application à la traduction: utilisation des encyclopédies, des ouvrages et des revues spécialisées à des fins terminologiques. Apprentissage de l'utilisation des banques de données et établissement de fiches terminologiques. *Préalables*: une note minimale de C dans TRAD 2101 (ou 122.210) et TRAD 3101 (ou 122.310) ou l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 3141 Rédaction professionnelle comparée I Cr.Hrs.3 (L'ancien 122.314) Étude comparative de documents professionnels anglais et français afin de mettre en lumière les différences qui peuvent exister dans les méthodes de présentation ou d'expression en anglais et en français. L'étudiant(e) devra ensuite produire des textes professionnels variés (lettres, procès-verbaux, curriculum vitae, etc.). *Préalables*: une note minimale de C dans les TRAD 2101 (ou 122.210) et TRAD 3100 (ou 122.310) ou l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 3261 Traduction générale (anglais-français) Cr.Hrs.3 (L'ancien 122.326) Mise en pratique des principes de traduction introduits dans le cours TRAD 2151 (ou 122.215) (Introduction à la traduction) auquel il fait suite. Les textes à traduire seront de nature générale et porteront sur divers domaines de l'actualité et de la vie professionnelle. *Préalable*: une note minimale de C dans le TRAD 2151 (ou 122.215). Donné au Collège universitaire de Saint-Boniface.

TRAD 3271 General Translation (French-English) Cr.Hrs.3 (L'ancien 122.327) Ap-

prendre et appliquer les règles de base de la traduction vers l'anglais de textes français d'intérêt général. Par une approche analytique du sens, découvrir les principaux aspects du maniement du langage pour pouvoir saisir les idées d'un message et leur articulation, et les reformuler en exploitant les ressources de l'anglais. *Préalable*: une note minimale de C dans au moins un des cours suivants: une note minimale de C dans au moins un des cours suivants: le ENGL 2000 (ou 004.200), le ENGL 2001 (ou 004.200), le TRAD 2101 (ou 122.210), le TRAD 2151 (ou 122.215). Donné au Collège universitaire de Saint-Boniface.

TRAD 3281 Sujets particuliers Cr.Hrs.3 (L'ancien 122.328) Le contenu de ce cours peut changer en fonction des besoins et des intérêts des étudiants et des professeurs. *Préalable*: un cours (3 crédits) avec une note minimale de C de niveau 2000 ou l'autorisation du professeur. Donné au Collège universitaire de Saint-Boniface.

TRAD 3301 Culture générale II Cr.Hrs.3 (L'ancien 122.330) Cours autodidactique pluridisciplinaire. L'étudiant(e) établit son corpus à partir d'une liste de lecture et en accord avec le(la) responsable de son programme d'étude. *Préalable*: une note minimale de C dans le TRAD 2301 (ou 122.230). Donné au Collège universitaire de Saint-Boniface.

TRAD 3461 Littérature et civilisation d'Amérique latine Cr.Hrs.3 (L'ancien 122.346) Initiation aux grands auteurs d'Amérique latine, ainsi qu'aux caractères spécifiques des sociétés latino-américaines: valeurs, pratiques, culturelles mais aussi politiques, commerciales et professionnelles. *Préalable*: une note minimale de C dans le TRAD 1261 (ou 122.126) ou SPAN 1260 (ou 044.126). Donné au Collège universitaire de Saint-Boniface.

TRAD 3561 Cours avancé d'espagnol professionnel Cr.Hrs.3 (L'ancien 122.356) Dans ce cours, l'accent sera mis sur la pratique de la traduction de l'espagnol au français et de français à l'espagnol à partir de textes pragmatiques à caractère professionnel. *Préalable*: une note minimale de C dans le TRAD 2361 (ou 122.236). Donné au Collège universitaire de Saint-Boniface.

TRAD 4011 Atelier de traduction professionnelle Cr.Hrs.3 (L'ancien 122.401) Travaux pratiques de traduction en atelier où la simulation des conditions réelles de travail devra permettre à l'étudiant(e) d'améliorer sa productivité sous le rapport du temps et de la qualité. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326) ou l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 4021 Analyse du discours Cr.Hrs.6 (L'ancien 122.402) Le discours étant défini comme tout ce qui se dit ou s'écrit, on en étudiera la structure et le fonctionnement à la fois dans la langue et dans la société. En particulier, on verra comment la communication se fonde sur l'interaction entre les actes d'énonciation, les propriétés d'un texte et les conditions de sa réception. Ce cours est ouvert aux étudiants et aux étudiantes des autres programmes sur autorisation écrite du représentant ou de la représentante du secteur de traduction. Donné au Collège universitaire de Saint-Boniface.

TRAD 4051 Révision Cr.Hrs.3 (L'ancien 122.405) Conçu dans une optique didactique, ce cours doit permettre à l'étudiant en traduction de vérifier et d'améliorer la qualité de son travail. Par une série d'exercices comparatifs et raisonnés, il apprendra à développer ses facultés analytiques, son sens critique et son habileté à manier la langue d'arrivée. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326) ou l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 4061 Terminologie appliquée Cr.Hrs.3 (L'ancien 122.406) Travaux pratiques destinés à renforcer l'efficacité et la qualité des recherches documentaires et terminologiques exigées de l'étudiant(e) par la traduction de textes spécialisés. *Préalable*: une note minimale de C dans le TRAD 3131 (ou 122.313). Donné au Collège universitaire de Saint-Boniface.

TRAD 4071 Mémoire de traduction Cr.Hrs.3 (L'ancien 122.407) Travail indépendant, s'étendant sur deux semestres ou plus, sous la direction d'un professeur. L'étudiant ou l'étudiante devra démontrer qu'il est capable de mener une recherche documentaire et terminologique à des fins traductionnelles. Pour ce faire, il ou elle réalisera une traduction commentée d'un texte d'au moins 3000 mots répondant aux exigences de la profession. La traduction sera nécessairement accompagnée d'une analyse textuelle et d'un lexique élaboré à partir du texte à traduire. *Préalables*: une note minimale de C dans le TRAD 3261 (ou 122.326) ou le TRAD 3271 (ou 122.327) et le TRAD 3131 (ou 122.313). Donné au Collège universitaire de Saint-Boniface.

TRAD 4081 Sous-titrage Cr.Hrs.3 (L'ancien 122.408) Le cours présente un survol des processus traductologiques et techniques du sous-titrage. Il comprend également un volet pratique sur la traduction cinématographique en utilisant des sous-titres. *Préalable*: une note minimale de C dans un des cours suivants: le TRAD 4251 (ou 122.425), TRAD 4091 (ou 122.409) ou le TRAD 4281 (ou 122.428). Donné au Collège universitaire de Saint-Boniface.

TRAD 4091 Gestion d'un service de traduction Cr.Hrs.3 (L'ancien 122.409) Le cours comporte les principes de base de la gestion appliquée à un service de traduction. Il aborde également la gestion et la coordination des équipes en réseau Internet, tant sur le plan national qu'international. Il s'adresse essentiellement aux étudiants de 4e année du Baccalauréat spécialisé. *Préalable*: une note minimale de C+ dans les cours TRAD 2151 (ou 122.215) et TRAD 3261 (ou 122.326) ou TRAD 3271 (ou 122.327). Donné au Collège universitaire de Saint-Boniface.

TRAD 4101 Mémoire de terminologie Cr.Hrs.3 (L'ancien 122.410) Travail de recherche supervisé en terminologie de l'École de traduction. Ce travail permettra de faire une recherche thématique sur un sujet et d'élaborer des fiches terminologiques. Par ailleurs, l'étudiant ou l'étudiante approfondira ses compétences dans la manipulation des bases de données terminologiques, leur mise à jour et leur enrichissement. *Préalables*: une note minimale de B dans le TRAD 3131 (ou 122.313) et TRAD 4061 (ou 122.406). Donné au Collège universitaire de Saint-Boniface.

TRAD 4111 Laboratoire II Cr.Hrs.3 (L'ancien 122.411) Ce cours est semblable au TRAD 3111 (ou 122.311), se donne en même temps et selon des modalités sembla-

bles. Laboratoire II vise à donner une deuxième année de pratique aux étudiants inscrits dans l'un des cours de traduction spécialisée. Les étudiants en Laboratoire II auront à traduire les textes qui présentent le plus de difficultés. *Préalable*: une note minimale de C dans le TRAD 3111 (ou 122.311). Donné au Collège universitaire de Saint-Boniface.

TRAD 4141 Rédaction professionnelle comparée 2 Cr.Hrs.3 (L'ancien 122.414) Étude comparative de documents professionnels anglais et français. Rédaction, en français, de documents professionnels tels que rapports, documents journalistiques ou juridiques. *Préalable*: une note minimale de C dans le TRAD 3141 (ou 122.314). Donné au Collège universitaire de Saint-Boniface.

TRAD 4231 Translation in the Social Sciences Cr.Hrs.3 (L'ancien 122.423) Révision et pratique des principes de la traduction à partir de textes français appartenant au domaine des sciences sociales. Établissement de dossiers documentaires et de fiches terminologiques bilingues. *Préalable*: une note minimale de C dans le TRAD 3271 (ou 122.327). Donné au Collège universitaire de Saint-Boniface.

TRAD 4241 Legal Translation Cr.Hrs.3 (L'ancien 122.424) Révision et pratique des principes de la traduction vers à partir de textes français appartenant au domaine juridique. Établissement de dossiers documentaires et de fiches terminologiques dans ces domaines. *Préalable*: une note minimale de C dans le TRAD 3271 (ou 122.327). Donné au Collège universitaire de Saint-Boniface.

TRAD 4251 Literary Translation Cr.Hrs.3 (L'ancien 122.425) Révision et pratique des principes de la traduction vers l'anglais à partir de textes littéraires français. Analyse du style et des modes d'expression et recherche d'équivalences en langue d'arrivée. *Préalable*: une note minimale de C dans le TRAD 3271 (ou 122.327). Donné au Collège universitaire de Saint-Boniface.

TRAD 4261 Initiation à l'interprétation Cr.Hrs.3 (L'ancien 122.426) Étant donné la croissance constante de la demande dans le domaine de l'interprétation, les étudiants auront avantage à suivre ce cours qui leur permettra de se familiariser avec la traduction orale. Dans ce cours, l'accent sera mis sur la qualité de l'expression orale, tant en anglais qu'en français, les interprètes travaillant en effet toujours dans les deux sens. *Préalables*: une note minimale de C dans le TRAD 3261 (ou 122.326) et le TRAD 3271 (ou 122.327). Donné au Collège universitaire de Saint-Boniface.

TRAD 4271 Scientific and Technical Translation Cr.Hrs.3 (L'ancien 122.427) Révision et application des principes de la traduction vers l'anglais à partir de textes appartenant aux domaines scientifiques et techniques. Établissement de dossiers documentaires et terminologiques dans ces domaines. *Préalable*: une note minimale de C dans le TRAD 3271 (ou 122.327). Donné au Collège universitaire de Saint-Boniface.

TRAD 4281 Adaptation publicitaire Cr.Hrs.3 (L'ancien 122.428) Initiation à l'adaptation et à la traduction de textes publicitaires. Apprentissage des méthodes de modulation intralinguistique et interlinguistique de l'énoncé publicitaire en fonction de facteurs linguistiques, affectifs et sociaux. Donné au Collège universitaire de Saint-Boniface.

TRAD 4361 Traduction spécialisée (anglais-français) Cr.Hrs.3 (L'ancien 122.436) Révision et application des principes de la traduction vers le français de textes pragmatiques anglais appartenant à divers domaines de spécialisation. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326). Donné au Collège universitaire de Saint-Boniface.

TRAD 4371 Specialized Translation (French-English) Cr.Hrs.3 (L'ancien 122.437) Réviser et appliquer les principes de la traduction vers l'anglais de textes pragmatiques français appartenant à divers domaines de spécialisation. *Préalable*: une note minimale de C dans le TRAD 3271 (ou 122.327). Donné au Collège universitaire de Saint-Boniface.

TRAD 4381 Traduction en sciences sociales (anglais-français) Cr.Hrs.3 (L'ancien 122.438) Au XXe siècle, les sciences sociales ont pris une importance de plus en plus marquée, créant ce faisant un langage qui leur est propre et tient compte de méthodes de recherche et d'analyse bien définies. L'étudiant(e) se familiarisera donc, dans ce cours, avec le langage des sciences sociales tant en anglais qu'en français, et il y aura recours chaque fois que le texte de départ l'exigera tout en enrichissant sa culture générale. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326). Donné au Collège universitaire de Saint-Boniface.

TRAD 4391 Traduction juridique (anglais-français) Cr.Hrs.3 (L'ancien 122.439) Révision et application des principes de la traduction vers le français de textes juridiques anglais appartenant à divers aspects du droit: textes législatifs, règlements, textes de jurisprudence, de doctrine, contrats. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326). Donné au Collège universitaire de Saint-Boniface.

TRAD 4401 Traduction littéraire (anglais-français) Cr.Hrs.3 (L'ancien 122.440) Application des principes de la traduction vers le français à des textes littéraires. Analyse des procédés stylistiques anglais et recherche d'équivalences en français. Pratique de la rédaction expressive. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326). Donné au Collège universitaire de Saint-Boniface.

TRAD 4411 Traduction scientifique et technique (anglais-français) Cr.Hrs.3 (L'ancien 122.441) Révision et application des principes de la traduction vers le français à partir de textes appartenant aux domaines scientifiques et techniques. Établissement de dossiers documentaires et terminologiques dans ces domaines. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326). Donné au Collège universitaire de Saint-Boniface.

TRAD 4421 Traduction commerciale et économique (anglais-français) Cr.Hrs.3 (L'ancien 122.442) Révision et application des principes de la traduction vers le français de textes pragmatiques spécialisés dans les domaines du commerce et de l'économie. Établissement de lexiques bilingues et enrichissement des connaissances de l'étudiant(e) dans ce domaine de spécialisation. Pratique de rédaction en style commercial. *Préalable*: une note minimale de C dans le TRAD 3261 (ou 122.326). Donné au Collège universitaire de Saint-Boniface.

TRAD 4501 Initiation à la localisation Cr.Hrs.3 (L'ancien 122.450) La localisation est l'adaptation de logiciels pour qu'ils soient utilisables par des publics très variés. Cette adaptation étant aussi linguistique, le rôle du traducteur est essentiel dans l'équipe de localisation, mais très technique. Dans ce cours, les étudiants apprendront donc à uti-

liser divers outils informatiques indispensables à cette activité. *Préalable:* une note minimale de C dans le TRAD 2111 (ou 122.211) ou l'autorisation du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

8.13 Geography Program

Acting Head: S. Mary P. Benbow
General Office: 211 Isbister Building
Telephone: 204 474 9081

Notice

Effective September 1, 2003 the Faculty of Arts will no longer offer Bachelor of Arts Major and Honours degree programs in Geography.

Those Arts students who declared a General Major, Advanced Major or Honours field in Geography prior to September 1, 2003 will be permitted to complete their degree program in Arts. Arts students will have until April 1, 2008 to complete the degree. It is still possible to declare or complete a Minor in Geography.

For Geography course listings, refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources chapter in this *Calendar*.

8.13.1 Academic Staff

For a complete listing of academic staff see the entry for the Department of Environment and Geography in the Clayton H. Riddell Faculty of Environment, Earth, and Resources chapter in this *Calendar*.

8.13.2 Program Information (for continuing students only)

Geography examines environments created on the earth's surface by nature and by humans. There are four broad categories of courses in the discipline: Physical geography is concerned with physical features on and over the globe; human geography examines the nature of cultural features or the products of human activity; regional geography attempts to achieve a synthesis of physical and human geography; and techniques in geography focus on analytic methods.

For continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

8.13.3 Geography			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
GEOG 1200 or GEOG 1280 and GEOG 1290	12 credit hours in Geography courses numbered at the 2000 level ¹ Year 2 and 3 courses should include at least 12 credit hours of systematic courses and at least 6 credit hours must be one or more area studies courses (see below).	12 credit hours in Geography courses numbered at the 3000 level ¹	
ADVANCED MAJOR TOTAL: 54 CREDIT HOURS			
GEOG 1200 or GEOG 1280 and GEOG 1290	<ul style="list-style-type: none"> ● GEOG 2220 ● GEOG 2530 ● 9 credit hours in Geography courses numbered at the 2000 or 3000 level¹ Year 2, 3 and 4 courses should include at least 12 credit hours of systematic courses and at least 6 credit hours must be one or more area studies courses (see below).	<ul style="list-style-type: none"> ● GEOG 3680 ● 6 credit hours in Geography courses numbered at the 3000 level¹ 	<ul style="list-style-type: none"> ● 12 credit hours in Geography courses numbered at the 4000 level ● 6 additional credit hours in Geography
MINOR TOTAL: 18 CREDIT HOURS			
GEOG 1200 or GEOG 1280 and GEOG 1290	6 credit hours in Geography courses numbered at the 2000 level	6 credit hours in Geography courses numbered at the 3000 level	
HONOURS			
GEOG 1200 or GEOG 1280 and GEOG 1290	<ul style="list-style-type: none"> ● GEOG 2220 ● GEOG 2530 ● 9 additional credit hours in Geography courses numbered at the 2000 or 3000 level ● 12 credit hours in ancillary options² 	<ul style="list-style-type: none"> ● GEOG 3680 ● 18 credit hours in Geography courses numbered at the 2000 or 3000 level of which at least 6 hours must be systematic and 6 hours must be area studies ● 6 credit hours in ancillary options² 	<ul style="list-style-type: none"> ● GEOG 4660 ● 12 credit hours in Geography courses numbered at the 4000 level ● 6 credit hours in ancillary options²

NOTES:

¹ Students wishing to transfer from the General Major to the Advanced Major are permitted to take either GEOG 2220 or GEOG 2530 in either third or fourth year.

² Ancillary options are chosen in consultation with the department head.

Other

Where the following notes refer to Majors, they apply to both General and Advanced Majors.

1) Courses numbered at the 2000 and 3000 level are arranged into the following groups Systematics (PS, HS and TS), and Area Studies (A) as follows:

Physical Geography (PS)

GEOG 2440 Geography of Natural Hazards	6
GEOG 2540 Weather and Climate	3
GEOG 2541 Météorologie et climatologie	3
GEOG 2550 Geomorphology	3

GEOG 2551 Géomorphologie	3
GEOG 2620 Geography of Environmental Changes	3
GEOG 3411 Géographie de l'eau	3
GEOG 3440 Applied Climatology	6
GEOG 3580 Landforms	6
GEOG 3610 Climatic Change	6
Human Geography (HS)	
GEOG 2210 Economic Geography	6
GEOG 2211 Géographie économique	6
GEOG 2410 Geography of Tourism and Recreation	6
GEOG 2430 Political Geography	6
GEOG 2480 Population Geography	6

GEOG 2481	Géographie de la Population	6	GEOG 3500	A Geography of Europe	6
GEOG 2520	Geography of Natural Resources	3	GEOG 3501	Géographie de l'Europe	6
GEOG 2630	Geography of Culture and Environment	3	GEOG 3590	Geography of Developing Countries	6
GEOG 2640	Geography of Culture and Inequality	3	GEOG 3591	Géographie des pays en voie de développement	6
GEOG 2651	Géographie politique 1	3	GEOG 3600	Geography of Ukraine	3
GEOG 2661	Géographie politique 2	3	GEOG 3700	Canada: The Making of the Human Landscape	6
GEOG 3421	L'eau, enjeu géostratégique	3	GEOG 3701	Canada: évolution de l'écoumène	6
GEOG 3460	Urban Geography	6	GEOG 3740	Field Studies in Geography	6
GEOG 3510	Agricultural Geography	6	GEOG 3750	Field Studies in Geography	3
GEOG 3520	Energy and Society	6	GEOG 3821	Les territoires de la Francophonie mondiale	3
GEOG 3530	An Introduction to Land-Resource Management	6	GEOG 3831	L'espace Francophone panaméricain	3
GEOG 3540	Regional Development Planning Theory and Practise	6	GEOG 3841	Les espaces Francophones de l'Afrique, de l'Asie et de l'Océanie	3
GEOG 3710	Population and the Third World	3			
GEOG 3720	Refugees, Displacees, Exiles	3			
GEOG 3800	Geography of Transportation Development	3			
GEOG 3821	Les territoires de la Francophonie mondiale	3			
GEOG 3831	L'espace Francophone panaméricain	3			
GEOG 3841	Les espaces Francophones de l'Afrique, de l'Asie et de l'Océanie	3			
Techniques (TS)					
GEOG 2220	Introductory Cartography and Map Interpretation	6			
GEOG 2221	Introduction à la cartographie et analyse de la carte numérique	6			
GEOG 2530	Introduction to Scientific Geographic Research	3			
GEOG 3680	Research Methods in Geography	6			
GEOG 3730	Geographic Information Systems	3			
GEOG 3740	Field Studies in Geography	6			
GEOG 3750	Field Studies in Geography	3			
Area Studies (Regional) (A)					
GEOG 2350	Latin America	6			
GEOG 2450	The Making of the Prairie Landscape	6			
GEOG 2460	Geography of Africa	6			
GEOG 2490	Geography of Modern China	3			
GEOG 2560	Geography of North America	6			
GEOG 2570	Geography of Canada	3			
GEOG 2580	Geography of the United States	3			
GEOG 3431	Géographie du Canada	3			
GEOG 3480	Canadian Problems	3			
GEOG 3481	Particularités de la géographie du Canada	3			

2) Majors may specialize in Physical, Human or Applied Geography but it is not compulsory for them to do so.

3) Majors wishing to specialize in Physical Geography should take at least three options (18 credit hours) from courses designated 'PS.'

4) Majors wishing to specialize in Human Geography should take at least three options (18 credit hours) from courses designated 'HS.'

5) Majors wishing to specialize in Applied Geography should include 2000-level courses from GEOG 2210, GEOG 2220, GEOG 2410, GEOG 2440, GEOG 2480, GEOG 2520, GEOG 2530, GEOG 2540 and GEOG 2620; and 3000-level courses from GEOG 3440, GEOG 3460, GEOG 3480, GEOG 3510, GEOG 3520, GEOG 3530, GEOG 3540, GEOG 3580, GEOG 3680, GEOG 3710, GEOG 3720 and GEOG 3800.

Honours in Geography may be taken in combination with the program of Central and East European Studies (see Section 8.5), Cross-disciplinary Minor programs are available using GEOG 3460 (Urban Studies program) and GEOG 3590 (Asian Studies program) and GEOG 2350 (Latin American Studies program). In addition, courses GEOG 2450, GEOG 3480 and GEOG 3700 may be used in combination with the Honours, Major, and Minor programs in Canadian Studies.

8.13.4 Geography Course Descriptions

For Geography course descriptions, refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources chapter in this *Calendar*.

8.14 Department of German and Slavic Studies

Acting Head: Myroslav Shkandrij

General Office: 328 Fletcher Argue Building

Telephone: 204 474 9370

E-mail: german_slavic@umanitoba.ca

Website: www.umanitoba.ca/german_and_slavic

8.14.1 Academic Staff

Professors Emeriti

Doerksen, V., M.A. (Manitoba), Ph.D. (Zurich); **Glendinning, R.J., Dr.Phil.** (Freiburg).

Senior Scholar

Rozumnyj, J., Ph.D. (Ottawa).

Professor

Shkandrij, M., M.A., Ph.D. (Toronto).

Associate Professors

Aponiuk, N., M.A., Ph.D.(Toronto); **Dueck, C., M.A.** (Saskatchewan), Ph.D. (McGill); **Heberger, A., M.A.** (Mannheim), M.A., Ph.D. (Waterloo).

Assistant Professors

Baraban, E., M.A.(Budapest), Ph.D.(British Columbia); **Jaeger, S., M.A., Ph.D.** (Bielefeld).

Senior Instructor

Finlay, R., M.A.(Manitoba).

Instructor

Konstantiuk, I., M.A.(Manitoba).

8.14.2 Program Information

This department's program covers two European cultural and language groups. German is the official language of five European countries and an understanding of German language and culture is essential to any understanding of European history. Courses are offered in German language, literature and culture. In Slavic studies the department offers language courses in Russian, Ukrainian and Polish — the three largest Slavic language groups. The Slavic countries of eastern Europe exert an important influence on international affairs. In Canada, immigration from both German and Slavic language groups has contributed greatly to the country's cultural mosaic.

8.14.3 German Program

For entry, continuation and graduation requirements for the General Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

General Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in GRMN 1120 or GRMN 2100. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate, including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in 6 credit hours in German.

Honours Program

For entry to the Honours program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

8.14.4 German			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
GRMN 1120 or GRMN 2100 ¹	<ul style="list-style-type: none"> ● GRMN 2120 or GRMN 2130 or GRMN 2140 ● GRMN 3200 ● 15 additional credit hours in German 		
MINOR TOTAL: 18 CREDIT HOURS			
6 credit hours in German	12 credit hours in German		
HONOURS SINGLE			
GRMN 1120 or GRMN 2100 ¹	<ul style="list-style-type: none"> ● GRMN 2120 or GRMN 2130 ● GRMN 2140 ● GRMN 3200 ● 18 additional credit hours in German courses numbered at the 2000, 3000 or 4000 level ● 30 credit hours in ancillary options 		<ul style="list-style-type: none"> ● GRMN 4600 ● 9 additional credit hours in German courses numbered at the 4000 level² ● 6 additional credit hours in German courses numbered at the 3000 or 4000 level ● 6 credit hours in ancillary options
HONOURS DOUBLE			
GRMN 1120 or GRMN 2100 ¹	<ul style="list-style-type: none"> ● GRMN 2120 or GRMN 2130 ● GRMN 2140 ● GRMN 3200 ● 12 additional credit hours in German courses numbered at the 2000, 3000 or 4000 level ● 24 credit hours in other honours field ● 6 credit hours in ancillary options 		<ul style="list-style-type: none"> ● GRMN 4600 ● 6 additional credit hours in German courses numbered at the 4000 level² ● 3 additional credit hours in German courses numbered at the 3000 or 4000 level ● 12 credit hours in other honours field
SPECIAL COURSES			
GRMN 1240, GRMN 2370 (No knowledge of the German language is required. May not be used for Major, Minor or Honours credit in German).			
NOTES:			
¹ In exceptional circumstances (with written consent of department head), students with superior language ability may replace GRMN 1120 or GRMN 2100 with GRMN 3200. In this case, GRMN 3200 listed under Year 2 or 3 of each program must be replaced with 6 credit hours in German in order to complete requirements.			
² Students enrolled in the fourth year of the Honours program may be permitted to substitute up to 6 credit hours of graduate level courses.			

8.14.5 German Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

U1 GRMN 1120 Beginning German Cr.Hrs.6 (Formerly 008.112) Three hours of lectures, plus one hour each of language lab and conversation per week. The course is intended for students with little or no previous knowledge of German. Basic grammar is included, but emphasis is placed on the development of broad reading and speaking skills. Satisfactory completion of this course enables students to proceed to GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210). Students may not hold credit for both GRMN 1120 (or 008.112) and GRMN 1121 (or 008.112). Students with Grade 12 German or its equivalent may not normally take the course for credit. Not open to students who have previously obtained credit for GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210).

GRMN 1121 Introduction à l'Allemand Cr.Hrs.6 (L'ancien 008.112) Trois heures de cours plus une heure de laboratoire de langue et une heure de conversation par semaine. Le cours est destiné aux étudiants et aux étudiantes n'ayant aucune connaissance de l'allemand ou n'en ayant qu'une connaissance minimale. Le cours comportera une initiation à la grammaire fondamentale mais l'accent sera mis sur le développement d'aptitudes à la lecture et à la conversation. La réussite à ce cours permet à l'étudiant(e) d'entrer dans les cours d'allemand GRMN 2100 (ou 008.210) ou GRMN 2101 (ou 008.210). L'étudiant(e) qui détient les crédits du GRMN 1121 (ou 008.112) ne peut se faire créditer aucun des cours GRMN 1120 (ou 008.112). L'étudiant(e) qui possède déjà les crédits du cours d'allemand de secondaire 4 ou l'équivalent ne peuvent s'inscrire à ce cours. Les étudiants(es) qui auraient déjà obtenu des crédits pour le GRMN 2100 (ou 008.210) ou GRMN 2101 (ou 008.210) ne peuvent pas s'inscrire à ce cours. Donné au Collège universitaire de Saint-Boniface.

U1 GRMN 2100 Intermediate German Cr.Hrs.6 (Formerly 008.210) Three hours of lectures and one hour of conversation class per week. Grammar review, exercises, development of practical oral skills, conversation and modern usage. Introduction to German poetry and prose. Students may not hold credit for both GRMN 2100 (or

008.210) and GRMN 2101 (or 008.210). *Prerequisite:* German 40S, or a grade of "C" or better in either: GRMN 1120 (or 008.112) or GRMN 1121 (or 008.112) or written consent of department head.

GRMN 2101 Allemand intermédiaire Cr.Hrs.6 (L'ancien 008.210) Trois heures de cours et une heure de conversation par semaine. Révision de la grammaire, exercices, développement de l'expression orale et conversation. Introduction à la poésie et à la prose allemandes. L'étudiant(e) qui détient les crédits du GRMN 2101 (ou 008.210) ne peut se faire créditer aucun des cours GRMN 2100 (ou 008.210). *Préalable:* Allemand de 12e année, ou une note minimale de C dans un des cours suivants: GRMN 1120 (ou 008.112) ou GRMN 1121 (ou 008.112) ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

W GRMN 2120 Introduction to German Culture 1 Cr.Hrs.3 Language of instruction: English. An introduction to the culture of contemporary German speaking countries; analyzes literature and other cultural forms since the end of World War I, including the Weimar Republic, the Third Reich and the Holocaust, divided Germany, Re-Unification, and the European Union.

W GRMN 2130 Introduction to German Culture 2 Cr.Hrs.3 Language of instruction: English. An introduction to the culture of the German-speaking countries from the Romans to the end of World War I; analyzes literature and other cultural forms and their relation to the rise of the German Nation in the 19th century and its first "fall" in the 20th century.

GRMN 2140 Exploring German Literature Cr.Hrs.3 In this intermediate course, we will read and discuss a number of works belonging to different literary genres by major German-speaking authors, such as Kafka, Mann, Brecht, Böll, Grass, Jelinek, Wolf, and others. Activities and assignments in this course will focus on the development of reading competency in different literary genres, the expansion of students' German vocabulary, and the development of German written and oral expression. Conducted in German. Students may not hold credit for both GRMN 2140 and the former 008.245. *Prerequisite:* a grade of "C" or better in GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210) or written consent of department head.

GRMN 2150 Independent Studies in German Cr.Hrs.3 The content of this class will vary from year to year depending on the needs and interests of instructors and students. *Prerequisite:* written consent of department head.

GRMN 2480 Special Topics in German 1 Cr.Hrs.3 (Formerly 008.248) Topics deal-

ing with German literature and culture. Course content will vary from year to year depending on the interests and needs of students and staff. *Prerequisite:* a grade of "C" or better in one of: GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210) or written consent of department head.

GRMN 2490 Special Topics in German 2 Cr.Hrs.3 (Formerly 008.249) Topics dealing with German literature and culture. Course content will vary from year to year depending on the interests and needs of students and staff. *Prerequisite:* a grade of "C" or better in one of: GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210), or written consent of department head.

GRMN 3200 Deutsche Sprachpraxis 1 Cr.Hrs.6 (Formerly 008.320) Modern German usage through conversation, translation (English-German) and practical exercises; study of contemporary fictional and non-fictional texts. Emphasis on vocabulary and basic structural and stylistic problems. Students may not hold credit for both GRMN 3200 (or 008.320) and GRMN 3201 (or 008.320). *Prerequisite:* a grade of "C" or better in one of: GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210).

GRMN 3201 Deutsche sprachpraxis I Cr.Hrs.6 (L'ancien 008.320) Approfondissement, au moyen d'exercices pratiques, de la conversation et de la traduction (français - allemand), de l'allemand parlé et écrit à l'aide de textes variés. L'accent sera mis sur l'étude du vocabulaire et des particularités de structure et de style. L'étudiant(e) ne peut se faire créditer à la fois le GRMN 3201 (ou 008.320) et le GRMN 3200 (ou 008.320). *Préalable:* une note minimale de C dans un des suivants: GRMN 2100 (ou 008.210) ou GRMN 2101 (ou 008.210). Donné au Collège universitaire de Saint-Boniface.

GRMN 3211 Allemand commercial Cr.Hrs.6 (L'ancien 008.321) Initiation, au moyen d'exercices oraux et écrits, au vocabulaire commercial et aux techniques d'écriture dans le domaine des affaires. Une révision de la grammaire allemande est prévue mais l'accent sera mis sur la composition et la conversation appliquées au domaine commercial. Les étudiants ne peuvent pas cumuler les crédits pour le GRMN 3211 (ou 008.321) et le GRMN 3230. *Préalable:* une note minimale de "C" dans un des suivants: GRMN 2100 (ou 008.210), GRMN 2101 (ou 008.210), GRMN 2110 (ou 008.211) ou l'approbation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

GRMN 3220 Deutsche Sprachpraxis 2 Cr.Hrs.3 Advanced work on various aspects of the German language, involving intensive practice in writing and conversational skills; translation of literary and non-literary materials from and into German; and exercise in stylistic and structural analysis of literary and non-literary German in a variety of registers and contexts. Students may not hold credit for both GRMN 3220 and the former 008.337. *Prerequisite:* a grade of "C" or better in GRMN 3200 (or 008.320) or GRMN 3201 (or 008.320).

GRMN 3230 Business German Cr.Hrs.3 An introduction to the contemporary terminology and usage of German in the workplace. Listening, speaking, reading, and writing skills will be developed through a variety of activities. This course also aims at developing cross-cultural awareness. The course prepares the student for the business exam *Zertifikat für den Beruf*. Students may not hold credit for both GRMN 3230 and GRMN 3211 (or 008.321). *Prerequisite:* a grade of "C" or better in GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210) or written consent of department head.

GRMN 3240 German Enlightenment and Classicism Cr.Hrs.3 A study of selected texts of the German Enlightenment and Classicism, including works by Lessing, Schiller, Goethe and others; advanced language practise. *Prerequisite:* a grade of "C" or better in GRMN 2140 or written consent of department head.

GRMN 3250 German Romanticism Cr.Hrs.3 Study of selected fairy tales, novellas, letters, poetry and other texts by authors such as Novalis, Tieck, E.T.A. Hoffmann, and Kleist; topics discussed include the relationship between Enlightenment and Romanticism, the role of women, the discovery of the uncanny, the role of the fantastic, and romantic vampires, advanced language practise. *Prerequisite:* a grade of "C" or better in GRMN 2140 or written consent of department head.

GRMN 3260 Representations of the Holocaust Cr.Hrs.3 This course will focus on the literary rendering, including film versions and German memorial culture, of the Holocaust experience by authors from the German-speaking countries, such as Anna Seghers, Jurek Becker, Paul Celan, Max Frisch, Peter Weiss, Ruth Klüger, W.G. Sebald, and others. *Prerequisite:* a grade of "C" or better in GRMN 2140 or written consent of department head.

GRMN 3270 Studies in Contemporary German Cinema Cr.Hrs.3 Language of instruction: English.

Studies the major accomplishments of East and West German cinema of the postwar period, as well as cinematic trends since German unification. We will consider questions of narrative, genre, and authorship, examine film's relationship to other media, and focus on the dynamic interaction between film history and social history. Films to be studied include features by prominent directors such as Wolf, Fassbinder, Wenders, von Trotta, Carow, Dörrie, and Tykwer. *Prerequisite:* a grade of "C" or better in a minimum of 30 credit hours of university level coursework or written consent of department head.

†**GRMN 3280 Sex, Gender and Cultural Politics in the German-Speaking World Cr.Hrs.3** Explores a wide range of literary and cultural texts that deal with sex and gender in the German-speaking world. Discussion will address topics such as representation of women and men in literature and the social and historical climate in which the literature was and is produced. *Prerequisite:* a grade of "C" or better in GRMN 2140 or written consent of department head.

GRMN 3290 History in Literature in German-Speaking Countries Cr.Hrs.3 Analyzes how history is represented and remembered in literature and other genres. The course will focus on the representation of one historical period such as the Weimar Republic or the Nazi Third Reich. Please consult the instructor for details on which historical period as it appears in literature will be considered. *Prerequisite:* a grade of "C" or better in GRMN 2140 or written consent of department head.

GRMN 3380 Special Topics in German Cr.Hrs.3 (Formerly 008.338) Topics dealing with German literature and culture. Course content will vary from year to year depending on the interests and needs of students and staff. *Prerequisite:* a grade of "C" or better in one of: GRMN 2100 (or 008.210) or GRMN 2101 (or 008.210), or written consent of department head.

GRMN 3390 German Representations of War Cr.Hrs.3 Language of instruction: English. Focuses on representations of war, particularly World War II from a German and European perspective in fiction, historiography, film, photography, and memorial culture. *Prerequisite:* a grade of "C" or better in a minimum of 30 credit hours of university level coursework or written consent of department head.

GRMN 3580 Independent Studies in German Cr.Hrs.3 The content of this class will vary from year to year depending on the needs and interests of instructors and students. *Prerequisite:* written consent of department head.

GRMN 3601 Sujets particuliers Cr.Hrs.3 (L'ancien 008.360) Le contenu de ce cours peut varier selon les besoins et les intérêts des étudiants et du professeur. *Préalable:* l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

Honours Courses

GRMN 4530 German Literary Theory and Criticism Cr.Hrs.3 (Formerly 008.453) A survey of the major approaches to literature in the German tradition: the historical evolution of literary theory, analysis of major critical methods and approaches to textual interpretation. *Prerequisite:* written consent of department head.

GRMN 4540 Introduction to German Language Structure Cr.Hrs.3 An introduction to the scientific study of the German language and to the role of the language teacher in the examination, analysis, and description of the German language. Topics include grammar, word formation, meaning, sound systems, language acquisition and change, and language in society. *Prerequisite:* written consent of department head.

GRMN 4600 Senior Seminar in German Studies Cr.Hrs.3 Language of instruction: German. Introduces basic methodology of German literary and cultural studies (genres, periods, resources, bibliographical methods). Examines German culture during critical periods in German history with specific emphasis on literature. Students work closely with a faculty advisor during the semester and are expected to produce a major research paper. *Prerequisite:* written consent of department head.

GRMN 4610 Independent Work Cr.Hrs.3 (Formerly 008.461) Each student will work with an instructor to prepare a reading program in an appropriate area and present written assignments as required. *Prerequisite:* written consent of department head.

GRMN 4640 Special Topics 1 Cr.Hrs.3 (Formerly 008.464) The specific content of this course will vary from year to year. A description of the course is available in advance at the Department Office. *Prerequisite:* written consent of department head.

GRMN 4650 Special Topics 2 Cr.Hrs.3 (Formerly 008.465) The specific content of this course will vary from year to year. A description of the course is available in advance at the Department Office. *Prerequisite:* written consent of department head.

Special Courses

GRMN 1240 German for Reading Knowledge Cr.Hrs.6 (Formerly 008.124) A course designed to develop reading skills. Concentrates on texts of a general nature from the Humanities, Natural and Social Sciences. Introduction to grammar, translation practise (German to English only). May not be used for Major, Minor, or Honours credit in German.

GRMN 2370 Modern German Literature in Translation Cr.Hrs.6 (Formerly 008.237) A study of selected works of modern authors such as Brecht, Dürrenmatt, Kafka, Hesse and Grass. No knowledge of the German language required. May not be used for Major, Minor, or Honours credit in German.

8.14.6 Slavic Studies - General Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

The following courses may be used in more than one Slavic Studies program listed below.

SLAV 2240 East European Literature 1 Cr.Hrs.3 (Formerly 052.224) Influential authors and works by Jewish, Polish, Russian, Ukrainian and other authors in English translation up to and including the nineteenth century.

SLAV 2250 East European Literature 2 Cr.Hrs.3 (Formerly 052.225) Celebrated and influential works of Jewish, Polish, Russian, Ukrainian and other literatures that describe the East European experience in English translation from the late nineteenth century to the present.

SLAV 3920 Gogol Cr.Hrs.3 (Formerly 052.392) A study of the author's major fiction and his influence on Russian and Ukrainian cultures and identity politics.

8.14.7 Program Information: Slavic Studies - Russian

For entry, continuation and graduation requirements for the General Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in six credit hours from RUSN 1300 (or RUSN 1330), RUSN 2810 (or RUSN 2820) (the former 052.262). For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in six credit hours from RUSN 1300 (or RUSN 1330), RUSN 2810 (or RUSN 2820) (the former 052.262).

8.14.8 Russian			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL RUSSIAN MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours from RUSN 1300, RUSN 1330, RUSN 2810 or RUSN 2820	24 credit hours in Russian courses of which at least 6 hours must be in language courses numbered at the 3000 level and 6 hours in literature courses numbered at the 3000 level		
RUSSIAN MINOR TOTAL: 18 CREDIT HOURS			
6 credit hours from RUSN 1300, RUSN 1330, RUSN 2810 or RUSN 2820	12 credit hours in Russian		
NOTES:			
With written consent from the department head, courses offered by other departments may be approved for credit.			
The following courses count as language courses: RUSN 1300, RUSN 1330, RUSN 2630, RUSN 2810, RUSN 2820, RUSN 3930.			
The following courses count as literature courses: RUSN 2280, RUSN 2290, RUSN 2350, RUSN 2740, RUSN 2750, RUSN 2760, RUSN 3330, RUSN 3580, RUSN 3770, RUSN 3780, RUSN 3790, RUSN 3900, RUSN 3980, SLAV 2240, SLAV 2250, SLAV 3920.			

8.14.9 Slavic Studies - Russian Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

General Courses

U1 RUSN 1300 Introductory Russian Cr.Hrs.6 (Formerly 052.130) Basic grammar, conversation and reading with emphasis on communication skills. Cultural content is introduced through a range of audio-visual materials. Not open to native speakers and students with high school Russian 41G credit. Students may not hold credit for both RUSN 1300 (or 052.130) and RUSN 1330 (or 052.133).

U1 RUSN 1330 Introductory Russian 2 Cr.Hrs.3 (Formerly 052.133) The second term of RUSN 1300 (or 052.130) Introductory Russian. Intended for students who have already a knowledge of the alphabet and the sound system, as well as elementary comprehension, communication and writing skills equivalent to those that would be achieved in the first term of RUSN 1300 (or 052.130). Students may not hold credit for both RUSN 1330 (or 052.133) and RUSN 1300 (or 052.130). *Prerequisite:* successful completion of a placement test administered by the department.

W RUSN 2280 Russian Culture 1 Cr.Hrs.3 (Formerly 052.228) A survey of the Russian cultural heritage from the pre-Christian era to the end of the nineteenth century. Mythology, the arts and literature. Lectures in English. Readings are available in both English translation and in the original.

W RUSN 2290 Russian Culture 2 Cr.Hrs.3 (Formerly 052.229) Russian culture from the end of the 19th century to the present day. Major developments in Russian art, film and literature. Readings are available in both English translation and in the original.

W RUSN 2350 Russian Women's Writing from the 1950s to the Present Day Cr.Hrs.3 (Formerly 052.235) Grekova, Klimova, Palei, Petrushevskaya, Sadur, Tokareva, Tolstaya, Vasilenko and others. Lectures in English. Readings in English or in the original.

RUSN 2630 Russian Language Seminar Abroad Cr.Hrs.3 (Formerly 052.263) The study of Russian language, literature and culture at an intensive language school in Eastern Europe. Designed for students aiming at near-native fluency. *Prerequisite:* a grade of "C" or better in RUSN 1300 (or 052.130) and written consent of department head.

W RUSN 2740 Literature and Revolution Cr.Hrs.3 (Formerly 052.274) Responses to the 1917 Revolution, focusing on writers of the twenties. Mayakovsky, Kollontai, Babel, Olesha, Zamyatin, Pilnyak, Bulgakov. References to art, cinema and cultural politics of the period. Lectures in English.

W RUSN 2750 Contemporary Russian Literature and Film Cr.Hrs.3 (Formerly 052.275) A survey of contemporary Russian literature and films since 1970. Erofeev, Iskander, Makanin, Peleev, Petrushevskaya, Tolstaya, Voznesensky, Vysotsky and others. Films directed by Bykov, Milchakov, Tarkovsky. The interrelationship between literature and films. Lectures in English. Readings in English or in the original. Films in Russian with English subtitles.

RUSN 2760 The Silver Age of Russian Literature Cr.Hrs.3 (Formerly 052.276) Chekhov, Symbolists, Decadents and Futurists. Reference to the theatre and art of the period. Lectures in English. Readings in the original or in English.

U1 RUSN 2810 Intermediate Russian Cr.Hrs.6 (Formerly 052.281) Grammar review, conversation, translation and reading of selected texts. Development of communication skills through practical exercises. Cultural content is introduced through use of audio-visual and internet materials. Students may not hold credit for both RUSN 2810 (or 052.281) and RUSN 2820 (or 052.282) or the former 052.262. *Prerequisite:* a grade "C" or better in RUSN 1300 (or 052.130) or RUSN 1330 (or 052.133) or Russian 41G or written consent of department head.

U1 RUSN 2820 Intermediate Russian 2 Cr.Hrs.3 (Formerly 052.282) The second term of RUSN 2810 (or 052.281) Intermediate Russian. Intended for students who al-

ready have basic comprehension, communication and writing skills equivalent to those that would be achieved in the first term of RUSN 2810 (or 052.281). Students may not hold credit for both RUSN 2820 (or 052.282) and RUSN 2810 (or 052.281) or the former 052.262. *Prerequisite:* successful completion of a placement test administered by the department.

RUSN 3330 Chekhov Cr.Hrs.3 (Formerly 052.333) The study of selected short stories and plays. Lectures in English. Readings are available in both Russian and English translation.

RUSN 3580 Russian Poetry Cr.Hrs.3 (Formerly 052.358) A study of major Russian poetry of the 19th and 20th centuries, including works by Pushkin, Lermontov, Tiutchev, Fet, Blok, Mayakovsky, Akhmatova, Esenin, Evtushenko, Vinokurov, Kazakova. Lectures and readings in Russian. *Prerequisite:* a grade of "C" or better in one of: RUSN 3930 (or 052.393), RUSN 3940 (or 052.394) or the former 052.380, or written consent of department head.

W RUSN 3770 Tolstoy Cr.Hrs.3 (Formerly 052.377) A study of the novelist that focuses on the development of the aesthetic views and intellectual biography. Representative works from his early, middle and late period will be selected for analysis. Lectures in English. Readings in the original or in English.

RUSN 3780 Dostoevsky Cr.Hrs.3 (Formerly 052.378) A study that focuses on the writer's art, in particular on his development of the polyphonic novel. Lectures in English. Readings in the original or in English.

RUSN 3790 Special Studies Cr.Hrs.3 (Formerly 052.379) The content of this course will vary from year to year, depending on the needs and interests of instructors and students. A description of the course is available in advance at the department office. *Prerequisite:* written consent of department head.

RUSN 3900 Tolstoy's War and Peace Cr.Hrs.3 (Formerly 052.390) This writer's art, view of history and human nature. References to film versions. Lectures in English. Readings in the original or in English.

RUSN 3930 Advanced Russian Cr.Hrs.6 (Formerly 052.393) Advanced composition, translation, reading and study of selected literary and other texts. Development of overall communication skills. Students may not hold credit for both RUSN 3930 (or 052.393) and RUSN 3940 (or 052.394) or the former 052.380. *Prerequisite:* a grade "C" or better in RUSN 2810 (or 052.281) or RUSN 2820 (or 052.282) or the former 052.262 or written consent of department head.

RUSN 3940 Advanced Russian 2 Cr.Hrs.3 (Formerly 052.394) The second term of RUSN 3930 (or 052.393) Advanced Russian. Intended for students who already have intermediate level comprehension, communication and writing skills equivalent to those that would be achieved in the first term of RUSN 3930 (or 052.393). Students may not hold credit for both RUSN 3940 (or 052.394) and RUSN 3930 (or 052.393) or the former 052.380. *Prerequisite:* successful completion of a placement test administered by the department.

W RUSN 3980 Women and Russian Literature Cr.Hrs.3 (Formerly 052.398) A study of the literature produced by Russian women writers in the nineteenth and early twentieth centuries, including an examination of key issues raised in works by writers such as Bunina, Durova, Volkonskaia, Pavlova, Guro, Gippius, Forsh, Akhmatova, Ts-vetaeva, and Chukovskaia. Lectures in English. Readings in the original and/or in English.

RUSN 4620 Selected Topics 1 Cr.Hrs.3 (Formerly 052.462) A program of independent reading and/or research on selected topics to 1900, undertaken by a student in consultation with his or her prospective instructor. *Prerequisite:* written consent of department head.

RUSN 4630 Selected Topics 2 Cr.Hrs.3 (Formerly 052.463) A program of independent reading and/or research on selected topics from the twentieth century, undertaken by a student in consultation with his/her prospective instructor. *Prerequisite:* written consent of department head.

8.14.10 Program Information: Slavic Studies - Ukrainian

For entry, continuation and graduation requirements for the General Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

General Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in six credit hours from UKRN 1310 (or UKRN 1320), UKRN 2720 (or UKRN 2730) (the former 052.264). For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required

on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in six credit hours from UKRN 1310 (or UKRN 1320), UKRN 2720 (or UKRN 2730) (the former 052.264).

8.14.11 Ukrainian

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL UKRAINIAN MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours from UKRN 1310, UKRN 1320, UKRN 2720 or UKRN 2730	24 credit hours in Ukrainian courses of which at least 6 credit hours must be in language courses numbered at the 3000 level and 6 credit hours in literature courses numbered at the 3000 level		
UKRAINIAN MINOR TOTAL: 18 CREDIT HOURS			
6 credit hours from UKRN 1310, UKRN 1320, UKRN 2720 or UKRN 2730	12 credit hours in Ukrainian courses of which at least 3 credit hours must be in literature		
NOTES:			
With written consent from the department head, courses offered by other departments may be approved for credit.			
The following courses count as language courses: UKRN 1230, UKRN 1270, UKRN1310, UKRN 1320, UKRN 2260, UKRN 2720, UKRN 2730, UKRN 3700, UKRN 3950, UKRN 3960.			
The following courses count as literature courses: UKRN 2420, UKRN 2430, UKRN 2510, UKRN 2520, UKRN 2590, UKRN 2710, UKRN 2770, UKRN 2780, UKRN 3440, UKRN 3670, UKRN 3840, UKRN 3850, UKRN 3880, UKRN 3910, UKRN 3970, SLAV 2240, SLAV 2250, SLAV 3920.			

8.14.12 Slavic Studies - Ukrainian Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

General Courses

U1 UKRN 1230 Language Seminar in Ukraine 1 Cr.Hrs.3 (Formerly 052.123) The study of Ukrainian language at an intensive language school in Ukraine. The course is designed for students aiming at near-native fluency. *Prerequisite:* a grade of "C" or better in UKRN 1310 (or 052.131) or its equivalent and written consent of department head.

U1 UKRN 1270 Conversational Ukrainian Cr.Hrs.6 (Formerly 052.127) Readings, dialogues, speeches, dictations, etc., designed to help the student achieve oral fluency and correct pronunciation. Regular attendance is obligatory. May not be used for Major or Minor credit in Ukrainian. Not open to students who have previously obtained credit for the former 052.264 or the former 052.383. *Prerequisite:* a grade of "C" or better in UKRN 1310 (or 052.131) or written consent of department head.

U1 UKRN 1310 Introductory Ukrainian Cr.Hrs.6 (Formerly 052.131) Basic grammar, conversation, composition and reading. Emphasis is placed on communication skills. Cultural content is introduced through a range of audio-visual materials. Not open to native speakers and students with Ukrainian 40S credit. Students may not hold credit for both UKRN 1310 (or 052.131) and UKRN 1320 (or 052.132).

U1 UKRN 1320 Introductory Ukrainian 2 Cr.Hrs.3 (Formerly 052.132) This course is the second term of UKRN 1310 (or 052.131) Introductory Ukrainian, and is intended for students who already have a knowledge of the alphabet and the sound system and elementary oral comprehension and reading, writing, and speaking skills equivalent to those that would be achieved in the first term of UKRN 1310 (or 052.131). Students may not hold credit for both UKRN 1320 (or 052.132) and UKRN 1310 (or 052.131). *Prerequisite:* successful completion of a placement test administered by the department.

UKRN 2260 Ukrainian Culture Seminar Abroad Cr.Hrs.3 (Formerly 052.226) This course is offered as part of the Summer Session. It is a study experience in Ukraine. The course features extensive exploration of contemporary Ukrainian culture. The course is taught in English. Students are given the maximum individual attention. Mornings are spent in class. Excursions are planned in Kyiv and neighboring sites. Students may not hold credit for both UKRN 2260 (or 052.226) and the former 052.223. *Prerequisite:* a grade of "C" or better in UKRN 1310 (or 052.131) or its equivalent and written consent of the department head.

✦ **UKRN 2420 Ukrainian Canadian Literature Cr.Hrs.3** (Formerly 052.242) A study of Ukrainian Canadian poetry, drama, fiction, and literary criticism and their relationship to letters in Ukraine. Emphasis will be placed on the representative works of Ewach, Danylchuk, Kiriak, Luhovy, and others. May not be used for Major or Minor credit in Ukrainian. *Prerequisite:* a grade of "C" or better in one of: UKRN 2720 (or 052.272), UKRN 2730 (or 052.273), the former 052.264, or written consent of department head.

✦ **UKRN 2430 Ukrainian Canadian Folklore Cr.Hrs.3** (Formerly 052.243) A survey of folk songs, stories, legends, beliefs, customs, traditions, and namelore of Ukrainian Canadians in relationship to folklore in Ukraine. May not be used for Major or Minor credit in Ukrainian. *Prerequisite:* a grade of "C" or better in one of: UKRN 2720 (or 052.272), UKRN 2730 (or 052.273), the former 052.264, or written consent of de-

partment head.

UKRN 2510 Ukrainian Mythology Cr.Hrs.3 (Formerly 052.251) An introduction to Ukrainian folk and classical mythology and beliefs, from pre-history to recent times. Readings in the original and in English. *Prerequisite:* a grade of "C" or better in one of: UKRN 2720 (or 052.272), UKRN 2730 (or 052.273), the former 052.264, or written consent of department head.

UKRN 2520 Ukrainian Rites and Rituals Cr.Hrs.3 (Formerly 052.252) A study of rites and rituals connected with the winter, spring, summer and autumn cycles; family and community festivities, from pre-historic to the present. Readings in the original and/or in English.

W UKRN 2590 Ukrainian Literature and Film Cr.Hrs.3 (Formerly 052.259) An examination of the relationship of Ukrainian literature and film. Students read literary works which have inspired films and analyze the unique formal qualities of each. The course considers the stylistic influence of film on literature and vice versa; the relationship between writer and director, especially in the case where they are one and the same person. Readings in the original and/or in English. Films in Ukrainian with English subtitles or plot summaries.

UKRN 2710 Ukrainian Literature of the 16th to 18th Centuries Cr.Hrs.3 (Formerly 052.271) Religious polemics, art and ideology in the writings of the period.

U1 UKRN 2720 Intermediate Ukrainian Cr.Hrs.6 (Formerly 052.272) Grammar review, conversation, translation and reading of selected texts. Development of communication skills through practical exercises. Cultural content is introduced through audio-visual materials. Students may not hold credit for both UKRN 2720 (or 052.272) and UKRN 2730 (or 052.273) or the former 052.264. *Prerequisite:* a grade of "C" or better in UKRN 1310 (or 052.131) or UKRN 1320 (or 052.132), or Ukrainian 40S, or written consent of department head.

U1 UKRN 2730 Intermediate Ukrainian 2 Cr.Hrs.3 (Formerly 052.273) This course is the second term of UKRN 2720 (or 052.272) Intermediate Ukrainian, and is intended for students who already have basic oral comprehension and reading, writing, and speaking skills equivalent to those that would be achieved in the first term of UKRN 2720 (or 052.272). Students may not hold credit for both UKRN 2730 (or 052.273) and UKRN 2720 (or 052.272) or the former 052.264. *Prerequisite:* successful completion of a placement test administered by the department.

UKRN 2770 Ukrainian Culture 1 Cr.Hrs.3 (Formerly 052.277) A survey that examines the Ukrainian Culture Heritage from the pre-Christian era, through medieval times and the baroque to the end of the 19th century. Issues in mythology, religion, the arts and literature are discussed. Lectures in English. Readings are available in both English translation and the original.

UKRN 2780 Ukrainian Culture 2 Cr.Hrs.3 (Formerly 052.278) Major trends in thought, the visual arts, film and literature from the end of the 19th century to the present day. Lectures in English. Readings are available in both English translation and Ukrainian.

UKRN 3440 Ukrainian Poetry Cr.Hrs.3 A study of some of the best Ukrainian poetry with a particular emphasis on the modern period. Lectures and readings in Ukrainian. *Prerequisite:* a grade of "C" or better in UKRN 1310 (or 052.131) or written consent of department head.

UKRN 3660 Ukrainian Literature in the West Cr.Hrs.3 (Formerly 052.366) A study of representative works of twentieth-century Ukrainian émigré and non-émigré authors, with emphasis on the New York Group. Readings in the original. *Prerequisite:*

written consent of department head.

UKRN 3670 Contemporary Ukrainian Literature Cr.Hrs.3 (Formerly 052.367) A study of poetry, prose, drama and essays from the 1960s to the present. Lectures in English. Readings in the original or in English.

UKRN 3700 Church Slavic: Ukrainian Version Cr.Hrs.3 (Formerly 052.370) Basic grammar, vocabulary and pronunciation; reading, translation and analysis of selected old Church Slavic texts. May not be used for Major or Minor credit in Ukrainian. *Prerequisite:* a grade of "C" or better in UKRN 3960 (or 052.396) or the former 052.383 or written consent of department head.

UKRN 3840 Ukrainian Novel Cr.Hrs.3 (Formerly 052.384) A study of representative novels of the 19th and 20th centuries. The course begins with the Romantic period and ends with contemporary writing. Lectures in English. Readings in the original or in English.

UKRN 3850 Ukrainian Short Story Cr.Hrs.3 (Formerly 052.385) A study of representative short stories which begins with the ethnographic concerns of early 19th-century writers and ends with the formal experimentation of contemporaries. Lectures in English. Readings in the original and in English.

UKRN 3880 Special Studies Cr.Hrs.3 (Formerly 052.388) The content of this course will vary from year to year, depending on the needs and interests of instructors and students. A description of the course is available in advance at the department office. *Prerequisite:* written consent of department head.

UKRN 3910 Shevchenko Cr.Hrs.3 (Formerly 052.391) A study of the greatest works, focusing on the writer's intellectual and artistic development. References to his art and the imperial context. Lectures in English. Readings in the original. *Prerequisite:* a grade of "C" or better in UKRN 1310 (or 052.131) or written consent of department head.

UKRN 3950 Advanced Ukrainian 1 Cr.Hrs.3 (Formerly 052.395) Advanced composition, translation, readings and study of selected literary and other texts. Development of oral and comprehension skills through study of contemporary film, television and other audio-visual materials. Students may not hold credit for both UKRN 3950 (or 052.395) and the former 052.383. *Prerequisite:* a grade of "C" or better in UKRN 2720 (or 052.272) or UKRN 2730 (or 052.273) or the former 052.264 or written consent of department head.

sent of department head.

UKRN 3960 Advanced Ukrainian 2 Cr.Hrs.3 (Formerly 052.396) A continuation of UKRN 3950 (or 052.395) Advanced Ukrainian 1. Continued work in advanced composition, translation, readings and study of selected literary and other texts. Continued development of oral and comprehension skills through study of contemporary film, television and other audio-visual materials. Students may not hold credit for both UKRN 3960 (or 052.396) and the former 052.383. *Prerequisite:* a grade of "C" or better in UKRN 3950 (or 052.395) or written consent of department head.

W † UKRN 3970 Women and Ukrainian Literature (3) (Formerly 052.397) A study of the literature produced by Ukrainian women writers in the nineteenth and early twentieth centuries, including an examination of key issues raised in works by writers such as Vovchok, Pchilka, Kobrynska, Ianovska, Kobylanska, Iaroshynska, and Ukrainka. Lectures in English. Readings in the original and/or in English.

UKRN 4640 Selected Topics 1 Cr.Hrs.3 (Formerly 052.464) A program of independent reading and/or research on selected topics to 1900, undertaken by a student in consultation with his or her prospective instructor. *Prerequisite:* written consent of department head.

UKRN 4650 Selected Topics 2 Cr.Hrs.3 (Formerly 052.465) A program of independent reading and/or research on selected topics from the twentieth century, undertaken by a student in consultation with his/her prospective instructor. *Prerequisite:* written consent of department head.

8.14.13 Program Information: Slavic Studies - Polish

For entry, continuation and graduation requirements for the General Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in POL 1890.

8.14.14 Polish

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
POLISH MINOR¹ TOTAL: 18 CREDIT HOURS			
POL 1890	POL 2890	POL 2320 or POL 3890	

NOTES:

¹ Students entering university with a knowledge of Polish, but without Grade 12 standing, may be granted written permission by the department head to enter 052.289.

8.14.15 Slavic Studies - Polish Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

General Courses

U1 POL 1890 Introductory Polish Cr.Hrs.6 (Formerly 052.189) Basic grammar, conversation, composition, readings, language laboratory sessions.

POL 2320 An Outline of Polish Literature Cr.Hrs.6 (Formerly 052.232) A study of selected works from major literary periods and genres, including contemporary literature and film screenings of some literary works. All readings and lectures in English.

POL 2530 Polish Civilization Cr.Hrs.6 (Formerly 052.253) A survey of Polish civilization from its beginnings to the present. All readings and lectures in English.

POL 2690 Polish Language and Culture Cr.Hrs.6 (Formerly 052.269) Offered as part of the Summer Session, this course is a study experience in Poland. The program features practical language training and an exploration of the Polish culture. *Prerequisite:* written consent of instructor.

POL 2890 Intermediate Polish Cr.Hrs.6 (Formerly 052.289) Grammar review, composition, translation, readings of selected prose and poetry. *Prerequisite:* a grade of "C" or better in POL 1890 (or 052.189) or written consent of department head.

POL 3890 Advanced Polish Cr.Hrs.6 (Formerly 052.389) Syntax, advanced composition, readings and study of selected prose and poetry. *Prerequisite:* a grade of "C" or better in POL 2890 (or 052.289) or written consent of department head.

8.15 Global Political Economy Program

Program Coordinator: Rodney Kueneman

Program Office: 302 Isbister Building

Telephone: 204 474 6501

E-mail: rod_kueneman@umanitoba.ca

Website: www.umanitoba.ca/faculties/arts/gpe/

8.15.1 Program Information

The departments of Anthropology, Economics, History, Political Studies and Sociology collaborate in a Major and Advanced Major that explores change in social, economic, political and international relations that have re-shaped and continue to re-shape the world. The public and private sectors, as well as non-governmental agencies, must understand the global forces that affect their international relationships as well as those that affect their internal ability to respond to restructuring forces around them.

For entry to the Major, the prerequisite is a grade of "C" or better in any 12 credit hours from the following: ECON 1200 (or ECON 1210 and ECON 1220); SOC 1200; POLS 1500; (no more than 6 credit hours from) HIST 1370, HIST 1380, HIST 1500, HIST 2380, HIST 2720.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Note: Students who declare and complete a major will not be required or allowed to complete a separate field for a minor for purposes of satisfying degree requirements.

8.15.2 Global Political Economy

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

GENERAL MAJOR TOTAL: 60 CREDIT HOURS

- Anthropology: ANTH 2390; SOC 3320 or Sociology SOC 3810
- Economics: ECON 1200 or ECON 1210 and ECON 1220; ECON 2540; ECON 2550; ECON 2630 or ECON 3390
- History: 12 credit hours from: HIST 1370, HIST 1380, HIST 1500, HIST 2380, HIST 2720
- Political Studies: POLS 1500; POLS 2040 or POLS 2530
- Sociology: SOC 1200; SOC 3470 or SOC 3690; SOC 3810 or Anthropology ANTH 3320

ADVANCED MAJOR TOTAL: 78 CREDIT HOURS

- Anthropology: ANTH 2390; ANTH 3320 or Sociology SOC 3810; ANTH 3750
- Economics: ECON 1200 or ECON 1210 and ECON 1220; ECON 2540; ECON 2550; ECON 2630 or ECON 3390
- Global Political Economy: GPE 2700; GPE 4700
- History: 12 credit hours from: HIST 1370, HIST 1380, HIST 1500, HIST 2380, HIST 2720
- Political Studies: POLS 1500; POLS 3220; POLS 3250
- Sociology: SOC 1200; SOC 2290; SOC 3470 or SOC 3690; SOC 3810 or Anthropology ANTH 3320

List of Courses for Global Political Economy

See the departmental *Calendar* section for full course descriptions.

Anthropology

- ANTH 2390 Social Organization in Cross-Cultural Perspective (B) 6
 ANTH 3320 Women in Cross-Cultural Perspective (B) 3
 ANTH 3750 Globalization and the World-System (B) 3

Economics

- ECON 1200 Principles of Economics or both 6
 ECON 1210 Introduction to Canadian Economic Issues and Policies and 3
 ECON 1220 Introduction to Global and Environmental Economic Issues and Policies 3
 ECON 2540 Political Economy 1: Production and Distribution 3
 ECON 2550 Political Economy 2: Economic Growth and Fluctuations in a Global Economic Environment 3
 ECON 2630 An Introduction to the World's Economies 6
 ECON 3390 Development Economics 6

Global Political Economy

- GPE 2700 Perspectives on Global Political Economy 3
 GPE 4700 Studies in Global Political Economy 6

History

- HIST 1370 An Introduction to Modern World History: 1500-1800 (M) 3
 HIST 1380 An Introduction to Modern World History: 1800 - Present (M) 3
 HIST 1500 An Introduction to Modern World History: 1500 - Present (M) 6
 HIST 2380 The Twentieth-Century World (G,M) 6
 HIST 2720 The World Since 1945 (G,M) 6

Political Studies

- POLS 1500 Introduction to Politics 6
 POLS 2040 Introduction to International Relations 6
 POLS 2041 Introduction aux relations internationales 6
 POLS 2530 Elements of Foreign Policy 6
 POLS 3220 Globalization and the World Economy 3
 POLS 3250 International Political Economy 3
 019.383* The Politics of International Economic Relations 6

Sociology

- SOC 1200 Introduction to Sociology 6
 SOC 2290 Introduction to Research Methods 6
 SOC 3470 Political Sociology 3
 SOC 3690 Sociology of the Developing Societies 3
 SOC 3810 Sociological Perspectives on Gender and Sexuality 3

List of Suggested Electives

Faculty of Arts

Anthropology

- ANTH 1220 Cultural Anthropology (A) 3
 or
 ANTH 1520 Critical Cultural Anthropology (A) 3

ANTH 2460	Peanantry in a Changing World (B)	3
ANTH 2510	Anthropology of Economic Systems (B)	3
ANTH 2530	Anthropology of Political Systems (B)	3
ANTH 2570	Urban Anthropology (B)	3
ANTH 3380	Anthropology and Contemporary Social Issues (B)	3
076.244*	Peasant Society and Culture (B)	3
Asian Studies		
ASIA 1420	Asian Civilizations to 1500 (Cross-listed with History HIST 1420)	3
ASIA 1430	Asian Civilizations Since 1500 (Cross-listed with History HIST 1430)	3
ASIA 2070	South Asian Civilization	6
150.211*	East Asian Civilization	6
Economics		
ECON 2420	Economics of the Labour Process and Labour Relations (Cross-listed with Labour Studies LABR 2420)	3
ECON 2490	Economic Accounting	3
ECON 2560	Corporations in the Global Economy	3
ECON 3390	Development Economics	6
ECON 3660	Economic Ideas and Social Institutions	6
ECON 3710	Sustainable Development: Issues and Policy	3
ECON 4510	Economy and State in a Modern Period: Western Europe and North America	6
History		
HIST 2670	History of Capitalism (M)	3
HIST 2680	History of Socialism from the French Revolution to the Present (M)	3
HIST 2710	Women in History (G)	6
HIST 3580	Topics in Recent World History 1 (M)	3
HIST 3590	Topics in Recent World History 2 (M)	3
HIST 4010	Imperialism, Decolonization and Neo-Colonialism, 1700 to the Present (G,M)	6
HIST 4320	Studies in World History since 1945 (G,M)	3
011.341*	The British Empire and Commonwealth Since 1815 (G)	6
Labour Studies		
LABR 1270	Introduction to the Political Economy of Labour	3
LABR 1290	Introduction to the Canadian Labour Movement	3
LABR 2420	Economics of the Labour Process and Labour Relations (Cross-listed with Economics ECON 2420)	6
Political Studies		
POLS 2040	Introduction to International Relations	6
POLS 2041	Introduction aux relations internationales	6
POLS 2070	Introduction to Canadian Government	6
POLS 2071	Introduction au système gouvernemental canadien	6
POLS 3200	International Security and Conflict Management	6
POLS 3880	Comparative Foreign Policy	3
POLS 4530	Regionalism in International Politics	3
POLS 4660	The State in the Economy	6
019.156*	Introduction to Canadian Government	6
019.273*	International Conflict Resolution	6
Sociology		
SOC 2480	Population Problems	3
SOC 3840	Community and Social Reconstruction	3

SOC 3870 Social Inequality	3
Clayton H. Riddell Faculty of Environment, Earth, and Resources Geography	
GEOG 1280 Introductory Human Geography	3
GEOG 2210 Economic Geography	6
GEOG 3590 Geography of Developing Countries	6
GEOG 3800 Geography of Transportation Development	3
GEOG 4640 Models in Urban Geography	3
*indicates course no longer offered.	

8.15.3 Global Political Economy Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

GPE 2700 Perspectives on Global Political Economy Cr.Hrs.3 (Formerly 157.270) An interdisciplinary seminar exploring issues in political economy at the global level from the perspectives of Anthropology, History, Economics, Political Studies, and Sociology. *Prerequisite:* written consent of Global Political Economy coordinator.

GPE 4700 Studies in Global Political Economy Cr. Hrs.6 (Formerly 157.470) An advanced interdisciplinary seminar that will study the effects of institutions, structures, and dynamics operating in the current global political economy. Students, working in groups, will be expected to do case studies on selected local (or regional) political economies. *Prerequisite:* written consent of Global Political Economy coordinator.

8.16 Department of History

Head: Mary Kinnear

General Office: 403 Fletcher Argue Building

Telephone: 204 474 9613

E-mail: history@umanitoba.ca

Website: www.umanitoba.ca/history

8.16.1 Academic Staff

Distinguished Professors

Anna, T.E., B.A., M.A., Ph.D. (Duke), F.R.S.C.; **Friesen**, G.A., B.A.(Hons.) (Saskatchewan), M.A., Ph.D. (Toronto), F.R.S.C.

Professors Emeriti

Carroll, F.M., B.A., M.A. (Minnesota), Ph.D. (Dublin); **Lebrun**, R.A., B.A. (St. John's), M.A., Ph.D. (Minnesota); **Sandiford**, K.A.P., B.A.(Hons.) (UCWI), M.A., Ph.D. (Toronto); **Wortley**, J.T., B.A., M.A. (Durham), Ph.D. (London), F.R. Hist.S.

Senior Scholars

Bailey, P.C., B.A. (Hons.), M.A. (Oxford), Ed.Cert. (Manchester), Ph.D. (UBC); **Kendle**, J.E., B.A. (Manitoba), Ph.D. (London), F.R. Hist. S.; **Kerr**, I.J., B.A. (Pennsylvania), Ph.D. (Minnesota); **Moulton**, E.C., B.A.(Ed.), M.A. (Memorial), Ph.D. (London); **Steiman**, L.B., B.A.(Hons.) (Manitoba), M.A., Ph.D.(Pennsylvania).

Professors

Bumsted, J.M., B.A. (Tufts), Ph.D. (Brown), F.R.S.C.; **Ferguson**, B.G., B.A.(Hons.) (UBC), M.A. (Carleton), Ph.D. (York); **Finlay**, J.L., B.A., M.A. (Cambridge), Ed.Cert. (Nottingham), Ph.D. (Manitoba); **Gerus**, O.W., B.A., M.A. (Manitoba), Ph.D. (Toronto); **Heller**, H., B.A. (Michigan), Ph.D. (Cornell); **Kinnear**, E. Mary, B.A. (Hons.), M.A. (Oxford), Ph.D. (Oregon), F.R.S.C.; **Kinnear**, M.S.R., B.A. (Saskatchewan), M.A. (Oregon), D.Phil.(Oxford), F.R. Hist.S.

Associate Professors

Brownlie, R.J., B.A., M.A., Ph.D. (Toronto); **Friesen**, Jean, B.A. (McGill), Ph.D. (UBC); **Gabbert**, M.A., B.A. (Lewis and Clark), M.A., Ph.D.(U.C. Santa Barbara); **Nesmith**, T.C., B.A.(Hons.), M.A. (Queen's), Ph.D. (Carleton); **Perry**, A., B.A. (Simon Fraser), M.A., Ph.D. (York).

Assistant Professors

Baader, M.B., M.A., M.Phil., Ph.D. (Columbia); **Chadya**, J.M., B.A.(Hons.), M.A. (Zimbabwe), Ph.D. (Minnesota); **Chen**, T.M., B.A. (Toronto), M.A., Ph.D. (Wisconsin); **Churchill**, D.S., B.A. (Hons.)(Trent), M.A. (Toronto), Ph.D. (Chicago); **Cossar**, R., B.A.(Hons.) (McGill), M.A., Ph.D. (Toronto); **Elvins**, S., B.A. (Hons.) (Queen's), M.A., Ph.D. (York); **Frank**, C., B.A.(Hons.) (Portland State), M.A., Ph.D. (York); **Kuffert**, L.B., B.Ed., B.A. (Hons.) (Saskatchewan), M.A. (UBC), Ph.D. (McMaster); **Nállim**, J.A., M.A., Ph.D. (Pittsburgh); **Ravindiran**, V., B.Sc. (Hons.) (Calgary), M.A., Ph.D. (Toronto); **Smith**, G.T., B.A. (Hons.) (U.B.C), M.A., Ph.D. (Toronto).

8.16.2 Program Information

The study of history provides essential background for many disciplines and professions where research analysis, communications skills and an understanding of how past events influence the present are important. The department includes specialists in intellectual, cultural, social, medieval, Aboriginal, women's, and international history. A particular area of departmental specialization is Canadian and western Canadian history.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in the first six credit hours of History. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

When selecting 2000-level courses in Year 2, students should anticipate their future interests.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in the first six credit hours of History.

Honours Program

For entry to the Honours Program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Normally, to continue in Honours, a minimum grade of "B" must be obtained in all History courses.

History HIST 4400 or HIST 4580 is recommended in Year 4 for students intending to do graduate work.

Other

At most, 12 credit hours at the 1000-level in History may count for a B.A. General, B.A. Advanced, or B.A. Honours degree credit.

Courses ANTH 2360 offered by the Department of Anthropology, and CLAS 2140, CLAS 2150, CLAS 2160 and CLAS 2170 offered by the Department of Classics count for credit towards a General Major, Advanced Major, Honours Single or Honours Double in History, CLAS 2140, CLAS 2150, CLAS 2160 and CLAS 2170 also count for credit towards a Minor in History.

8.16.3 History

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours in History courses numbered at the 1000 or 2000 level or 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	12 credit hours in History courses numbered at the 2000 level	<ul style="list-style-type: none"> ● 6 credit hours in History courses numbered at the 3000 level ● 6 credit hours in History courses numbered at the 2000 or 3000 level 	<i>continued on next page</i>

Within the 30 credit hours, students must choose 6 credit hours from each of 3 different areas of study.

ADVANCED MAJOR TOTAL: 48 CREDIT HOURS

6 credit hours in History courses numbered at the 1000 or 2000 level or 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	18 credit hours in History courses numbered at the 2000 level	18 credit hours in History courses numbered at the 3000 level, or 12 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 2000 level, or 12 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 4000 level	6 credit hours in History courses numbered at the 4000 level
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Within the 48 credit hours, students must choose 6 credit hours from each of 3 different areas of study.

MINOR TOTAL: 18 CREDIT HOURS

6 credit hours in History courses numbered at the 1000 or 2000 level or 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	6 credit hours in History courses numbered at the 2000 level	6 credit hours in History courses numbered at the 2000 or 3000 level
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HONOURS SINGLE¹

6 credit hours in History courses numbered at the 1000 or 2000 level or 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	<ul style="list-style-type: none"> ● 18 credit hours in History courses numbered at the 2000 level or 12 credit hours in History courses numbered at the 2000 level and 6 credit hours in History courses numbered at the 3000 level ● 12 credit hours in ancillary options 	<ul style="list-style-type: none"> ● 6 credit hours in History courses numbered at the 3000 level ● 12 credit hours in History courses numbered at the 4000 level ● 6 credit hours in ancillary options 	<ul style="list-style-type: none"> ● 18 credit hours in History courses numbered at the 4000 level, including presentation of an Honours Paper prepared in conjunction with one of the History courses² numbered at the 4000 level ● 6 credit hours in ancillary options
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Honours students must choose from a minimum of three different defined areas of historical study.

HONOURS DOUBLE^{1,3}

6 credit hours in History courses numbered at the 1000 or 2000 level or 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	<ul style="list-style-type: none"> ● 12 credit hours in History courses numbered at the 2000 level or 6 credit hours in History courses numbered at the 2000 level and 6 credit hours in History courses numbered at the 3000 level ● 12 credit hours in other Honours field ● 6 credit hours in ancillary options 	<ul style="list-style-type: none"> ● 6 credit hours in History courses numbered at the 3000 level ● 6 credit hours in History courses numbered at the 4000 level ● 12 credit hours in other Honours field 	<ul style="list-style-type: none"> ● 12 credit hours in History courses numbered at the 4000 level, including presentation of an Honours Paper prepared in conjunction with one of the History courses² numbered at the 4000 level ● 12 credit hours in other Honours field
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Honours students must choose from a minimum of three different defined areas of historical study.

NOTES:

- ¹ Students, particularly those intending to proceed to a graduate program, are encouraged to study a second language during the course of their Honours program.
- ² Details of the Year 4 Honours paper are available from the head of the History department.
- ³ Ancillary options are courses taken from outside the Honours field of study.

History courses are arranged into groups and areas of study as follows:

Groups:	Areas:
numbered at the 1000 level: Introductory	A: The Americas
numbered at the 2000 level: General	B: Asian
numbered at the 3000 level: Special	C: Canadian
numbered at the 4000 level: Honours	D: Ancient and Medieval
	E: European
	G: General
	M: Modern World

For information regarding Cross-Disciplinary Programs, see Section 8.7 and for Canadian Studies, see Section 8.3. Courses applicable to Canadian Studies have the symbol ✦.

8.16.4 History Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

Group 1: Introductory Courses

U1 W HIST 1200 An Introduction to the History of Western Civilization (G) Cr.Hrs.6 (Formerly 011.120) An introductory survey of the cultural history of the Western world from the ancient Greeks to the present. Students may not hold credit for HIST 1200 (or 011.120) and any of: HIST 1201 (or 011.120), HIST 1350 (or 011.135), or HIST 1360 (or 011.136).

HIST 1201 Initiation à la civilisation occidentale (G) Cr.Hrs.6 (L'ancien 011.120) Aperçu de l'histoire culturelle du monde occidental de l'antiquité grecque à nos jours. L'étudiant(e) qui détient les crédits du HIST 1201 (ou 011.120) ne peut se faire créditer aucun des cours HIST 1200 (ou 011.120), HIST 1350 (ou 011.135), ou HIST 1360 (ou 011.136). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 1260 New Directions in History: Inquiries into the Cultural Basis of the Modern World (G) Cr.Hrs.3 (Formerly 011.126) The history of cultural change focusing on such topics as leisure and popular culture, sexuality and history, and the social consequences of creativity and genius. The specific content will vary from year to year.

U1 W HIST 1270 New Directions in History: Inquiries into the Power Relations of the Modern World (G) Cr.Hrs.3 (Formerly 011.127) The history of the social and cultural impact of factors such as changes in technology and communication, warfare, and revolution. The specific content will vary from year to year.

U1 W HIST 1310 Canada-United States: Contemporary Problems in Perspective: Initial Problems (C) Cr.Hrs.3 (Formerly 011.131) An examination of such issues as

the founding of new societies in New France and New England; the development of republican and responsible governments; and the industrialization of the American and Canadian nations.

U1 W HIST 1320 Canada-United States: Contemporary Problems in Perspective: Current Problems (C) Cr.Hrs.3 (Formerly 011.132) An examination of such issues as the evolution of the modern state system in Canada and in the United States; the impact of urbanization and foreign affairs in the nuclear age.

U1 W HIST 1350 An Introduction to the History of Western Civilization to 1500 (G) Cr.Hrs.3 (Formerly 011.135) An introductory survey of the cultural history of the Western World from the earliest civilizations to 1500. Students may not hold credit for HIST 1350 (or 011.135) and any of: HIST 1200 (or 011.120) or HIST 1201 (or 011.120).

U1 W HIST 1360 An Introduction to the History of Western Civilization from 1500 (G) Cr.Hrs.3 (Formerly 011.136) An introductory survey of the cultural history of the Western World from 1500 to the present. Students may not hold credit for both HIST 1360 (or 011.136) and any of: HIST 1200 (or 011.120) or HIST 1201 (or 011.120).

U1 W HIST 1370 An Introduction to Modern World History: 1500-1800 (M) Cr.Hrs.3 (Formerly 011.137) A study of the forces which created the modern world, including the rise of capitalism and the encounter of Western and non-Western societies. Students may not hold credit for both HIST 1370 (or 011.137) and HIST 1500 (or 011.150).

U1 W HIST 1380 An Introduction to Modern World History: 1800-Present (M) Cr.Hrs.3 (Formerly 011.138) A study of the forces which created the modern world, including industrialization, imperialism, decolonization, and the emergence of revolution and counter-revolution. Students may not hold credit for both HIST 1380 (or 011.138) and HIST 1500 (or 011.150).

U1 W HIST 1390 History of Colonial Canada: 1500-1885 (C) Cr.Hrs.3 (Formerly 011.139) A study of the development of Canada from its colonial origins to the completion of national and transcontinental unification. Emphasis is on French Canada, Indian-European cultural contact, regional life and social organization, impact of colonialism, and the creation of a national state. Students may not hold credit for HIST 1390 (or 011.139) and any of: HIST 1440 (or 011.144) or HIST 1441 (or 011.144).

U1 W HIST 1400 History of the Canadian Nation since 1867 (C) Cr.Hrs.3 (Formerly 011.140) A study of the national development of Canada to the present. Emphasis is placed on French Canada, the regional life and social organization of the country, the impact of continentalism, the development of the economy, and the rise of a national sentiment. Students may not hold credit for HIST 1400 (or 011.140) and any of: HIST 1440 (or 011.144) or HIST 1441 (or 011.144).

U1 W HIST 1410 Asian Civilizations (B) Cr.Hrs.6 (Formerly 011.141) A study of major themes in the history and culture of China and Japan, the Indian Subcontinent and Southeast Asia, from ancient times to the contemporary period. Students may not hold credit for HIST 1410 (or 011.141) and any of: HIST 1420 (or 011.142), HIST 1430 (or 011.143), ASIA 1420 (or 150.142), ASIA 1430 (or 150.143), or the former 150.141.

U1 W HIST 1420 Asian Civilizations to 1500 (B) Cr.Hrs.3 (Formerly 011.142) A study of major themes in the history and culture of China and Japan, the Indian subcontinent and Southeast Asia from ancient times to around 1500. Also offered as Asian Studies ASIA 1420. May not be held with HIST 1410 (or 011.141) or ASIA 1420 (150.142).

U1 W HIST 1430 Asian Civilizations from 1500 (B) Cr.Hrs.3 (Formerly 011.143) A study of major themes in the history and culture of China and Japan, the Indian subcontinent and Southeast Asia in modern times. Also offered as Asian Studies ASIA 1430 (or 150.143). May not be held with HIST 1410 (or 011.141) or ASIA 1430 (150.143).

U1 W HIST 1440 History of Canada (C) Cr.Hrs.6 (Formerly 011.144) A study of Canadian development from earliest days to the present. Emphasis is placed on Aboriginal societies, the history of French Canada, the regional life and social organization of the country, the impact of colonialism and continentalism, and the rise of nationalisms. Students may not hold credit for HIST 1440 (or 011.144) and any of: HIST 1441 (or 011.144), HIST 1390 (or 011.139), or HIST 1400 (or 011.140).

HIST 1441 Histoire du Canada (C) Cr.Hrs.6 (L'ancien 011.144) Étude de l'évolution générale du Canada, des "origines" à nos jours. À travers un survol des principales périodes, régions, groupes, personnages et institutions qui ont contribué à la formation et à la transformation de la société canadienne, il s'agira d'illustrer la richesse et la complexité des rapports humains dans le temps et l'espace. L'étudiant(e) qui détient le crédits du HIST 1441 (ou 011.144) ne peut se faire créditer aucun des cours HIST 1440 (ou 011.144), HIST 1390 (ou 011.139), ou HIST 1400 (ou 011.140). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 1500 An Introduction to Modern World History: 1500-Present (M) Cr.Hrs.6 (Formerly 011.150) A study of the forces which created the modern world, including the rise of capitalism, colonial expansion from the 15th Century on, and the emergence of revolution and counter-revolution in the 20th Century. Students may not hold credit for both HIST 1500 (or 011.150) and HIST 1370 (or 011.137) or HIST 1380 (or 011.138).

Group 2: General Courses

HIST 2041 Histoire des Etats-Unis jusqu'en 1877 (A) Cr.Hrs.3 (L'ancien 011.204) Une vue générale du développement du peuple américain et de l'établissement jusqu'à la période de Reconstruction. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2041 (ou 011.204) et le HIST 2230 (ou 011.223). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2050 South Asia since 1947 (B) Cr.Hrs.3 (Formerly 011.205) A comparative history of India, Pakistan, Bangladesh and Sri Lanka since their achievement of independence in the late 1940s.

U1 W HIST 2080 The Byzantine Empire and the Slavic World (D) Cr.Hrs.3 (Formerly

011.208) A study of the rise and fall of the "later Roman Empire" and of its relations with Russia, Bulgaria, Serbia and the west (i.e., in the crusades), 800-1261 A.D.

U1 W HIST 2130 Emergence of Modern South Asia: 1757-1947 (B) Cr.Hrs.3 (Formerly 011.213) A survey of major developments in the modern history of the Indian subcontinent with particular reference to colonialism and nationalism and to the 20th Century emergence of India, Pakistan, and Bangladesh.

U1 W HIST 2140 Colonial Latin America (A) Cr.Hrs.3 (Formerly 011.214) A survey of the major developments in Latin America from the Indigenous cultures and European Conquest to Independence in 1821.

U1 W HIST 2150 Independent Latin America (A) Cr.Hrs.3 (Formerly 011.215) A survey of the major developments in Latin America from Independence in 1821 to the present.

U1 W HIST 2180 The History of Catholicism to 1540 (G) Cr.Hrs.3 (Formerly 011.218) The history of Roman Catholicism from the first century to 1540. Emphasis will be placed on the external forces and internal developments that have shaped Catholicism.

HIST 2191 Histoire économique et sociale canadienne du XIXe siècle (C) Cr.Hrs.6 (L'ancien 011.219) Ce cours aborde l'émergence de l'industrialisation au Canada et ses effets sur la société canadienne. La mise en place d'une bourgeoisie industrielle et d'un prolétariat sera examinée attentivement de même que ses implications sur la société canadienne. Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2210 History of Britain, 1485 to the Present (E) Cr.Hrs.6 (Formerly 011.221) A general survey of British history from 1485 to the present. Emphasis is placed on constitutional, political, and diplomatic themes; social, economic, and cultural factors are also discussed. Students may not hold credit for both HIST 2210 (or 011.221) and HIST 2211 (or 011.221).

HIST 2211 Histoire d'Angleterre depuis 1485 (E) Cr.Hrs.6 (L'ancien 011.221) Aperçu du progrès et du développement de la Grande-Bretagne depuis 1485 jusqu'à l'époque contemporaine inclusivement. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2211 (ou 011.221) et le HIST 2210 (ou 011.221). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2230 History of the United States from 1607 (A) Cr.Hrs.6 (Formerly 011.223) A survey of the development of the American people and their institutions from Colonial times to the present day. Students may not hold credit for HIST 2230 (or 011.223) and any of HIST 2760 (or 011.276) or HIST 2761 (or 011.276).

U1 W HIST 2240 History of Antisemitism and the Holocaust (E) Cr.Hrs.6 (Formerly 011.224) A survey of the role of the Jewish minority in Christian Europe over the past two thousand years. First term will focus on the evolution of anti-Jewish ideas and policies. Second term will be a study of the Nazi German Holocaust and, in particular, the role of antisemitism as a causal factor therein. Students may not hold credit for both HIST 2240 (or 011.224) and JUD 2940 (or 055.294).

U1 W HIST 2280 Aboriginal History of Canada (C) Cr.Hrs.6 (Formerly 011.228) A historical survey of Aboriginal peoples in Canada from early times to the present. The course will cover pre-contact peoples, responses to the European arrival, military alliances, the fur trade, the Métis, treaties, government policies and Aboriginal responses, and cultural resurgence and political organizing since 1945. Students may not hold for credit both HIST 2280 (or 011.228) and the former 011.254.

U1 W HIST 2370 History of Europe since the French Revolution (E) Cr.Hrs.6 (Formerly 011.237) The history of Europe since 1789, focusing on industrialization, political ideologies, and national and international politics.

U1 W HIST 2380 The Twentieth-Century World (G,M) Cr.Hrs.6 (Formerly 011.238) The problems of the modern world, including the global impact of Western civilization, the clash of ideologies, war and peace, and modernization. Students may not hold credit for both HIST 2380 (or 011.238) and HIST 2381 (or 011.238).

HIST 2381 Le monde du 20e siècle (G,M) Cr.Hrs.6 (L'ancien 011.238) Les crises du monde moderne, y compris l'impact, sur une échelle universelle, de la civilisation occidentale, le choc des idéologies, la guerre et la paix, et la modernisation. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2381 (ou 011.238) et le HIST 2380 (ou 011.238). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2410 History of India (B) Cr.Hrs.6 (Formerly 011.241) The aim of the course is to introduce students to Indian history. It provides a broad survey of major developments in Indian history from its origins in Indus valley to the present.

U1 W HIST 2420 The Medieval World Cr.Hrs.6 (Formerly 011.242) A survey of the society and culture of the Middle Ages, from 500-1500. Students may not hold credit for HIST 2420 (or 011.242) and any more than one of the former 011.206, the former 011.207, or the former 011.209.

HIST 2481 Histoire de France depuis 1500 (E) Cr.Hrs.6 (L'ancien 011.248) Aperçu de la Renaissance des XVIIe, XVIIIe et XIXe siècles et de l'époque contemporaine. Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2490 History of Russia (E) Cr.Hrs.6 (Formerly 011.249) A survey of Russian history from its origins to the present. Students may not hold credit for both HIST 2490 (or 011.249) and either HIST 2660 (or 011.266) or HIST 2840 (or 011.284).

U1 W HIST 2520 A History of Germany since the Reformation (E) Cr.Hrs.6 (Formerly 011.252) A survey of German history from the 16th Century to the present day.

U1 W HIST 2570 Nationalism in Modern Times (M) Cr.Hrs.3 (Formerly 011.257) A study of the ideology and practices of national movements in the 19th and 20th Centuries. Attention will be given in particular to the development of the idea of the nation, and nation-building in the twentieth-century world.

U1 W HIST 2580 A History of Fascism: The Politics and Culture of the Radical Right (E) Cr.Hrs.3 (Formerly 011.258) An examination of the ideas and practices of twentieth-century fascist movements.

U1 W HIST 2600 Introduction to Ukraine (E) Cr.Hrs.3 A history of Ukraine and its

people, beginning with medieval Kievan Rus' and ending in the 18th century with Ukraine's absorption into Russian and Austrian empires. Students may not hold credit for both HIST 2600 and the former 011.255.

U1 W HIST 2610 Making of Modern Ukraine (E) Cr.Hrs.3 A history of cultural, religious, economic and political forces, in the period 1800 to the present, that stimulated Ukraine's struggle for national independence from foreign domination. Students may not hold credit for both HIST 2610 and the former 011.255.

U1 W HIST 2650 Modern China and Japan (B) Cr.Hrs.6 (Formerly 011.265) An examination of the major developments in East Asian history from 1800 to 1960. Topics to be examined include Western imperialism, nationalism, the Chinese revolutions, and the modernization of Japan.

U1 W HIST 2660 History of the Soviet Union (E) Cr.Hrs.3 (Formerly 011.266) Attention will be given in particular to the Russian Revolution, the nature of the Soviet political system, the major social and economic experiments, and the Soviet role in international politics. Students may not hold credit for both HIST 2660 (or 011.266) and HIST 2490 (or 011.249).

U1 W HIST 2670 History of Capitalism (M) Cr.Hrs.3 (Formerly 011.267) A study of the emergence and evolution of the capitalist system stressing its effects on human culture from the 15th to the 20th Centuries.

U1 W HIST 2680 A History of Socialism from the French Revolution to the Present (M) Cr.Hrs.3 (Formerly 011.268) The history of socialism, both revolutionary and nonrevolutionary from the French Revolution to the present. The course covers the history of theory and political action, and of both European and non-European socialism.

U1 W HIST 2690 The Common People in Industrial Society (G) Cr.Hrs.6 (Formerly 011.269) A study of the experience of common people in an era of massive social change, with particular attention to the history of Britain as the prototype modern urban industrial society, 1750-1920.

U1 W HIST 2710 Women in History (G) Cr.Hrs.6 (Formerly 011.271) An introductory survey of the social, economic, cultural, and political history of women in Western society from prehistory to the present.

U1 W HIST 2720 The World Since 1945 (G,M) Cr.Hrs.6 (Formerly 011.272) A survey of the political, social, economic, and cultural history of the world since World War II.

U1 W HIST 2760 History of the United States from 1877 (A) Cr.Hrs.3 (Formerly 011.276) A survey of the development of the American people from Reconstruction to the present. Students may not hold credit for HIST 2760 (or 011.276) and any of: HIST 2761 (or 011.276) or HIST 2230 (or 011.223).

HIST 2761 Histoire des États-Unis depuis 1877 (A) Cr.Hrs.3 (L'ancien 011.276) Une revue générale du développement du peuple américain à partir de la Reconstruction jusqu'au présent. L'étudiant(e) qui détient le crédits du HIST 2761 (ou 011.276) ne peut se faire créditer aucun des cours HIST 2760 (ou 011.276), HIST 2230 (ou 011.223). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2820 An Introduction to Historical Method (G) Cr.Hrs.6 (Formerly 011.282) This course is intended mainly for prospective history and social science teachers but also will be useful for History Major and Honours students. It combines a survey of approaches to the writing of history, past and present, and, through the presentation of a research paper, an introduction to the use and assessment of historical evidence. Students may not hold credit for both HIST 2820 (or 011.282) and HIST 2821 (or 011.282).

HIST 2821 Introduction à la méthode historique (G) Cr.Hrs.6 (L'ancien 011.282) Ce cours s'adresse tant aux futurs enseignants en histoire et en sciences sociales qu'aux gens inscrits aux programmes de majeure et de mineure en histoire. Le cours combine l'étude des manières dont on écrit aujourd'hui, l'histoire et une introduction à l'utilisation et à l'analyse des faits et concepts historiques. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2821 (ou 011.282) et le HIST 2820 (ou 011.282). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2840 A History of Russia to 1917 (E) Cr.Hrs.3 (Formerly 011.284) A survey of the historical development of Russia from its beginnings to the end of the Imperial period. Students may not hold credit for both HIST 2840 (or 011.284) and HIST 2490 (or 011.249).

U1 W HIST 2890 Imperialism (G,M) Cr.Hrs.6 (Formerly 011.289) A study of imperialism in the modern world, its historic origins, its growth and development as a worldwide phenomenon in the late 19th Century, and its transformation and continuing manifestations in the 20th Century.

U1 W HIST 2900 Topics in Social History (G) Cr.Hrs.6 (Formerly 011.290) The content of this course will vary from year to year. A description of the course is available in advance at the History Department Office.

U1 W HIST 2930 The History of the British Isles, 412-1485 (D) Cr.Hrs.6 (Formerly 011.293) A survey of the political, social, religious and cultural history of the British Isles (with special emphasis on England) from the end of the Roman occupation to the conclusion of the Wars of the Roses.

U1 W HIST 2950 Early Canada: from the Earliest Settlement to 1867 (C) Cr.Hrs.6 (Formerly 011.295) A study of the origin and development of New France and British North America up to the Union of 1867. Students may not hold credit for both HIST 2950 (or 011.295) and HIST 2951 (or 011.295).

HIST 2951 Les origines du Canada: depuis la première colonie jusqu'en 1867 (C) Cr.Hrs.6 (L'ancien 011.295) Étude des origines et du développement de la Nouvelle France et de l'Amérique du Nord britannique jusqu'à l'Union de 1867. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2951 (ou 011.295) et le HIST 2950 (ou 011.295). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2960 The New Dominion: 1867 to 1921 (C) Cr.Hrs.6 (Formerly 011.296) An intensive examination of the problems of nation-making: Canada's reac-

tions to the new imperialism; and the impact of industrialization upon Canada. Students may not hold credit for both HIST 2960 (or 011.296) and HIST 2961 (or 011.296).

HIST 2961 Le nouveau Dominion: de 1867 à 1921 (C) Cr.Hrs.6 (L'ancien 011.296) Étude approfondie des problèmes liés à l'émergence du Canada en tant que nation. Les réactions au nouvel impérialisme et les répercussions de l'industrialisation. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2961 (ou 011.296) et le HIST 2960 (ou 011.296). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2970 Modern Canada: 1921 to the Present (C) Cr.Hrs.6 (Formerly 011.297) An intensive examination of the building of modern Canada, as a nation state and as a social, cultural, economic and political entity. Students may not hold credit for both HIST 2970 (or 011.297) and HIST 2971 (or 011.297).

HIST 2971 Le Canada moderne: de 1921 à nos jours (C) Cr.Hrs.6 (L'ancien 011.297) Étude approfondie de la transformation du Canada en un Etat moderne, entité nationale, politique, économique, sociale et culturelle. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2971 (ou 011.297) et le HIST 2970 (ou 011.297). Donné au Collège universitaire de Saint-Boniface.

U1 W HIST 2990 The History of Catholicism since 1540 (G) Cr.Hrs.3 (Formerly 011.299) The history of Roman Catholicism from about 1540 to the present. Emphasis will be placed on Catholic responses to the modern world and to movements of theological and institutional reform.

Group 3: Special Courses

HIST 3000 Issues in European History (E) Cr.Hrs.3 (Formerly 011.300) The content of this course will vary. It is designed to provide an analysis of selected issues in European history. Consult the History Department for particulars. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3020 South America since 1945 (A) Cr.Hrs.3 (Formerly 011.302) Major developments since 1945 on the continent of South America, with special emphasis on major political movements, Marxism and populism, the impact of industrialization, and South America's international role. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3030 Issues in Ukrainian History (E) Cr.Hrs.3 (Formerly 011.303) The content of this course will vary and will be announced each year. It is intended to provide an analysis of important issues in Ukrainian history. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3040 Mexico, Central America, and Cuba since 1945 (A) Cr.Hrs.3 (Formerly 011.304) Major developments since 1945, with special emphasis on changes in the Mexican revolutionary system, the crisis in Central America, and the Cuban Revolution. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3050 Canada since 1945 (C) Cr.Hrs.6 (Formerly 011.305) A problems approach to recent Canadian history involving lectures and seminars. Emphasis will be placed on political, social and economic issues of national interest during the last 40 years. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3070 History of the United States from 1877 to 1939 (A) Cr.Hrs.6 (Formerly 011.307) This course will trace the political, social, economic, and cultural history of the United States from the period of Reconstruction to the start of the Second World War. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3080 History of American Consumer Culture (A) Cr.Hrs.3 (Formerly 011.308) This course will trace the development of American consumer society from the colonial era to the present. Topics addressed include the histories of: branding, mass distribution, department stores, advertising, mass-market magazines, consumer organizing, and consumer protest. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3090 Studies in Asian History (B) Cr.Hrs.3 (Formerly 011.309) The content of this course will vary. It is designed to provide in-depth examination of specialized themes or areas in modern Asian history. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3110 Topics in History 1 (G) Cr.Hrs.3 (Formerly 011.311) An opportunity for the intensive study of selected topics or themes in history. The content varies, but may include work in social and cultural history or on specialized subjects. Consult the History Department and the Registration Guide for particulars. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3120 Topics in History 2 (G) Cr.Hrs.3 (Formerly 011.312) An opportunity for the intensive study of selected topics or themes in history. The content varies, but may include work in social and cultural history or on specialized subjects. Consult the History Department and the Registration Guide for particulars. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3130 Issues in Social History (G) Cr.Hrs.3 (Formerly 011.313) The content of this course will vary. It is designed to provide an analysis of important issues in Social history. Consult the History Department for particulars. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3160 The Cultural History of Postwar Britain (E) Cr.Hrs.6 (Formerly 011.316) The cultural history of modern Britain since 1945, interpreting culture both in its formal artistic expression and in the practices of everyday life. Students may not hold credit for both HIST 3160 (or 011.316) and HIST 3580 (or 011.358) offered as Culture and Society in Post-1945 Britain. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3180 Modern Russia: The Soviet Era and Beyond (E) Cr.Hrs.6 (Formerly 011.318) An examination of the revolutionary transformation of the Russian empire into the Soviet Union and the aftermath of its collapse in 1991. *Prerequisite:* a grade

of "C" or better in six credit hours of history or written consent of department head.

HIST 3210 The History of Popular Radicalism in the Twentieth Century (M) Cr.Hrs.6 (Formerly 011.321) Studies in the history of popular radicalism since the Bolshevik Revolution. Topics will include the development of communist and social democratic movements in the West, socialist revolutions in the underdeveloped world, the nature of communist workers' states and the development of radical theory. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

◆ **HIST 3220 The History of Canadian-American Relations (A,C) Cr.Hrs.6** (Formerly 011.322) A detailed and comprehensive study of the diplomatic relations between Canada and the United States from 1783 to the present. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

◆ **HIST 3250 Canada and the World, 1867 to the Present (C) Cr.Hrs.6** (Formerly 011.325) A study of selected aspects of Canada's external relations since Confederation. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3270 Roman Law in Medieval Europe (D) Cr.Hrs.3 (Formerly 011.327) An historical survey, for the non-specialist, of the developments in Roman Law and jurisprudence from the period of the later Roman Empire to the high middle ages (ca. 284-1300). *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3280 History of Medieval English Law (D) Cr.Hrs.3 (Formerly 011.328) An inquiry into the constituents which shaped the Common Law of England from the beginning of the 7th to end of the 14th Century. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3290 The United States since 1939 (A) Cr.Hrs.6 (Formerly 011.329) A survey of political, social, economic, and cultural history of the United States since the beginning of the Second World War. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3330 Intellectual History of Western Europe, 1750-1850 (E) Cr.Hrs.6 (Formerly 011.333) The age of prose and reason; the Enlightenment; reactions to the French Revolution; origins and development of romanticism; science and realism; new social, political, and economic theories. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3341 Histoire de l'Europe, 1789-1870 (E) Cr.Hrs.6 (L'ancien 011.334) Une étude historique, à partir de la révolution française et la vie de Napoléon Bonaparte, portant sur les forces et les personnalités dominantes du 19e siècle européen. On fera ressortir les aspects suivants: le nationalisme, le libéralisme, le conservatisme réactionnaire, et le socialisme. *Préalable:* avoir obtenu une note minimale de C dans six crédits en histoire ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

HIST 3420 History of American Foreign Policy (A) Cr.Hrs.6 (Formerly 011.342) American diplomacy from the eve of the Revolution to the present, stressing Anglo-Canadian-American relations in the nineteenth century and Far Eastern and Cold War policies in the 20th Century. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3430 Britain, 1714-1815 (E) Cr.Hrs.6 (Formerly 011.343) An examination of the political structure, constitutional developments, colonial problems, and social and religious changes, the impact of the industrial revolution, and the reaction to the French Revolution in Britain during this period. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3440 Post-Colonial South Asian History (B) Cr.Hrs.3 (Formerly 011.344) This course through lectures, films and in-class discussion surveys the major developments and themes in the histories of South Asian societies and states since independence from British colonial rule. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3450 A History of the Medieval Holy Roman Empire c. 750-1250 (D) Cr.Hrs.6 (Formerly 011.345) An analysis of the origins, development, and decline of the medieval Holy Roman Empire, with special attention to church-state relations, internal tensions, and the economic structure. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3471 Histoire de la Russie moderne (E) Cr.Hrs.6 (L'ancien 011.347) L'évolution politique, économique et sociale de la Russie de 1689 à nos jours. *Préalable:* avoir obtenu une note minimale de C dans six crédits en histoire ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

HIST 3480 The Margins of the Middle Ages (D) Cr.Hrs.3 (Formerly 011.348) A study of groups and movements situated on the periphery of European society between 1100 and 1500. *Prerequisite:* a grade of "C" or better in HIST 2420 (or 011.242) or written consent of department head.

HIST 3550 Popular Culture, Crime and Punishment in England, 1550-1850 (E) Cr.Hrs.3 (Formerly 011.355) A history of crime and the institutions for its control and punishment in England from the Tudor period to the turn of the nineteenth century. We will trace the connections between crime and larger processes such as war, the economy and urbanization. Topics will include the changing patterns of crime, the role of gender in the application of law, the reform of the criminal law and the emergence of imprisonment. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

† **HIST 3570 History of Women in Canada (C) Cr.Hrs.6** (Formerly 011.357) This course explores the history of women in Canada from the pre-contact period to the present. Specific topics analysed in class and in readings will include women's roles in First Nations societies, white-Aboriginal contact, settlement, industrialization, family economy, immigration, work, sexuality, reproduction, feminism and politics. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of

department head.

HIST 3580 Topics in Recent World History 1 (M) Cr.Hrs.3 (Formerly 011.358) An in-depth treatment of selected topics in world history since 1945. The content of the course will vary from year to year, and a precise description is available in advance from the History department office. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3590 Topics in Recent World History 2 (M) Cr.Hrs.3 (Formerly 011.359) An in-depth treatment of selected topics in world history since 1945. The content of the course will vary from year to year, and a precise description is available in advance from the History department office. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3670 Modern Indian History (B) Cr.Hrs.3 (Formerly 011.367) This course surveys the major developments in Indian history during the British colonial period culminating in the year 1947 with independence from colonial rule and the creation of the independent states of India and Pakistan. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3680 Europe, 1870-1945 (E) Cr.Hrs.6 (Formerly 011.368) Europe at the zenith of its power. The course examines the dominant forces and personalities of the period between Bismarck and Hitler. It emphasizes nationalism and minorities questions; the origins and events of the two world wars; and the domestic concerns of the major European states. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

◆ **HIST 3690 History of Northern Canada (C) Cr.Hrs.6** (Formerly 011.369) A regional history of northern Canada with particular emphasis on native people. Themes will include culture contact, economic exploitation of northern territories, and the political relationship of metropolis and hinterland in Canada. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3700 History of Working People and Labour Movements 1700 to the Present (G) Cr.Hrs.6 (Formerly 011.370) A survey of working class history with emphasis upon the varieties of labour movements and trade unions. The course will refer to the social and political experience of working people in Great Britain, Europe and the United States and will devote one term to Canadian topics. Also offered as Labour Studies LABR 3700. May not be held with LABR 3700 (or 153.370). *Prerequisite:* a grade of "C" or better in six credit hours of history or labour studies or written consent of department head.

HIST 3710 Selected Topics Cr.Hrs.6 (Formerly 011.371) A program of independent reading and/or research on selected topics, undertaken and arranged by a student in consultation with the prospective instructor, upon the written approval of the department head.

◆ **HIST 3721 Histoire du Manitoba (C) Cr.Hrs.6** (L'ancien 011.372) L'évolution politique, économique et sociale de la province depuis sa création à nos jours. Le cours sera précédé d'un bref aperçu de l'ère missionnaire dans l'Ouest canadien. *Préalable:* une note minimale de C dans HIST 1440 (ou 011.144) ou HIST 1441 (ou 011.144) ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

◆ **HIST 3730 A History of Western Canada (C) Cr.Hrs.6** (Formerly 011.373) A regional history emphasizing the development of a Western perspective upon the nation. Topics include the fur trade and Red River Settlement, transition to Canadian institutions, the wheat economy, immigration, labour and political movements, cultural changes. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3740 Topics in Latin American History (A) Cr.Hrs.3 (Formerly 011.374) The contents of this course will be announced each year. Consult the History Department. It is designed to provide in-depth studies of specialized subjects and themes in modern Latin American history. *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3760 Problems in American History 1 (A) Cr.Hrs.3 (Formerly 011.376) The subject matter of this course will be announced each year. Consult the History department. Students may not hold credit for both HIST 3760 (or 011.376) and HIST 3761 (or 011.376). *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3761 Sujets particuliers en histoire des Etats-Unis 1 (A) Cr.Hrs.3 (L'ancien 011.376) La matière de ce cours sera annoncé chaque année. Veuillez consulter le département d'histoire. L'étudiant(e) ne peut se faire créditer à la fois le HIST 3761 (ou 011.376) et le HIST 3760 (ou 011.376). *Préalable:* avoir obtenu une note minimale de C dans six crédits en histoire ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

W **HIST 3770 Problems in American History 2 (A) Cr.Hrs.3** (Formerly 011.377) The subject matter of this course will be announced each year. Consult the History department. Students may not hold credit for both HIST 3770 (or 011.377) and HIST 3771 (or 011.377). *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3771 Sujets particuliers en histoire des Etats-Unis 2 (A) Cr.Hrs.3 (L'ancien 011.377) La matière de ce cours sera annoncée chaque année. Veuillez consulter le département d'histoire. L'étudiant(e) ne peut se faire créditer à la fois le HIST 3771 (ou 011.377) et le HIST 3770 (ou 011.377). *Préalable:* avoir obtenu une note minimale de C dans six crédits en histoire ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

◆ **HIST 3780 Studies in Canadian History 1 (C) Cr.Hrs.3** (Formerly 011.378) The content of this course will vary. It is designed to provide in-depth studies of specialized topics and themes in Canadian history. A precise description of the course is available in advance at the History department office. Students may not hold credit for both HIST 3780 (or 011.378) and HIST 3781 (or 011.378). *Prerequisite:* a grade of "C" or better in six credit hours of history or written consent of department head.

◆ **HIST 3781 Étude choisies en histoire du Canada 1 (C) Cr.Hrs.3** (L'ancien 011.378) Le contenu de ce cours variera d'année en année. Il est construit en vue de donner une connaissance approfondie de certains sujets et thèmes particuliers de l'histoire du Canada. La description détaillée de ce cours sera disponible à l'avance au bureau du professeur. L'étudiant(e) ne peut se faire créditer à la fois le HIST 3781 (ou 011.378) et le HIST 3780 (ou 011.378). *Préalable*: avoir obtenu une note minimale de C dans six crédits en histoire ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

◆ **HIST 3790 Studies in Canadian History 2 (C) Cr.Hrs.3** (Formerly 011.379) The content of this course will vary. It is designed to provide in-depth studies of specialized topics and themes in Canadian history. A precise description of the course is available in advance at the History department office. Students may not hold credit for both HIST 3790 (or 011.379) and HIST 3791 (or 011.379). *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

◆ **HIST 3791 Étude choisies en histoire du Canada 2 (C) Cr.Hrs.3** (L'ancien 011.379) Le contenu de ce cours variera d'année en année. Il est construit en vue de donner une connaissance approfondie de certains sujets et thèmes particuliers de l'histoire du Canada. La description détaillée de ce cours sera disponible à l'avance au bureau du professeur. L'étudiant(e) ne peut se faire créditer à la fois le HIST 3791 (ou 011.379) et le HIST 3790 (ou 011.379). *Préalable*: avoir obtenu une note minimale de C dans six crédits en histoire ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

◆ **HIST 3810 The Family, Love and Marriage in Western Society, 1500-1800 (E) Cr.Hrs.6** (Formerly 011.381) An examination of the theory and practise of marriage in early modern Europe, with particular reference to the demographic, economic, religious and legal context for intimate relations. Students may not hold credit for both HIST 3810 (or 011.381) and HIST 3811 (or 011.381). *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

◆ **HIST 3811 Famille, amour et mariage dans la société occidentale, 1500-1800 (E) Cr.Hrs.6** (L'ancien 011.381) Étude de la théorie et de la pratique du mariage dans l'Europe moderne particulièrement dans un rapport avec les aspects démographiques, économiques, religieux et juridique de la relation maritale. L'étudiant(e) ne peut se faire créditer à la fois le HIST 3811 (ou 011.381) et le HIST 3810 (ou 011.381). *Préalable*: avoir obtenu une note minimale de C dans six crédits en histoire ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

◆ **HIST 3820 The Women's Movement, 1850 to the Present (G) Cr.Hrs.6** (Formerly 011.382) A comparative examination across western societies of women's reform organizations, of women's movement into public life, and of the changes in women's paid and unpaid work. *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3880 Europe in Transition: 1348-1648 (E) Cr.Hrs.6 (Formerly 011.388) A study of the transition from the medieval to the modern world. *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

◆ **HIST 3910 The Ukrainians in Canada (C) Cr.Hrs.3** (Formerly 011.391) A history of the Ukrainian community in Canada. Topics to be discussed will include immigration, social and political organizations, churches, cultural assimilation, Ukrainian contributions to Canada, and relations with Ukraine. *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3930 Minorities in the Modern World (M) Cr.Hrs.3 (Formerly 011.393) A comparative study of tensions between majority and minority groups since 1848. The course emphasizes Europe, although minorities in Canada and elsewhere are also considered. *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3960 China, 1911 to the Present (B) Cr.Hrs.3 (Formerly 011.396) A study of nationalism and revolution in 20th Century China. *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

HIST 3980 Nationalism on the Indian Sub-Continent in the Twentieth-Century (B) Cr.Hrs.3 (Formerly 011.398) A study of the emergence and consolidation of the nations of India, Pakistan and Bangladesh, 1909 to the present. *Prerequisite*: a grade of "C" or better in six credit hours of history or written consent of department head.

Honours Courses

HIST 4010 Imperialism, Decolonization and Neo-Colonialism, 1700 to the Present (G,M) Cr.Hrs.6 (Formerly 011.401) Studies in the theories and practise of imperialism from an historical perspective. *Prerequisite*: written consent of department head.

HIST 4020 Studies in Modern British History (E) Cr.Hrs.6 (Formerly 011.402) An examination of topics drawn from 19th and 20th Century Britain. The specific content will vary from year to year. *Prerequisite*: written consent of department head.

HIST 4030 The History of Communism and Socialism since 1945 (M) Cr.Hrs.6 (Formerly 011.403) A seminar course in the history of communism and socialism since World War II. Topics will include the evolution of communist and social democratic movements in the West, the development of communist workers' states and the struggle for socialism in the underdeveloped world. *Prerequisite*: written consent of department head.

HIST 4040 The Later Middle Ages (D) Cr.Hrs.6 (Formerly 011.404) Selected topics in economics, social, cultural, art, and religious history of the later medieval world. *Prerequisite*: written consent of department head.

HIST 4050 England in the Long Eighteenth Century (E) Cr.Hrs.6 (Formerly 011.405) Selected themes in the history of England's long eighteenth century, from 1660-1840. Specific topics will vary from year to year, but will generally include the transformation of political culture, the consequences of war, the question of national identities, the emergence of commercial society and the changes in social structure. *Prerequisite*: written consent of the department head.

◆ **HIST 4060 Gender History in Canada (C) Cr.Hrs.6** (Formerly 011.406) Gender

history explores the roles, images, and experiences of masculinity and femininity in the past. This course will familiarize students with the changing theoretical and historiographical terrain of gender history. It will draw on the international literature but focus on the history of gender in Canada, examining how historians analyse masculinity, femininity, the family, sexuality, politics, race/ethnicity, moral regulation, class, nation, and colonialism. *Prerequisite*: written consent of department head.

HIST 4070 Issues in Modern Asian History 1: Selected Topics (M,B) Cr.Hrs.3 (Formerly 011.407) The content of this course will vary. Emphasis will be on analysis of important issues and recent developments in the history and historiography of modern Asia. Consult the History Department for particulars. *Prerequisite*: written consent of department head.

HIST 4080 Issues in Modern Asian History 2: Selected Topics (M,B) Cr.Hrs.3 (Formerly 011.408) The content of this course will vary. Emphasis will be on analysis of important issues and recent developments in the history and historiography of modern Asia. Consult the History Department for particulars. *Prerequisite*: written consent of department head.

HIST 4090 Studies in American History to 1877 (A) Cr.Hrs.6 (Formerly 011.409) An examination of selected topics in American history from colonial beginnings to Reconstruction. Particular topics will be announced each year. *Prerequisite*: written consent of department head.

HIST 4100 Studies in American History since 1877 (A) Cr.Hrs.6 (Formerly 011.410) An examination of selected topics in American history from Reconstruction to the present. Particular topics will be announced each year. *Prerequisite*: written consent of department head.

HIST 4110 Selected Topics in British History (E) Cr.Hrs.6 (Formerly 011.411) A seminar course whose content will vary. A description of the course is available in advance at the History department office. *Prerequisite*: written consent of department head.

HIST 4120 History of Aboriginal Rights (C) Cr.Hrs.6 (Formerly 011.412) A study of Aboriginal rights from early contact to the present with a particular emphasis on treaties, the courts, and Aboriginal efforts to enforce specific forms of rights. *Prerequisite*: written consent of department head.

HIST 4200 Modern South Asia: Colonialism, Nationalism and Modernization (B) Cr.Hrs.6 (Formerly 011.420) A study of selected themes in the history of the Indian subcontinent in the 19th and 20th Centuries. *Prerequisite*: written consent of department head.

◆ **HIST 4280 Topics in the Cultural History of Canada (C) Cr.Hrs.6** (Formerly 011.428) Studies in Canadian cultural, communications, and intellectual history. Topics will vary from year to year but a description is available in advance at the History department office. *Prerequisite*: written consent of department head.

HIST 4300 Problems in Modern Russian and Soviet History (E) Cr.Hrs.6 (Formerly 011.430) A study of selective historical problems from 1861 to the present. The focus will shift from year to year. *Prerequisite*: written consent of department head.

HIST 4310 Topics in Social History (G) Cr.Hrs.6 (Formerly 011.431) The content of this course will vary. It is designed to provide students with specialized topics and themes in Social history. A description of the course is available in advance at the History department office. *Prerequisite*: written consent of department head.

HIST 4320 Studies in World History since 1945 (G,M) Cr.Hrs.6 (Formerly 011.432) A comparative approach to recent world history, utilizing area and thematic studies. *Prerequisite*: written consent of department head.

◆ **HIST 4340 Introduction to Archival Science (G) Cr.Hrs.6** (Formerly 011.434) A thorough introduction to archival theory and practise with special emphasis on the history and development of archives and their place in modern society, terminology, collection development, appraisal arrangement, access, conservation, research aids and related archival principles. *Prerequisite*: written consent of department head.

◆ **HIST 4390 The History of White Attitudes and Policies towards Native Peoples in North America (C) Cr.Hrs.6** (Formerly 011.439) Topics will include the changing social and radical ideas of programs of directed change and the resistance of indigenous peoples to white social goals. *Prerequisite*: written consent of department head.

HIST 4400 Historical Method and Historiography (G) Cr.Hrs.6 (Formerly 011.440) A study of historical methods and historiography. *Prerequisite*: written consent of department head.

HIST 4410 The Renaissance (E) Cr.Hrs.6 (Formerly 011.441) Interpretations of the transitional period, 1300 to 1500, in Europe, with emphasis upon cultural and intellectual aspects of the Renaissance in Italy. *Prerequisite*: written consent of department head.

HIST 4530 Europe, 1870-1914 (E) Cr.Hrs.6 (Formerly 011.453) The domestic policies and diplomatic and military strategies of the major or European powers between Bismarck and World War I. *Prerequisite*: written consent of department head.

HIST 4580 The Great Historians (G) Cr.Hrs.6 (Formerly 011.458) The readings of a select number of modern and classical historians. Preparation of a research paper on a particular historiographic problem. *Prerequisite*: written consent of department head.

HIST 4630 The United States, 1828-65 (A) Cr.Hrs.6 (Formerly 011.463) A study of the pre-Civil War era with special emphasis on Jacksonian democracy and the ferment of reform. *Prerequisite*: written consent of department head.

◆ **HIST 4700 Canada, 1896 to the Present (C) Cr.Hrs.6** (Formerly 011.470) A detailed study of the major problems which have confronted Canada in the 20th century. *Prerequisite*: written consent of department head.

◆ **HIST 4720 History of Manitoba (C) Cr.Hrs.6** (Formerly 011.472) An intensive study of selected topics in the history of Manitoba from the 1890s to the present. *Prerequisite*: written consent of department head.

HIST 4740 The Golden Age of Byzantium (D) Cr.Hrs.6 (Formerly 011.474) A study of the Byzantine Empire with special emphasis on the period of the Macedonian dynasty. *Prerequisite:* written consent of department head.

HIST 4820 The Crusades (D) Cr.Hrs.6 (Formerly 011.482) A study of the evolution and decline of the crusading ideal in Europe, 1095-1291. Particular attention will be given to the effect of the Crusades on the Mediterranean world. *Prerequisite:* written consent of department head.

HIST 4840 The Early Middle Ages (D) Cr.Hrs.6 (Formerly 011.484) An inquiry into the disintegration of the Roman Empire from Constantine to Charlemagne. *Prerequisite:* written consent of department head.

HIST 4870 Contemporary Latin America (A) Cr.Hrs.6 (Formerly 011.487) A study of selected historical developments in Latin America since the Cuban Revolution, with emphasis on most recent themes. *Prerequisite:* written consent of department head.

HIST 4880 International History, 1919-45 (E,M) Cr.Hrs.6 (Formerly 011.488) A study of international affairs, with emphasis on the diplomacy of the great powers, policy formation, and ideology. *Prerequisite:* written consent of department head.

★ **HIST 4890 Canadian Social History (C) Cr.Hrs.6** (Formerly 011.489) A study of the evolution of Canadian society with intensive analysis of topics such as the pioneer community, immigration, ethnic history, urban development. *Prerequisite:* written consent of department head.

★ **HIST 4900 The Hudson's Bay Company and British North America (C) Cr.Hrs.6** (Formerly 011.490) A research course which examines various aspects of the relations

between the Hudson's Bay Company and British North America and is designed to utilize the Hudson's Bay Company Archives in Winnipeg. *Prerequisite:* written consent of department head.

HIST 4940 Revolutionary China: A Century of Upheaval, 1870 to the Present (B) Cr.Hrs.6 (Formerly 011.494) A study of the disintegration of the Imperial order, the 1911 revolution, Kuomintang rule and Japanese aggression, and the Communist revolution. *Prerequisite:* written consent of department head.

★ **HIST 4950 History of Quebec (C) Cr.Hrs.6** (Formerly 011.495) A study of the province of Quebec from 1791 to the present day. Emphasis will be on recent history with examination of such topics as Laurier liberalism, Duplessis nationalism, and the emergence of the Parti Québécois. *Prerequisite:* written consent of department head.

HIST 4960 Special Studies in European History (E) Cr.Hrs.6 (Formerly 011.496) A seminar course whose content will vary from year to year. *Prerequisite:* written consent of department head.

HIST 4970 The United States in the Twentieth Century (A) Cr.Hrs.6 (Formerly 011.497) An examination of the United States since 1900, emphasizing the political system, government-business relations, radicalism, the labour movement, and foreign policy. *Prerequisite:* written consent of department head.

HIST 4990 Selected Topics Cr.Hrs.6 (Formerly 011.499) A program of independent reading and/or research on selected topics, undertaken and arranged by a student in consultation with prospective instructor, upon the written approval of the department head.

8.17 Department of Icelandic

Acting Head: David Arnason

General Office: 357 University College

Telephone: 204 474 8487

E-mail: uctyp@cc.umanitoba.ca

Website: www.umanitoba.ca/icelandic

8.17.1 Academic Staff

Associate Professor

Bjarnadottir, B., B.A., M.A., Ph.D. (Iceland).

Lecturer

Hilmisdóttir, H., M.A. (Helsinki).

8.17.2 Program Information

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in either ICEL 1240 or ICEL 2240. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in ICEL 1220 or ICEL 1240 or ICEL 2240.

Honours Program

The Honours Program is not currently offered.

For information on reciprocal recognition of credit for Scandinavian/Icelandic courses given by the University of Alberta and the University of Manitoba, see the department.

8.17.3 Icelandic			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
MAJOR (OPTION 1) TOTAL: 30 CREDIT HOURS			
ICEL 1240 ¹	ICEL 2240	18 credit hours in Icelandic courses numbered at the 2000, 3000, or 4000 level	
MAJOR (OPTION 2) TOTAL: 30 CREDIT HOURS			
ICEL 2240	24 credit hours in Icelandic courses numbered at the 2000, 3000, or 4000 level		
MINOR (OPTION 1) TOTAL: 18 CREDIT HOURS			
ICEL 1240 ¹	ICEL 2240	6 credit hours in Icelandic	
MINOR (OPTION 2) TOTAL: 18 CREDIT HOURS			
ICEL 1220 or ICEL 1240	12 credit hours in Icelandic		
HONOURS SINGLE OR DOUBLE²			
ICEL 2240	ICEL 2220, ICEL 2300	ICEL 2310, ICEL 3400	● ICEL 4420, ICEL 4440, ICEL 4460 ● 3 credit hours in Icelandic courses numbered at the 3000 level

NOTES:

¹ "Prior to standing" in ICEL 1240 will be determined by means of a written test administered by the department at time of registration.

² Students who qualify for Single or Double Honours must select the balance of their work in years 2, 3, and 4 from: Classics, English, French, German, History, Philosophy, or Russian in consultation with the department head.

8.17.4 Icelandic Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

General Courses

U1 ICEL 1220 Introduction to Icelandic Culture and Civilization Cr.Hrs.6 (Formerly 012.122) An introductory survey of Icelandic history, culture, and civilization from

the Viking Age to the 20th century. Open to all students. Taught in English.

U1 ICEL 1240 Modern Icelandic 1 Cr.Hrs.6 (Formerly 012.124) Texts: Asta Svavarsdottir and Margret Jonsdottir, *Íslenska fyrir Utlendinga* (Reykjavik 1991) and Ari Pall Kristinnsson, *The Pronunciation of Modern Icelandic* (Reykjavik 1985). Other texts to be announced.

ICEL 2220 Modern Icelandic Literature in Translation Cr.Hrs.3 (Formerly 012.222) A study of modern Icelandic literature through an analysis of a selection of works by Icelandic writers in English translation from around 1900 until the present.

★ **ICEL 2230 Contemporary Icelandic-Canadian Literature Cr.Hrs.3** (Formerly 012.223) An examination of contemporary Icelandic-Canadian literature in English, its role and characteristics, its place and function within the broader field of Canadian literature, and its challenges to the Canadian cultural mainstream.

ICEL 2240 Modern Icelandic 2 Cr.Hrs.6 (Formerly 012.224) Modern Icelandic usage through practical exercises and free composition. Study of fictional and non-fictional texts. *Prerequisite:* prior standing in ICEL 1240 (or 012.124) or a grade of "C" or better in ICEL 1240 (or 012.124).

ICEL 2250 Icelandic Folktales Cr.Hrs.3 (Formerly 012.225) An introduction to Icelandic and Icelandic-Canadian folk- and fairytales; including stories of ghosts, trolls, elves, huldufolk and sea-monsters. Open to all students: taught in English.

ICEL 3230 Modern Icelandic 3 Cr.Hrs.6 (Formerly 012.323) A study of Icelandic grammar and syntax, combined with lessons and exercises in reading, composition, dialogue, and oral presentation. *Prerequisite:* a grade of "C" or better in ICEL 2240 (or 012.224) or written consent of department head.

ICEL 3320 Old Norse Mythology Cr.Hrs.3 (Formerly 012.332) The myths and cults of the pre-Christian gods in the Nordic countries studied on the basis of the original sources (in English translation) and related to pre-Christian Nordic society. Open to all students; taught in English.

ICEL 3330 Icelandic Sagas in Translation Cr.Hrs.3 (Formerly 012.333) A study of the Icelandic sagas based on the original sources in English translation. Open to all students; taught in English. ICEL 3320 (or 012.332) is recommended but not required.

★ **ICEL 3460 Laura Goodman Salverson Cr.Hrs.3** (Formerly 012.346) A study of the creative and political implications of minority writing and the construction of an ethnic female identity through an analysis of Laura Goodman Salverson's main works in their Canadian and Icelandic cultural contexts and their critical reception. *Prerequisite:* written consent of department head.

Honours Courses

★ **ICEL 2300 Icelandic-Canadian Literature Cr.Hrs.6** (Formerly 012.230) Text: Einar H. Kvaran and Gudm. Finnbogason, *Vestan um haf* (Reykjavik, 1930). Other texts to be announced. *Prerequisite:* written consent of department head.

ICEL 2310 An Introduction to Old Icelandic Language and Literature Cr.Hrs.6 (Formerly 012.231) Text: Sigrid Valfells and James E. Cathey. *Old Icelandic: An Introductory Course* (Oxford, 1981). *Prerequisite:* written consent of department head.

ICEL 3400 Old Icelandic Literature Cr.Hrs.6 (Formerly 012.340) A study of selected Icelandic sagas and Eddic poems. *Prerequisite:* written consent of department head.

ICEL 4420 History of the Icelandic Language Cr.Hrs.3 (Formerly 012.442) A study of the development of the Icelandic language from the twelfth century to the present day. *Prerequisite:* written consent of department head.

★ **ICEL 4440 The Icelanders in Canada Cr.Hrs.3** (Formerly 012.444) A history of the emigration of Icelanders to North America and the Icelandic communities in Canada, their social and political organizations, churches, and cultural assimilation. *Prerequisite:* written consent of department head.

ICEL 4460 Special Topics Cr.Hrs.3 (Formerly 012.446) A seminar course whose content will vary from year to year. *Prerequisite:* written consent of department head.

8.18 Interdisciplinary Courses

The Faculty of Arts offers a number of interdisciplinary courses designed by a course committee consisting of members of a number of departments. Interdisciplinary courses are free options, and a student may register for more than one.

Cross-disciplinary programs are available in:

Asian Studies	See Section 8.2
Canadian Studies	See Section 8.3
Catholic Studies	See Section 8.4
Central and East European Studies	See Section 8.5
Drama	See Section 8.8
Film Studies	See Section 8.11
Global Political Economy	See Section 8.15
History of Art	See Section 9.3
Labour Studies	See Section 8.19
Latin American Studies	See Section 8.20
Medieval and Renaissance Studies	See Section 8.22
Theatre	See Section 8.30
Ukrainian Canadian Heritage Studies	See Section 8.31
Urban Studies	See Section 8.32
Women's Studies	See Section 8.33

Others

For further information on these courses, consult the Faculty of Arts general office.

8.18.1 Interdisciplinary-Others Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd digits (1,3,5,7,9) indicate courses given at Collège universitaire de Saint-Boniface.

U1 W ARTS 1110 Introduction to University Cr.Hrs.3 (Formerly 099.111) A seminar course designed to help students make the transition from high school to university by imparting the knowledge, skills, and attitudes requisite for success in university study. Each section limited to 30 students. Open only to students who have completed less than twelve credit hours. Students may not hold credit for both ARTS 1110 (or

099.111) and ARTS 1111 (or 099.111).

ARTS 1111 Introduction à l'université Cr.Hrs.3 (L'ancien 099.111) Cours offert sous forme de séminaire dont le but est de faciliter la transition entre le secondaire et l'université. Développement des connaissances, des compétences et des attitudes nécessaires pour bien réussir les études universitaires. Un maximum de 30 inscriptions par section. Offert seulement aux étudiantes et aux étudiants qui ont complété moins de 12 crédits. L'étudiant(e) ne peut se faire créditer à la fois le ARTS 1111 (ou 099.111) et le ARTS 1110 (ou 099.111). Donné au Collège universitaire de Saint-Boniface.

U1 ARTS 1120 Reading and Writing Across the Disciplines Cr.Hrs.6 (Formerly 099.112) English ARTS 1120 (or 099.112) is designed to teach students how to read, write, and research at the university level. The course stresses effective expository writing, prose reading, and research skills.

U1 W ARTS 1140 European Literature 1 Cr.Hrs.3 (Formerly 099.114) Great books of continental Europe in English translation. Team taught by a number of specialists in different literatures. Selected works from the ancient period until the end of the eighteenth century.

U1 W ARTS 1150 European Literature 2 Cr.Hrs.3 (Formerly 099.115) Some of the best known and most influential writers of continental Europe in English translation. Taught by specialists in the different literatures. Selected works from the beginning of the nineteenth century until the present day.

ARTS 2640 Technology and Society 1 Cr.Hrs.3 (Formerly 099.264) An interdisciplinary examination of technological development, economic growth and their effect on Society and the natural environment. Among the topics to be discussed will be industrialism and its effect on air and water quality illustrated by case studies of several industries and of the Great Lakes. Students may not hold credit for both ARTS 2640 (or 099.264) and the former 023.264.

ARTS 2650 Technology and Society 2 Cr.Hrs.3 (Formerly 099.265) Problems caused by technological development: resource availability, energy development, nuclear proliferation, population growth and food supplies. Possible future technological developments and the responsibilities of the professional. Students may not hold credit for both ARTS 2650 (or 099.265) and the former 023.265.

ARTS 3050 Interdisciplinary Seminar* Cr.Hrs.6 (Formerly 099.305) A course which forms part of the core curriculum taken by students in the associateship program at St. John's College, and is a requirement for all such students. Those enrolled in the seminar will be expected to present papers contributing to the integration of knowledge derived from their various major fields, from the subject areas represented in the core curriculum, and from the pursuit of their own special interests. The papers will be commented on by faculty members drawn from different academic departments. *Prerequisite:* written consent of the dean of studies, St. John's College.

* Indicates the course is not regularly offered

8.19 Labour Studies Program

Program Coordinator: Julie Guard

Program Office: 470 University College

Telephone: 204 474 7110

E-mail: julie_guard@umanitoba.ca

Website: www.umanitoba.ca/labour_studies

8.19.1 Academic Staff

Associate Professor

Guard, J., B.A. (Western Ontario), M.E.S. (York), Ph.D. (Toronto).

Assistant Professor

Camfield, D., B.A., M.A., Ph.D. (York).

8.19.2 Program Information

This program examines the social and economic relations of work, the employer-employee relationship, and current issues in public policy and economics. Students in the program are exposed to topics in collective bargaining, labour law, employment law, health and safety, and the past, present, and future of the labour movement. The impact of technology and the effects of globalization are also explored.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in both LABR 1270 and LABR 1290 (the former 153.128). For students who have taken additional courses toward the major, a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in both LABR 1270 and LABR 1290 (the former 153.128).

All Programs

While ECON 1200 Principles of Economics, or ECON 1210 Introduction to Canadian Economic Issues and Policies and ECON 1220 Introduction to Global and Environmental Economic Issues and Policies, and SOC 1200 Introduction to Sociology are not required, they are highly recommended. Students are encouraged to select additional courses from the List of Core Courses and the List of Electives (see below).

Courses used towards a Labour Studies Major or Minor may not be used towards a Major/Minor or Honours in the second field.

8.19.3 Labour Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
LABR 1270 and LABR 1290	Option 1 <ul style="list-style-type: none"> • Labour Studies LABR 2420 (or Economics ECON 2420) • Labour Studies LABR 3700 (or HIST 3700) or Labour Studies LABR 3510 (or Economics ECON 3510) and 12 credit hours from the list of electives below; or Option 2 <ul style="list-style-type: none"> • Labour Studies LABR 2420 (or Economics ECON 2420) • Labour Studies LABR 3300 and 15 credit hours from the list of electives below 		
ADVANCED MAJOR TOTAL: 54 CREDIT HOURS			
LABR 1270 and LABR 1290	Option 1 <ul style="list-style-type: none"> • Labour Studies LABR 2420 (or Economics ECON 2420), LABR 3010, LABR 3070, LABR 3700 (or History HIST 3700), LABR 4510¹, LABR 4520¹ • Labour Studies LABR 3510 (or Economics ECON 3510) and 15 credit hours from the list of electives below; or Option 2 <ul style="list-style-type: none"> • Labour Studies LABR 2420 (or Economics ECON 2420), LABR 3010, LABR 3070, LABR 3700 (or History HIST 3700), LABR 4510¹, LABR 4520¹ • Labour Studies LABR 3300 and 18 credit hours from the list of electives below 		
MINOR TOTAL: 18 CREDIT HOURS			
LABR 1270 and LABR 1290	Option 1 <ul style="list-style-type: none"> • Labour Studies LABR 2420 (or Economics ECON 2420) • Labour Studies LABR 3510 (or Economics ECON 3510) or Labour Studies LABR 3700 (or History HIST 3700); or Option 2 <ul style="list-style-type: none"> • Labour Studies LABR 2420 (or Economics ECON 2420) • Labour Studies LABR 3300 and 3 credit hours from the list of electives below 		

NOTES:

¹ Courses LABR 4510 and LABR 4520 may only be taken in the final year of the program and require written consent of the Labour Studies program coordinator.

List of Core Courses for Labour Studies

Labour Studies	
LABR 1270 Introduction to the Political Economy of Labour	3
LABR 1290 Introduction to the Canadian Labour Movement	3
LABR 2420 Economics of the Labour Process and Labour Relations (same as Economics ECON 2420)	6
LABR 3010 Labour Law	3
LABR 3070 Labour Relations and Occupational Health and Safety Law	3
LABR 3300 Workers, Employers and the State	3
LABR 3510 Industrial Relations (same as Economics ECON 3510)	6
LABR 3700 History of Working People and Labour Movements 1700 to the Present (G) (same as History HIST 3700)	6
LABR 4510 Labour Studies Field Placement Seminar	3
LABR 4520 Labour Studies Field Placement	6

153.128* Introduction to Labour Institutions and Problems 3
 * No longer offered

List of Electives

The following courses may be selected to fulfill the requirements for a degree in Labour Studies (see the table above for details). Other courses might be chosen for this purpose, in accordance with students' individual interests, but require advance permission from the Labour Studies coordinator. Students are responsible for ensuring that all prerequisites have been met. In the following list (H) indicates an Honours course.

Faculty of Arts

Economics		
ECON 2280 Social Welfare and Human Resources		6
ECON 2350 Community Economic Development		3
ECON 2360 Women in the Canadian Economy		6

ECON 2500	Labour and Technology (same as Labour Studies LABR 2450)	3	MGMT 2080	Introduction to Management and Organization Theory	3
ECON 3170	Introduction to Quantitative Methods in Economics	3	MGMT 3030	Contemporary Social Issues in Business	3
ECON 3300	Canadian Economic History	6	HRIR 2440	Human Resource Management	3
ECON 3360	Labour Economics	6	HRIR 3430	Selected Topics in Industrial Relations	3
ECON 3510	Industrial Relations (same as Labour Studies LABR 3510)	6	HRIR 3450	Labour and Employment Relations (or the former 027.341)	3
ECON 3660	Economic Ideas and Social Institutions	6	HRIR 4420	Compensation	3
History			HRIR 4480	Collective Bargaining and Administration	3
HIST 2670	History of Capitalism (M)	3	HRIR 4520	Comparative Industrial Relations and Human Resource Management	3
HIST 2680	A History of Socialism from the French Revolution to the Present (M)	3	Interdepartmental Courses		
HIST 2690	The Common People in Industrial Society (G)	6	IDM 3000	Aboriginal Business Context: Influences and Impacts	3
HIST 2710	Women in History (G)	6	IDM 4090	Aboriginal Business Leadership	3
HIST 2720	The World Since 1945 (G,M)	6			
HIST 2970	Modern Canada: 1921 to the Present (C)	6			
HIST 2971	Le Canada moderne: de 1921 à nos jours (C) (CUSB)	6			
HIST 3050	Canada since 1945 (C)	6			
HIST 3210	The History of Popular Radicalism in the Twentieth Century (M)	6			
HIST 3570	History of Women in Canada (C)	6			
HIST 3700	History of Working People and Labour Movements 1700 to the Present (G) (same as Labour Studies LABR 3700)	6			
HIST 3730	A History of Western Canada (C)	6			
HIST 4030	The History of Communism and Socialism since 1945 (M) (H)	6			
Labour Studies					
LABR 2440	Economic and Social Measurement	3			
LABR 2450	Labour and Technology (same as Economics ECON 2500)	3			
LABR 3010	Labour Law	3			
LABR 3030	Labour and the Bargaining Process	3			
LABR 3060	Workplace Health and Safety	3			
LABR 3070	Labour Relations and Occupational Health and Safety	3			
LABR 3110	Special Studies in Labour Studies	3			
LABR 3120	Special Studies in Labour Studies	3			
LABR 3130	Employment Legislation and the Protection of Workers	3			
LABR 3140	Pensions and Benefits	3			
LABR 3150	Labour Adjustment	3			
LABR 3200	Workers' Self-Management	3			
LABR 3300	Workers, Employers and the State	3			
LABR 3510	Industrial Relations (same as Economics ECON 3510)	6			
LABR 3700	History of Working People and Labour Movements 1700 to the Present (G) (same as History HIST 3700)	6			
153.308*	Workers' Self Management	6			
Native Studies					
NATV 3320	Aboriginal Organizations	3			
Philosophy					
PHIL 2290	Ethics and Society	6			
PHIL 2830	Business Ethics	3			
PHIL 3710	Critiques of Contemporary Society	6			
Political Studies					
POLS 4570	Public Organizational Management (H)	6			
POLS 4660	The State in the Economy (H)	6			
019.487*	Government and Public Sector Unionism (H)	3			
Psychology					
PSYC 3510	Organizational Psychology	3			
PSYC 3600	Environmental Psychology	3			
Sociology					
SOC 2290	Introduction to Research Methods	6			
SOC 3370	Sociology of Work	3			
SOC 3371	Sociologie du travail (CUSB)	3			
SOC 3470	Political Sociology	3			
SOC 3471	Sociologie politique (CUSB)	3			
SOC 3820	Qualitative and Historical Methods in Sociology	3			
SOC 3870	Social Inequality	3			
SOC 3871	Inégalités sociales (CUSB)	3			
Women's Studies					
WOMN 2500	Race, Class and Sexuality	3			
WOMN 3550	Feminist Community Organizing: Theories and Practices	3			
I.H. Asper School of Business (Faculty of Management)					
Business Administration					
GMGT 2030	Administrative Theory	3			

8.19.4 Labour Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 LABR 1270 Introduction to the Political Economy of Labour Cr.Hrs.3 (Formerly 153.127) An introduction to how working for wages has changed the lives of ordinary people, how labour is produced and reproduced, and the dynamics of labour markets, work organization and class conflict in capitalist societies.

U1 LABR 1290 Introduction to the Canadian Labour Movement Cr.Hrs.3 (Formerly 153.129) An introduction to the development of the contemporary working-class movement in Canada and to workplace issues today. Students may not hold credit for both LABR 1290 (or 153.129) and the former 153.128.

LABR 2420 Economics of the Labour Process and Labour Relations Cr.Hrs.6 (Formerly 153.242) An examination of theoretical approaches to paid and unpaid work, the organization of labour processes, the production and reproduction of labour, and labour markets in Canada today, as well as possible alternatives. Students may not hold credit for both LABR 2420 (or 153.242) and ECON 2420 (or 018.242). *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or six credit hours of 1000 level Economics.

LABR 2440 Economic and Social Measurement Cr.Hrs.3 (Formerly 153.244) Sources, techniques and limitations of data collection and processing in the socio-economic sphere. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 2450 Labour and Technology Cr.Hrs.3 (Formerly 153.245) Examination of the relationship between technological change and levels of employment, organization/quality of work and division of labour. Same as Economics ECON 2500 (or 018.250) Labour and Technology (3). Students may not hold credit for both LABR 2450 (or 153.245) and ECON 2500 (or 018.250). *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), six credit hours of 1000 level Economics, or written consent of the Labour Studies coordinator.

LABR 3010 Labour Law Cr.Hrs.3 (Formerly 153.301) An introduction to legislation and interpretation, legal procedures, and quasi-judicial boards as they concern the organization of trade unions, collective bargaining, settlement of disputes, labour standards, workers' compensation, unemployment insurance and human rights. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 3030 Labour and the Bargaining Process Cr.Hrs.3 (Formerly 153.303) A course to explain labour's involvement in the negotiation process including the mechanics and the theoretical issues of bargaining. The course focuses on contemporary issues. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 3060 Workplace Health and Safety Cr.Hrs.3 (Formerly 153.306) An introduction to occupational health, industrial hygiene and industrial safety emphasizing the impact of chemical hazards on the body, the measure and control of hazards and the causes and prevention of industrial accidents. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 3070 Labour Relations and Occupational Health and Safety Law Cr.Hrs.3 (Formerly 153.307) The economic costs of workplace injuries and sickness; the history of occupational health and safety laws and their implementation; the history and functions of workers' compensation; collective bargaining on health and safety. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 3110 Special Studies in Labour Studies Cr.Hrs.3 (Formerly 153.311) This course will vary from year to year depending on the needs of students and the interests of the instructor. *Prerequisite:* written consent of the Labour Studies coordinator.

LABR 3120 Special Studies in Labour Studies Cr.Hrs.3 (Formerly 153.312) This course will vary from year to year depending on the needs of students and the interests of the instructor. *Prerequisite:* written consent of the Labour Studies coordinator.

LABR 3130 Employment Legislation and the Protection of Workers Cr.Hrs.3 (Formerly 153.313) An examination of the legal rights and obligations of workers and employers, and the enforcement mechanisms for the non-unionized workplace, over the course of the employment relationship from hiring through to termination or retire-

ment. Special emphasis will be placed on statutory and common law, personal employment contracts, wrongful and constructive dismissal, human rights legislation and jurisprudence. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 3140 Pensions and Benefits Cr.Hrs.3 (Formerly 153.314) The nature and role of pensions in the life cycle of workers and the issue of pension funds control on distribution. The role of non-wage benefits in the labour compensation package. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 3150 Labour Adjustment Cr.Hrs.3 (Formerly 153.315) An examination of occupational and labour training and of income support systems available to the Canadian labour force, including recent immigrants, with comparisons to some other countries. *Prerequisite:* a grade of "C" or better in both LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or written consent of the Labour Studies coordinator.

LABR 3200 Workers' Self-Management Cr.Hrs.3 (Formerly 153.320) An examination of historical and contemporary examples of self-managed workplaces and the theory of a participatory economy based on workers' self-management. Students may not hold credit for both LABR 3200 (or 153.320) and the former 153.308. *Prerequisite:* a grade of "C" or better in LABR 3510 (or 153.351 or 018.351) or written consent of instructor.

LABR 3300 Workers, Employers and the State Cr.Hrs.3 This course examines the social, economic, and political contexts of work and the relations, rules, and structures that shape the interactions between workers, employers, and the state. Topics include workers' and management rights, the rights, obligations and functions of unions, the legal contexts of labour/management relations, and initiatives for increasing equity. *Prerequisite:* a grade of "C" or better in one of the following: LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128); or LABR 2420 (or 153.242) or

ECON 2420 (or 018.242).

★ **LABR 3510 Industrial Relations Cr.Hrs.6** (Formerly 153.351) A study of comparative employer-employee relationships in Canada and other selected countries as affected by market forces, social traditions, and government action. Students may not hold credit for both LABR 3510 (or 153.351) and ECON 3510 (or 018.351). *Prerequisite:* a grade of "C" or better in LABR 1270 (or 153.127) and LABR 1290 (or 153.129) (the former 153.128), or six credit hours of 1000 level Economics.

LABR 3700 History of Working People and Labour Movements 1700 to the Present (M) Cr.Hrs.6 (Formerly 153.370) A survey of working class history with emphasis upon the varieties of labour movements and trade unions. The course will refer to the social and political experience of working people in Great Britain, Europe and the United States and will devote one term to Canadian topics. Also offered as History HIST 3700. May not be held with HIST 3700 (or 011.370). *Prerequisite:* a grade of "C" or better in six credit hours of Labour Studies or History or written consent of the Labour Studies coordinator.

W LABR 4510 Labour Studies Field Placement Seminar Cr.Hrs.3 (Formerly 153.451) A seminar to be taken concurrently with LABR 4520 in which each student will relate theory and practice. Students may not hold credit for both LABR 4510 (or 153.451) and either the former 153.481 or 153.482. *Prerequisite:* formal declaration of the Labour Studies Advanced Major and written consent of the Labour Studies coordinator.

LABR 4520 Labour Studies Field Placement Cr.Hrs.6 (Formerly 153.452) An educationally directed field experience in which the student will undertake specific tasks and assignments in some aspects of labour relations. Field placement options include a labour union, professional association, employer, provincial department of labour, public archives. Students may not hold credit for both LABR 4520 (or 153.452) and either the former 153.481 or 153.482. *Prerequisite:* formal declaration of the Labour Studies Advanced Major Degree Program and written consent of the Labour Studies coordinator.

8.20 Latin American Studies Program

Program Coordinator: Jean-Luc Chodkiewicz

Program Office: 443 Fletcher Argue Building

Telephone: 204 474 6330

E-mail: chodkie@cc.umanitoba.ca

8.20.1 Program Information

Through varied courses students may examine regions or periods of Latin American history. Emphasis is given to Mexican, Meso-American and Andean topics, Latin American civilizations including the pre-Columbian. Ethnic studies are also a major theme. Courses from Anthropology, Economics, Geography, History, and Spanish are included. This cross-disciplinary program permits a student to gain a deeper understanding of the subject field without being restricted to one discipline. The program offers the option of a term in Mexico from January to April; information is available from the program coordinator.

A Minor in Latin American Studies consists of at least three full courses, or equivalent, from a **minimum of two different departments chosen from the following list.**

Faculty of Arts

Anthropology		
ANTH 2980***	Anthropological Perspectives on Contemporary Mexico (B)	3
ANTH 2990**	Prehispanic Cultures of Mexico (D)	3
ANTH 3660*	Latin American Culture History	3
ANTH 3680	Anthropological Perspectives on Current Issues in Latin America (B)	3
ANTH 3690*	Peoples and Cultures of Contemporary Latin America	6

* Indicates course no longer offered

** Offered only in second term as part of the "Term in Mexico" option.

Economics

ECON 3390	Development Economics	6
History		
HIST 2140	Colonial Latin America (A)	3
HIST 2150	Independent Latin America (A)	3

HIST 3020	South America Since 1945 (A)	3
HIST 3040	Mexico, Central America, and Cuba Since 1945 (A)	3
HIST 4870	Contemporary Latin America (A)	6
Spanish		
SPAN 2200	Spanish American Culture and Civilization	3
SPAN 2530	Spanish-American Literature 1	3
SPAN 2540	Spanish-American Literature 2	3
SPAN 3230	Spanish-American Fiction Since 1950	3
SPAN 3250	Realism in Spanish-American Fiction	3
SPAN 3260	Twentieth-Century Theatre and Poetry in Spanish America	3
SPAN 3690	Nineteenth-Century Theatre and Poetry in Spanish America	3
044.370*	The Novel of the Land and the Realistic Short Story in Spanish America	3
044.373*	The Spanish-American Essay and Twentieth-Century Poetry and Drama	3
044.374*	The New Spanish-American Novel and the Contemporary Short Story	3

* Indicates course no longer offered

Clayton H. Riddell Faculty of Environment, Earth, and Resources

Geography		
GEOG 2350	Latin America (A)	6

Knowledge of the Spanish language is not required since the literature on Latin America in English is extensive and adequate. However, the Latin American literature courses offered by the Department of French, Spanish and Italian require a reading knowledge of Spanish.

For entry to the Minor in Latin American Studies, the prerequisite is a grade of "C" or better in six credit hours from the approved list.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

For course descriptions, see departmental listings.

8.21 Department of Linguistics

Head: Kevin Russell

General Office: 514 Fletcher Argue Building

Telephone: 204 474 9596

E-mail: lingdpt@cc.umanitoba.ca

Website: www.umanitoba.ca/linguistics

8.21.1 Academic Staff

Distinguished Professor

Wolfart, H.C., [B.A.equiv.](Albert-Ludwigs-Universität, Freiburg im Breisgau), M.A. (Yale), M.A. (Cornell), M.Phil., Ph.D. (Yale), F.R.S.C.

Senior Scholar

Wade, W.D., B.A., M.A., Ph.D. (Colorado).

Professor

Nahir, M., B.A. (Bar-Ilan), M.A., Ph.D. (Pittsburgh).

Associate Professors

Ghameshi, J., B.A.(Hons.) (York), M.A., Ph.D. (Toronto); Janzen, T., B.Ed. (Saskatchewan), M.A. (Manitoba), Ph.D. (New Mexico); MacDonald, L.A., B.A.(Hons.) (Trent), M.A. (Calgary), Ph.D. (Manitoba); Pentland, D.H., B.A.(Hons.) (Manitoba), M.A., Ph.D. (Toronto); Russell, K., B.Sc. (Manitoba), M.A., Ph.D. (Southern California).

Assistant Professor

Hagiwara, R., B.A. (Washington), M.A., Ph.D. (U.C.L.A.)

8.21.2 Program Information

The linguistics approach to language is based on the analysis of sound, the structure of words and sentences, and the meanings they transmit. But it also has to deal with the way sounds change, words come and go, and meanings shift. Linguistics is the humanities discipline that is closest to being a science in the generally accepted sense of the word. Partly because human language, the subject of linguistics, is almost entirely acquired sub-consciously, it is a massive and intricate structure that is free to develop in accordance with natural rather than with consciously determined social laws.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in LING 1200 or written consent of the department head. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in LING 1200, or written consent of the department head.

Other

In addition to its core concentration in *Linguistic Theory and Analysis* and such other areas of study as Applied Linguistics, Verbal Arts, etc., Linguistics also offers:

- A pre-professional concentration in *Applied Linguistic Science*, which will be of special interest to students planning a career in speech/language pathology; contact department general office for information; and
- A program in American Sign Language/English Interpretation, offered jointly with Red River College; see below for details.

Students intending to major in Linguistics are strongly encouraged to undertake the in-depth study of a second language.

8.21.3 Linguistics

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
LING 1200 ¹	<ul style="list-style-type: none"> ● at least 9 credit hours chosen from the core courses² numbered at the 2000 level ● at least 6 credit hours chosen from the core courses² numbered at the 3000 level ● 9 additional credit hours of Linguistics 		
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
LING 1200 ¹	<ul style="list-style-type: none"> ● at least 12 credit hours chosen from the core courses² numbered at the 2000 level ● LING 3200 or LING 3300 or LING 3400 ● 6 additional credit hours chosen from the core courses² numbered at the 3000 level ● 18 additional credit hours of Linguistics 		
MINOR TOTAL: 18 CREDIT HOURS			
LING 1200 ¹	<ul style="list-style-type: none"> ● at least 6 credit hours chosen from the core courses² numbered at or above the 2000 level ● 6 additional credit hours of Linguistics 		

NOTES:

¹ Students are advised to take LING 1380 General Phonetics as early as possible in their program (ideally during their first year, in addition to LING 1200 Introduction to Linguistics) as this course is a prerequisite for many of the advanced courses.

² Not all of the core courses listed below will necessarily be offered every year; this includes even those at the 2000 level which are prerequisites for courses at the 3000 level. Students intending to major in Linguistics are advised to plan their programs well in advance, and to consult the Linguistics department at the beginning of each academic year.

Core Courses

LING 2200	Syntax	6
LING 2420	Phonology	3
LING 2440	Analytic Techniques	3
LING 2460	Morphology	3
LING 2640	Comparative Linguistics	3
LING 3120	Syntactic Theory	3
LING 3140	Phonological Theory	3
LING 3200	The Structure of a non-Indoeuropean Language	6
LING 3300	The Structure of ASL	6
LING 3400	Field Methods	6
LING 3800	Seminar	6
LING 3820	Selected Topics	3
LING 3840	Special Topics in ASL	3

Program in Linguistics and American Sign Language/English Interpretation taught jointly with Red River College leading to a B.A. General Degree

Students who wish to pursue this program must seek separate admission to both the University of Manitoba and Red River College.

Students must successfully complete all requirements for Deaf Studies and the American Sign Language/English Interpretation Program at Red River College only. Specific courses (42 credit hours) completed in this program will be considered acceptable for university degree credit, will satisfy a humanities requirement and will become the declared minor for purposes of the degree. For the purposes of satisfying the distribution requirement, completion of the Deaf Studies Certificate will qualify as six hours in a field and completion of the Joint ASL Program will qualify as six hours in a field.

The entire joint program is described below:

Deaf Studies Program (prerequisite) - RRC

Course No.	Credit Hours
DSP-D101 American Sign Language 1	
DSP-D201 American Sign Language 2	
DSP-D300 American Sign Language 3	
	These 3 courses count as 6 credit hours
DSP-D100 Deaf Culture	3
DSP-D202 Deaf History	3
DSP-D301 Cross-cultural Interaction	(no U of M credit)
Total Hours	12

Deaf Studies Program (prerequisite) - U of M

LING 1200 Introduction to Linguistics	6
LING 1220 Cultural Anthropology (A)	3
or	
LING 1520 Critical Cultural Anthropology (A)	3
Math (science)	3
Total Hours	12

Following successful completion of this prerequisite year, a Certificate in Deaf Studies is awarded by Red River College and selection for continuation for the joint degree program is made by RRC and the Linguistics department.

Linguistics (U of M) and American Sign Language/English Interpretation (RRC)**Year 1 RRC**

AEI-I320 Cross-language Processing in Interpretation	3
AEI-I120 Language Processing in Interpretation-English	3
AEI-I220 Language Processing in Interpretation-ASL	3
AEI-I101 English Comprehension and Expression	3
Total Hours	12

Year 1 - U of M

LING 2200 Syntax	6
LING 2460 Morphology	3
LING 2740 Interpretation Theory	3
ENGL XXXX English	6
Math (science)	3
[Students seeking a second degree may substitute any 3 credit hours for Math (science).]	
Total Hours	21

Year 2 - RRC

AEI-A420 Advanced ASL	3
AEI-P120 Interpretation Lab 1	6
AEI-I290 Ethics 1	3
AEI-I390 Ethics 2	3
AEI-I280 Interpretation Settings 1	(no U of M credit)
AEI-I380 Interpretation Settings 2	(no U of M credit)
Total Hours	15

Year 2 - U of M

LING 3300 The Structure of ASL	6
LING XXXX Linguistics elective	3
Total Hours	9

Year 3 - RRC

AEI-P220 Interpretation Lab 2	3
AEI-P500 Practicum	(no U of M credit)
AEI-P454 Practicum Seminar	(no U of M credit)
Total Hours	3

Year 3 - U of M

LING 3840 Special Topics in ASL	3
UM Electives (non linguistics courses)	6
(Before selecting the 6 credit hours of electives, contact the dean's office to ensure the selection satisfies the subject field requirement.)	
Total Hours	9

8.21.4 Linguistics Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 LING 1200 Introduction to Linguistics Cr.Hrs.6 (Formerly 126.120) Language as a communication system composed of sound, grammatical and semantic subsystems. Development of a theoretical framework. Exercises in a variety of languages.

U1 LING 1340 Semantics Cr.Hrs.3 (Formerly 126.134) An introduction to linguistic approaches to meaning, with special emphasis on the analysis of lexical domains.

U1 LING 1360 Languages of Canada Cr.Hrs.3 (Formerly 126.136) A survey of languages and linguistic problems encountered in North America, with particular attention to questions of relationship and classification. Examples will be drawn from both indigenous and immigrant languages.

U1 LING 1380 General Phonetics Cr.Hrs.3 (Formerly 126.138) The articulatory and acoustic analysis of speech sounds. Transcription exercises in a variety of languages.

U1 LING 1420 Language and Gender Cr.Hrs.3 (Formerly 126.142) In exploring the relationship between language and gender, this course addresses such questions as: how are gender differences manifested and perpetuated through language use?; is there such a thing as "women's language"?; how do gender differences influence communication between women and men?; how does gender interact with (for example) race, class and sexuality with respect to language use? In addition, we consider issues of language structure, including sexism in English and the relative success of gender-based language reform efforts.

U1 LING 1440 Rules of English Grammar Cr.Hrs.3 (Formerly 126.144) What are the criteria that are used to distinguish "good" from "bad" grammar? What are the rules we need to know in order to speak and write "properly"? In focusing on basic concepts in traditional grammar, this course reviews parts of speech, the English tense system, sentence types (active vs. passive), question formation and types of embedded clauses. It examines the rules of traditional grammar and explores the linguistic structures that lie behind the rules. This course is not intended for students learning English; it presupposes native or near-native competence in English.

LING 2200 Syntax Cr.Hrs.6 (Formerly 126.220) Sentences are complex arrangements of words and other elements, and syntactic structures have long been at the centre of theoretical controversy. A typological survey of syntactic patterns, introducing formal and functional approaches to syntactic analysis. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2420 Phonology Cr.Hrs.3 (Formerly 126.242) Each language relies on a finite set of distinctive sounds. Based on physical features which are universal, sound systems are language-specific, abstract structures. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2440 Analytic Techniques Cr.Hrs.3 (Formerly 126.244) Techniques for recognizing the structure of words and sentences in a variety of languages. The formulation of linguistic rules, especially at the interface of morphology and phonology. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2460 Morphology Cr.Hrs.3 (Formerly 126.246) The internal structure of words: the traditional distinction between inflection and derivation, types of word structures, word-formation rules, levels of word-formation. The relationship of morphology to phonology and syntax. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2600 Verbal Art Cr.Hrs.3 (Formerly 126.260) Puns, punchlines, slogans and the chant of the auctioneer are as much instances of verbal art as are rhetorical flourishes and formal literary structures. With spoken language as its major focus, this course draws on a variety of languages, sources and genres to study artistic and playful uses of language. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2620 Language in Society Cr.Hrs.3 (Formerly 126.262) Language is embedded in a social context: dialect variability, the choice of speech registers, the use of special-purpose languages, code-switching, sexual specialization are instances of language behaviour reflecting non-linguistic reality. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2640 Comparative Linguistics Cr.Hrs.3 (Formerly 126.264) Language change and its consequences; aspects of historical linguistics, language classification and linguistic prehistory. Examples from Indo-European and North American Indian languages. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2720 Applied Linguistics Cr.Hrs.3 (Formerly 126.272) The practical implications of linguistic analysis in such areas as the formal or informal acquisition of a second language, the establishment of standards for spoken and written usage, language maintenance and other aspects of language planning. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2740 Introduction to Interpretation Theory Cr.Hrs.3 (Formerly 126.274) A survey of interpretation theory, including specifics of language use and problems in the transfer of cultural context for both source and target language, the history of language awareness on the part of the interpreter, and the development of theories of interpretation. This course will draw heavily on the field of ASL/English interpretation for illustration. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2800 Communication Disorders Cr.Hrs.3 (Formerly 126.280) A general introduction to the major pathologies of speech, language and hearing as viewed against the background of normal linguistic structures and functions. The distinction between mechanically- and neurologically-based disorders is illustrated in terms of aetiology, diagnosis and approaches to treatment. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 2830 Linguistic Anatomy and Physiology 1 Cr.Hrs.3 (Formerly 126.283) An intensive survey of the principal organs of speech and hearing, their embryology, and the general features of their evolutionary history. Some consideration will also be given to their pathological impairment. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) and LING 1380 (or 126.138), or written consent of instructor.

LING 2850 Linguistic Anatomy and Physiology 2 Cr.Hrs.3 (Formerly 126.285) A sur-

vey of the structures of the central and peripheral nervous systems as they relate to the production and perception of speech and the processing of language. Includes a survey of linguistic aphasiology and a review of neurological deficits associated with abnormal language behaviour. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) and LING 1380 (or 126.138), or written consent of instructor.

LING 2860 Language Acquisition Cr.Hrs.3 (Formerly 126.286) The study of first language acquisition based on evidence from typologically diverse languages. Universals in the emergence of phonological, morphological and syntactic features, and their impact upon linguistic theory. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) and LING 1380 (or 126.138), or written consent of instructor.

LING 2880 Acoustic Phonetics Cr.Hrs.3 (Formerly 126.288) The physical principles involved in the production, propagation and reception of sound. The subjective characteristics of sounds (loudness, pitch and quality) are related to their objective parameters (intensity, frequency and spectrum). The physical methods and the types of equipment used to analyze the basic physical properties of sounds will be demonstrated. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) and LING 1380 (or 126.138), or written consent of instructor.

LING 2900 The Evolution of Language Cr.Hrs.6 (Formerly 126.290) The fundamental concepts of communication and language; emergent and continuity theories of language. The distinctive traits of human speech and their analogues among non-humans (especially birds, primates and cetaceans). The inferential evidence of speech capacity in the human fossil record. *Prerequisite:* a grade of "C" or better in LING 1200 (or 126.120) or written consent of instructor.

LING 3120 Syntactic Theory Cr.Hrs.3 (Formerly 126.312) Formal and functional analyses of specific syntactic issues, such as the representation of grammatical relations, the formulation and explanation of universals, the "learnability criterion" as a test for theoretical adequacy and the rôle of semantics and pragmatics in syntactic theory. *Prerequisite:* a grade of "C+" or better in LING 2200 (or 126.220) or written consent of instructor.

LING 3140 Phonological Theory Cr.Hrs.3 (Formerly 126.314) The nature of phonological representations: prosodic hierarchies, multi-tiered structures, the underspecification of segments. Types of phonological rules, rule ordering, the cycle. *Prerequisite:* a grade of "C+" or better in LING 2420 (or 126.242) or written consent

of instructor.

LING 3200 The Structure of a non-Indoeuropean Language Cr.Hrs.6 (Formerly 126.320) Every "new" language challenges accepted doctrine and helps us to evaluate competing hypotheses: in this course, a non-Indoeuropean language (which may vary from Hua to Hungarian) is systematically explored on the basis of field records and descriptions which have become classics. *Prerequisite:* a grade of "C+" or better in each of LING 2200 (or 126.220), LING 2420 (or 126.242) and LING 2440 (or 126.244), or written consent of instructor.

◆ **LING 3300 The Structure of ASL Cr.Hrs.6** (Formerly 126.330) An examination of ASL as a signed, as opposed to spoken, language. Topics include phonetic, phonological, morphological and syntactic structures. *Prerequisite:* a grade of "C+" or better in each of LING 1200 (or 126.120), LING 2200 (or 126.220), and LING 2460 (or 126.246), or written consent of instructor.

LING 3400 Field Methods Cr.Hrs.6 (Formerly 126.340) Working with a speaker of an unfamiliar (and, usually, unrecorded) language, students are apprenticed in the collection, analysis and interpretation of raw data. *Prerequisite:* a grade of "C+" or better in each of LING 2200 (or 126.220), LING 2420 (or 126.242) and LING 2440 (or 126.244), or written consent of instructor.

LING 3600 History of Linguistics Cr.Hrs.6 (Formerly 126.360) The analysis of language and linguistic theory from the Indian, Graeco-Latin and Arabic traditions to the Renaissance, Enlightenment and the modern period. *Prerequisite:* a grade of "C+" or better in LING 2640 (or 126.264) or written consent of instructor.

LING 3800 Seminar Cr.Hrs.6 (Formerly 126.380) Major issues or problems of current interest in the language sciences. *Prerequisite:* written consent of instructor.

LING 3820 Special Topics Cr.Hrs.3 (Formerly 126.382) Topics of current interest in the language sciences. *Prerequisite:* written consent of instructor.

LING 3840 Special Topics in ASL Cr.Hrs.3 (Formerly 126.384) Topics of current interest in ASL linguistics. *Prerequisite:* written consent of instructor.

LING 3900 Special Studies Cr.Hrs.6 (Formerly 126.390) Supervised research or field work. *Prerequisite:* written consent of instructor.

LING 3920 Special Studies Cr.Hrs.3 (Formerly 126.392) Supervised study. *Prerequisite:* written consent of instructor.

8.22 Medieval and Renaissance Studies Program

Program Office: Faculty of Arts Dean's Office

Telephone: 204 474 9100

8.22.2 Program Information

The millennium from the end of the Roman empire to the Renaissance is the formative period of European civilization. The Middle Ages and the Dark Ages were periods of human drama full of change and growth and a struggle to regain a civilized way of life. The Age of Chivalry with its crusades, the flowering of the arts and architecture, and the emergence of new philosophical concepts and ideologies found culmination in the Renaissance. For those interested in the pre-modern world, this program permits a broad approach to the subject.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

The following entries contain information which is not contained in Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in 12 credit hours considered relevant to the Major by the program advisor.

A) General Major in Medieval and Renaissance Studies consists of 36 credit hours selected as follows:

- Nine credit hours in either Latin or Greek
 - Six credit hours from the following History courses:
- | | | |
|-----------|---|---|
| HIST 2080 | The Byzantine Empire and the Slavic World (D) | 3 |
| HIST 2420 | The Medieval World (D) | 6 |

- | | | |
|----------|---|---|
| 011.206* | The Emergence of the Medieval World (D) | 3 |
| 011.207* | The Early and High Middle Ages (D) | 3 |
| 011.209* | The Middle Ages in Decline (D) | 3 |

* No longer offered

● 21 credit hours in courses dealing with the Medieval and/or Renaissance world, including a minimum of six credit hours to be selected from each of the following groups (a detailed list of courses may be obtained from the program advisor):

Group 1: History, Philosophy, Religion

Group 2: Literature, Language, Fine Arts (including Music)

B) Advanced Major in Medieval and Renaissance Studies consists of 12 credit hours in addition to the above, of which six must be in a modern language. The remaining six credit hours may be selected from Group 1 or Group 2.

Minor Program

For entry to the Minor program, the prerequisite is a grade of "C" or better in six credit hours considered relevant to the Minor by the program advisor.

A Minor in Medieval Studies will consist of 18 credit hours, and must include History course HIST 2420 The Medieval World (D) (6). The remaining 12 credit hours may be selected from Group 1 or Group 2, or from courses in either Latin or Greek. If Latin or Greek courses are chosen, a minimum of six credit hours is required in either Latin or Greek.

Other

Students should note that courses used towards the Major(s) or Minor in this area may not be used for Major, Minor or Honours in a second field.

8.23 Department of Native Studies

Acting Head: Wanda Wuttunee

General Office: 533 Fletcher Argue Building

Telephone: 204 474 9266

E-mail: native@ms.umanitoba.ca

Website: www.umanitoba.ca/native_studies

8.23.1 Academic Staff

Senior Scholar

Ahenakew, I.F., B.Ed. (Saskatchewan), M.A. (Manitoba).

Professors

Kulchyski, P., B.A. (Hons.) (Winnipeg), M.A., Ph.D. (York); LaRocque, E.D., B.A. (Goshen College), M.A. (Associated Mennonite Seminary), M.A., Ph.D. (Manitoba).

Associate Professor

Wuttunee, W.A., B.Comm., LL.B., M.B.A. (Calgary), Ph.D. (Manitoba).

Assistant Professors

Eigenbrod, R., Staats Examen (Göttingen, Germany), M.A. (Alberta), Ph. D. (Greifswald & Ernst Moritz Arndt, Germany); **Shore**, F. J., B.A.(Spec.) (Brandon), M.A., Ph.D. (Manitoba); **Simmons**, D., B.A. (Mount Allison), M.A., Ph.D. (York); **Trott**, C.J., B.A.(Hons.) (Toronto), B.Th. (McGill), Ph.D.(Toronto).

Professional Affiliates

Fontaine, P., B.A. (Manitoba); **Lavallee**, M., Human Relations Counsellor, B.A. (Brandon).

8.23.2 Program Information

Courses in this department examine the history, art, literature, and the philosophical and religious traditions of Canada's original inhabitants. Other courses explore the legal, political, and health care systems in relation to Aboriginal people. Aboriginal and non-Aboriginal students may specialize in either Native studies or Native languages, Cree and Ojibway.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in NATV 1200 or "C" or better in both NATV 1220 and NATV 1240. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

A) Native Studies

For entry to the Minor, the prerequisite is a grade of "C" or better in one of NATV 1200 or "C" or better in both NATV 1220 and NATV 1240.

B) Native Languages

For entry to the Minor, the prerequisite is a grade of "C" or better in both NATV 1250 and NATV 1260, or "C" or better in both NATV 1270 and NATV 1280, or "C" or better in NATV 2250 and NATV 2270.

Other

Students will be permitted to register for a Major in Native Studies and a Minor in Native Languages but may not complete both a Major and Minor in Native Studies.

Before registering for approved cross-listed courses, students should consult the *Calendar* or the departments regarding prerequisites for specific courses.

8.23.3 Native Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
NATIVE STUDIES MAJOR¹ TOTAL: 30 CREDIT HOURS			
NATV 1200 or NATV 1220 and NATV 1240	<ul style="list-style-type: none"> ● 18 credit hours in Native Studies numbered at the 2000 level or above¹ ● 6 credit hours in Native Studies or Native Languages courses numbered at the 3000 level or above. 		
NATIVE STUDIES ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
NATV 1200 or NATV 1220 and NATV 1240	<ul style="list-style-type: none"> ● 21 credit hours in courses offered by Native Studies² ● 12 credit hours in courses offered by Native Studies numbered at the 3000 level ● 9 credit hours in courses offered by Native Studies numbered at the 4000 level 		
NATIVE STUDIES MINOR TOTAL: 18 CREDIT HOURS			
NATV 1200 or NATV 1220 and NATV 1240	12 credit hours in courses offered by Native Studies numbered at the 2000 level or above ²		
NATIVE LANGUAGES MINOR⁵ (OPTION 1) TOTAL: 18 CREDIT HOURS			
NATV 1250 and NATV 1260 or NATV 1270 and NATV 1280	NATV 2250 or NATV 2270	NATV 2300 and NATV 2320, or NATV 2310 and NATV 2330, or 6 credit hours approved by the department ^{3,4}	
NATIVE LANGUAGES MINOR⁵ (OPTION 2) TOTAL: 18 CREDIT HOURS			
NATV 2250 or NATV 2270	NATV 2300 and NATV 2320, or NATV 2310 and NATV 2330	6 credit hours in Native languages or 6 credit hours approved by the department ^{3,4}	

NOTES:

¹ Students may substitute up to 12 credit hours from the approved cross-listed courses and/or 12 hours of Native Language courses numbered at the 1000 or 2000 level in lieu of Native Studies but must have six credit hours in Native Studies or Native Languages courses offered by Native Studies numbered at the 3000 level or above.

² Students may substitute up to six credit hours from the list of approved courses and/or six hours of Native Language courses in lieu of Native Studies courses.

³ No more than 12 credit hours may be taken from NATV 1200, NATV 1220, NATV 1240, NATV 1250, NATV 1260, NATV 1270, NATV 1280, NATV 2250, NATV 2270.

⁴ Six credit hours may be from related linguistics courses approved by the department.

⁵ Students who wish to declare a Minor should consult with the department head.

Aboriginal Governance Stream

Students interested in pursuing an Advanced Major in Aboriginal Governance are required to take a minor in Business. The requirements for both are set out below. For course descriptions, including any prerequisites and/or restrictions see the appropriate chapter in this *Calendar*. The conditions for entry, continuation and graduation requirements may be found in Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Advanced Major, Aboriginal Governance Stream, the prerequisite is a grade of "C" or better in NATV 1200 or a "C" or better in both NATV 1220 and NATV 1240.

For students who have taken additional courses toward the Major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the required Minor in Business for students who wish the Aboriginal Governance Stream, the prerequisite is 6 credit hours from ACC 1100, ACC 1110, FIN 2200, GMGT 2030, GMGT 3300, HRIR 2440, MIS 2000 or MKTG 2210 with a grade of "C" or better in each.

For information on this program contact the Department of Native Studies.

8.23.4 Native Studies Aboriginal Governance Stream

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
NATIVE STUDIES ADVANCED MAJOR — ABORIGINAL GOVERNANCE STREAM WITH REQUIRED MINOR IN BUSINESS			
NATV 1200 or NATV 1220 and NATV 1240	<ul style="list-style-type: none"> • NATV 2220, NATV 3310, NATV 3320, NATV 4200, NATV 4310, NATV 4320 • 3 credit hours in courses offered by Native Studies numbered at the 3000 level. • 3 credit hours in courses offered by Native Studies numbered at the 4000 level. • 21 credit hours in courses offered by Native Studies¹ • Additional courses required for purposes of completing the governance stream are 		
Faculty of Arts Economics — ECON 1200 Political Studies — POLS 1500 and POLS 2570 Faculty of Science Computer Science — COMP 1260 Statistics — STAT 1000			
REQUIRED MINOR IN BUSINESS FOR THOSE STUDENTS IN A DECLARED ABORIGINAL GOVERNANCE STREAM			
ACC 1100, ACC 1111, FIN 2200, GMGT 2030, GMGT 3300, HRIR 2440, MIS 2000, MKTG 2210	6 credit hours from: ENTR 3100, FIN 3470, GMGT 2000, HRIR 4410		

NOTE:

¹ Students may substitute up to six credit hours from the list of approved courses and/or six hours of Native Language courses in lieu of Native Studies courses.

List of Approved Courses in Native Studies

Approved courses from other departments for partial fulfilment of the Major and Minor in Native Studies are given below.

Faculty of Arts

Anthropology		
ANTH 2040	Native North America: A Sociocultural Survey (B)	3
ANTH 2620	New World Prehistory (D)	3
ANTH 2630	New World Civilizations (D)	3
ANTH 2640	Manitoba Prehistory (D)	3
ANTH 3460	Native North American Ethnology (B)	3
ANTH 3500	Peoples of the Arctic (B)	3
076.345*	Native North America: A Sociocultural Survey (B)	3
076.358*	North American Indians: A Sociocultural Survey	3
076.359*	North American Indian Ethnology	3
Economics		
ECON 2350	Community Economic Development	3
History		
HIST 2280	Aboriginal History of Canada (C)	6
HIST 3690	History of Northern Canada (C)	6
011.254*	North American Indian (A,C,S)	6
Sociology		
SOC 2370	Ethnic Relations	3
Asper School of Business		
IDM 3000	Aboriginal Business Context: Influences and Impacts	3
IDM 4090	Aboriginal Business Leadership	3

Faculty of Education

EDUA 1540	Cross-cultural Education	3
116.303*	Cross-cultural Education	3

Clayton H. Riddell Faculty of Environment, Earth, and Resources

Geography		
053.369*	Historical Geography of Indian Peoples in the Canadian Fur Trade	6
053.378*	Historical Geography of Canadian Indians (A)	6

School of Art

FAAH 2090	Art of the North American Aboriginal Peoples	3
FAAH 3430	Inuit Art	3
054.358*	Inuit Culture and Art	3
054.373*	Art of the North American Native Peoples	3

Faculty of Music

MUSC 3860	Topics in Music (when the topic is "Music in Traditional Aboriginal Society")	3
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* Indicates course no longer offered

8.23.5 Native Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 NATV 1000 Orientation Course: The Colonizers and the Colonized Cr.Hrs.3 (Formerly 032.100) The course which is offered as part of the summer session consists of an introduction to the colonization process as it regards Aboriginal people and the processes of decolonization undertaken by the people since 1970. *Prerequisite:* this is a special course designed for first year entering Aboriginal students. Registration is restricted and written consent must be obtained from the instructor prior to registration.

U1 NATV 1200 The Native Peoples of Canada Cr.Hrs.6 (Formerly 032.120) A survey of the political, social, and economic situations of the contemporary Indian, Métis, and Inuit peoples of Canada. Students may not hold credit for both NATV 1200 (or 032.120) and either NATV 1220 (or 032.122) or NATV 1240 (or 032.124).

U1 NATV 1220 The Native Peoples of Canada, Part 1 Cr.Hrs.3 (Formerly 032.122) A survey of the political, social, and economic situations of the contemporary Indian, Métis, and Inuit peoples of Canada from pre-contact to 1945. Students may not hold credit for both NATV 1220 (or 032.122) and NATV 1200 (or 032.120).

U1 NATV 1240 The Native Peoples of Canada, Part 2 Cr.Hrs.3 (Formerly 032.124) A survey of the political, social, and economic situations of the contemporary Indian, Métis, and Inuit peoples of Canada from 1945 to the present. This course may include a field trip component. Students may not hold credit for both NATV 1240 (or 032.124) and NATV 1200 (or 032.120).

NATV 2000 Selected Topics in Native Studies Cr.Hrs.3 (Formerly 032.200) The content of this course will vary. Depending on instructor, this course may have a field component. Contact the Department of Native Studies for details. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

W NATV 2020 The Métis of Canada Cr.Hrs.3 (Formerly 032.202) A history of the Métis of Canada. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

NATV 2040 The Native Peoples of the Northern Plains Cr.Hrs.3 (Formerly 032.204) An interdisciplinary study of the history and traditional cultures of the Native Peoples of the Northern Plains. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

NATV 2060 The Native Peoples of the Eastern Woodlands Cr.Hrs.3 (Formerly 032.206) An interdisciplinary study of the history and traditional cultures of the Native peoples of the Great Lakes and Maritimes. Emphasis will be on the Anishinabe (Ojibway, Saulteaux). Depending on instructor, this course may have a field component. Contact the Department of Native Studies for details. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

NATV 2070 The Native Peoples of the Subarctic Cr.Hrs.3 (Formerly 032.207) This course will examine the subsistence organization, social organization and cosmology of both the Cree and Dene. We will further examine the history of the aboriginal-European encounter and the impact of colonialism on contemporary political and land rights struggles. While we will consider the region as a whole, we will specifically focus on the James Bay Cree and Rock Cree of Northern Manitoba, and secondly on the Saysi Dene, north of the Churchill River. This course may include a field trip component. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

NATV 2080 Inuit Society and Culture Cr.Hrs.3 (Formerly 032.208) An examination of the subsistence organization, social organization, cosmology and ceremonies of Inuit from a regional and comparative perspective. While this course will focus on

Eastern Arctic Inuit comparison will also be made to Greenlanders, Inuvialuit, Inupiat and Yup'ik. We will conclude the course by examining colonial history and the rise of Nunavut. The course may include a field trip component. Students may not hold credit for both NATV 2080 (or 032.208) and NATV 2000 (or 032.200) with the topic "Inuit Society and Culture". *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

NATV 2100 Aboriginal Spirituality Cr.Hrs.3 (Formerly 032.210) This course allows students to work with Aboriginal elders or traditional teachers, exposing them to cultural and spiritual concepts. Emphasis is on Anishinabe or Cree teachings, though other First Nations approaches may be offered. This course may include a field trip component. Students may not hold credit for both NATV 2100 (or 032.210) and NATV 3000 (or 032.300) when titled "Aboriginal Wisdom and Spirituality".

✳️ **NATV 2220 Native Societies and the Political Process Cr.Hrs.3** (Formerly 032.222) An analysis of contemporary Canadian (and U. S.) political and administrative processes as they affect Native people. Depending on instructor, this course may have a weekend field trip. Contact the Department of Native Studies for details. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

✳️ **NATV 2410 Canadian Native Literature Cr.Hrs.3** (Formerly 032.241) A study of literature by and about Canadian Native peoples, Indian mythology, personal narratives, protest literature, poetry, plays and novels will be explored to give an appreciation of Native philosophies, experiences, traditions and cultures. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

✳️ **NATV 2420 Inuit Literature in Translation Cr.Hrs.3** (Formerly 032.242) An examination of various literary forms produced by Inuit including traditional myths and songs, life histories, contemporary novels and modern political writings. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of instructor or department head.

✳️ **NATV 2450 Images of Indian People in North American Society Cr.Hrs.3** (Formerly 032.245) Will trace the portrayal of Indian peoples 1492 to the present. Emphasis will be on material and theoretical depictions, and will require reading as well as study of art pieces, tourist objects, cartoons, movies and so forth. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

✳️ **NATV 3000 Selected Topics Cr.Hrs.3** (Formerly 032.300) The content of this course will vary. Contact the department for a course description. *Prerequisite:* written consent of department head.

NATV 3100 Aboriginal Healing Ways Cr.Hrs.3 (Formerly 032.310) This course allows students to work with Aboriginal elders or traditional teachers on concepts of healing and wellness. Emphasis is on Anishinabe or Cree healing practices, though other First Nations approaches may be offered. This course may include a field trip component. Students may not hold credit for both NATV 3100 (or 032.310) and NATV 3000 (or 032.300) when titled "Exploring Aboriginal Healing". *Prerequisite:* a grade of "C" or better in NATV 2100 (or 032.210) or written consent of the department head.

✳️ **NATV 3240 Native Medicine and Health Cr.Hrs.3** (Formerly 032.324) The health, disease, and medical practices of North American Native peoples. A survey of the health and health care of North American Native people from pre-contact to modern times. Special attention will be paid to traditional concepts of health and healing practices. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

✳️ **NATV 3270 The Métis Nation: The Modern Era Cr.Hrs.3** (Formerly 032.327) A study of the dispossession of the Métis Nation after 1870, their resurgence in the 1950s and contemporary issues affecting Métis people in Canada. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

✳️ **NATV 3280 Aboriginal Peoples and the Canadian Justice System Cr.Hrs.3** (Formerly 032.328) A study of Native peoples' relationships to civil and criminal law in modern Canadian society. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

NATV 3290 Independent Research Cr.Hrs.3 (Formerly 032.329) Supervised research or field work. Results will be presented in a form appropriate to the subject of study. Written consent of department head, based on a written research proposal, must be obtained before registration.

✳️ **NATV 3310 Canadian Law and Aboriginal Peoples Cr.Hrs.3** (Formerly 032.331) A survey of laws relating to Native peoples in Canada. Topics will include legal aspects of aboriginal title, Indian treaties, Indian and Métis land claims, the Indian Act, hunting and fishing rights, self-government, and constitutional issues. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

✳️ **NATV 3320 Aboriginal Organizations Cr.Hrs.3** (Formerly 032.332) A study of local, regional and national Aboriginal organizations in contemporary North America and their interaction with government and private agencies. Students may not hold credit for both NATV 3320 (or 032.332) and NATV 3350 (or 032.335). *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

NATV 3330 Aboriginal People, Science and the Environment Cr.Hrs.3 (Formerly 032.333) This course will examine current Aboriginal environmental and development issues both locally and internationally. The basic principles of Aboriginal philosophy and how present forms of development on Aboriginal land has conflicted with this philosophy will be examined. *Prerequisite:* written consent of department

head.

✳️ **NATV 3340 Circumpolar Cultures and Lifestyles Cr.Hrs.3** (Formerly 032.334) An interdisciplinary study of inter-relationships between the history, traditional lifestyles, politics, and environment of circumpolar Indigenous peoples. *Prerequisite:* written consent of department head.

NATV 3350 Aboriginal Organizations Cr.Hrs.6 (Formerly 032.335) A study of local, regional and national Aboriginal organizations in contemporary North America and their interaction with government and private agencies. A field component may be included depending on instructor. Contact the Department of Native Studies for details. Students may not hold credit for both NATV 3350 (or 032.335) and NATV 3320 (or 032.332). *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of department head.

✳️ **NATV 3360 Aboriginal Women of Canada Cr.Hrs.3** (Formerly 032.336) This course explores and critically examines from interdisciplinary and post-colonial perspectives historical and contemporary processes, representation, experiences and social issues specific to Aboriginal women of Canada. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of instructor or department head.

✳️ **NATV 3370 Political Development in the North Cr.Hrs.3** (Formerly 032.337) An examination of historical and contemporary political processes in Nunavut, Northwest Territories, and Yukon including the negotiation and implementation of Aboriginal land claims. *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of instructor.

✳️ **NATV 3380 Cultural Constructions of Gender in Canadian Aboriginal Societies Cr.Hrs.3** (Formerly 032.338) An examination of the theoretical issues that surround the cultural construction of gender leading into detailed ethnographic and historical case studies. *Prerequisites:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of instructor.

NATV 3390 Cultural Continuity and Change in Cumberland Sound Cr.Hrs.3 (Formerly 032.339) This course examines the rich and complex history of Cumberland Sound. The course also discusses the specific character of Inuit culture in Cumberland Sound and, in a series of lectures on contemporary community dynamics, looks at recent expressions of culture. Students may not hold credit for both NATV 3390 (or 032.339) and NATV 3000 (or 032.300) when titled "Culture and History in Cumberland Sound".

NATV 4000 Field Course Cr.Hrs.3 (Formerly 032.400) The content and location of this course will vary depending on instructor. Extra costs for travel, meals, supplies and accommodation may be required. Contact the Department of Native Studies for details. *Prerequisite:* written consent of department head.

✳️ **NATV 4200 First Nations' Government Cr.Hrs.3** (Formerly 032.420) A review and critical examination of the evolution of First Nations' self-government with a focus on contemporary issues, models and trends. *Prerequisite:* written consent of department head.

✳️ **NATV 4210 Seminar in Contemporary and Historical Métis Issues Cr.Hrs.3** (Formerly 032.421) A study of the literature, both primary and secondary, dealing with the Métis people in Canada. *Prerequisite:* written consent of department head.

✳️ **NATV 4220 Environment, Economy and Aboriginal Peoples Cr.Hrs.3** (Formerly 032.422) An analysis of sustainable development issues discussed within a cultural context. Depending on the instructor, this course may have a field component. Contact the Department of Native Studies for details. *Prerequisite:* written consent of department head.

✳️ **NATV 4230 Traditional Knowledge and Native Studies Research Cr.Hrs.3** (Formerly 032.423) A study of issues influencing oral histories, case studies, interviews, and other techniques used in research with Aboriginal people. Depending on instructor this course may have a field component. Contact the Department of Native Studies for details. *Prerequisite:* written consent of department head.

✳️ **NATV 4240 Arctic Lifestyles Cr.Hrs.3** (Formerly 032.424) An interdisciplinary study of the interrelationships between culture, economy, and ecology in the Arctic region. Depending on instructor, this course may have a field component. Contact the Department of Native Studies for details. *Prerequisite:* written consent of department head.

✳️ **NATV 4250 Topics on Aboriginal Identities Cr.Hrs.3** (Formerly 032.425) An interdisciplinary study of Aboriginal values, cultures and contemporary identities with emphasis on the impact of colonization. *Prerequisite:* a grade of C+ or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), plus 6 credit hours in Native Studies, or written consent of instructor.

✳️ **NATV 4260 Sacred Lands and Sacred Spaces of Indigenous Peoples Cr.Hrs.3** (Formerly 032.426) Students will increase their understanding of the importance and significance of Sacred Lands and Sacred Spaces to International Indigenous Peoples. Experiential learning, seminar and a field component may be included depending on instructor. Consult the Department of Native Studies for details. Also offered as GEOG 4260 by Clayton H. Riddell Faculty of Environment, Earth, and Resources. Students may not hold credit for both NATV 4260 (or 032.426) and GEOG 4260 (or 053.426). *Prerequisite:* written consent of department head.

NATV 4270 Indigenous Peoples' Material Culture Cr.Hrs.3 (Formerly 032.427) A critical review of the spiritual, cultural, historical and environmental factors influencing material culture used by international Indigenous Peoples. Experiential learning seminars and a field component may be included depending on instructor. Contact the Department of Native Studies for details. *Prerequisite:* written consent of department head.

✦ **NATV 4280 Missionaries, Colonialism and Aboriginal Peoples Cr.Hrs.3** (Formerly 032.428) A study of Aboriginal responses to Christian missions with a particular emphasis on resistance, syncretism, and "prophet" movements. *Prerequisite:* a grade of "C" or better in 15 credit hours of Native Studies or written consent of instructor.

NATV 4290 Independent Research Cr.Hrs.3 (Formerly 032.429) Supervised research or field work. Results will be presented in a form appropriate to the subject of study. *Prerequisite:* written consent of department head, based on a written research proposal, must be obtained before registration.

NATV 4300 Advanced Selected Topics in Native Studies Cr.Hrs.3 (Formerly 032.430) The content of this course will vary from year to year. Contact the Department for a course description. *Prerequisite:* written consent of department head.

NATV 4310 Exploring Aboriginal Economic Perspectives Cr.Hrs.3 (Formerly 032.431) Explore the impact of legal, constitutional and governance issues on the internal and external operating environment affecting economic development by Aboriginal peoples. Current strategies for successful partnerships between industry and Aboriginal peoples will also be examined. Students may not hold credit for both NATV 4310 (or 032.431) and either ECON 2350 (or 018.235) or IDM 3000 (or 098.300). *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of instructor.

NATV 4320 Aboriginal Economic Leadership Cr.Hrs.3 (Formerly 032.432) An analysis of current leadership strengths and challenges facing Aboriginal organizations. Out of this analysis will come understanding of strategies for working effectively with Aboriginal organizations. Students may not hold credit for both NATV 4320 (or 032.432) and IDM 4090 (or 098.409). *Prerequisite:* a grade of "C" or better in NATV 1200 (or 032.120), or NATV 1220 (or 032.122) and NATV 1240 (or 032.124), or written consent of instructor.

Native Languages

U1 ✦ NATV 1250 Introductory Cree 1 Cr.Hrs.3 (Formerly 032.125) Practical course intended for students who are not fluent in Cree. Emphasis will be on oral work for the purpose of learning basic sounds and grammatical patterns. Some attention will be given to the structural differences between Cree and English. Regular attendance and active participation are obligatory. This course is a *prerequisite* for NATV 1260 (or 032.126) Introductory Cree 2.

U1 ✦ NATV 1260 Introductory Cree 2 Cr.Hrs.3 (Formerly 032.126) Continuation of NATV 1250 (or 032.125) Introductory Cree 1. Practical course intended for students who are not fluent in Cree. Emphasis will be on oral work for the purpose of learning basic sounds and grammatical patterns. Some attention will be given to the structural differences between Cree and English. Regular attendance and active participation are obligatory. *Prerequisite:* a grade of "C" or better in NATV 1250 (or 032.125).

U1 ✦ NATV 1270 Introductory Ojibway 1 Cr.Hrs.3 (Formerly 032.127) Practical course intended for students who are not fluent in Ojibway. Emphasis will be on oral work for the purpose of learning basic sounds and grammatical patterns. Some attention will be given to the structural differences between Ojibway and English. Regular attendance and active participation are obligatory. This course is a *prerequisite* for NATV 1280 (or 032.128) Introductory Ojibway 2.

U1 ✦ NATV 1280 Introductory Ojibway 2 Cr.Hrs.3 (Formerly 032.128) Continuation of NATV 1270 (or 032.127) Introductory Ojibway 1. Practical course intended for students who are not fluent in Ojibway. Emphasis will be on oral work for the purpose of learning basic sounds and grammatical patterns. Some attention will be given to the structural differences between Ojibway and English. Regular attendance and active participation are obligatory. *Prerequisite:* a grade of "C" or better in NATV 1270 (or 032.127).

pose of learning basic sounds and grammatical patterns. Some attention will be given to the structural differences between Ojibway and English. Regular attendance and active participation are obligatory. *Prerequisite:* a grade of "C" or better in NATV 1270 (or 032.127).

U1 ✦ NATV 1290 Introductory Inuktitut Cr.Hrs.3 (Formerly 032.129) A practical course in conversational Inuktitut focusing on basic grammatical structures, everyday vocabulary, and using syllabics. This course is offered as part of the Pangnirtung Summer Travel/Study Program. *Prerequisite:* written consent of department head.

NATV 2010 Northern Algonquian Languages Cr.Hrs.3 (Formerly 032.201) A survey of the structure of Swampy Cree, Moose Cree, Plains Cree, Woods Cree, Montagnais, Naskapi and Ojibway with particular attention to a shift from oral tradition to printed communication. *Prerequisite:* a grade of "C" or better in NATV 1250 (or 032.125) and NATV 1260 (or 032.126), or NATV 1270 (or 032.127) and NATV 1280 (or 032.128), or written consent of department head.

✦ **NATV 2250 Intermediate Cree Cr.Hrs.6** (Formerly 032.225) Continuation of introductory courses and entry-level course for fluent speakers. Development of conversational fluency. Cree orthography, composition and translation, introduction to the linguistic structure of Cree. *Prerequisite:* a grade of "C" or better in NATV 1250 (or 032.125) and NATV 1260 (or 032.126), or Matriculation Cree, or written consent of instructor or department head.

✦ **NATV 2270 Intermediate Ojibway Cr.Hrs.6** (Formerly 032.227) Continuation of introductory courses and entry-level course for fluent speakers. Development of conversational fluency. Ojibway orthography, composition and translation, introduction to the linguistic structure of Ojibway. *Prerequisite:* a grade of "C" or better in NATV 1270 (or 032.127) and NATV 1280 (or 032.128), or Matriculation Ojibway, or written consent of instructor or department head.

✦ **NATV 2300 Cree Literature Cr.Hrs.3** (Formerly 032.230) A survey of Cree literature based on the extensive study of particular texts in cultural, historical and spiritual contexts. *Prerequisite:* a grade of "C" or better in NATV 2250 (or 032.225) or written consent of the department head.

NATV 2310 Ojibway Literature Cr.Hrs.3 (Formerly 032.231) A survey of Ojibway (Eastern, Western, Chippewa, Saulteaux, Odawa, others) literature based on the extensive study of particular texts in cultural, historical and spiritual contexts. *Prerequisite:* a grade of "C" or better in NATV 2270 (or 032.227) or written consent of department head.

✦ **NATV 2320 Structure of the Cree Language Cr.Hrs.3** (Formerly 032.232) A detailed structural analysis of Cree with special attention to the problem of dialect variation and to the contrastive analysis of Cree and English. *Prerequisite:* a grade of "C" or better in NATV 2250 (or 032.225) or written consent of department head.

NATV 2330 Structure of the Ojibway Language Cr.Hrs.3 (Formerly 032.233) A detailed structural analysis of Ojibway with special attention to the problem of dialect variation and to the contrastive analysis of Ojibway and English. *Prerequisite:* a grade of "C" or better in NATV 2270 (or 032.227) or written consent of department head.

✦ **NATV 3300 Native Language Planning and Development Cr.Hrs.3** (Formerly 032.330) The social and political setting of the indigenous languages of North America. Issues and methods in language policy development, maintenance, standardization, and innovation. *Prerequisite:* a grade of "C" or better in six credit hours of Native Languages at the second year level.

8.24 Near Eastern and Judaic Studies

Program coordinator: Moshe Nahir

General Office: 545 Fletcher Argue

Telephone: 204 474 9623

E-mail: nahir@cc.umanitoba.ca

8.24.1 Program Information

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

Effective the 1989-1990 Regular Session, the General Major and Advanced Major in Near Eastern and Judaic Studies will not be offered until further notice.

Minor Program

A) Near Eastern and Judaic Studies

For entry to the Minor, the prerequisite is a grade of "C" or better in the first six credit hours of Near Eastern and Judaic Studies courses.

B) Yiddish

Effective with the 1989-1990 Regular Session, the Minor in Yiddish will not be offered until further notice.

8.24.2 Near Eastern and Judaic Studies

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

GENERAL MAJOR NEAR EASTERN AND JUDAIC STUDIES [NOT CURRENTLY OFFERED] TOTAL: 30 CREDIT HOURS

- 6 credit hours in Language and Literature (Hebrew¹, Yiddish, or Arabic²)
- 6 credit hours in Judaic Civilization or Near Eastern Studies
- 18 credit hours in Near Eastern and Judaic Studies

ADVANCED MAJOR NEAR EASTERN AND JUDAIC STUDIES [NOT CURRENTLY OFFERED] TOTAL: 48 CREDIT HOURS

- 12 credit hours in Language and Literature (Hebrew¹, Yiddish, or Arabic²)
- 12 credit hours in Judaic Civilization or Near Eastern Studies
- 24 credit hours in Near Eastern and Judaic Studies

MINOR NEAR EASTERN AND JUDAIC STUDIES TOTAL: 18 CREDIT HOURS

18 credit hours in Near Eastern and Judaic Studies

MINOR YIDDISH [NOT CURRENTLY OFFERED] TOTAL: 18 CREDIT HOURS

YIDD 1220

YIDD 2320

6 credit hours in Hebrew Language and Literature or Near Eastern and Judaic Civilization

NOTES:

¹ A language-placement interview is required before registration. Normally, elementary Hebrew day school graduates begin with 055.126 while secondary Hebrew day school graduates begin with language courses numbered at the 2000 or 3000 level.

² A language-placement interview is required before registration.

8.24.3 Near Eastern and Judaic Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Semitic Languages and Literature

U1 SEM 1120 Biblical Hebrew (A) Cr.Hrs.6 (Formerly 055.112) An introductory course with emphasis on basic grammar and syntax. Students will learn to read simple biblical narratives. Students may not hold credit for both SEM 1120 (or 055.112) and RLG 1120 (or 020.112).

U1 SEM 1250 Hebrew 1 Cr.Hrs.6 (Formerly 055.125) For students with a minimal experience with the language yet with a basic ability to read it. Following current methods in the teaching of a second/ foreign language, the listening-comprehension, speaking, reading and writing skills are developed. Language lab and organized conversation are part of the course. Intended for students with a strictly elementary standing. *Prerequisite:* written consent of program coordinator.

U1 SEM 1260 Hebrew 2 Cr.Hrs.6 (Formerly 055.126) For students who have taken SEM 1250 (or 055.125) or the equivalent. Spoken and written Hebrew - vocabulary and grammar, organized conversation and reading of selected texts. In addition to regular sessions, either one hour of lab or directed conversation per week is required. *Prerequisite:* written consent of program coordinator.

SEM 2210 Modern Hebrew Literature Cr.Hrs.6 (Formerly 055.221) Not regularly offered.

SEM 2250 Rabbinic Hebrew Cr.Hrs.6 (Formerly 055.225) Not regularly offered.

SEM 2260 Elementary Arabic Cr.Hrs.6 (Formerly 055.226) Introduction to Arabic language and grammar with emphasis on its relationship to semitic cognates. *Prerequisite:* written consent of program coordinator.

SEM 2280 Introduction to Hebrew Literature Cr.Hrs.6 (Formerly 055.228) Not regularly offered.

SEM 2350 Hebrew 3 Cr.Hrs.6 (Formerly 055.235) For students who have taken SEM 1260 (or 055.126) or the equivalent. Further oral practise, vocabulary expansion and grammar review, and development of reading and writing skills. *Prerequisite:* written consent of program coordinator.

SEM 3360 Hebrew Communication Arts Cr.Hrs.6 (Formerly 055.336) A study of all aspects of Hebrew communication. For advanced students with reasonable fluency in the language. The writing skill on general subjects will be developed as well as comprehension and vocabulary expansion in the reading of more technical texts. *Prerequisite:* written consent of program coordinator.

SEM 3370 Hebrew Language and Literature Cr.Hrs.6 (Formerly 055.337) A study of the structure and usage of modern Hebrew, examination of selections of Major modern writers and development of speaking and writing skills. Review of the history of Hebrew and the application of linguistics to the understanding of the language. *Prerequisite:* written consent of program coordinator.

SEM 3380 The Creation of Modern Hebrew Cr.Hrs.6 (Formerly 055.338) An advanced study of the revival of Hebrew as a spoken language. Other attempts at language planning and revival will be observed. Lectures and discussions will be in Hebrew. *Prerequisite:* written consent of program coordinator.

Yiddish

U1 YIDD 1220 Yiddish Cr.Hrs.6 (Formerly 055.122) This course is intended for those who have little or no experience with the Yiddish language, and may not normally be taken by students who have attended a Yiddish day school. Emphasis on conversational Yiddish and reading comprehension. *Prerequisite:* written consent of program coordinator.

YIDD 2320 Yiddish Literature and Language Cr.Hrs.6 (Formerly 055.232) Not regularly offered.

Judaic Civilization

JUD 2290 History of Jewish Thought Cr.Hrs.6 (Formerly 055.229) Not regularly offered.

JUD 2300 The Makers of Modern Judaism Cr.Hrs.6 (Formerly 055.230) Not regularly offered.

JUD 2330 Patterns in Jewish Life Cr.Hrs.6 (Formerly 055.233) A survey of the forms and institutions which made for the expression of Jewish culture. The course will specifically deal with the Jewish life cycle, holy days and holidays, communal structure and family organization. Students may not hold credit for both JUD 2330 (or 055.233) and RLG 2820 (or 020.282).

JUD 2340 Contemporary Israel Cr.Hrs.3 (Formerly 055.234) A study of the history and development of modern Israel. Topics discussed include the economic, social, cultural and religious structures of the contemporary Jewish state. Attention will also be focused on the status of Israeli minorities such as Moslems and Christians.

JUD 2370 Jewish-Gentile Relations Cr.Hrs.3 (Formerly 055.237) Not regularly offered.

JUD 2650 Field Studies in Biblical Lands Cr.Hrs.6 (Formerly 055.265) Not regularly offered.

JUD 2940 Antisemitism: A Social History from the Crusades to the Holocaust Cr.Hrs.6 (Formerly 055.294) A survey of the origins and consequences of antisemitism in Western history, from the eleventh century to the present, with emphasis on the medieval crusades, the age of protestantism and capitalism, and the Nazi holocaust. Students may not hold credit for both JUD 2940 (or 055.294) and HIST 2240 (or 011.224).

JUD 3390 Jewish Mysticism Cr.Hrs.6 (Formerly 055.339) Not regularly offered.

JUD 3410 The Holocaust Cr.Hrs.6 (Formerly 055.341) An historical study of the destruction of the Jews during World War II. There will also be a survey of the philosophical, literary, and artistic responses. The course will utilize films, tapes, and other media.

Near Eastern

NE 3420 The Arab-Israeli Conflict Cr.Hrs.3 (Formerly 055.342) Not regularly offered.

NE 3450 Studies in the Near East Cr.Hrs.3 (Formerly 055.345) The content of this course will vary. It is designed to provide instruction in specialized topics and themes in Near Eastern and Islamic Studies. A precise description of the course is available in advance from the department office. *Prerequisite:* written consent of the program coordinator.

8.25 Department of Philosophy

Head: Carl Matheson

General Office: 453 University College

Telephone: 204 474 6878

E-mail: mazursl@ms.umanitoba.ca

Website: www.umanitoba.ca/philosophy

8.25.1 Academic Staff**Professors**

McCarthy, D.J., B.A.(St.Paul's, Washington, D.C.), M.A., Ph.D. (Toronto), L.M.S. (Medieval Institute); **Matheson**, C., B.Sc.(Hons.), M.A. (Dalhousie), Ph.D. (Syracuse); **Schafer**, A. M., B.A.(Hons.) (Manitoba), B.Litt. (Oxford); **Shaver**, R. W., B.A. (Toronto), Ph.D. (Pittsburgh).

Associate Professors

Bailey, J.A., B.A. (Gettysburg), M.A., Ph.D. (Pittsburgh); **Caplan**, B.D., B.A. (McGill), M.A., Ph.D. (UCLA); **Jenkins**, J.L., B.A. (Hampshire), M.A., Ph.D.

(Pittsburgh); **Martens**, R.M., B.A. Distinction (Manitoba), M.A. (Dalhousie), Ph.D.(Western Ontario); **Schroeder**, T.A., B.A. (Lethbridge), Ph.D. (Stanford); **Stack**, M.F., B.A., M.A. (Saskatchewan), Ph.D. (Duke); **Warmbrod**, W.K., A.B.(Hons.), Ph.D. (North Carolina).

Assistant Professor

McArthur, N., B.A. (McGill), M.A. (Western Ontario), Ph.D. (Southern California).

8.25.2 Program Information

Philosophy is composed of several areas of study: these include logic, metaphysics, ethics, political philosophy, philosophy of science, philosophy of language, and aesthetics. Philosophers use the tools of rigorous logic and clear conceptual analysis. Their goal is to understand things such as the nature of reason, the physical universe, right and wrong, the human mind, and sometimes even the meaning of life. There are good arguments

and bad arguments. Training in philosophy will help the student not only consider these important questions but also to improve his or her clarity of expression and ability to think critically.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of “C” or better in six credit hours in Philosophy. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

The General Major may consist entirely of courses numbered beyond the 1000 level.

Minor Program

For entry to the Minor, the prerequisite is a grade of “C” or better in six credit hours in Philosophy.

The Minor may consist entirely of courses numbered beyond the 1000 level.

Honours Program

For entry to the Honours program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

8.25.3 Philosophy			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR¹ TOTAL: 30 CREDIT HOURS			
6 credit hours in Philosophy courses numbered at the 1000 level	<ul style="list-style-type: none"> ● 6 credit hours from Group 2 (History of Philosophy) ● an additional 18 credit hours in Philosophy 		
ADVANCED MAJOR¹ TOTAL: 48 CREDIT HOURS			
48 credit hours in Philosophy satisfying the following requirements:			
<ul style="list-style-type: none"> ● at least 6 and at most 12 credit hours must be from PHIL 1200, PHIL 1320, PHIL 1330, PHIL 1510 ● at least 12 credit hours from courses in Group 2 (History of Philosophy). (PHIL 1510 may be used to satisfy both requirement 1 and half of requirement 2.) ● at least 6 credit hours from PHIL 2430 or PHIL 2760 ● at least 12 credit hours from Philosophy courses numbered above the 2000 level. (Students must obtain written permission of the department head to take honours courses) 			
MINOR¹ TOTAL 18 CREDIT HOURS			
6 credit hours in Philosophy	12 credit hours in Philosophy		
HONOURS SINGLE^{1,2}			
6 credit hours in Philosophy courses numbered at the 1000 level	<ul style="list-style-type: none"> ● PHIL 2430³ ● PHIL 2760 ● 6 credit hours from PHIL 2610, PHIL 2630, PHIL 2640, PHIL 2650, PHIL 2660, PHIL 2780, PHIL 2790, PHIL 3580 ● 12 credit hours outside of Philosophy 	<ul style="list-style-type: none"> ● 9 credit hours in Honours Philosophy courses ● 3 credit hours from PHIL 2610, PHIL 2630, PHIL 2640, PHIL 2650, PHIL 2660, PHIL 2780, PHIL 2790, PHIL 3580 ● an additional 3 credit hours from Group 2 (History of Philosophy) ● 3 credit hours in Honours Philosophy courses or Group 2 (History of Philosophy) courses ● 6 credit hours outside Philosophy 	<ul style="list-style-type: none"> ● 12 credit hours in Honours Philosophy courses ● 6 credit hours in Philosophy courses numbered above the 1000 level ● 6 credit hours outside Philosophy
HONOURS DOUBLE^{1,2}			
6 credit hours in Philosophy courses numbered at the 1000 level	<ul style="list-style-type: none"> ● 6 credit hours from Group 2 (History of Philosophy) ● PHIL 2430 or PHIL 2760 ● 18 credit hours outside Philosophy 	<ul style="list-style-type: none"> ● 6 credit hours in Honours Philosophy courses ● 3 credit hours from PHIL 2610, PHIL 2630, PHIL 2640, PHIL 2650, PHIL 2660, PHIL 2780, PHIL 2790, PHIL 3580 ● an additional 3 credit hours from Group 2 (History of Philosophy) ● 12 credit hours outside Philosophy 	<ul style="list-style-type: none"> ● 6 credit hours in Honours Philosophy courses ● 6 credit hours in Philosophy courses numbered above the 1000 level ● 12 credit hours outside Philosophy

NOTES:

¹ At most 12 credit hours in Philosophy numbered at the 1000 level may count towards any degree program. In addition, no student may hold credit in both PHIL 1200 and PHIL 1510. PHIL 1510 counts as a Group 1 and a Group 2 course.

² Courses listed may be taken in years other than the ones specified; however, the total set of courses taken must conform to these requirements in other respects.

³ Students who took PHIL 1330 in their first year will substitute six other credit hours in Philosophy for PHIL 2430 in Year 2.

8.25.4 Philosophy Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

Detailed information on courses provided by instructors is available in a bound volume at the reserve desk in the Dafoe Library and the philosophy general office.

Courses not regularly offered at the University of Manitoba are shown with an asterisk (*) following the course title.

In addition to 1000-level (Group 1) courses, the Department of Philosophy offers a number of upper-level courses for which there is no prerequisite; these are included in the course descriptions for Groups 2 and 3 below.

Group 1: Introductory (1000-Level) Courses

NOTE: At most 12 credit hours at the 1000 level in Philosophy may count towards any degree program. In addition, students may not hold credit for both PHIL 1200 and PHIL 1510; PHIL 1511; PHIL 1510 and PHIL 1511 count as Group 1 and Group 2 courses.

U1 PHIL 1200 Introduction to Philosophy Cr.Hrs.6 (Formerly 015.120) An introduction to five main areas of philosophy. Topics are logical thinking; the criteria and limits of human knowledge; and three of: God, right and wrong, free will and the nature of consciousness, scientific inquiry, and social justice. Students may not hold credit for PHIL 1200 (or 015.120) and any of: PHIL 1261 (or 015.126), PHIL 1510 (or 015.151), or PHIL 1511 (or 015.151).

PHIL 1261 Fondements de la philosophie Cr.Hrs.6 (L'ancien 015.126) Spécificité du domaine de la philosophie par rapport aux domaines de la science expérimentale, des sciences religieuses, de l'art; initiation à la méthode dialectique et à son application. Notions fondamentales de critique. Donné au Collège universitaire de Saint-Boniface.

U1 PHIL 1290 Critical Thinking Cr.Hrs.3 (Formerly 015.129) A course which helps students to think clearly and critically, and to present, defend, and evaluate arguments. The instructor will discuss good and bad reasoning, everyday fallacies, some specific argument forms such as the categorical syllogism, and ways and means of defining words. Students may not hold credit for PHIL 1290 (or 015.129) and any of: PHIL 1320 (or 015.132) or PHIL 1321 (or 015.132).

U1 PHIL 1320 Introductory Logic Cr.Hrs.6 (Formerly 015.132) A course which helps students to think clearly and critically, and to present, defend and evaluate arguments. The course deals with categorical logic, non-formal fallacies, definition, modern symbolic logic and scientific method. Not open to students who have previously obtained credit for PHIL 2430 (or 015.243) or PHIL 3750 (or 015.375). Students may not hold credit for PHIL 1320 (or 015.132) and any of: PHIL 1321 (or 015.132), PHIL 1290 (or 015.129), or PHIL 1330 (or 015.133).

PHIL 1321 Introduction à la logique Cr.Hrs.6 (L'ancien 015.132) Ce cours a pour but d'aider les étudiants à penser clairement et de manière critique, à présenter, à défendre et à évaluer les arguments. Le cours traite de la logique catégorique, des sophismes non-formels, de la définition, de la logique symbolique moderne et de la méthode scientifique. L'étudiant(e) qui ont obtenu des crédits pour les cours PHIL 2430 (ou 015.243) et PHIL 3750 (ou 015.375) ne sont pas autorisés à suivre ce cours. L'étudiant(e) qui détient les crédits du PHIL 1321 (ou 015.132) ne peut se faire créditer aucun des cours PHIL 1320 (ou 015.132), PHIL 1290 (ou 015.129), ou PHIL 1330 (ou 015.133). Donné au Collège universitaire de Saint-Boniface.

U1 PHIL 1330 Introduction to Symbolic Logic Cr.Hrs.6 (Formerly 015.133) A comprehensive survey of modern symbolic logic, both sentential and quantificational. The course examines natural deduction techniques, symbolization of English arguments, tautologies, predicates, relations and definite descriptions. Students may not hold credit for PHIL 1330 (or 015.133) and any of: PHIL 1320 (or 015.132), PHIL 1321 (or 015.132), PHIL 2430 (or 015.243), or PHIL 3750 (or 015.375).

U1 PHIL 1510 Historical Introduction to Philosophy Cr.Hrs.6 (Formerly 015.151) An introduction to the great philosophical thinkers of Western civilization from the ancient Greeks such as Plato and Aristotle to the analytic philosophers and (possibly) the existentialists of our own day; and an introduction to the great issues, such as the nature of reality, the existence of God, human knowledge, and morality. Elementary logic will also be covered. Students may not hold credit for PHIL 1510 (or 015.151) and any of: PHIL 1511 (or 015.151), PHIL 1200 (or 015.120), or PHIL 1261 (or 015.126). PHIL 1510 (or 015.151) counts as a Group 1 and a Group 2 course.

PHIL 1511 Introduction historique à la philosophie Cr.Hrs.6 (L'ancien 015.151) Introduction aux grands penseurs de la civilisation occidentale des anciens grecs tels que Platon et Aristote jusqu'aux philosophes analytiques et (si possible) aux existentialistes contemporains. Introduction aux grandes questions telles que la nature de la réalité, l'existence de Dieu, la connaissance humaine et la moralité. La logique élémentaire sera aussi étudiée. L'étudiant(e) qui détient les crédits du PHIL 1511 (ou 015.151) ne peut se faire créditer aucun des cours PHIL 1510 (ou 015.151), PHIL 1200 (ou 015.120), ou PHIL 1261 (ou 015.126). Le cours PHIL 1510 (ou 015.151) fait partie à la fois du groupe 1 et du groupe 2. Donné au Collège universitaire de Saint-Boniface.

Group 2: History of Philosophy

PHIL 2260 Philosophical Perspectives* Cr.Hrs.6 (Formerly 015.226) A survey of selected influential ancient, medieval, modern and contemporary philosophers. The course will examine their views on human nature, appearance and reality, morals, politics, and the place of people in the universe. A natural adjunct to the study of literature, history, and religion.

PHIL 2300 Political Philosophy Cr.Hrs.6 (Formerly 015.230) An analysis and evaluation of the main ideals - justice, freedom, happiness, equality, and self-realization - of the great political philosophers (e.g., Plato, Hobbes, Locke, Mill, and Marx) and of their theories of human nature and their blueprints for society. Students may not hold credit for both PHIL 2300 (or 015.230) and PHIL 2301 (or 015.230). *Prerequisite:* 30 hours of university credit.

PHIL 2301 Philosophie politique Cr.Hrs.6 (L'ancien 015.230) Analyse et évaluation des doctrines des grands penseurs politiques tels que Platon, Hobbes, Locke, Mill, Marx; leurs idéaux de justice, de liberté, de bonheur, d'égalité et d'épanouissement personnel, leurs théories sur la nature humaine et sur les fondements de la société. L'étudiant(e) ne peut se faire créditer à la fois le PHIL 2301 (ou 015.230) et le PHIL

2300 (ou 015.230). *Préalable:* 30 crédits universitaires. Donné au Collège universitaire de Saint-Boniface.

PHIL 2320 Thomas Aquinas and Medieval Philosophy* Cr.Hrs.6 (Formerly 015.232) This course covers the doctrines of the principal medieval thinkers from Augustine to Ockham on human nature, knowledge, and morality. Half the course is devoted to a textual analysis of certain writings of Thomas Aquinas. Students may not hold credit for both PHIL 2320 (or 015.232) and PHIL 2321 (or 015.232).

PHIL 2321 Thomas d'Aquin et la philosophie médiévale Cr.Hrs.6 (L'ancien 015.232) Étude des doctrines des principaux penseurs de l'époque médiévale, de saint Augustin à Ockham, sur la nature humaine, sur la connaissance et sur la morale. La moitié du cours sera consacrée à l'analyse des textes pris parmi les différentes oeuvres de saint Thomas. L'étudiant(e) ne peut se faire créditer à la fois le PHIL 2321 (ou 015.232) et le PHIL 2320 (ou 015.232). Donné au Collège universitaire de Saint-Boniface.

W PHIL 2610 The History and Philosophy of Science Cr.Hrs.6 (Formerly 015.261) A critical study of the nature of scientific knowledge and of the evolution of science from the ancient Greeks to the present. A background in science is not required. *Prerequisite:* 30 hours of university credit.

PHIL 2630 Continental Rationalism Cr.Hrs.3 (Formerly 015.263) A study of the great Continental philosophers, Descartes, Spinoza, and Leibniz, who viewed reason, rather than experience, as the key to knowledge of the universe. Students may not hold credit for both PHIL 2630 (or 015.263) and PHIL 2631 (or 015.263). *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level Philosophy or written consent of department head.

PHIL 2631 Le rationalisme continental Cr.Hrs.3 (L'ancien 015.263) Étude des philosophes du continent: Descartes, Spinoza, Leibniz, qui ont perçu la raison plutôt que l'expérience comme la clé de toute connaissance de l'Univers. L'étudiant(e) ne peut se faire créditer à la fois le PHIL 2631 (ou 015.263) et le PHIL 2630 (ou 015.263). *Préalable:* une note minimale de C dans six heures-crédits au niveau 1000 en philosophie ou autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PHIL 2640 British Empiricism Cr.Hrs.3 (Formerly 015.264) The course surveys and analyzes the theories of the great British empiricists, Locke, Berkeley, and Hume, on the nature and foundations of human knowledge and its relation to experience. Students may not hold credit for both PHIL 2640 (or 015.264) and PHIL 2641 (or 015.264). *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level Philosophy or written consent of department head.

PHIL 2641 L'empirisme britannique Cr.Hrs.3 (L'ancien 015.264) Revue et analyse des théories des grands empiristes britanniques: Locke, Berkeley et Hume, sur la nature et les fondements de la connaissance humaine et ses relations avec l'expérience. L'étudiant(e) ne peut se faire créditer à la fois le PHIL 2641 (ou 015.264) et le PHIL 2640 (ou 015.264). *Préalable:* une note minimale de C dans six heures-crédits au niveau 1000 en philosophie ou autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PHIL 2650 Plato Cr.Hrs.3 (Formerly 015.265) An examination of Plato's views on reality, "man", politics, and morals through a study of his most significant dialogues. The course will begin with a discussion of the main pre-socratic philosophers. Students may not hold credit for both PHIL 2650 (or 015.265) and PHIL 2651 (or 015.265). *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level Philosophy or written consent of department head.

PHIL 2651 Platon Cr.Hrs.3 (L'ancien 015.265) Examen des vues de Platon sur la réalité, la politique et la morale à travers l'étude de ses dialogues les plus importants. Le cours débutera avec une discussion des principaux philosophes présocratiques. L'étudiant(e) ne peut se faire créditer à la fois le PHIL 2651 (ou 015.265) et le PHIL 2650 (ou 015.265). *Préalable:* une note minimale de C dans six heures-crédits au niveau 1000 en philosophie ou autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PHIL 2660 Aristotle Cr.Hrs.3 (Formerly 015.266) A study of Aristotle's most important views on reality, knowledge, morals, and politics, and of the late classical philosophies: epicureanism and stoicism. Students may not hold credit for both PHIL 2660 (or 015.266) and PHIL 2661 (or 015.266). *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level Philosophy or written consent of department head.

PHIL 2661 Aristote Cr.Hrs.3 (L'ancien 015.266) Une étude des idées les plus importantes d'Aristote sur la réalité, la connaissance, la morale et la politique. Étude des philosophies postclassiques: l'épicurisme et le stoïcisme. L'étudiant(e) ne peut se faire créditer à la fois le PHIL 2661 (ou 015.266) et le PHIL 2660 (ou 015.266). *Préalable:* une note minimale de C dans six heures-crédits au niveau 1000 en philosophie ou autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PHIL 2690 Nineteenth-Century European Philosophy Cr.Hrs.6 (Formerly 015.269) A study of Continental philosophy beginning with Kant and including the work of Hegel, Marx, Kierkegaard, Nietzsche, and (possibly) Schopenhauer and Comte. The course examines different views about the nature of humans, history, morals, alienation, freedom, and science.

PHIL 2710 Twentieth-Century European Philosophy: Existentialism* Cr.Hrs.3 (Formerly 015.271) This course will be devoted to a study of existentialist themes as they appear in the writings, both literary and philosophical, of some of the following: Beckett, Camus, de Beauvoir, Hesse, Heidegger, Kafka, Kierkegaard, Marcel, Nietzsche, Sartre, Buber, R.D. Laing, and various existential psychologists. Students may not hold credit for PHIL 2710 (or 015.271) and any of: PHIL 2820 (or 015.282) or PHIL 2821 (or 015.282).

PHIL 2720 Twentieth-Century European Philosophy: Phenomenology* Cr.Hrs.3 (Formerly 015.272) A study of specially selected writings with emphasis upon the development of phenomenology from Husserl onward and the use of phenomenological method by such thinkers as: Sartre, Heidegger and Merleau-Ponty. Students may

not hold credit for PHIL 2720 (or 015.272) and any of: PHIL 2820 (or 015.282) or PHIL 2821 (or 015.282).

PHIL 2780 Thomas Aquinas* Cr.Hrs.3 (Formerly 015.278) A study of Aquinas' views on topics such as humans, universals, truth, the existence and nature of God, morality and natural law, and the relation of philosophy to religious faith. Students may not hold credit for PHIL 2780 (or 015.278) and any of: PHIL 2320 (or 015.232) or PHIL 2321 (or 015.232).

W PHIL 2790 Moral Philosophy Cr.Hrs.6 (Formerly 015.279) An introduction to moral philosophy and influential moral philosophers of the past and present. The main emphasis will be on the nature and justification of moral judgement. Philosophers such as Plato, Hobbes, Hume, Kant, Moore, Stevenson, Hare and Rawls will be discussed. *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level Philosophy or written consent of department head.

PHIL 2820 Existentialism Cr.Hrs.6 (Formerly 015.282) A study of existential themes as they appear in the writings, both literary and philosophical, of such figures as Beckett, Camus, de Beauvoir, Heidegger, Kafka, Jaspers, Kierkegaard, Marcel, Nietzsche, Sartre, Buber and Laing. Students may not hold credit for PHIL 2820 (or 015.282) and any of: PHIL 2821 (or 015.282) or PHIL 2710 (or 015.271).

PHIL 2821 L'existentialisme Cr.Hrs.6 (L'ancien 015.282) Étude des thèmes existentialistes qui apparaissent à travers les oeuvres d'écrivains et de philosophes tels que: Beckett, Camus, de Beauvoir, Hesse, Heidegger, Kafka, Jaspers, Kierkegaard, Marcel, Nietzsche, Sartre, Buber et Lange. L'étudiant(e) qui détient les crédits du PHIL 2821 (ou 015.282) ne peut se faire créditer aucun des cours PHIL 2820 (ou 015.282) ou PHIL 2710 (ou 015.271). Donné au Collège universitaire de Saint-Boniface.

PHIL 3580 Kant* Cr.Hrs.3 (Formerly 015.358) A study of the 18th-century German thinker, Immanuel Kant, focusing on the revolutionary theories about reality and human knowledge contained in his major metaphysical work, *The Critique of Pure Reason*. *Prerequisite:* a grade of "C" or better in one of: PHIL 2630 (or 015.263), PHIL 2631 (or 015.263), PHIL 2640 (or 015.264), PHIL 2641 (or 015.264), or written consent of department head.

PHIL 3690 The Rise of Analytic Philosophy* Cr.Hrs.3 (Formerly 015.369) A study of the important developments in British philosophy in the first half of the 20th century and their effects upon present-day philosophical thinking. Special attention will be paid to the work of G.E. Moore, Bertrand Russell, Wittgenstein, and the logical positivists. *Prerequisite:* a grade of "C" or better in six credit hours of Philosophy.

PHIL 3700 Pragmatism* Cr.Hrs.3 (Formerly 015.370) A survey of the development of pragmatism in the United States from Peirce to the present, including an examination of the work of James, Dewey, and C.I. Lewis. *Prerequisite:* a grade of "C" or better in six credit hours of Philosophy.

PHIL 3720 Contemporary Philosophy Cr.Hrs.6 (Formerly 015.372) An introduction to the main movements in 20th-century philosophy: idealism, realism, logical positivism, ordinary language philosophy, pragmatism, and existentialism. Philosophers such as Royce, Russell, Moore, Ayer, Carnap, Ryle, Wittgenstein, Peirce, James, Dewey, Heidegger and Sartre will be studied. Students may not hold credit for both PHIL 3720 (or 015.372) and PHIL 3690 (or 015.369). *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level Philosophy or written consent of department head.

Group 3: Systematic Courses

W PHIL 2150 Mind and Body Cr.Hrs.3 (Formerly 015.215) An introduction to theories of the mind and body, including dualism, identity theory and functionalism. The course deals with topics such as consciousness, thought, and desire. *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level philosophy or 30 hours of university credit.

PHIL 2160 Fundamentals of the Philosophy of Language Cr.Hrs.3 (Formerly 015.216) An introduction to theories of language, including those of Gottlob Frege and Bertrand Russell. The course deals with a variety of linguistic phenomena pertaining to names, definite descriptions, demonstratives, identity sentences, and belief reports. *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level philosophy or 30 hours of university credit.

PHIL 2170 Special Topics 1 Cr.Hrs.3 (Formerly 015.217) Topics will vary. *Prerequisite:* a grade of "C" or better in three credit hours of philosophy or 30 hours of university credit.

PHIL 2180 Special Topics 2 Cr.Hrs.3 (Formerly 015.218) Topics will vary. *Prerequisite:* a grade of "C" or better in three credit hours of philosophy or 30 hours of university credit.

PHIL 2290 Ethics and Society Cr.Hrs.6 (Formerly 015.229) An examination of some contemporary ethical theories and their application to a number of practical issues. Current issues to be discussed may include: ethics and the environment; abortion and euthanasia; sexual freedom and human equality; civil disobedience; individual liberty vs. state authority; punishment; and, justice and utility. Students may not hold credit for both PHIL 2290 (or 015.229) and any of: PHIL 2531 (or 015.253), PHIL 2740 (or 015.274) and PHIL 2750 (or 015.275). *Prerequisite:* 30 hours of university credit.

PHIL 2430 Modern Logic and the Philosophy of Logic Cr.Hrs.6 (Formerly 015.243) A systematic introduction to the theory and techniques of modern symbolic logic, with an examination of contributions made by contemporary philosophers in dealing with philosophical problems closely connected with logic. Students may not hold credit for both PHIL 2430 (or 015.243) and PHIL 1330 (or 015.133) or PHIL 3750 (or 015.375).

PHIL 2450 Philosophy of Human Nature Cr.Hrs.6 (Formerly 015.245) An attempt to arrive at a viable view of humans in the universe. Problems to be considered include the mind and the body, free will, immortality, "human's" distinctiveness from the rest of nature, and personal identity. Students may not hold credit for both PHIL 2450 (or 015.245) and PHIL 2580 (or 015.258). *Prerequisite:* a grade of "C" or better in six

credit hours of Philosophy.

PHIL 2531 Morale Cr.Hrs.6 (L'ancien 015.253) Étude des problèmes moraux contemporains: la libération de la femme, la liberté de la personne, la pollution, la discrimination, l'avortement, les drogues, la violence - qui à la lumière de divers courants d'idées et de la tradition chrétienne. L'étudiant(e) détient les crédits du PHIL 2531 (ou 015.253) ne peut se faire créditer aucun des cours PHIL 2290 (ou 015.229), PHIL 2740 (ou 015.274) ou PHIL 2750 (ou 015.275). Donné au Collège universitaire de Saint-Boniface.

PHIL 2560 Philosophy of History* Cr.Hrs.3 (Formerly 015.256) Consideration of philosophical problems arising in the study of history. Topics include historical knowledge, historical explanation, objectivity, slanted history, and propaganda. *Prerequisite:* a grade of "C" or better in six credit hours of 1000-level Philosophy or written consent of department head.

PHIL 2580 Metaphysics Cr.Hrs.3 (Formerly 015.258) A study of some fundamental problems relating to the nature of reality, e.g., mind and body, cause and effect, human freedom, and the problem of universals. Students may not hold credit for both PHIL 2580 (or 015.258) and PHIL 2450 (or 015.245). *Prerequisite:* a grade of "C" or better in six credit hours of Philosophy at the 1000 level.

PHIL 2700 Philosophy of Religion Cr.Hrs.6 (Formerly 015.270) A critical examination of religious beliefs and the grounds for holding them. Topics normally include God's existence and nature, evil, faith and reason, the meaning of religious language, revelation, miracles, and mysticism. Students may not hold credit for PHIL 2700 (or 015.270) and any of: PHIL 2701 (or 015.270) or PHIL 2730 (or 015.273).

PHIL 2701 Philosophie de la religion Cr.Hrs.6 (L'ancien 015.270) Examen critique des raisons pouvant justifier l'attitude religieuse. Le cours portera entre autres sur l'existence de Dieu et sa nature, le mal, la raison et la foi, la signification du discours religieux, la révélation, les miracles, le mysticisme. L'étudiant(e) qui détient les crédits du PHIL 2701 (ou 015.270) ne peut se faire créditer aucun des cours PHIL 2700 (ou 015.270) ou PHIL 2730 (ou 015.273). Donné au Collège universitaire de Saint-Boniface.

PHIL 2730 Fundamentals of the Philosophy of Religion* Cr.Hrs.3 (Formerly 015.273) A critical study of some fundamental problems in the philosophy of religion, such as the existence and nature of God, the justification of religious beliefs, the status of mystical and other religious experiences, and the significance of religious discourse. Students may not hold credit for PHIL 2730 (or 015.273) and any of: PHIL 2700 (or 015.270) or PHIL 2701 (or 015.270).

PHIL 2740 Ethics and Biomedicine* Cr.Hrs.3 (Formerly 015.274) An examination of some important ethical issues arising out of recent developments in biology and medicine. Examples of topics to be covered include: the allocation of scarce medical resources; genetic engineering; euthanasia vs. the prolongation of life; abortion and infanticide, and experimentation on human subjects. Students may not hold credit for PHIL 2740 (or 015.274) and any of: PHIL 2290 (or 015.229) or PHIL 2531 (or 015.253). *Prerequisite:* 30 hours of university credit.

PHIL 2750 Ethics and the Environment* Cr.Hrs.3 (Formerly 015.275) An examination of some important ethical issues connected with environmental pollution and resource depletion. Examples to be covered include: the ideal of liberty and environmental limits; scarcity and the ideal of justice; growth vs. steady-state economics; animal rights, and survival ethics vs. welfare ethics. Students may not hold credit for PHIL 2750 (or 015.275) and any of: PHIL 2290 (or 015.229) or PHIL 2531 (or 015.253). *Prerequisite:* 30 hours of university credit.

PHIL 2760 Introduction to the Theory of Knowledge Cr.Hrs.6 (Formerly 015.276) This course challenges and investigates our claims to knowledge. Problems dealt with normally include: the nature of knowledge, sense experience, truth and necessary truth, the analytic-synthetic distinction, memory, induction, etc. *Prerequisite:* a grade of "C" or better in six credit hours of Philosophy or written consent of department head.

PHIL 2770 Philosophy of Art* Cr.Hrs.6 (Formerly 015.277) An introductory analysis of some contemporary aesthetic theories and an examination of such problems as the relation between art and morality, meaning and expression in art, the nature and functioning of criticism, and the justification of standards of aesthetic evaluation.

PHIL 2800 Contemporary Political Philosophy* Cr.Hrs.3 (Formerly 015.280) An examination of recent theories about whether there should be political authority, who should wield it, what is its proper scope and what are the duties and rights of citizens. The course will deal with representatives of such positions as anarchism, communism, conservatism, liberalism. Students may not hold credit for both PHIL 2800 (or 015.280) and PHIL 3710 (or 015.371). *Prerequisite:* 30 hours of university credit.

PHIL 2810 Educational Philosophy* Cr.Hrs.3 (Formerly 015.281) An examination of the main issues in philosophy of education: what traits it is desirable for people to acquire, why they are desirable and how they are best promoted. Also a consideration of how answers to these questions vary with theories of human nature. Students may not hold credit for PHIL 2810 (or 015.281) and any of: PHIL 3550 (or 015.355) or PHIL 3551 (or 015.355). *Prerequisite:* 30 hours of university credit.

PHIL 2830 Business Ethics Cr.Hrs.3 (Formerly 015.283) The course will explore the application of ethical theory to business. Topics to be discussed will normally include: theories of justice, corporate responsibility, the ethics of advertising, consumer and environmental protection, and preferential hiring. *Prerequisite:* 30 hours of university credit.

PHIL 2840 The Ethics of War and Peace Cr.Hrs.3 (Formerly 015.284) A study of the ethical issues connected with war and the securing of peace, as articulated in the writings of major philosophers and selected political and military thinkers. Relevant moral theories, such as non-violence, holy war, the just war, the ethical reasoning underlying policies of deterrence, will be critically examined in historical and contemporary context.

PHIL 2850 Philosophy of Social Science Cr.Hrs.3 (Formerly 015.285) The nature of

logic and scientific reasoning as found in the context of the social sciences. *Prerequisite*: 30 hours of university credit.

PHIL 2860 Philosophy of Law Cr.Hrs.3 (Formerly 015.286) An introduction to the philosophy of law and to rule systems generally. Sample topics include the concept of law (law and religion; natural law; and the "laws of the books"); the connection, if any, between law and morality; and the politics of law in Canada and elsewhere. Students may not hold credit for both PHIL 2860 (or 015.286) and the former 015.246.

PHIL 2870 Philosophy and Law Cr.Hrs.3 (Formerly 015.287) An inquiry into the philosophy of law, on issues not covered in PHIL 2860 (or 015.286). Students will examine such topics as: guilt and responsibility; theories of punishment; the right to dissent; legal reasoning; and, "professional ethics". Students may not hold credit for both PHIL 2870 (or 015.287) and the former 015.247.

W † PHIL 3220 Feminist Philosophy Cr.Hrs.3 (Formerly 015.322) An examination of philosophical issues of special interest to students of feminism and women's issues. Topics typically include: feminist epistemology, metaphysical implications of feminism, and feminist ethics. *Prerequisite*: a grade of "C" or better in six credit hours in Philosophy or written consent of department head.

PHIL 3380 Theories of Value Cr.Hrs.6 (Formerly 015.338) A systematic study of some fundamental problems to do with the nature of value. For example, are standards of value matters of personal preference only? Are value judgments capable of being true or false? Does evaluation yield knowledge? In what ways is reasoning about values a special kind of reasoning? Students may not hold credit for both PHIL 3380 (or 015.338) and PHIL 3740 (or 015.374). *Prerequisite*: 30 hours of university credit.

PHIL 3550 Philosophy of Education* Cr.Hrs.6 (Formerly 015.355) An exposition, examination, and evaluation of contrasting views about what constitutes an ideal education, about what institutions and practices are most conducive to that ideal, and about what compromises have to be made with that ideal in view of human nature. Students may not hold credit for PHIL 3550 (or 015.355) and any of: PHIL 3551 (or 015.355) or PHIL 2810 (or 015.281). *Prerequisite*: 30 hours of university credit.

PHIL 3551 Philosophie de l'éducation Cr.Hrs.6 (L'ancien 015.355) Exposé, examen et évaluation des diverses théories sur ce qui constitue l'éducation idéale. Des institutions et des pratiques les plus aptes à réaliser cet idéal et des compromis à faire selon la nature humaine. L'étudiant(e) qui détient le crédits du PHIL 3551 (ou 015.355) ne peut se faire créditer aucun des cours PHIL 3550 (ou 015.355) ou PHIL 2810 (ou 015.281). *Préalable*: 30 heures-crédits universitaires. Donné au Collège universitaire de Saint-Boniface.

PHIL 3561 Métaphysique Cr.Hrs.6 (L'ancien 015.356) Les présocratiques et le problème de l'être mobile. Analyse du temps, de l'espace, du lieu et de la quantité. De la théorie hylémorphique et du mouvement reçu dans les êtres. Transcendentalisme et analogie de l'être et structure des êtres particuliers. Dieu et le concours divin. *Préalable*: une note minimale de C dans six heures de crédits en philosophie au niveau 1000. Donné au Collège universitaire de Saint-Boniface.

PHIL 3571 Philosophie de l'homme Cr.Hrs.6 (L'ancien 015.357) Dans le monde, l'Homme est déterminé. Par la raison, il en émerge et cherche le sens de son existence. Est-ce là toute son originalité? Liberté et valeurs. *Préalable*: une note minimale de C dans six heures-crédits en philosophie ou autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PHIL 3600 Philosophical Problems of Artificial Intelligence* Cr.Hrs.3 (Formerly 015.360) Can a machine think? Is the mind a machine? A study of recent work on these questions, from philosophy, computer science, psychology, and physiology. *Prerequisite*: a grade of "C" or better in six credit hours in Philosophy or Mathematics or Computer Science; or written consent of department head.

PHIL 3710 Critiques of Contemporary Society* Cr.Hrs.6 (Formerly 015.371) An exposition and appraisal of criticisms of contemporary society by philosophical liberals, conservatives, socialists and anarchists. Writers such as Engels, Dewey, J.S. Mill, Kropotkin, Lenn and Rand will be discussed. Students may not hold credit for both PHIL 3710 (or 015.371) and PHIL 2800 (or 015.280). *Prerequisite*: 30 hours of university credit.

PHIL 3730 Philosophy of Psychology Cr.Hrs.3 (Formerly 015.373) A study of the cognitive strategy in psychology, of the question of reductionism, and of the relevance of neuroscience to psychological theory. *Prerequisite*: a grade of "C" or better in six credit hours at the 1000-level in Philosophy or Psychology, or written consent of the department head.

PHIL 3740 Value Theory* Cr.Hrs.3 (Formerly 015.374) An examination of some contemporary theories about the nature of value and its status in a world of facts, combined with a discussion as to whether it is rational, or prudent, to be moral. Students may not hold credit for both PHIL 3740 (or 015.374) and PHIL 3380 (or 015.338). *Prerequisite*: 30 hours of university credit.

PHIL 3750 Sentential and Predicate Calculi Cr.Hrs.3 (Formerly 015.375) An accelerated introduction to sentential and predicate calculi. Students may not hold credit for both PHIL 3750 (or 015.375) and either PHIL 1330 (or 015.133) or PHIL 2430 (or 015.243). *Prerequisite*: 60 hours of university credit.

Group 4: Honours Courses

PHIL 3430 Problems in Legal Philosophy Cr.Hrs.3 (Formerly 015.343) A treatment of some problems arising in the philosophy of law including responsibility and the doctrine of mens rea, theories of punishment, law and morality, and the concept of law. *Prerequisite*: written consent of department head.

PHIL 3440 Problems in Social and Political Philosophy Cr.Hrs.3 (Formerly 015.344) A treatment of selected problems arising in social and political philosophy, e.g., the philosophy of the state, distributive justice, and the ethics of revolution. *Prerequisite*: written consent of department head.

PHIL 3630 Contemporary Epistemology 1 Cr.Hrs.3 (Formerly 015.363) A critical examination of contemporary issues in the theory of knowledge including recent empiricist attempts to resolve the problem of justifying belief. Typical topics include foundations of knowledge, the concept of "truth", radical scepticism, the new riddle of induction, normative epistemology, the psychology and sociology of knowledge. *Prerequisite*: a grade of "C" or better in PHIL 2760 (or 015.276) or written consent of department head.

PHIL 3640 Contemporary Epistemology 2 Cr.Hrs.3 (Formerly 015.364) A critical examination of some contemporary issues in the theory of knowledge not covered in PHIL 3630 (or 015.363). There is evidence that empiricism is a mistaken theory of knowledge. The aim is to bring the student up-to-date on the details of this current conflict and to proceed further on our own, if possible. Readings are from the current literature. A natural sequel to PHIL 3630 (or 015.363), but can be taken independently. *Prerequisite*: written consent of department head.

PHIL 3650 Contemporary Metaphysics 1 Cr.Hrs.3 (Formerly 015.365) A survey of recent issues of ontology, reference and existence, ontological commitment, realism vs. nominalism, Quine's notion of ontological relativity, etc. *Prerequisite*: written consent of department head.

PHIL 3660 Contemporary Metaphysics 2 Cr.Hrs.3 (Formerly 015.366) An intensive investigation of the most significant recent scholarly research into metaphysics. Problem areas to be studied will vary from year to year. *Prerequisite*: written consent of department head.

PHIL 3760 Topics in Moral Theory 1 Cr.Hrs.3 (Formerly 015.376) A critical examination of such issues in moral theory as moral scepticism, contractarianism, moral realism, utilitarianism and justice. *Prerequisite*: a grade of "C" or better in PHIL 2790 (or 015.279) or written consent of department head.

PHIL 3770 Topics in Moral Theory 2 Cr.Hrs.3 (Formerly 015.377) A critical examination of such issues in moral theory as moral realism, naturalism, moral epistemology, feminist ethics, moral language, egoism and justice. *Prerequisite*: a grade of "C" or better in PHIL 2790 (or 015.279) or written consent of department head.

PHIL 4460 Contemporary Issues 1* Cr.Hrs.3 (Formerly 015.446) An intensive study of specially selected topics in contemporary philosophy. The subject matter of the course will vary from year to year. *Prerequisite*: written consent of department head.

PHIL 4470 Contemporary Issues 2* Cr.Hrs.3 (Formerly 015.447) A course of the same description as PHIL 4460 (or 015.446), but with subject matter drawn from a different area of contemporary philosophy. *Prerequisite*: written consent of department head.

PHIL 4490 Philosophy of Mind Cr.Hrs.3 (Formerly 015.449) A seminar concentrating on the analysis of consciousness. Topics include: mind and brain, the explanation of human behaviour, and whether or not machines and animals can think. *Prerequisite*: written consent of department head.

PHIL 4510 Philosophy of Language Cr.Hrs.3 (Formerly 015.451) An examination of problems such as the nature of meaning, grammar, semantics, reference, truth, and methodology in the study of language. *Prerequisite*: written consent of department head.

PHIL 4520 Historical Topics 1* Cr.Hrs.3 (Formerly 015.452) Selected topics in the history of philosophy. *Prerequisite*: written consent of department head.

PHIL 4530 Historical Topics 2* Cr.Hrs.3 (Formerly 015.453) Selected topics in the history of philosophy. *Prerequisite*: written consent of department head.

PHIL 4540 Philosophical Methodology* Cr.Hrs.3 (Formerly 015.454) A critical analysis and comparison of differing views of the nature and aims of philosophy and the methods to be employed in achieving those aims. *Prerequisite*: written consent of department head.

PHIL 4560 Inductive Logic Cr.Hrs.3 (Formerly 015.456) A study of inductive reasoning and inductively based knowledge claims. Topics normally include probability theory, confirmation, inductive knowledge, tests of hypotheses, the logic of estimation, etc. *Prerequisite*: written consent of department head.

PHIL 4570 Modal Logic* Cr.Hrs.3 (Formerly 015.457) A study of one or more of: the strict or logical modalities, tense logic, deontic logic, and many-valued logic. *Prerequisite*: written consent of department head.

PHIL 4580 Honours Seminar* Cr.Hrs.6 (Formerly 015.458) A seminar course with subject matter varying from year to year, designed to meet special needs of Honours Philosophy students. *Prerequisite*: written consent of department head.

PHIL 4600 Science and Philosophy since Newton* Cr.Hrs.3 (Formerly 015.460) This course traces the major threads of humankind's intellectual evolution from the time of Newton to the present. Figures studied include Newton, Kant, Maxwell, Darwin, Peirce, and Einstein. Issues include the nature of space and time, of matter and energy, of living organisms, and the nature and evolution of human consciousness. *Prerequisite*: fourth year standing in any faculty, or written consent of department head.

PHIL 4610 Directed Reading in Philosophy 1 Cr.Hrs.3 (Formerly 015.461) Subject matter will vary from year to year. *Prerequisite*: written consent of department head.

PHIL 4620 Directed Reading in Philosophy 2 Cr.Hrs.3 (Formerly 015.462) Subject matter will vary from year to year. *Prerequisite*: written consent of department head.

PHIL 4630 Symbolic Logic 1 Cr.Hrs.3 (Formerly 015.463) Selected topics in mathematical logic, including propositional and quantificational logic, number theory, and the major metatheoretical results. *Prerequisite*: written consent of department head.

PHIL 4640 Symbolic Logic 2 Cr.Hrs.3 (Formerly 015.464) Selected topics in mathematical logic, including propositional and quantificational logic, number theory, and the major metatheoretical results. *Prerequisite*: written consent of department head.

8.26 Department of Political Studies

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Website: www.umanitoba.ca/political_studies

8.26.1 Academic Staff

Duff Roblin Professorship in Government

Thomas, P.G., B.A.(Hons.), M.A. (Manitoba), Ph.D.(Toronto).

Senior Scholars

Daycock, D.W., B.A.(Hons.), M.A. (Manitoba), Ph.D. (London); **Peterson, T.E.,** B.A., M.A. (Manitoba); **St. John, O.P.,** B.A.(Hons.) (UBC), M.Sc., Ph.D. (London).

Professors

Buteux, P.E., B.Sc.(Econ.)(Hons.), Ph.D. (London); **Debicki, M.,** LL.M.(Warsaw), Ph.D. (Carleton); **Thomas, P.G.,** B.A.(Hons.), M.A. (Manitoba), Ph.D. (Toronto).

Associate Professors

Fergusson, J.G., B.A.(Hons), M.A. (Manitoba), Ph.D. (UBC); **Knysh, G, D.,** B.A.(L.PH.), M.A. (Manitoba), Ph.D. (London); **Lambert, G.,** B.A.(Hons.) (Manchester), M.A., Ph.D.(Minnesota); **MacLean, G.A.,** B.A.(Hons.) (Dalhousie), M.A. (McMaster), Ph.D. (Queen's); **Neville, W.F.,** B.A.(Hons.) (Manitoba), M.A. (Oxford); **Ogrodnick, M.,** B.A., M.A. (Alberta), Ph.D. (York); **Santos, C.R.,** B.A., B.A.U., M.P.A. (Philippines), LL.M. (Harvard), Ph.D. (Michigan).

Assistant Professors

Jacoby, T.A., B.A. (Manitoba), M.A. (Hebrew Univ.), Ph.D. (York); **Yellon, R. A.,** B.A.(Hons.) (McGill).

8.26.2 Program Information

Political Studies examines the dynamics of human interaction in which individuals and groups compete to achieve their goals. The study of politics involves a consideration of the interactions between the individual, the state, government, public affairs and public policy. Political Studies examines the dynamics of these interactions in the context of competing visions, values and interests, particularly in the pursuit of varying public goals, including the quest for political power and the control of government. Politics is thus both a study of conflict between competing interests and a study of how these competing interests achieve compromise and cooperation.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in six credit hours in Political Studies. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

A maximum of six credit hours in Political Studies courses numbered at the 1000 level may be used towards the 30 credit hours for a General Major or the 48 credit hours for an Advanced Major.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in six credit hours in Political Studies.

A maximum of six credit hours in Political Studies courses numbered at the 1000 level may be used toward the 18 credit hours for a Minor.

Honours Program

For entry to the Honours Program, see Section 4: Basic Faculty Regulations for the Three Programs leading to a B.A.

Honours Ancillary Options:

Economics	Psychology
Geography	Sociology
History	Statistics
Philosophy	

A modern language or another subject with department approval.

Honours in Political Studies may be taken in combination with the program of Central and East European Studies. See Section 8.5.

Other

Combinations of courses for the Major, Minor and Honours programs, other than those listed above may be permitted by written consent of the department head. Similarly, Honours courses may be taken by students in the General or Advanced Major programs with the written consent of the department head.

8.26.3 Political Studies			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours in Political Studies courses numbered at or above the 1000 level	<ul style="list-style-type: none"> ● 18 credit hours in Political Studies courses numbered at or above the 2000 level ● 6 credit hours in Political Studies courses numbered at or above the 3000 level 		
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours in Political Studies courses numbered at or above the 1000 level	<ul style="list-style-type: none"> ● 6 credit hours in Political Studies courses numbered at the 2000 level ● 6 credit hours in Political Studies courses numbered at the 3000 level ● 6 credit hours in Political Studies courses numbered at the 4000 level ● an additional 24 credit hours in Political Studies courses numbered at or above the 2000 level 		
MINOR TOTAL: 18 CREDIT HOURS			
6 credit hours in Political Studies courses numbered at or above the 1000 level	12 credit hours in Political Studies courses numbered at or above the 2000 level		
HONOURS SINGLE^{1, 3}			
6 credit hours in Political Studies courses numbered at or above the 1000 level	<ul style="list-style-type: none"> ● 18 credit hours from POLS 2000, POLS 2040, POLS 2070, POLS 2510 ● 12 credit hours in ancillary options 	<ul style="list-style-type: none"> ● POLS 3950 ● 15 credit hours in Political Studies courses numbered at the 3000 level² ● 6 credit hours in ancillary options 	<ul style="list-style-type: none"> ● 18 credit hours in Political Studies Honours courses numbered at the 4000 level ● 6 credit hours in ancillary options

HONOURS DOUBLE^{1, 3}

6 credit hours in Political Studies courses numbered at or above the 1000 level

● 12 credit hours from POLS 2000, POLS 2040, POLS 2070, POLS 2510

● 12 credit hours in other Honours field

● 6 credit hours in ancillary options

● 12 credit hours in Political Studies courses numbered at the 3000 level²

● an additional 12 or 18 credit hours depending on other Honours field

● 12 credit hours in Political Studies Honours courses numbered at the 4000 level

● 12 credit hours in other Honours field

NOTES:

¹ A student must include at least six credit hours in political theory (POLS 2510, POLS 2710, POLS 3240, POLS 3510, POLS 3600, POLS 3610, POLS 4510, POLS 4610, POLS 4810).

² A student in Single or Double Honours may, with written permission of the department head, substitute: six credit hours in Honours courses numbered at the 4000-level in place of six credit hours numbered at the 3000-level.

³ Ancillary options are courses taken from outside the Honours field of study.

8.26.4 Political Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

U1 W POLS 1500 Introduction to Politics Cr.Hrs.6 (Formerly 019.150) A survey and appraisal of contemporary ideology, government, and international problems. Students may not hold credit for both POLS 1500 (or 019.150) and POLS 1501 (or 019.150).

POLS 1501 Introduction à la politique Cr.Hrs.6 (L'ancien 019.150) Un aperçu et une évaluation de l'idéologie contemporaine, du gouvernement et des problèmes internationaux. L'étudiant(e) ne peut se faire créditer à la fois le POLS 1501 (ou 019.150) et le POLS 1500 (ou 019.150). Donné au Collège universitaire de Saint-Boniface.

W POLS 2000 Introduction to Comparative Politics Cr.Hrs.6 (Formerly 019.200) An introduction to the methodology and scope of comparative politics, examining political processes and public policies in a variety of political systems, including liberal democracies, post-Communist, newly industrializing, and developing nations.

POLS 2020 Asian Politics Cr.Hrs.6 (Formerly 019.202) An analysis of contemporary politics in India, China, Japan. In a given year, the course will focus on the politics of one of these countries.

W POLS 2040 Introduction to International Relations Cr.Hrs.6 (Formerly 019.204) An introduction to the analysis of international political action and interaction. The course examines the manner in which the foreign policies of states are formulated and the conflict, competition and cooperation produced by state interaction. Examples are drawn mainly from international events since 1945, with appropriate references to earlier periods. Students may not hold credit for POLS 2040 (or 019.204) and any of: POLS 2041 (or 019.204) or the former 019.153

POLS 2041 Introduction aux relations internationales Cr.Hrs.6 (L'ancien 019.204) Introduction à l'analyse des actions et des interactions politiques internationales. Le cours examine la manière dont les politiques étrangères des États sont formulées; les conflits, les compétitions et les coopérations produites par les interactions étatiques. L'étudiant(e) qui détient le crédits du POLS 2041 (ou 019.204) ne peut se faire créditer aucun des cours POLS 2040 (ou 019.204) ou l'ancien 019.153. Donné au Collège universitaire de Saint-Boniface.

W POLS 2070 Introduction to Canadian Government Cr.Hrs.6 (Formerly 019.207) A survey of the Canadian political institutions and processes including contemporary Canadian federalism, the parliamentary system, political parties and interest groups. Students may not hold credit for POLS 2070 (or 019.207) and any of: POLS 2071 (or 019.207) or the former 019.156.

● **POLS 2071 Introduction au système gouvernemental canadien Cr.Hrs.6** (L'ancien 019.207) Une revue à la fois des institutions et des processus politiques canadiens, y compris les systèmes parlementaires et fédéral, les partis politiques et les groupes d'intérêt. L'étudiant(e) qui détient le crédits du POLS 2071 (ou 019.207) ne peut se faire créditer aucun des cours POLS 2070 (ou 019.207) ou l'ancien 019.156. Donné au Collège universitaire de Saint-Boniface.

POLS 2120 American and British Politics Cr.Hrs.6 (Formerly 019.212) An examination and analysis of modern American and British politics, with particular attention to government structure and operation, party rivalry and voting patterns, and the nature and influence of racial, ethnic and class divisions with respect to government policies and political alignments.

POLS 2430 The European Union in World Politics Cr.Hrs.3 (Formerly 019.243) An examination of the political mechanisms and institutions of the European Community as a politico-economic bloc. Special emphasis is placed on issues such as the Common Agricultural Policy; the effort at economic, monetary, and political union; the goals and limits of the European Political Cooperation; EC's external relations and last, but not least, Canadian-E.U. relations.

W POLS 2510 Great Political Thinkers Cr.Hrs.6 (Formerly 019.251) A survey and evaluation of major political theorists from ancient to modern times. Students may not hold credit for both POLS 2510 (or 019.251) and POLS 2511 (or 019.251).

POLS 2511 Les grands penseurs politiques Cr.Hrs.6 (L'ancien 019.251) Aperçu et jugement sur la pensée des grands philosophes politiques, de l'Antiquité aux temps modernes. L'étudiant(e) ne peut se faire créditer à la fois le POLS 2511 (ou 019.251) et le POLS 2510 (ou 019.251). Donné au Collège universitaire de Saint-Boniface.

POLS 2530 Elements of Foreign Policy Cr.Hrs.6 (Formerly 019.253) A study of the factors affecting the making of foreign policy. An outline of a comparative approach is offered and the foreign policies of a number of countries are surveyed. These include Britain, Canada, China, France, Germany, the U.S.A., the former U.S.S.R. and Japan.

● **POLS 2561 Questions d'actualité en politique canadienne Cr.Hrs.6** (L'ancien 019.256) Une analyse des activités du gouvernement canadien dans certains domaines problématiques ainsi qu'une revue des différentes approches à ces problèmes. Donné au Collège universitaire de Saint-Boniface.

● **POLS 2570 Introduction to Public Administration Cr.Hrs.6** (Formerly 019.257) An assessment of basic principles, personnel recruitment and organization, and fiscal management in government operation. Canadian topics will be assigned. Students may not hold credit for both POLS 2570 (or 019.257) and POLS 2571 (or 019.257).

● **POLS 2571 Initiation à l'administration publique Cr.Hrs.6** (L'ancien 019.257) Une revue des principes fondamentaux, du recrutement du personnel et de l'organisation ainsi que de la gestion fiscale au sein du gouvernement. L'étudiant ne peut se faire créditer à la fois le POLS 2571 (ou 019.257) et le POLS 2570 (ou 019.257). Donné au Collège universitaire de Saint-Boniface.

POLS 2710 Introduction to Political Analysis Cr.Hrs.6 (Formerly 019.271) A critical examination of how various analytical perspectives attempt to study the relationship between truth and bias in political discourse, with particular emphasis on ideological components in established techniques of political understanding.

POLS 2810 Empirical Political Theory Cr.Hrs.6 (Formerly 019.281) An assessment of the contributions to, and significance of, empirical political theory. The course will discuss types of political theory, standards and theory assessment, and particular areas of application including: political attitudes, choice, policy performance, and leadership.

POLS 2920 Government, Politics and Society in Ukraine Cr.Hrs.6 (Formerly 019.292) An introductory analysis of the modern Ukrainian political institutions and processes. Ukraine's relations with other jurisdictions of the former U.S.S.R. will also be examined.

♀ ● **POLS 3100 Gender and Politics in Canada Cr.Hrs.3** (Formerly 019.310) This course introduces the principal themes in the study of gender and politics in Canada. Topics may include women's political organizing and activism, representation in political institutions, the gendered division of labour in the private and public spheres, gender and public policy, and the gendered nature of political behaviour. *Prerequisite:* a grade of "C" or better in one of: POLS 2070 (or 019.207), POLS 2071 (or 019.207), the former 019.156, or written consent of instructor or department head.

POLS 3140 Selected Topics in Politics 1 Cr.Hrs.3 (Formerly 019.314) The content of this course will vary. Contact the department for a course description. Students may not hold credit for both POLS 3140 (or 019.314) and POLS 3141 (or 019.314). *Prerequisite:* written consent of instructor or department head.

POLS 3141 Sujets particuliers en politique 1 Cr.Hrs.3 (L'ancien 019.314) Le contenu du cours variera. Contacter le secteur pour une description de cours. L'étudiant(e) ne peut se faire créditer à la fois le POLS 3141 (ou 019.314) et le POLS 3140 (ou 019.314). *Préalable:* consentement écrit du professeur ou chef de département. Donné au Collège universitaire de Saint-Boniface.

POLS 3150 Selected Topics in Politics 2 Cr.Hrs.3 (Formerly 019.315) The content of this course will vary. Contact department for a course description. Students may not hold credit for both POLS 3150 (or 019.315) and POLS 3151 (or 019.315). *Prerequisite:* written consent of instructor or department head.

POLS 3151 Sujets particuliers en politique 2 Cr.Hrs.3 (L'ancien 019.315) Le contenu du cours variera. Contacter le secteur pour une description de cours. L'étudiant(e) ne peut se faire créditer à la fois le POLS 3151 (ou 019.315) et le POLS 3150 (ou 019.315). *Préalable:* consentement écrit du professeur ou chef de département. Donné au Collège universitaire de Saint-Boniface.

POLS 3160 Human Rights and Civil Liberties Cr.Hrs.3 (Formerly 019.316) An examination of the foundations of modern human rights systems in liberal democracies. Topics addressed include the main philosophical arguments on human rights, dominant legal theories of rights, and international conventions and systems of human rights protection. Students may not hold credit for both POLS 3160 (or 019.316) and the former 019.266. *Prerequisite:* a grade of "C" or better in one of: POLS 2510 (or 019.251), POLS 2511 (or 019.251), or written consent of instructor or department head.

● **POLS 3170 The Canadian Charter of Rights and Freedoms Cr.Hrs.3** (Formerly 019.317) A systematic examination of the rights and freedoms contained in the Char-

ter through Supreme Court decisions. Additional topics addressed include the historical, political and intellectual sources of rights protection in Canada and a review of Canadian human rights legislation. Students may not hold credit for both POLS 3170 (or 019.317) and the former 019.266. *Prerequisite:* a grade of "C" or better in one of: POLS 2070 (or 019.207), POLS 2071 (or 019.207), or written consent of instructor or department head.

POLS 3200 International Security and Conflict Management Cr.Hrs.6 (Formerly 019.320) A study of contemporary world conflict, conflict management, and issues of global security. Students may not hold credit for both POLS 3200 (or 019.320) and the former 019.273. *Prerequisite:* a grade of "C" or better in one of: POLS 2040 (or 019.204), POLS 2041 (or 019.204), the former 019.153, or written consent of instructor or department head.

POLS 3220 Globalization and the World Economy Cr.Hrs.3 (Formerly 019.322) An exploration of issues relating to globalization, including regionalism, economic structures and regimes, multinational corporations, global debt, problems in the developing world, and the future for leadership in the international system. Students may not hold credit for both POLS 3220 (or 019.322) and the former 019.383. *Prerequisite:* a grade of "C" or better in one of: POLS 2040 (or 019.204), POLS 2041 (or 019.204), the former 019.153, or written consent of instructor or department head.

♦ **POLS 3240 Feminist Political Theory Cr.Hrs.3** (Formerly 019.324) An examination of feminist approaches to the status and participation of women in political life. The course also includes feminist discourse on ethical issues and state policy.

POLS 3250 International Political Economy Cr.Hrs.3 (Formerly 019.325) A survey of the relationship between political authority and the production and distribution of global wealth. Emphasis is placed on the historical development of international political economy, its fundamentals, as well as major theoretical perspectives. Students may not hold credit for both POLS 3250 (or 019.325) and the former 019.383. *Prerequisite:* a grade of "C" or better in one of: POLS 2040 (or 019.204), POLS 2041 (or 019.204), the former 019.153, or written consent of instructor or department head.

POLS 3251 Économie politique internationale Cr.Hrs.3 Le cours examine les interrelations entre processus politiques, production et distribution de la richesse dans l'environnement international. L'accent est mis autant sur le développement historique, les perspectives théoriques majeures que sur les enjeux fondamentaux en économie politique internationale. L'étudiant(e) qui détient les crédits du POLS 3251 ne peut se faire créditer aucun des cours POLS 3250 (ou 019.325) ou l'ancien 019.383. *Préalable:* une note minimale de C dans un des cours suivants: POLS 2040 (ou 019.204), POLS 2041 (ou 019.204), l'ancien 019.153, ou le consentement écrit de l'enseignant ou du chef de département. Donné au Collège universitaire de Saint-Boniface.

POLS 3510 Political Doctrines of the Twentieth Century Cr.Hrs.6 (Formerly 019.351) A survey of major contemporary systems of ideas which seek to explain or justify political behaviour.

♦ **POLS 3520 Canadian Foreign and Defence Policy Cr.Hrs.6** (Formerly 019.352) An examination of Canadian foreign and defence policy, with attention to contemporary events and issues. The course is designed to examine both foreign and defence policies as interdependent issues for Canadian interests. The course will assess the evolution and changing priorities of Canadian foreign and defence issues, with particular attention to Canada's relations with the United States, Europe, Asia and the Third World. Students may not hold credit for POLS 3520 (or 019.352) and any of: POLS 3561 (or 019.356) or the former 019.368. *Prerequisite:* a grade of "C" or better in one of: POLS 2040 (or 019.204), POLS 2041 (or 019.204), the former 019.153, or written consent of instructor or department head.

♦ **POLS 3561 Politique étrangère canadienne Cr.Hrs.6** (L'ancien 019.356) Une analyse de la tradition canadienne en politique étrangère, le développement de la politique étrangère pendant la Guerre Froide et les perspectives pour l'avenir en ce qui a trait à l'Alliance Atlantique, les États-Unis et le Tiers-Monde. L'étudiant(e) qui détient les crédits du POLS 3561 (ou 019.356) ne peut se faire créditer aucun des cours POLS 3520 (ou 019.352) ou l'ancien 019.368. *Préalable:* une note minimale de C dans un des cours suivants: POLS 1500 (ou 019.150), POLS 1501 (ou 019.150), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

POLS 3600 Political Concepts Cr.Hrs.3 (Formerly 019.360) An exposition and analysis of the role and meaning of terms central to political discourse. Among concepts to be studied are power, community, justice, freedom, equality and obligation. *Prerequisite:* a grade of "C" or better in one of: POLS 2510 (or 019.251), POLS 2511 (or 019.251), the former 019.151, or written consent of instructor or department head.

POLS 3610 Political Metaphors Cr.Hrs.3 (Formerly 019.361) An examination of the main interpretation of metaphors as they relate to and are illustrated by those characteristics of the understanding of political order. Metaphors to be analyzed include: organicism, mechanism, contractualism, games, exchange, and the theatre. *Prerequisite:* a grade of "B" or better in one of: POLS 2510 (or 019.251), POLS 2511 (or 019.251), or the former 019.151.

POLS 3620 The Governments of Western Europe Cr.Hrs.6 (Formerly 019.362) A survey of the political and governmental process in Great Britain, France, and West Germany.

POLS 3640 Comparative Defence Policy Cr.Hrs.3 (Formerly 019.364) The examination within a comparative framework of the factors determining the making and implementation of the defence policies of a number of representative and significant countries. *Prerequisite:* a grade of "C" or better in one of: POLS 2040 (or 019.204), POLS 2041 (or 019.204), the former 019.153, or written consent of instructor or department head.

♦ **POLS 3670 Canadian Political Parties Cr.Hrs.3** (Formerly 019.367) This course provides students with an understanding of the origins, evolution, operation and programmes of Canadian political parties. Topics addressed include party types, party systems, party organization and financing, electoral activities and party leadership.

Students may not hold credit for both POLS 3670 (or 019.367) and the former 019.286. *Prerequisite:* a grade of "C" or better in one of: POLS 2070 (or 019.207), POLS 2071 (or 019.207), or written consent of instructor or department head.

POLS 3820 The Ideologies and Politics of Radical Movements Cr.Hrs.6 (Formerly 019.382) A comparative analysis of the programs and ideologies of selected radical movements.

POLS 3840 Approaches to the Study of International Relations Cr.Hrs.3 (Formerly 019.384) An overview of the various competing theoretical approaches used in the analysis of international relations, as well as the methodologies used by international politics analysts. Students may not hold credit for both POLS 3840 (or 019.384) and POLS 3841. *Prerequisite:* a grade of "C" or better in one of: POLS 2040 (or 019.204), POLS 2041 (or 019.204), the former 019.153, or written consent of instructor or department head.

POLS 3841 Les approches théoriques en relations internationales Cr.Hrs.3 Études des différentes approches théoriques utilisées dans l'analyse des relations internationales, ainsi que les méthodologies utilisées par les analystes de la politique internationale. L'étudiant(e) ne peut se faire créditer à la fois le POLS 3841 et le POLS 3840 (ou 019.384). *Préalable:* une note minimale de C dans un des cours suivants: POLS 2040 (ou 019.204), POLS 2041 (ou 019.204), l'ancien 019.153, ou le consentement écrit de l'enseignant ou du chef de département. Donné au Collège universitaire de Saint-Boniface.

♦ **POLS 3860 Canadian Federalism Cr.Hrs.3** (Formerly 019.386) An examination of Canadian federal structures and processes with emphasis on constitutional influences, the evolution of jurisdictions, province-building and contemporary federal issues.

POLS 3880 Comparative Foreign Policy Cr.Hrs.3 (Formerly 019.388) A comparative study of the factors affecting foreign policy in selected countries including, but not limited to, Canada, the United States, Russia, China, Japan, Great Britain, France, and Germany. The course also includes an examination of international, regional, and domestic factors affecting the creation of foreign policy by states. *Prerequisite:* a grade of "C" or better in one of: POLS 2040 (or 019.204), POLS 2041 (or 019.204), the former 019.153, or written consent of instructor or department head.

POLS 3910 Applied Statistical Analysis Cr.Hrs.3 (Formerly 019.391) An examination of statistical models and applications. Topics include descriptive analysis, classification, correlation and regression. *Prerequisite:* a grade of "C" or better in POLS 3950 (or 019.395) or written consent of instructor or department head.

POLS 3920 American Politics Cr.Hrs.6 (Formerly 019.392) An examination of institutions, processes, public policies, and current public affairs in the United States. *Prerequisite:* a grade of "C" or better in POLS 2000 (or 019.200) or written consent of instructor or department head.

POLS 3930 Foreign Policy Decision-Making Cr.Hrs.6 (Formerly 019.393) The analysis and construction of selected theoretical models of the foreign policy decision-making process. The case studies examined will refer primarily, but not exclusively, to U.S. foreign policy decision-making. Students may not hold credit for both POLS 3930 (or 019.393) and POLS 3931 (or 019.393).

POLS 3931 La prise de décisions en politique étrangère Cr.Hrs.6 (L'ancien 019.393) Analyse et construction d'un certain nombre de modèles théoriques. Les études de cas font surtout référence à la politique étrangère américaine (mais pas exclusivement). L'étudiant(e) ne peut se faire créditer à la fois le POLS 3931 (ou 019.393) et le POLS 3930 (ou 019.393). Donné au Collège universitaire de Saint-Boniface.

POLS 3950 Research Methods in the Study of Politics Cr.Hrs.3 (Formerly 019.395) An introduction to the major quantitative and qualitative research strategies employed in the study of politics. The topics addressed include interviewing, content analysis, comparative studies, survey design, sampling, research ethics and basic statistical analysis. Students may not hold credit for both POLS 3950 (or 019.395) and the former 019.390. *Prerequisite:* a grade of "C" or better in six credit hours of Political Studies at the 2000 level or written consent of instructor or department head.

♦ **POLS 3960 Canadian Politics Cr.Hrs.6** (Formerly 019.396) An examination of recurrent issues and problems in the Canadian political culture including the evolution of parties and ideologies, and issues such as regionalism, dualism, continentalism, civil liberties and the interventionist state. *Prerequisite:* a grade of "C" or better in one of: POLS 2070 (or 019.207), POLS 2071 (or 019.207), the former 019.156, or written consent of instructor or department head.

Honours Courses

Open to Honours students and other advanced undergraduate students with written consent of instructor or department head.

POLS 4160 Selected Topics in Politics 3 Cr.Hrs.3 (Formerly 019.416) The content of this course will vary. Contact department for a course description. *Prerequisite:* written consent of instructor or department head.

POLS 4170 Selected Topics in Politics 4 Cr.Hrs.3 (Formerly 019.417) The content of this course will vary. Contact department for a course description. *Prerequisite:* written consent of instructor or department head.

♦ **POLS 4180 Provincial Politics in Canada Cr.Hrs.3** (Formerly 019.418) The course focuses on politics at the provincial level in Canada and on the politics of the regions: Atlantic, Quebec, Ontario, the West and BC. Emphasis is on a comparison of political cultures, governments, budgets, parties, elections, and political change across the regions. *Prerequisite:* written consent of instructor or department head.

♦ **POLS 4190 Manitoba Politics and Government Cr.Hrs.3** (Formerly 019.419) An examination of politics and government in modern Manitoba. Topics addressed include federal-provincial relations, parties and elections, political culture, the legislative process and public policy. Students may not hold credit for both POLS 4190 (or 019.419) and the former 019.476. *Prerequisite:* written consent of instructor or department head.

POLS 4510 Advanced History of Political Ideas Cr.Hrs.3 (Formerly 019.451) An in-depth analysis of selected texts in the history of political theory with a focus on ideas and concerns relevant to contemporary political life. Students may not hold credit for both POLS 4510 (or 019.451) and the former 019.471. *Prerequisite:* written consent of instructor or department head.

POLS 4530 Regionalism in International Relations Cr.Hrs.3 (Formerly 019.453) This course examines the nature and substance of political relations among states in the international system to institutionalize relations for economic, political, or security reasons. Emphasis is given to post-1945 and contemporary regional relationships. Regional arrangements studied in the course include, but are not necessarily limited to, North America, Europe, the Asia-Pacific rim, the Middle East, Latin America, and Africa. Students may not hold credit for both POLS 4530 (or 019.453) and POLS 4830 (or 019.483). *Prerequisite:* written consent of instructor or department head.

POLS 4570 Public Organizational Management Cr.Hrs.6 (Formerly 019.457) A study of the levels and functions of public management in governmental bureaucracy, models of decision-making and organizational development, unionized collective bargaining and equal opportunity employment, with some training in public administration research. *Prerequisite:* written consent of instructor or department head.

POLS 4610 Contemporary Political Theory Cr.Hrs.3 (Formerly 019.461) An examination of recent developments in the analysis of political ideas, institutions, and behaviour. Students may not hold credit for both POLS 4610 (or 019.461) and the former 019.471. *Prerequisite:* written consent of instructor or department head.

◆ **POLS 4660 The State in the Economy Cr.Hrs.6** (Formerly 019.466) Drawing from literature in Canadian political economy, this course will examine historical and contemporary patterns and forms of Canadian state involvement in the economy. Both federal and provincial contexts will be studied and selected areas of current interest, such as the role of crown corporations and industrial policy, will be emphasized. *Prerequisite:* written consent of instructor or department head.

POLS 4730 Strategic Studies Cr.Hrs.6 (Formerly 019.473) An examination of the role, management, and politics of organized force in the international system. *Prerequisite:* written consent of instructor or department head.

POLS 4770 Political Choice Cr.Hrs.6 (Formerly 019.477) Conceptualization and application of the factors that explain the choices of participants in political processes such as foreign and domestic policy-making, law-making, and voting. Both rational and non-rational factors will be covered. Emphasis will be placed on the integration of both sets of factors into a comprehensive explanation framework. *Prerequisite:* written consent of instructor or department head.

POLS 4810 Seminar in Marxist-Leninist and Contemporary Marxist Political Theory Cr.Hrs.6 (Formerly 019.481) An examination of Communist political theory from Lenin to the present; an analysis of the main currents of Marxist and Marxist-Leninist theoretical developments since the death of Stalin. *Prerequisite:* written consent of instructor or department head.

POLS 4830 The Politics of International Regions Cr.Hrs.6 (Formerly 019.483) The course will explore the themes of decolonization, nation-building, political leadership, international conflict, foreign policy and external intervention in the Middle-East, Latin America, Africa, or South-East Asia since World War II. In a given year, the course will concentrate on one of the above areas. *Prerequisite:* written consent of instructor or department head.

◆ **POLS 4860 The Canadian Policy Process Cr.Hrs.6** (Formerly 019.486) This course will examine a number of conceptual frameworks for the analysis of the policy process, will analyze the role of different institutions and actors in the policy process, and will appraise current government responses to problems within Canadian society. *Prerequisite:* written consent of instructor or department head.

POLS 4910 Scope and Methods in Political Science Cr.Hrs.6 (Formerly 019.491) A research seminar involving the application of particular analytical models or theories to a range of related political problems. *Prerequisite:* written consent of instructor or department head.

POLS 4940 American Foreign Policy Cr.Hrs.6 (Formerly 019.494) An analysis of the foreign policy of the United States from 1945 to the present, focusing on the explanation of the foreign policy decisions taken and the policy-making process giving rise to them. Students may not hold credit for both POLS 4940 (or 019.494) and the former 019.493. *Prerequisite:* written consent of instructor or department head.

8.27 Department of Psychology

Head: Harvey Keselman

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E-mail: psychology@umanitoba.ca

Website: www.umanitoba.ca/psychology

8.27.1 Academic Staff

Professor Emeritus

Adair, J.G., B.Sc., M.Sc. (Trinity, Texas), Ph.D. (Iowa).

Senior Scholars

Aftanas, M.S., B.A., M.A. (Manitoba), Ph.D. (Alberta); **Brodsky, M.J.,** B.A. (New York), Ph.D. (Texas); **Kaye, S.M.,** B.Sc. (McGill), M.A., Ph.D. (Dalhousie); **McIntyre, J.S.,** B.A. (Alberta), M.A. (Calgary), Ph.D. (Illinois); **Schallow, J. R.,** B.S. (Hons.) (Northwestern), Ph.D. (Texas).

Professors

Chipperfield, J., B.A. (Hons.), M.A. Ph.D. (Manitoba); **DeLuca, R.,** B.A. (Hons.) (Winnipeg), M.A., Ph.D. (Manitoba); **Eaton, W.O.,** B.A. (Stanford), M.A., Ph.D. (Illinois); **Keselman, H.J.,** B.A. (Farleigh Dickinson), M.Sc., Ph.D. (Oklahoma); **Keselman, J.C.,** B.A., M.A., Ph.D. (Manitoba); **LeBow, M.D.,** B.A. (UCLA), M.A., Ph.D. (Utah); **Leventhal, L.Y.,** B.A. (UCLA), M.A., Ph.D. (Southern Illinois); **Martin, D.G.,** B.A. (Albion), M.A., Ph.D. (Chicago); **Martin, G.L.,** B.A. (Colorado), M.A., Ph.D. (Arizona); **Nickels, J.B.,** B.A. (Occidental College), M.A., Ph.D. (Missouri); **Pear, J.J.,** B.S. (Maryland), M.A., Ph.D. (Ohio); **Perry, R.P.,** B.A. (UBC), M.Sc., Ph.D. (Calgary); **Singer, M.,** B.Sc. (McGill), M.S., Ph.D. (Carnegie); **Wilson, L.M.,** A.B. (Mt. Holyoke College), M.A., Ph.D. (Kent State).

Associate Professors

Altemeyer, R.A., B.Sc. (Yale), M.S., Ph.D. (Carnegie); **Bailis, D.,** B.A. (California), M.A., Ph.D. (Princeton); **Cox, B.,** B.A. (Hons.) (Manitoba), M.A., Ph.D. (York); **Forest, J.J.,** B.A. (Hons.) (Alberta), M.Sc. (Washington), Ph.D. (Alberta); **Holborn, S.W.,** B.A. (Victoria), M.A., Ph.D. (Iowa); **Huynh, C-L.,** M.P.A. (Brigham Young), M.A. (Simon Fraser), M.A., M.S., Ph.D. (Iowa); **Ivanco, T.L.,** B.A.Sc. (Lethbridge), Ph.D. (McMaster); **Jakobson, L.,** B.A. (Hons.) (Manitoba), M.A., Ph.D. (Western Ontario); **Johnson, E.,** B.A. (Hons.) (Queen's), Ph.D. (Waterloo); **Mallin, B.,** B.A. (Hons.), M.A., Ph.D. (Manitoba); **Mondor, T.,** B.A. (Hons.) (Winnipeg), M.A., Ph.D. (Waterloo); **Morry, M.,** B.A. (Hons.) (Alberta), M.A., Ph.D. (Iowa); **Niemi, R.R.,** B.A. (Hons.), M.A., Ph.D. (Queen's); **Sande, G.N.,** B.A. (Hons.) (Victoria), M.A., Ph.D. (Waterloo); **Shapiro, L. J.,** B.A. (Colgate), M.A., Ph.D. (Texas Christian); **Tefft, B. M.,** B.A. (Cornell), Ph.D. (Roch.); **Thomas, M.,** B.A. (Texas), M.A., Ph.D. (Tennessee); **Vorauer, J.,** B.A. (UBC), M.A., Ph.D. (Wa-

terloo); **Whiteley, J.H.,** B.A. (Hons.) (Toronto), M.A. (Western Ontario), Ph.D. (Iowa); **Wilson, J.R.,** B.A. (Northern Illinois), M.S. (Kansas State), Ph.D. (Kent State); **Yu, C.T.,** B.A., M.A., Ph.D. (Manitoba).

Assistant Professors

Cameron, J., B.A. (Manitoba), Ph.D. (Waterloo); **Freeman, W.,** B.A. (Regina), M.A., Ph.D. (UBC); **Kruk, R.,** B.Sc., M.A., Ph.D. (Toronto); **Leboe, J.,** B.A. (Hons.), M.A. (Simon Fraser), Ph.D. (McMaster); **Marotta, J.,** B.Sc. (Queen's), M.Sc., Ph.D. (Western Ontario); **Medved, M.,** C.Psych. (College of Psychologists), B.Sc., M.A., Ph.D. (Toronto); **Racine, T.,** B.A., Ph.D. (Simon Fraser).

8.27.2 Program Information

Psychology is a discipline that examines questions concerning behaviour and mental processes. Cognitive processes such as perceiving, learning, remembering, thinking, talking, and social interactions as well as the biological basis for behaviour and human development are among the issues explored. Psychology on the one hand helps us understand human behaviour, but on the other also provides insights that can help and benefit individuals and society. A degree program is also offered in the Faculty of Science.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in PSYC 1200 or a grade of "C" or better in both PSYC 1211 and PSYC 1221. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in PSYC 1200 or a grade of "C" or better in both PSYC 1211 and PSYC 1221, or written consent of the department head.

Honours Program

For entry to the Honours program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

8.27.3 Psychology

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
PSYC 1200 or PSYC 1211 and PSYC 1221	<ul style="list-style-type: none">● PSYC 2250 and PSYC 2260● 6 additional credit hours in Psychology courses numbered at the 2000 or 3000 level	12 credit hours in Psychology courses numbered at the 2000 or 3000 level	
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
PSYC 1200 or PSYC 1211 and PSYC 1221	<ul style="list-style-type: none">● PSYC 2250 and PSYC 2260● 6 additional credit hours in Psychology courses numbered at the 2000 or 3000 level	12 credit hours in Psychology courses numbered at the 2000 or 3000 level	18 credit hours in Psychology courses numbered at the 2000 or 3000 level
MINOR TOTAL: 18 CREDIT HOURS			
PSYC 1200 or PSYC 1211 and PSYC 1221	6 credit hours in Psychology courses numbered at the 2000 or 3000 level	6 credit hours in Psychology courses numbered at the 2000 or 3000 level	
HONOURS SINGLE			
PSYC 1200 or PSYC 1211 and PSYC 1221	<ul style="list-style-type: none">● PSYC 2300¹● 6 credit hours in Psychology courses numbered at the 2000 or 3000 level: (3 hours from each of two different lettered menu categories)²● 15 credit hours in ancillary options³● 3 credit hours in free options⁴	<ul style="list-style-type: none">● 3 credit hours from PSYC 3630, PSYC 4500, or PSYC 4570● 15 credit hours in Psychology courses: (3 hours each of at least two different lettered menu courses not taken in Year 2)● 9 credit hours in ancillary options³● 3 credit hours in free options⁴	<ul style="list-style-type: none">● PSYC 4520● 6 credit hours in Psychology courses numbered at the 4000 level● 6 credit hours in Psychology courses numbered at any level, including any remaining menu category● 6 credit hours in ancillary options³
HONOURS DOUBLE			
PSYC 1200 or PSYC 1211 and PSYC 1221	<ul style="list-style-type: none">● PSYC 2300¹● 6 credit hours in Psychology courses numbered at the 2000 or 3000 level: (3 hours from each of two different lettered menu categories)²● 12 credit hours in other Honours field● 6 credit hours in an ancillary option³	<ul style="list-style-type: none">● 3 credit hours from PSYC 3630, PSYC 4500, or PSYC 4570● 9 credit hours in Psychology courses: (3 hours from each of three different lettered menu categories not already taken in Year 2)● 12 credit hours in other Honours field	<ul style="list-style-type: none">● PSYC 4520● 6 credit hours in Psychology courses numbered at the 4000 level● 12 credit hours in other Honours field

NOTES:

¹ PSYC 2250 and PSYC 2260 are required when PSYC 2300 is not offered.

² Lettered menu categories are as follows:

Category A: Personality/Social – PSYC 2410, PSYC 2420, PSYC 3450, PSYC 3460

Category B: Developmental – PSYC 2290, PSYC 2310, PSYC 2370

Category C: Learning – PSYC 2440, PSYC 2470

Category D: Cognitive – PSYC 2480, PSYC 3160, PSYC 3170, PSYC 3441, PSYC 3580, PSYC 3610

Category E: Biological – PSYC 2360, PSYC 3330, PSYC 3430

³ Ancillary options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding Psychology courses).

⁴ Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including Psychology courses).

8.27.4 Psychology Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

More information on courses provided by instructors is available in a booklet at the reserve desk, Dafoe Library, the faculty general office, and the Psychology general office.

U1 PSYC 1200 Introduction to Psychology Cr.Hrs.6 (Formerly 017.120) Basic concepts and principles of individual behaviour are examined, particularly those of human development, normal and abnormal behaviour, social psychology, learning, perception, and psychological measurement. Students may not hold credit for PSYC 1200 (or 017.120) and any of: PSYC 1201 (or 017.120), PSYC 1211 (or 017.121) or PSYC 1221 (or 017.122). Prerequisite for all other courses in Psychology.

PSYC 1201 Introduction à la psychologie Cr.Hrs.6 (L'ancien 017.120) Étude des principes et des concepts de base de la psychologie, tels l'apprentissage, la perception, le développement, le comportement normal et anormal. L'étudiant(e) qui détient

les crédits du PSYC 1201 (ou 017.120) ne peut se faire créditer aucun des cours PSYC 1200 (ou 017.120), PSYC 1211 (ou 017.121), ou PSYC 1221 (ou 017.122). Ce cours est préalable à tout autre cours de psychologie. Donné au Collège universitaire de Saint-Boniface.

PSYC 1211 Introduction à la psychologie I Cr.Hrs.3 (L'ancien 017.121) Ce cours traite des processus fondamentaux sous-jacents à la psychologie. On y parle des bases biologiques des comportements, des processus sensoriels, de la perception, des états de conscience, de l'apprentissage et de la mémoire. On décrit également les méthodes de recherche propres à la psychologie scientifique. L'étudiant(e) qui détient les crédits du PSYC 1211 (ou 017.121) ne peut se faire créditer aucun des cours PSYC 1200 (ou 017.120) ou PSYC 1201 (ou 017.120). Donné au Collège universitaire de Saint-Boniface.

PSYC 1221 Introduction à la psychologie II Cr.Hrs.3 (L'ancien 017.122) Ce cours traite des connaissances utilisées par les psychologues pour aider l'être humain dans sa compréhension personnelle et ses interactions sociales. On y parle de motivations, d'intelligence, de personnalité et de psychopathologie. On décrit également les outils et les méthodes de travail propres à la psychologie appliquée. L'étudiant(e) qui détient les crédits du PSYC 1221 (ou 017.122) ne peut se faire créditer aucun des cours PSYC 1200 (ou 017.120) ou PSYC 1201 (ou 017.120). Donné au Collège universitaire de Saint-Boniface.

PSYC 2240 History of Psychology Cr.Hrs.3 (Formerly 017.224) A consideration of some factors contributing to the development of modern psychology. The influence of different schools and systems of psychology on contemporary points of view is considered. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2250 Introduction to Psychological Research Cr.Hrs.3 (Formerly 017.225) Examines psychology as a scientific discipline and describes methods of collecting and interpreting psychological data. Required of all majors and normally taken in the second year. Students may not hold credit for both PSYC 2250 (or 017.225) and PSYC 2251 (or 017.225). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2251 Introduction à la recherche en psychologie Cr.Hrs.3 (L'ancien 017.225) Une étude de la psychologie comme discipline scientifique et la description des méthodes de collecte et d'interprétation des données en psychologie. Ce cours est obligatoire pour la majeure et devrait être suivi en deuxième année. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2251 (ou 017.225) et le PSYC 2250 (ou 17.225). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

M PSYC 2260 Introduction to Research Methods in Psychology Cr.Hrs.3 (Formerly 017.226) Discusses concepts of inductive inference and explanation. The nature of research designs is emphasized. Required of all majors and normally taken in the second year. Students may not hold credit for both PSYC 2260 (or 017.226) and PSYC 2261 (or 017.226). *Prerequisite:* a grade of "C" or better in PSYC 2250 (or 017.225) or PSYC 2251 (or 017.225).

M PSYC 2261 Introduction aux méthodes de recherche en psychologie Cr.Hrs.3 (L'ancien 017.226) Étude des concepts inductifs d'inférence et d'explication. Ce cours mettra l'accent sur les schèmes de recherche en psychologie. Ce cours est obligatoire pour la majeure, et devrait être suivi en deuxième année. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2261 (ou 017.226) et le PSYC 2260 (ou 17.226). *Préalable:* une note minimale de C dans le PSYC 2250 (ou 017.225) ou le PSYC 2251 (ou 017.225). Donné au Collège universitaire de Saint-Boniface.

PSYC 2290 Child Development Cr.Hrs.3 (Formerly 017.229) The course deals with normal psychological development from prenatal life until puberty. The scientific approach to child study is emphasized. Students may not hold credit for both PSYC 2290 (or 017.229) and PSYC 2291 (or 017.229). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2291 Le développement de l'enfant Cr.Hrs.3 (L'ancien 017.229) Étude du développement psychologique normal de la période prénatale à la puberté. Les méthodes de recherche utilisées dans l'étude de l'enfant sont présentées. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2291 (ou 017.229) et le PSYC 2290 (ou 17.229). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 2310 Adolescent Development Cr.Hrs.3 (Formerly 017.231) This course deals with normal psychological development from puberty until adulthood. Results of scientific research are emphasized. Students may not hold credit for both PSYC 2310 (or 017.231) and PSYC 2311 (or 017.231). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2311 Le développement de l'adolescent Cr.Hrs.3 (L'ancien 017.231) Étude du développement psychologique normal de la puberté au stade adulte, à l'aide des résultats de recherches scientifiques. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2311 (ou 017.231) et le PSYC 2310 (ou 17.231). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 2320 Motivation Cr.Hrs.3 (Formerly 017.232) Critical evaluation of current theories and research on motivation are presented. Topics typically surveyed include instinct, exploration, homeostasis, frustration, conflict, and social motivation. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2330 Emotion Cr.Hrs.3 (Formerly 017.233) This course deals with theories and research in the psychology and physiology of emotional behaviour. The theoretical frame of reference for this course is that emotion is a descriptive concept. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2360 Brain and Behaviour Cr.Hrs.3 (Formerly 017.236) This course explores the relationship between brain and behaviour. The student will first learn about the fundamental elements of the nervous system. Lectures will integrate these elements into discussions of systems responsible for sensation, motor control, emotion, sleep, learning and memory. Clinical scenarios will be used to illuminate function. Students may not hold credit for PSYC 2360 (or 017.236) and any of: PSYC 3530 (or 017.353), PSYC 3531 (or 017.353), PSYC 3540 (or 017.354) when titled Brain and Behaviour, or PSYC 3541 (or 017.354). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or

017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2370 Developmental Psychology from Adolescence to Old Age Cr.Hrs.3 (Formerly 017.237) The course deals with psychological changes during young adulthood, middle age, and old age. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2390 Psychology of Women Cr.Hrs.3 (Formerly 017.239) A critical re-examination of existing assumptions about women in the light of contemporary research. Psychology as a discipline and a methodology for investigating human behaviour will be stressed. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2400 The Psychology of Sex Differences Cr.Hrs.3 (Formerly 017.240) Course explores the relationship between: human behaviour, physiology, and sex roles for males and females in our society. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2410 Social Psychology 1 Cr.Hrs.3 (Formerly 017.241) This course provides a basic introduction to the ways in which we affect and are affected by the behaviour of others. Topics typically include: methods used by social psychologists, attitudes and attitude change, social beliefs and judgements, conformity, and persuasion. Students may not hold credit for both PSYC 2410 (or 017.241) and PSYC 2411 (or 017.241). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2411 Psychologie sociale 1 Cr.Hrs.3 (L'ancien 017.241) Ce cours présente une introduction de base aux façons par lesquelles nous affectons et sommes affectés par les comportements des autres. Les thèmes abordés incluent: les méthodes utilisées par les psychologues sociaux, les attitudes et le changement d'attitude, les croyances sociales et le jugement, la conformité et la persuasion. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2411 (ou 017.241) et le PSYC 2410 (ou 017.241). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 2420 Social Psychology 2 Cr.Hrs.3 (Formerly 017.242) This course provides an introduction to basic social psychology topics not covered in PSYC 2410 (or 017.241) or PSYC 2411 (or 017.241), such as social norms and roles, group dynamics, prejudice, aggression, altruism, attraction and close relationships, and intergroup conflict. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2430 Humanistic and Transpersonal Psychology Cr.Hrs.3 (Formerly 017.243) A survey of such topics as search for meaning, personal growth, self-actualization, electric stimulation of the brain, meditation, and extra-sensory perception. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2440 Behaviour Modification Principles Cr.Hrs.3 (Formerly 017.244) The fundamental assumptions, principles, and procedures of behaviour modification are described and illustrated by applications to normal and abnormal human behaviour. Students may also conduct supervised projects in applied areas or in basic behavioural research. Students may not hold credit for both PSYC 2440 (or 017.244) and PSYC 2441 (or 017.244). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2441 Principes de modification du comportement Cr.Hrs.3 (L'ancien 017.244) On discutera les hypothèses fondamentales, les principes et les méthodes de modification du comportement à partir d'exemples tirés du comportement humain, normal et anormal. Les étudiants pourraient effectuer des projets de recherche supervisés dans des secteurs d'application spécifique ou de la recherche fondamentale sur le comportement. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2441 (ou 017.244) et le PSYC 2440 (ou 17.244). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 2450 Behaviour Modification Applications Cr.Hrs.3 (Formerly 017.245) Guidelines for designing, implementing, and evaluating behaviour modification applications are described in detail. Students may also conduct supervised projects in applied areas or in basic behavioural research. Students may not hold credit for both PSYC 2450 (or 017.245) and PSYC 2451 (or 017.245). *Prerequisite:* a grade of "C" or better in PSYC 2440 (or 017.244) or PSYC 2441 (or 017.244).

PSYC 2451 Domaines d'application de la modification du comportement Cr.Hrs.3 (L'ancien 017.245) L'étude d'un certain nombre de domaine d'application de la modification du comportement basée sur les principes et les procédés décrits dans le cours PSYC 2440 (ou 017.244) ou PSYC 2441 (ou 017.244). Les étudiants pourraient effectuer des projets de recherche supervisés dans des secteurs d'application spécifique; ou de la recherche fondamentale sur le comportement. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2451 (ou 017.245) et le PSYC 2450 (ou 17.245). *Préalable:* une note minimale de C dans le PSYC 2440 (ou 017.244) ou PSYC 2441 (ou 017.244). Donné au Collège universitaire de Saint-Boniface.

PSYC 2460 Dyadic Relations Cr.Hrs.3 (Formerly 017.246) This course covers friendship formation and dyadic relations - linking, liking, loving, and leaving from an empirically oriented psychological perspective. *Prerequisite:* a grade of "C" or better in

one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2470 Learning Foundations of Psychology Cr.Hrs.3 (Formerly 017.247) Examines basic learning processes, along with examples of how psychologists study them. Emphasis is placed on how knowledge of basic learning processes can help us understand complex human behaviour. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2480 Cognitive Processes Cr.Hrs.3 (Formerly 017.248) An introduction to the higher mental processes from an information processing perspective. Topics include attention, cognitive development, imagery, language, memory and problem-solving. Extensive reference will be made to recent experimental findings. Students may not hold credit for both PSYC 2480 (or 017.248) and PSYC 2481 (or 017.248). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2481 Processus cognitifs Cr.Hrs.3 (L'ancien 017.248) Une introduction aux processus langage, supérieurs dans une perspective de traitement de l'information. Les sujets abordés incluent l'attention, le développement cognitif, l'imagerie, le langage, la mémoire et la résolution de problèmes. Le cours sera basé sur de nombreuses références aux résultats expérimentaux récents. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 2481 (ou 017.248) et le PSYC 2480 (ou 17.248). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

W PSYC 2500 Elements of Ethology Cr.Hrs.3 (Formerly 017.250) This course involves one three-hour lecture meeting and one laboratory per week and concerns the study of animal behaviour through lectures, films, and field trips. Parakeets, flies, and/or ducklings plus one animal of the student's choice will be observed. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2510 Comparative Psychology Cr.Hrs.3 (Formerly 017.251) This course examines the viability of comparative psychology today, the type of subjects used in comparative psychology research, its history and background, some applications and contemporary viewpoints, and its current status. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 2520 Orientations to Psychological Systems Cr.Hrs.3 (Formerly 017.252) Examines and contrasts humanistic, psychodynamic, cognitive, and behavioural psychology with regard to consciousness vs. the unconscious, free-will vs. determinism, holism vs. analysis, purpose vs. past influences, transcendentalism vs. physicalism, and focus on the person vs. focus on problems. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3160 Perception and Attention Cr.Hrs.3 This lecture course will provide you with a basic introduction to the characteristics and processes of human perception. A scientific approach will be used with specific emphasis on exploring the relation between experimental evidence and theory. Topics to be covered include transmission of information through the visual and auditory systems, visual and auditory pattern recognition, selective and divided attention, and the role of attention and interpretation in perception. Students may not hold credit for both PSYC 3160 and PSYC 3441 (or 017.344). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3170 Research in Cognitive Psychology Cr.Hrs.3 This course will provide an introduction to conducting research in human perception and cognition. Students will gain experience in all facets of the research process including: critical reading of relevant literature, experimental design and preparation, data collection and analysis, and report writing. Activities may include critiques of published research, research proposals, individual and/or group projects, research reports, and individual and/or group presentations. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122); and written consent of instructor.

PSYC 3330 Elements of Physiological Psychology Cr.Hrs.3 (Formerly 017.333) This course presents the fundamentals of the neurobiology of behaviour. Special importance is placed on the information-processing properties of the nervous system in order to provide a uniform framework for the understanding of such topics as perception, attention, sleep and wakefulness, motivation, and learning. Students may not hold credit for both PSYC 3330 (or 017.333) and PSYC 3331 (or 017.333). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3331 Éléments de psychologie physiologique Cr.Hrs.3 (L'ancien 017.333) Ce cours présente les fondements de la neurobiologie du comportement. Une importance particulière est placée dans les propriétés du traitement de l'information du système nerveux de façon à offrir un cadre de référence à la compréhension de thèmes tels la perception, l'attention, le sommeil et la vigilance, la motivation et l'apprentissage. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 3331 (ou 017.333) et le PSYC 3330 (ou 17.333). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC

1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3360 Experimental Child Psychology Cr.Hrs.3 (Formerly 017.336) Selected topics in child psychology are reviewed, such as infant learning and the development of memory processes. Students learn methods for observing child behaviour through laboratory assignments. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3370 Principles of Physiological Psychology Cr.Hrs.3 (Formerly 017.337) This course provides an in-depth examination of the important issues and areas of physiological psychology, with emphasis on recent and exciting developments. Biological systems and processes that underlie behaviour and experience will be studied. *Prerequisite:* a grade of "C" or better in one of: PSYC 3330 (or 017.333), PSYC 3331 (or 017.333), or written consent of department head.

PSYC 3390 Thinking Cr.Hrs.3 (Formerly 017.339) A survey of psychological inquiries into complex mental processes. The course provides a conceptual integration of concept learning, problem-solving, creativity, and fantasy. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3430 Sensory Processes Cr.Hrs.3 (Formerly 017.343) A review of the structure and function of biological receptor systems and how they mediate information about the environment. It includes such topics as receptor transduction, neural correlates of sensation, and neural models of sensory discrimination. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122); and one of the following: PSYC 2360 (or 017.236), PSYC 3330 (or 017.333), PSYC 3331 (or 017.333), both BIOL 1020 and BIOL 1030, both BIOL 1021 and BIOL 1031, ZOO 2530 (or 022.253), or the former 071.125.

PSYC 3441 Perception Cr.Hrs.3 (L'ancien 017.344) Un survol des méthodes et des techniques qui traitent de l'interaction entre les informations sensorielles et les informations existantes au sein de l'organisme. Les sujets traités incluent la psychophysique, les constances perceptives, l'apprentissage perceptuel, l'adaptation et les disorsions. L'étudiant ne peut pas se faire créditer à la fois le PSYC 3441 (ou 017.344) et le PSYC 3160. *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3450 Psychology of Personality Cr.Hrs.3 (Formerly 017.345) The study of theory and research on the principles affecting personality development and structure. Students may not hold credit for both PSYC 3450 (or 017.345) and PSYC 3451 (or 017.345). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3451 Psychologie de la personnalité Cr.Hrs.3 (L'ancien 017.345) Étude de la théorie et de la recherche dans les principes qui gouvernent le développement de la personnalité. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 3451 (ou 017.345) et le PSYC 3450 (ou 17.345). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3460 Abnormal Psychology Cr.Hrs.3 (Formerly 017.346) The study of theory and research on abnormal human behaviour. The major forms of psychological disturbance are discussed. An introduction to the prevention and treatment of psychological disturbances is given. Students may not hold credit for both PSYC 3460 (or 017.346) and PSYC 3461 (or 017.346). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3461 Psychologie de l'anormal Cr.Hrs.3 (L'ancien 017.346) Étude de la théorie et de la recherche dans le domaine du comportement anormal de l'homme. On discute les formes principales des troubles psychologiques, leur prévention et leur traitement. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 3461 (ou 017.346) et le PSYC 3460 (ou 17.346). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3480 Social Learning and Psychopathology Cr.Hrs.3 (Formerly 017.348) This course emphasizes the manner in which pathological and maladaptive behaviour patterns are transmitted to the individual by his/her environment. The major focus is on the way in which various psychosocial forces contribute to specific disorders such as schizophrenia and psychosomatic illnesses. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3490 Individual Differences Cr.Hrs.3 (Formerly 017.349) This course is concerned with the systematic way in which individuals vary. Topics include individual differences as a function of sex, age, race, and socioeconomic status. Specific behaviours to be studied include reaction-time differences, differences in intelligence, differences in aptitudes and interests, and differences in motor abilities. The reasons for some of these differences will also be delineated. Hence genetic and physiological factors, as well as psychological explanations for individual differences, will be studied. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3510 Organizational Psychology Cr.Hrs.3 (Formerly 017.351) An examination of representative theory and research about psychological aspects of behaviour in various types of organizations. Topics include personnel selection, group processes, worker satisfaction, productivity, and consumer behaviour. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3520 Independent Research in Psychology 1 Cr.Hrs.3 (Formerly 017.352) Students carry out a research project and write a paper. Research may include historical, theoretical or experimental analyses of psychological problems. Normally available only to third and fourth year students who are in Honours Psychology or who are Psychology Majors and have completed one of: PSYC 2300 (or 017.230), or both PSYC 2250 (or 017.225) and PSYC 2260 (or 017.226), or both PSYC 2251 (or 017.225) and PSYC 2261 (or 017.226). A student may not hold credit for more than two of PSYC 3520 (or 017.352), PSYC 3560 (or 017.356), PSYC 3590 (or 017.359). *Prerequisite:* prearranged written consent of an individual instructor and written consent of department head.

PSYC 3530 Contemporary Issues 1 Cr.Hrs.3 (Formerly 017.353) The content of this course will vary from year to year, but in general it will entail either some specific topic of prominent interest in psychology or a psychological analysis of some problem of current public interest. Students may not hold credit for both PSYC 3530 (or 017.353) and PSYC 3531 (or 017.353). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3531 Problèmes contemporains 1 Cr.Hrs.3 (L'ancien 017.353) Le contenu de ce cours variera d'année en année, mais traitera généralement d'un sujet spécifique d'actualité concernant la psychologie, ou de l'analyse psychologique d'un problème d'intérêt public. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 3531 (ou 017.353) et le PSYC 3530 (ou 17.353). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3540 Contemporary Issues 2 Cr.Hrs.3 (Formerly 017.354) The content of this course will vary from year to year, but in general it will entail either some specific topic of prominent interest in psychology or a psychological analysis of some problem of current public interest. Students may not hold credit for both PSYC 3540 (or 017.354) and PSYC 3541 (or 017.354). *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3541 Problèmes contemporains 2 Cr.Hrs.3 (L'ancien 017.354) Le contenu de ce cours variera d'année en année, mais traitera généralement d'un sujet spécifique d'actualité concernant la psychologie, ou de l'analyse psychologique d'un problème d'intérêt public. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 3541 (ou 017.354) et le PSYC 3540 (ou 17.354). *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3560 Supervised Field Study in Psychology Cr.Hrs.3 (Formerly 017.356) Students usually do supervised field work in a community setting and write a paper. Normally available only to third and fourth year students who are in Honours Psychology or who are Psychology Majors. A student may not hold credit for more than two of PSYC 3520 (or 017.352), PSYC 3560 (or 017.356), PSYC 3590 (or 017.359). *Prerequisite:* prearranged written consent of an individual instructor and written consent of department head.

PSYC 3580 Language and Thought Cr.Hrs.3 (Formerly 017.358) An examination of recent investigations of human language behaviour. Emphasis will be placed on natural language phenomena, which will be examined within the framework of modern theories of thought. Some of the topics considered include communication, the development of language, and natural language comprehension. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3590 Independent Research in Psychology 2 Cr.Hrs.3 (Formerly 017.359) Students carry out a research project and write a paper. Research may include historical, theoretical or experimental analysis of psychological problems. Normally available only to third and fourth year students who are in Honours Psychology or who are Psychology Majors and have completed one of: PSYC 2300 (or 017.230), or both PSYC 2250 (or 017.225) and PSYC 2260 (or 017.226), or both PSYC 2251 (or 017.225) and PSYC 2261 (or 017.226). A student may not hold credit for more than two of PSYC 3520 (or 017.352), PSYC 3560 (or 017.356), PSYC 3590 (or 017.359). *Prerequisite:* prearranged written consent of an individual instructor and written consent of department head.

PSYC 3600 Environmental Psychology Cr.Hrs.3 (Formerly 017.360) The scientific study of environment/behaviour interactions. The physiological and behavioural effects of the thermal, sonic, luminous, and built environment. Perception and evaluation of environments. Behaviour in domestic, work, and urban environments. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3610 Memory Cr.Hrs.3 (Formerly 017.361) Selected topics in human memory are reviewed, including the physiological and chemical bases for learning and memory, primary determinants of forgetting, memory models, nonverbal memory, organization in memory, and the use of mnemonic schemes to improve memory.

Prerequisite: a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

PSYC 3620 Community Mental Health Cr.Hrs.3 (Formerly 017.362) A general introduction to community mental health theory and practice. The history of psychiatric care and dominant etiological models are briefly reviewed. Factors contributing to the development of community mental health approaches in dealing with psychological problems are discussed and current programs are reviewed. At least one field trip is required. *Prerequisite:* written consent of instructor or department head.

PSYC 3630 Psychological Measurement and Assessment Cr.Hrs.3 (Formerly 017.363) A study of the basic concepts of measurement in psychology and the application of these concepts in selected areas of psychology. The principal topics of the course will be historical foundations, basic concepts such as reliability, validity, and invariance, the use of different tests and instruments, scaling, and the unique aspects of measurement encountered in different areas of psychology. Students may not hold credit for both PSYC 3630 (or 017.363) and PSYC 3631 (or 017.363). *Prerequisite:* a grade of "C" or better in one of: PSYC 2300 (or 017.230), or both PSYC 2250 (or 017.225) and PSYC 2260 (or 017.226), or both PSYC 2251 (or 017.225) and PSYC 2261 (or 017.226), or written consent of department head.

PSYC 3631 Mesure et évaluation en psychologie Cr.Hrs.3 (L'ancien 017.363) Étude et application des principes de la mesure dans divers domaines psychologiques. On étudiera les concepts de validité, de constance, d'échelonnement, de variance, et on offrira une introduction à la construction et l'utilisation de différents tests psychologiques. L'étudiant(e) ne peut se faire créditer à la fois le PSYC 3631 (ou 017.363) et le PSYC 3630 (ou 017.363). *Préalable:* une note minimale de C dans le PSYC 2300 (ou 017.230), ou tous les deux le PSYC 2250 (ou 017.225) et le PSYC 2260 (ou 017.226), ou tous les deux le PSYC 2251 (ou 017.225) et le PSYC 2261 (ou 017.226), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3641 Introduction à la neuropsychologie Cr.Hrs.3 (L'ancien 017.364) Un survol des connaissances actuelles touchant les relations entre le cerveau et les comportements humains. Les sujets suivants sont traités: organisation du système nerveux, les désordres neurologiques, effets des lésions cérébrales sur les comportements (agnosie, aphasie, apraxie, négligence, etc.) asymétrie cérébrale, applications cliniques. *Préalable:* une note minimale de C dans un des cours suivants: PSYC 1200 (ou 017.120) ou PSYC 1201 (or 017.120), ou tous les deux PSYC 1211 (ou 017.121) et PSYC 1221 (ou 017.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

PSYC 3650 Introduction to Clinical Psychology Cr.Hrs.3 (Formerly 017.365) Clinical psychology is presented as both a scientific and an applied discipline. Such topics as assessment, intervention, research, and professional issues are covered. *Prerequisite:* a grade of "C" or better in one of: PSYC 3450 (or 017.345), PSYC 3451 (or 017.345), PSYC 3460 (or 017.346), PSYC 3461 (or 017.346), or written consent of department head.

PSYC 3660 Sport Psychology Cr.Hrs.3 (Formerly 017.366) This course examines the use of psychological knowledge to enhance the development of performance and satisfaction of athletes and others associated with sports. Topics include improving skills of athletes, motivating practice performance, increasing the effectiveness of coaches, and mental preparation for competition. *Prerequisite:* a grade of "C" or better in one of the following: PSYC 1200 (or 017.120) or PSYC 1201 (or 017.120), or both PSYC 1211 (or 017.121) and PSYC 1221 (or 017.122), or written consent of department head.

Honours Courses

All Honours courses have as prerequisite appropriate standing in the Honours Psychology program.

W M PSYC 2300 Advanced General Psychology Cr.Hrs.6 (Formerly 017.230) A lecture and laboratory course introducing basic rationale, logic, and design in research, particularly emphasizing independent research. *Prerequisite:* written consent of department head.

PSYC 3420 Learning Cr.Hrs.6 (Formerly 017.342) A course surveying research in animal and human learning and emphasizing the discovery of basic principles related to the control of behaviour. Major theoretical systems will be considered. *Prerequisite:* written consent of department head.

PSYC 4450 Animal Behaviour 1 Cr.Hrs.3 (Formerly 017.445) The nature-nurture controversy will be discussed, followed by a survey of the diverse behaviours relating to the physical environment (e.g., food storage); predation (e.g. trapping); defence (e.g., camouflage); and migration. *Prerequisite:* written consent of department head.

PSYC 4460 Animal Behaviour 2 Cr.Hrs.3 (Formerly 017.446) A more detailed analysis of selected topics including communication, animal populations, and the social use of space in humans and infrahumans. *Prerequisite:* written consent of department head.

PSYC 4470 Perception Cr.Hrs.3 (Formerly 017.447) Emphasis is on coding and learning in visual perception. Perceptual plasticity is related to the physiology of encoding, information and decision processes, adaptation and constancy phenomena, and perceptual learning in the young. *Prerequisite:* written consent of department head.

PSYC 4480 Thinking Cr.Hrs.3 (Formerly 017.448) A critical evaluation of theory and research in complex mental processes. Topics discussed include information processing, human memory and problem-solving, creative thought, psycholinguistics, and the development of thought. *Prerequisite:* written consent of department head.

PSYC 4490 Comparative Psychology Cr.Hrs.3 (Formerly 017.449) A survey of similarities and differences of behaviour at various phylogenetic levels. Topics include evolution, genetics, sensory processes, neuropsychology, learning processes, and social behaviour. *Prerequisite:* written consent of department head.

PSYC 4500 Psychological Tests Cr.Hrs.3 (Formerly 017.450) Introductory study of the basic concepts in the construction, evaluation, and use of psychological tests, such as varieties of instruments, test data sources, item analysis, and test validity and reliability. *Prerequisite:* a grade of "C" or better in one of: PSYC 2300 (or 017.230), or both PSYC 2250 (or 017.225) and PSYC 2260 (or 017.226), or both PSYC 2251 (or 017.225) and PSYC 2261 (or 017.226); and written consent of department head.

PSYC 4520 Honours Research Seminar Cr.Hrs.6 (Formerly 017.452) In first term there will be an examination of important experimental issues, and several experimental assignments. In addition, each student will propose a research project of greater scope to be conducted under the supervision of a Psychology staff member. In second term, students will carry out their projects and report their findings. *Prerequisite:* 90 credit hours towards honours program, including a grade of "C" or better in three credit hours in PSYC 3630 (or 017.363), PSYC 3631 (or 017.363), PSYC 4500 (or 017.450), or PSYC 4570 (or 017.457); and written consent of department head.

PSYC 4530 Sleep and Dream Research Cr.Hrs.3 (Formerly 017.453) Course covers current research regarding sleep and dreams. Emphasis will be upon methodology and empirical findings. *Prerequisite:* written consent of department head.

PSYC 4540 Contemporary Issues 1 Cr.Hrs.3 (Formerly 017.454) Course content may vary from year to year, but in general it will entail either some specific topic of prominent interest in psychology or a psychological analysis of some problem of current public interest. *Prerequisite:* written consent of department head.

PSYC 4550 Stress and Adjustment Cr.Hrs.3 (Formerly 017.455) Significant aspects of stress research, theory, and management are reviewed. Major course topics are the evolution of the stress concepts, determinants of stress, measurement of stress, effects of stress and principles of adjustment to stress. *Prerequisite:* written consent of department head.

PSYC 4560 Health Psychology Cr.Hrs.3 (Formerly 017.456) This course focuses on understanding how psychological factors contribute to the promotion and maintenance of good health, to the prevention and treatment of illness, and to recovery from or adjustment to existing illness. *Prerequisite:* written consent of department head.

PSYC 4570 Design and Analysis for Psychological Experiments Cr.Hrs.3 (Formerly 017.457) Methods for controlling sources of internal validity in psychological experiments, such as randomization, blocking, factorial configurations, and repeated measurements, will be discussed. Descriptive and multivariate methods of analysis will also be introduced. The use of statistical packages will be illustrated. *Prerequisite:* a grade of "C" or better in one of: PSYC 2300 (or 017.230), or both PSYC 2250 (or 017.225) and PSYC 2260 (or 017.226), or both PSYC 2251 (or 017.225) and PSYC

2261 (or 017.226); and written consent of department head.

PSYC 4580 Elements of Behavioural Pharmacology Cr.Hrs.3 (Formerly 017.458) Data and theories related to psychoactive agents are introduced, with emphasis on therapeutic drug classes, drugs of abuse, and methodological issues in drug research. The focus is on the behavioural analysis of drug action, but a neuropharmacological analysis is developed where it has a firm relationship to the behavioural analysis. *Prerequisite:* written consent of department head.

PSYC 4590 Selected Topics in Social Psychology Cr.Hrs.3 (Formerly 017.459) A seminar in Social Psychology whose content shall vary from year to year. A description of the course is available in advance at the Psychology general office. *Prerequisite:* written consent of department head.

PSYC 4600 Selected Topics in Developmental Psychology Cr.Hrs.3 (Formerly 017.460) The specific content of this course will vary from year to year. A description of the course is available in advance at the Psychology general office. *Prerequisite:* written consent of department head.

PSYC 4610 Social Cognition Cr.Hrs.3 (Formerly 017.461) Focus on the processes determining how people perceive themselves and others in their social world. From topics such as causal attribution, psychological control, personal memory, and social inference, the course will address selected issues from theoretical and empirical perspectives. *Prerequisite:* written consent of department head.

PSYC 4620 Community Mental Health Cr.Hrs.3 (Formerly 017.462) A seminar covering contemporary issues in community mental health and their relation to psychological services. Topics include the history of the community mental health movement, de-institutionalization as a social policy, the etiology and epidemiology of mental disorders, recognition of and response to mental disorders, mental health systems, community-based mental health services, and prevention of mental disorders. Students may not hold credit for both PSYC 4620 (or 017.462) and PSYC 4540 (or 017.454) offered as Community Mental Health. *Prerequisite:* written consent of department head.

PSYC 4630 Behavioural Endocrinology Cr.Hrs.3 (Formerly 017.463) A comparative approach is adopted to examine how hormones influence a diversity of behaviours through their actions on brain function, the physiological substrates of the behaviours, and their development as evolutionary adaptations. Techniques used by behavioural neuroscientists to study the behavioural and neuroendocrine interactions are surveyed. *Prerequisite:* a grade of "C" or better in PSYC 3330 (or 017.333) or PSYC 3331 (or 017.333), and written consent of department head.

8.28 Department of Religion

Head: Dawne McCance

General Office: 328 Fletcher Argue Building

Telephone: 204 474 9516

E-mail: religion@umanitoba.ca

Website: www.umanitoba.ca/religion

8.28.1 Academic Staff

Distinguished Professor Emeritus

Klostermaier, K.K., Dr. Phil.(Gregorian, Rome), Ph.D. (Bombay).

Professors

Grislis, E., B.A.(Gettysburg), B.D. (Lutheran Theological Seminary, Gettysburg), Ph.D. (Yale), Dr.(h.c.) (Latvia), D.D. (h.c.) (St. John's College); **McCance, D.,** B.Sc., M.A., Ph.D. (Manitoba).

Associate Professors

Whicher, I., B.A. (Queen's), M.A. (Concordia), Ph.D. (Cambridge, UK); **Wolfart, J.,** B.A.(Hons.), Ph.D. (Cambridge, UK).

Assistant Professors

Alexandrin, E.R., B.A. (Boston), M.A. (Toronto); **Broadhurst, L.,** B.A. (Toronto), M.A. (Wilfrid Laurier); **Mackendrick, K.,** B.A. (Hons.) (Windsor), M.A., Ph.D. (Toronto).

8.28.2 Program Information

We are a world religions department. Our approach is multi-disciplinary: we engage the full range of human activity commonly deemed "religious," seeking to understand how religions function, how religious discourse evolves, why certain religious perspectives gain prominence and how they are contested. We research and teach about a range of religions, past and present, from around the world, investigating the language, ethical systems, practices, organizations, and institutions within which religions are defined, refined, rejected, or renewed. Given the diversity of this study, we foreground theoretical and methodological questions as central to the coherence of our courses, programs, and fields.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in six credit hours in Religion. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A maximum of 12 credit hours in Religion courses numbered at the 1000-level may be used toward the 30 credit hours for the Major.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in six credit hours in Religion.

A maximum of 12 credit hours in Religion courses numbered at the 1000-level may be used toward the 18 credit hours for the Minor.

Honours Program

For entry to the Honours Program, see Section 4.0: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Other

For the purpose of the Honours and the Major programs, the three areas of study are identified in the course listing with the following letters in brackets after the course title:

A: Western Religious Traditions

B: World Religions

C: Religion and Culture

In addition to courses numbered at the 1000-level, the Department of Religion offers a number of upper-level courses for which there are prerequisites; see course descriptions.

It is not necessary for students to enter the offerings in Religion by way of courses numbered at the 1000-level. Students in any year or program may register for any course in Religion provided they satisfy course and program prerequisites. With written permission of the department head students may take courses numbered at the 4000-level.

In cooperation with St. Paul's College, the Department of Religion offers an arrangement of courses with special emphasis in Catholic studies as an option for students intending to major or minor in Religion. This special emphasis involves completing course RLGN 2850 Contemporary Issues in Roman Catholicism and selecting relevant courses offered in the Faculty of

Arts and the School of Art. Contact the Department of Religion prior to registration in order to select appropriate courses.

It is also possible for students to complete a Specialization in Judaic Studies; contact the Department of Religion for information.

8.28.3 Religion			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours in Religion courses	<ul style="list-style-type: none"> ● 6 credit hours in Religion courses numbered at the 3000 level (with written consent of the department head, students are permitted to substitute Honours courses in the Major) ● 18 credit hours in Religion courses: six credit hours must be taken in each of the following three areas: Western Religious Traditions (A), World Religions (B), and Religion and Culture (C) 		
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours in Religion courses	<ul style="list-style-type: none"> ● 12 credit hours in Religion courses numbered at the 4000 level (with written consent of the department head, students may be permitted to substitute courses numbered at the 3000 level) ● 30 credit hours in Religion courses: six credit hours must be taken in each of the following three areas: Western Religious Traditions (A), World Religions (B), and Religion and Culture (C) 		
MINOR TOTAL: 18 CREDIT HOURS			
6 credit hours in Religion courses	6 credit hours in Religion courses	6 credit hours in Religion courses	
HONOURS SINGLE^{1, 2}			
6 credit hours in Religion courses	<ul style="list-style-type: none"> ● 18 credit hours in Religion courses numbered at the 2000 level ● 12 credit hours in ancillary options 	<ul style="list-style-type: none"> ● 12 credit hours in Religion courses numbered at the 3000 level ● 6 credit hours in Religion courses numbered at the 4000 level ● 6 credit hours in ancillary options 	<ul style="list-style-type: none"> ● 18 credit hours in Religion courses numbered at the 4000 level ● 6 credit hours in ancillary options
HONOURS DOUBLE^{1, 2}			
6 credit hours in Religion courses	<ul style="list-style-type: none"> ● 12 credit hours in Religion courses numbered at the 2000 level ● 12 credit hours in other Honours field ● 6 credit hours in ancillary options 	<ul style="list-style-type: none"> ● 6 credit hours in Religion courses numbered at the 3000 level ● 6 credit hours in Religion courses numbered at the 4000 level ● 12 credit hours in other Honours field 	<ul style="list-style-type: none"> ● 12 credit hours in Religion courses numbered at the 4000 level ● 12 credit hours in other Honours field

NOTES:

¹ Honours students will be expected to obtain six credit hours in each of the study areas B and C. In addition, for purposes of the Honours program, study area A is divided into two parts: (a) Bible and (b) the history of Western religion. Normally an Honours student will be expected to obtain six credit hours in each of those two parts.

² Ancillary options are courses taken from outside the Honours field of study.

8.28.4 Religion Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

Introductory Courses

U1 RLGN 1120 Biblical Hebrew (A) Cr.Hrs.6 (Formerly 020.112) An introductory course with emphasis on basic grammar and syntax. Students will learn to read simple biblical narratives. (Not acceptable for credit towards a Major or Minor in Religion.) Students may not hold credit for both RLGN 1120 (or 020.112) and SEM 1120 (or 055.112).

RLGN 1281 Fondements de la religion chrétienne (A) Cr.Hrs.6 (L'ancien 020.128) Une étude du phénomène de la religion, affirmations chrétiennes fondamentales et choix de sujets sur le débat contemporain. Donnée au Collège universitaire de Saint-Boniface.

U1 W RLGN 1320 Introduction to World Religions (B) Cr.Hrs.6 (Formerly 020.132) An historical survey of the major living religions in terms of their development, ideas and practices as reflected in their literature. Students may not hold credit for RLGN 1320 (or 020.132) and RLGN 1321 (or 020.132).

RLGN 1321 Introduction aux religions du monde (B) Cr.Hrs.6 (L'ancien 020.132) Un aperçu de l'histoire des grandes religions du monde, avec insistance sur le Bouddhisme, l'Hindouisme, les religions de l'Orient et l'Islam à partir de leur littérature. L'étudiant(e) ne peut se faire créditer à la fois le RLGN 1321 (ou 020.132) et le RLGN 1320 (ou 020.132). Donnée au Collège universitaire de Saint-Boniface.

U1 RLGN 1350 The History of Eastern Christianity (A) Cr.Hrs.6 (Formerly 020.135) This course examines the general history of Eastern Christianity. It studies the doctrines and organization of the churches, their spirit and attitude to church unity.

U1 RLGN 1390 Readings in Biblical Hebrew 1 (A) Cr.Hrs.3 (Formerly 020.139) Reading and translation of selected prose portions of the Hebrew Bible. Vocabulary building and review of basic Hebrew grammar. *Prerequisite:* a grade of "C" or better

in RLGN 1120 (or 020.112) or SEM 1120 (or 055.112) or written consent of instructor or department head.

U1 RLGN 1400 Readings in Biblical Hebrew 2 (A) Cr.Hrs.3 (Formerly 020.140) Reading and translation of selected poetic portions of the Hebrew Bible. Vocabulary building and advanced grammar. *Prerequisite:* a grade of "C" or better in RLGN 1390 (or 020.139) or written consent of instructor or department head.

U1 RLGN 1410 Death and Concepts of the Future (C) Cr.Hrs.3 (Formerly 020.141) The course investigates theories, images, and rituals of death, dying and the afterlife in selected world religions. Students may not hold credit for both RLGN 1410 (or 020.141) and the former 020.247.

U1 W RLGN 1420 Ethics in World Religions (C) Cr.Hrs.3 (Formerly 020.142) Examination of the ethical teachings of world religious traditions. Attention will be given to such questions as the nature of the good or virtue, the place of law or commandments, the relationship between religion and morality, the concepts of moral community and the moral self. Students may not hold credit for RLGN 1420 (or 020.142) and any of: RLGN 1421 (or 020.142) or the former 020.245.

RLGN 1421 Éthique religieuse (C) Cr.Hrs.3 (L'ancien 020.142) Un examen de la pensée éthique de représentants d'une ou de plusieurs traditions religieuses. Une attention spéciale est portée sur des sujets comme la nature du bien et de la vertu, la place des lois ou commandements, et en relation entre la religion et la moralité. L'étudiant(e) qui détient le crédits du RLGN 1421 (or 020.142) ne peut se faire créditer aucun des cours RLGN 1420 (or 020.142) ou l'ancien 020.245. Donnée au Collège universitaire de Saint-Boniface.

U1 RLGN 1430 Food: Religious Concepts and Practices (C) Cr.Hrs.3 (Formerly 020.143) This course explores the cultural (communal and social) dimensions of the major world religions through examination of food concepts and practices. Topics studied include: food symbols and rituals in the theory of religion; food proscription and endorsements ("dietary laws"); food in ritual time and space ("menus" and "liturgies"); concepts of plenty and concepts of dearth (ethics of food distribution); food and communication; food and gender/food and the body; feasting and fasting; food, religion and "consumer culture". Students may not hold credit for both RLGN 1430 (or 020.143) and the former 020.131.

U1 W RLGN 1440 Evil in World Religions (C) Cr.Hrs.3 (Formerly 020.144) The

course introduces students to perspectives on evil in selected world religions. Students may not hold credit for both RLG 1440 (or 020.144) and the former 020.138.

U1 RLG 1450 Religion and the Media (C) Cr.Hrs.3 (Formerly 020.145) This course investigates representations of religion in popular media. Through study of a range of media, from newspapers to the internet, the course explores cultural stereotypes about religion, asking how religions are represented, and how they represent themselves, in popular culture.

General Courses

RLGN 2030 Psychology and Religion (C) Cr.Hrs.3 (Formerly 020.203) An examination of selected modern and contemporary psychology and religion interactions. Students may not hold credit for both RLG 2030 (or 020.203) and RLG 2211 (or 020.221).

RLGN 2040 Early Modern/Modern Christianity (A) Cr.Hrs.3 (Formerly 020.204) A chronological survey of Christian practices and teachings from 1500-1900. This course examines dimensions of the "modernization" of Western Christianity, giving particular emphasis to the Protestant and Catholic Reformations, including changes in ritual practice, major theological and other doctrinal disputes, social formations, "elite" and "popular" religion, institutional developments, artistic and literary production. These will be considered in the larger context of the development of "national" churches and the complicated role of Christian ideas and institutions in colonial enterprises, with attention given both to propagation of Western Christianity and its establishment as a "world religion", and to particular local varieties and conditions of Western Christianity. Students may not hold credit for both RLG 2040 (or 020.204) and the former 020.228.

RLGN 2050 Modern and Contemporary Christianity (A) Cr.Hrs.3 (Formerly 020.205) A survey of 20th century Christianity. The course will include an examination of the changing religious, social, and political practices and institutional forms of Christianity since 1900. Students may not hold credit for both RLG 2050 (or 020.205) and the former 020.228.

RLGN 2060 Religion and Violence (C) Cr.Hrs.3 (Formerly 020.206) Violence of many kinds - physical and non-physical, by and against individuals, within and amongst religious groups - plays an integral role in all religious traditions and systems. This course explores this role within the framework of an historical approach to world religions. Themes covered may include: theories of religion and violence; sacrifice; martyrdom; symbolic violence; iconoclasm; blasphemy; heterodoxy and discipline; religious toleration; religious warfare; religion and cultural resistance; religion and domestic violence; religion and non-violence.

RLGN 2070 Indigenous World Religions (B) Cr.Hrs.6 (Formerly 020.207) This course surveys the complex category "indigenous world religions". The course includes historical and critical study of the category "indigenous religion", consideration of various developments that have brought the category to the forefront of the scholarly study of world religions, and survey of methodologies currently available for the study of indigenous traditions. The course addresses a number of themes - oral traditions, myth and social formation, shamanic practices, colonization and religious aspects of resistance, religion and postcolonial identities - approaching these themes through study of indigenous traditions of North and South America, Africa, Asia, Oceania, and Europe.

RLGN 2080 Sikhism (B) Cr.Hrs.3 (Formerly 020.208) An examination of the history and texts of Sikhism, its central figures and practices, and its role in the modern world.

RLGN 2090 Issues in Science and Religion (C) Cr.Hrs.3 A consideration of some of the major issues arising from the intersection of the concepts and interests of the natural sciences with those of the religions of the world. Students may not hold credit for RLG 2090 and the former 020.250.

RLGN 2100 Approaches to the Qur'an (B) Cr.Hrs.3 An introduction to the main features, structure, and contents of the Qur'an as a text and to the manifold ways it has been received, understood, and interpreted by Muslims for over 1400 years.

W RLG 2160 Introduction to the Hebrew Scriptures (A) Cr.Hrs.3 (Formerly 020.216) An introduction to the historical and critical study of the writings of the "Old Testament", the Hebrew Scriptures. Students may not hold credit for both RLG 2160 (or 020.216) and the former 020.240.

W RLG 2170 Introduction to the New Testament (A) Cr.Hrs.3 (Formerly 020.217) An introduction to the historical and critical study of the Christian "New Testament". Students may not hold credit for both RLG 2170 (or 020.217) and the former 020.240.

RLGN 2180 Theory of Nature (C) Cr.Hrs.3 (Formerly 020.218) While the content of this course will vary year-to-year, its constant purpose will be to introduce students to some of the many ways in which "nature" has been theorized. The course will explore historical and cultural contexts in which selected theories of nature have developed. It will also explore implications of different theories of nature for environmental ethics.

RLGN 2211 Psychologie de la religion (C) Cr.Hrs.6 (l'ancien 020.221) Un examen de l'expérience religieuse à la lumière de la psychologie moderne. Il comprend une étude de la religion chez l'individu et la société; de l'enfance et de l'épanouissement de la conscience religieuse; de la psychologie des foules et de l'évangélisme, du culte; de la mystique, de l'immortalité. Donné au Collège universitaire de Saint-Boniface.

RLGN 2231 Étude de l'Ancien Testament (A) Cr.Hrs.6 (l'ancien 020.223) Un aperçu de l'histoire, de la littérature et des idées religieuses de l'Ancien Testament. Donné au Collège universitaire de Saint-Boniface.

RLGN 2350 Major Themes in World Religions (B) Cr.Hrs.6 (Formerly 020.235) A systematic and comparative study of some of the central issues of the major living high-religions of the East and West.

✦ **RLGN 2410 Religion in Canada (C) Cr.Hrs.6** (Formerly 020.241) The goal of the

course is to provide an outline history of the religious institutions and groups in Canada and to explore how they have responded to the peculiar character of Canadian life. Students may not hold credit for RLG 2410 (or 020.241) and RLG 2411 (or 020.241).

✦ **RLGN 2411 Les religions au Canada (C) Cr.Hrs.6** (l'ancien 020.241) Le but de ce cours est de donner un aperçu historique des institutions et groupes religieux au Canada et aussi de voir comment ceux-ci répondent aux caractéristiques spéciales de la vie canadienne. L'étudiant(e) ne peut se faire créditer à la fois le RLG 2411 (ou 020.241) et le RLG 2410 (ou 020.241). Donné au Collège universitaire de Saint-Boniface.

RLGN 2510 Mennonite Studies (C) Cr.Hrs.6 (Formerly 020.251) A study of the history and theology of the Mennonite people from the 16th century to the present.

RLGN 2520 Eastern Christianity in North America (A) Cr.Hrs.3 (Formerly 020.252) A survey of the history and institutions of the major Eastern Christian bodies in North America. Particular reference will be made to the sociological and economic problems, the question of identity and survival, the problem of unity. *Prerequisite:* a grade of "C" or better in RLG 1350 (or 020.135) or written consent of department head.

RLGN 2530 Eastern Christianity in the Contemporary World (A) Cr.Hrs.3 (Formerly 020.253) A study of some modern-day problems such as: politics, nationalism, geography, culture, secularization, and the question of unity. Particular reference will be made to the problem of the church in Eastern Europe. *Prerequisite:* a grade of "C" or better in RLG 1350 (or 020.135) or written consent of department head.

RLGN 2540 Modern Movements in World Religions (B) Cr.Hrs.6 (Formerly 020.254) Major developments of historic living religions from the end of their medieval periods into the 20th century, including the rise of nationalistic prophetic movements and post-independence formulations.

RLGN 2550 History of Early Christian Thought (A) Cr.Hrs.3 (Formerly 020.255) Christian thought from the second century to Augustine.

RLGN 2560 History of Medieval Christian Thought (A) Cr.Hrs.3 (Formerly 020.256) Christian thought from Augustine to the end of the medieval period.

RLGN 2570 Indian Religious Art and Architecture (B) Cr.Hrs.3 (Formerly 020.257) A survey of Major periods and themes in Indian art and architecture (Buddhist, Jain, Hindu); iconography, temples, canons of Indian art; life of Buddha, Rama-cycle and Krsna-complex; socioeconomic background.

W ✦ RLG 2590 Religion and Social Issues (C) Cr.Hrs.3 (Formerly 020.259) The course examines selected ethical-social issues such as abortion, euthanasia, new genetic and reproductive technologies, and environmental and ecological issues, with reference to one or more of the world's religious traditions. Students may not hold credit for both RLG 2590 (or 020.259) and RLG 2591 (or 020.259).

✦ **RLGN 2591 La religion et les problèmes sociaux (C) Cr.Hrs.3** (l'ancien 020.259) Les problèmes tels que l'ordre, la justice, la guerre, le changement social, la désobéissance civile, l'avortement et l'euthanasie seront considérés à la lumière des ressources d'une ou de plusieurs traditions religieuses. L'étudiant(e) ne peut se faire créditer à la fois le RLG 2591 (ou 020.259) et le RLG 2590 (ou 020.259). Donné au Collège universitaire de Saint-Boniface.

RLGN 2630 Problems of Faith and Reason (C) Cr.Hrs.6 (Formerly 020.263) An historical study of certain attempts to solve problems concerning the relationship between religious faith and natural reason.

RLGN 2640 Anti-Semitism and Christianity (A) Cr.Hrs.3 (Formerly 020.264) A survey of the phenomenon of Anti-Semitism as it relates to the Christian community.

† **RLGN 2680 Women and Religion 1 (C) Cr.Hrs.3** (Formerly 020.268) Content of this course may vary from year to year. It will address, through contemporary interpretive models, topics of current and ongoing interest in relation to the understanding and role of women in the world's religious traditions.

† **RLGN 2690 Women and Religion 2 (C) Cr.Hrs.3** (Formerly 020.269) Content of this course may vary from year to year. It will address, through contemporary interpretive models, topics of current and ongoing interest in relation to the understanding and role of women in the world's religious traditions.

RLGN 2700 Religions of China and Japan (B) Cr.Hrs.6 (Formerly 020.270) A study of the history, teachings and developments of Confucianism, Taoism, Shinto and Buddhism in China and Japan from their beginning to the present.

RLGN 2711 Étude du Nouveau Testament (A) Cr.Hrs.6 (l'ancien 020.271) Un aperçu de l'histoire, de la littérature et des idées religieuses du Nouveau Testament. Donné au Collège universitaire de Saint-Boniface.

RLGN 2730 Jews and Judaism in Antiquity (A) Cr.Hrs.3 (Formerly 020.273) The study of the Jewish people and their civilization from their origins in the ancient Near East to the completion of the Hebrew Bible and the redaction of the Talmud.

RLGN 2740 Medieval Jewish Civilization (A) Cr.Hrs.3 (Formerly 020.274) A history of the Jews and their civilization from the close of the Talmud to the 18th century. Topics covered will include Christianity, Islam, Messianism and anti-Semitism.

RLGN 2750 Modern Jewish Civilization (A) Cr.Hrs.3 (Formerly 020.275) A history of the Jews and their civilization from the French Revolution to the last quarter of the 20th century. Topics covered will include the Enlightenment, Emancipation, Racism/Holocaust, Nationalism/Zionism and Religious Denominationalism.

RLGN 2760 Rabbinic Judaism (A) Cr.Hrs.3 (Formerly 020.276) A study of the development of classical rabbinic Judaism from its roots in the Hebrew Bible and the Talmud to the end of the 18th century. Talmud, Law, Mysticism, Theology and Biblical Exegesis are some of the subjects examined.

RLGN 2770 Contemporary Judaism (A) Cr.Hrs.3 (Formerly 020.277) A study of contemporary denominational Judaism and its origins in the classical rabbinic tradition. The focus will be on the denominations active in North America.

RLGN 2780 Classical Islam (B) Cr.Hrs.3 (Formerly 020.278) An examination of the

formation, development and expression of classical Islam. Emphasis is placed on the life and teachings of the Prophet Muhammad, the Qur'an, the Sunna, and the Shi' schism.

RLGN 2790 Contemporary Islam (B) Cr.Hrs.3 (Formerly 020.279) A study of the responses of Islamic communities to the pressures of the modern world. Special note will be taken of the relation between Islam and power.

RLGN 2810 History of Jewish Thought (A) Cr.Hrs.6 (Formerly 020.281) A survey of intellectual and philosophical patterns as exhibited throughout Jewish history. Particular attention will be paid to the cultural, social, and economic influences which gave rise to these patterns.

RLGN 2820 Patterns in Jewish Life (A) Cr.Hrs.6 (Formerly 020.282) A survey of the forms and institutions which made for the expression of Jewish culture. The course will specifically deal with the Jewish life cycle, holy days and holidays, communal structure and family organization.

RLGN 2830 Buddhism (B) Cr.Hrs.6 (Formerly 020.283) A survey of the origins and teachings of Buddhism and its spread throughout Asia and the West. Particular attention will be given to transformations in Buddhist thought and practice as it entered different cultural regions.

RLGN 2840 The Second Vatican Council (A) Cr.Hrs.3 (Formerly 020.284) An historical and theological analysis of the Second Vatican Council, beginning with the situation of the Roman Catholic Church subsequent to the French Revolution. The course will include study of major Vatican II documents. Particular attention will be given to the legacy of Vatican II and to assessment of the Council's impact on the life of the Roman Catholic Church.

RLGN 2850 Contemporary Issues in Roman Catholicism (A) Cr.Hrs.3 (Formerly 020.285) A survey of major movements, thinkers, debates and issues in twentieth-century post-Vatican II Roman Catholicism. Particular attention will be given to the following: magisterium and dissent, social justice, women in the church, ecumenical and inter-religious dialogue, and emergent theologies.

RLGN 2860 Hinduism (B) Cr.Hrs.6 (Formerly 020.286) This course presents an overview of the rich and multi-faceted tradition of Hinduism dealing with its history and development and the religious thinking and experience formed from ancient to modern times. In the first term several foundational aspects of Hindu culture will be examined including the diversity of religious and philosophical perspectives, ritual, mythology, deity figures, and social structure. The second term will deal largely with central themes in the study of Hinduism and explore key issues past and present that enrich our understanding of Hinduism and its global significance today.

RLGN 3100 Rituals of Death and Mourning (C) Cr.Hrs.3 (Formerly 020.310) An exploration of the ritual dimensions of death and mourning in selected religious traditions, including such topics as: burial rites, cremation, funeral ceremonies, gender and mourning, grave goods and grave markers, lamentation and social protest, mortuary practices.

RLGN 3110 Issues in the Study of Religion and Evil (C) Cr.Hrs.3 (Formerly 020.311) An examination of the construction of evil in discourse and ritual, including such topics as: purity and pollution; social boundaries and identity; norms of conformity and non-conformity; institutions of power and authority; morality and evil.

RLGN 3120 Religion and Bioethics (C) Cr.Hrs.3 (Formerly 020.312) An examination of theoretical and practical bioethical issues and how these are engaged by various religious traditions. Students may not hold credit for both RLG 3120 (or 020.312) and the former 020.381.

RLGN 3130 Religion and Modern Thought (C) Cr.Hrs.3 (Formerly 020.313) The idea that religion is a distinct and unique aspect of human activity is a defining feature of modern thought. This course explores aspects of this understanding of religion in various modern intellectual movements from the sixteenth century to the nineteenth century, considering these movements in their particular historical contexts. Topics covered may include: skepticism, northern humanism, religion and European expansion, atheism, religion and the nation state, religion and early modern science, enlightenment, religion and bourgeoisie, imperialism, religion and revolution, religion and evolution. Students may not hold credit for both RLG 3130 (or 020.313) and RLG 3251 (or 020.325).

RLGN 3140 Religion and Postmodern Thought (C) Cr.Hrs.3 (Formerly 020.314) A study of various so-called "postmodern" movements, particularly as these relate to the understanding and study of religion. Students may not hold credit for both RLG 3140 (or 020.314) and RLG 3251 (or 020.325).

RLGN 3150 Buddhism in East Asia (B) Cr.Hrs.3 (Formerly 020.315) An examination of the history and teachings of Buddhism in China and Japan, giving particular attention to processes of adaptation and transformation within the East Asian context. Students may not hold credit for both RLG 3150 (or 020.315) and the former 020.374.

RLGN 3160 Tibetan Religious Traditions (B) Cr.Hrs.3 (Formerly 020.316) A study of the religious traditions, particularly Buddhism, that have developed from antiquity in Tibet. Students may not hold credit for both RLG 3160 (or 020.316) and the former 020.374.

RLGN 3170 Eastern Religions in the West (B) Cr.Hrs.3 (Formerly 020.317) This course considers historical Western interactions with, and representations of, Asian religious traditions. Students may not hold credit for both RLG 3170 (or 020.317) and the former 020.374.

RLGN 3180 Religion in American Culture (C) Cr.Hrs.3 (Formerly 020.318) An examination of the role of religion in American culture from the colonial to the contemporary periods. Students may not hold credit for both RLG 3180 (or 020.318) and the former 020.352.

RLGN 3190 Images of the Prophet Muhammad: Classical and Contemporary Perspectives (B) Cr.Hrs.3 This course addresses the central place of the Prophet Muhammad in Muslim life and religious practice. It examines sources for the life of

Muhammad, considers the Prophet as a model of piety, and gives careful attention to methodological approaches to the study of Islam.

RLGN 3210 Indian Philosophy (B) Cr.Hrs.3 (Formerly 020.321) This course introduces some of the main philosophical schools of Hindu and Buddhist thought, emphasizing the living history of interaction and debate between the various traditions.

RLGN 3220 Indian Religion and Society (C) Cr.Hrs.3 (Formerly 020.322) This course investigates selected topics in religion and society in the region of the Indian sub-continent. Topics will vary from year to year, ranging from a focus on marriage to a study of Buddhist monks and the politics of civil war in Sri Lanka.

RLGN 3230 Gender in Early Christianity (C) Cr.Hrs.3 (Formerly 020.323) This course examines the light shed by ancient writings on the role(s) of women in ancient Christian groups, and on the ideologies of gender promoted or assumed by these groups. Thus the focus, while predominately on women, will extend to the way in which gender identities were constructed and adhered to by males and females in early Christianity..

RLGN 3240 Jesus and the Gospel Writings (A) Cr.Hrs.3 (Formerly 020.324) The aim of this course is to develop a sophisticated understanding of the New Testament Gospels and their sources, and the ideas these writings were intended to communicate; also to reconstruct the outlines of a history of the earliest traditions about Jesus based on the analysis of these writings.

RLGN 3251 La religion et la pensée moderne (C) Cr.Hrs.6 (L'ancien 020.325) Étude des idées contenues dans certaines idéologies, telles que le marxisme, la théorie de l'évolution, les méthodes d'interprétation biblique et la psychologie moderne, contestant les positions traditionnelles des religions. Revues des réfutations apportées par certains penseurs contemporains et des solutions transmises par les mouvements religieux. On ne peut se faire créditer à la fois le RLG 3251 (ou 020.325) et l'ancien 020.134. *Donné au Collège universitaire de Saint-Boniface.*

RLGN 3391 L'Église d'aujourd'hui (A) Cr.Hrs.6 (L'ancien 020.339) Le cours examine l'Église telle qu'elle apparaît dans la Bible; l'à-propos de sa vie dans la société contemporaine; les problèmes de liberté et d'autorité dans la communauté; le mouvement vers l'unité. *Donné au Collège universitaire de Saint-Boniface.*

RLGN 3530 Contemporary Issues 1 Cr.Hrs.3 (Formerly 020.353) Content of this course will vary from year to year but it will deal with some specific topic of current interest in religion, some aspect of methodology in the study of religion, or an analysis from a religious perspective of some problem of current public interest. Students may not hold credit for both RLG 3530 (or 020.353) and RLG 3531 (or 020.353). *Prerequisite:* written consent of department head.

RLGN 3531 Problèmes contemporains 1 (C) Cr.Hrs.3 (L'ancien 020.353) Le contenu de ce cours variera d'année en année. Toutefois, il traitera de sujets particuliers d'intérêt courant en religion, de certains aspects de méthodologie de l'étude de la religion, ou d'une analyse de certains problèmes courants d'intérêt général du point de vue religieux. L'étudiant(e) ne peut se faire créditer à la fois le RLG 3531 (ou 020.353) et le RLG 3530 (ou 020.353). *Préalable:* l'autorisation écrite du professeur. *Donné au Collège universitaire de Saint-Boniface.*

RLGN 3540 Contemporary Issues 2 Cr.Hrs.3 (Formerly 020.354) Content of this course will vary from year to year but it will deal with some specific topic of current interest in religion, some aspect of methodology in the study of religion, or an analysis from a religious perspective of some problem of current public interest. Students may not hold credit for RLG 3540 (or 020.354) and RLG 3541 (or 020.34). *Prerequisite:* written consent of department head.

RLGN 3541 Problèmes contemporains 2 (C) Cr.Hrs.3 (L'ancien 020.354) Le contenu de ce cours variera d'année en année. Toutefois, il traitera de sujets particuliers d'intérêt courant en religion, de certains aspects de méthodologie de l'étude de la religion, ou d'une analyse de certains problèmes courants d'intérêt général du point de vue religieux. L'étudiant(e) ne peut se faire créditer à la fois le RLG 3541 (ou 020.354) et le RLG 3540 (ou 020.354). *Préalable:* l'autorisation écrite du professeur. *Donné au Collège universitaire de Saint-Boniface.*

RLGN 3570 Major Thinkers in the Eastern Christian Tradition (A) Cr.Hrs.6 (Formerly 020.357) An examination of some major figures together with certain specific problems and special movements in the history of Eastern Christian thought. *Prerequisite:* RLG 1350 (or 020.135) or written consent of department head.

RLGN 3640 Religion in the Hellenistic World (A) Cr.Hrs.3 (Formerly 020.364) A study of the philosophical, social, and religious context in which the religions of Judaism and Christianity emerged. *Prerequisite:* written consent of instructor or department head.

RLGN 3750 Topics in Indian Religious Art and Architecture (B) Cr.Hrs.3 (Formerly 020.375) The course will focus on one or more of the religious dimensions of the following: selected motifs in Indian art, the art and architecture of a particular region or epoch, the theoretical assumptions underlying Indian art.

RLGN 3770 Paul the Apostle (A) Cr.Hrs.6 (Formerly 020.377) The ministry of Paul the Apostle in the light of modern historical study, his importance in the formation of Christianity, and examination of selected Pauline letters from the New Testament. *Prerequisite:* a grade of "C" or better in both RLG 2160 (or 020.216) and RLG 2170 (or 020.217) (the former 020.240), or written consent of instructor or department head.

RLGN 3780 Selected New Testament Literature and Themes (A) Cr.Hrs.6 (Formerly 020.378) An intensive study of selected documents and/or themes from the New Testament. *Prerequisite:* a grade of "C" or better in both RLG 2160 (or 020.216) and RLG 2170 (or 020.217) (the former 020.240), or written consent of instructor or department head.

RLGN 3790 Prophets of Ancient Israel (A) Cr.Hrs.6 (Formerly 020.379) The nature and role of prophets in ancient Israelite religion, study of selected examples of Old Testament prophetic literature. *Prerequisite:* a grade of "C" or better in both RLG

2160 (or 020.216) and RLG 2170 (or 020.217) (the former 020.240), or written consent of instructor or department head.

RLGN 3800 Selected Old Testament Literature and Themes (A) Cr.Hrs.6 (Formerly 020.380) An intensive study of selected writings or themes of the Old Testament (the Tanach). *Prerequisite:* a grade of "C" or better in both RLG 2160 (or 020.216) and RLG 2170 (or 020.217) (the former 020.240), or written consent of instructor or department head.

RLGN 3840 The Bible as Story (A) Cr.Hrs.6 (Formerly 020.384) A study of the manner in which biblical storytellers present their tales and the ways in which these narratives have been retold ever since. Particular attention will be paid to Midrash, the tradition of creative retellings of biblical tales. *Prerequisite:* a grade of "C" or better in both RLG 2160 (or 020.216) and RLG 2170 (or 020.217) (the former 020.240), or written consent of department head.

RLGN 3850 Story and Storytelling: Religious Narratives in Context and Performance (C) Cr.Hrs.3 (Formerly 020.385) An investigation of the importance of narrative in selected religious traditions. The course will survey a variety of stories in their religious contexts, giving particular attention to the following issues: orality and textual authority, transmission and transformation, interpretation and power. The course will involve study of various approaches to myth and narrative analysis, both of textual sources and of performative traditions.

RLGN 3870 The Thought of Bernard Lonergan (A) Cr.Hrs.3 (Formerly 020.387) A study of the thought of the twentieth-century Canadian Jesuit, Bernard Lonergan, including his work on method in theology, on ways of knowing and on ethics.

Honours Courses

RLGN 4060 The Yoga Tradition (B) Cr.Hrs.3 (Formerly 020.406) This course explores the rich, diverse, and highly complex Yoga tradition, emphasizing classical and medieval forms of Yoga philosophy and practice within Hinduism. As well as tracing historical development of the Yoga tradition, the course highlights the meaning and purpose of Yoga in its classical expression and considers the growing popularity and relevance of Yoga in the modern world. *Prerequisite:* written consent of department head.

RLGN 4070 Prophets and/or Revolutionaries: Christianity and Political Culture since 1500 (C) Cr.Hrs.3 (Formerly 020.407) This course explores both the material and ideological circumstances linking major religious and political upheavals in "the West" over the course of the modern period. Using case studies (e.g. the German Peasants. War / Radical Reformation; the Puritan Revolution / English Civil War; the French Revolution; the Riel Revolt; contemporary Guatemala) from the sixteenth to the twentieth centuries, the course introduces students of religion to the methods and practices of the "social history of ideas". *Prerequisite:* written consent of department head.

RLGN 4080 Critical Theory and Religion (C) Cr.Hrs.3 (Formerly 020.408) An examination of the work of the Frankfurt School (Theodor Adorno, Max Horkheimer, and Herbert Marcuse) and Jürgen Habermas as it relates to the study of religion. Topics will include: the nature and scope of reason and enlightenment, disenchantment and modernity, ideology and ideology critique, and the separation of science, morality, and art. *Prerequisite:* written consent of department head.

RLGN 4090 Advanced Studies in Early Modern Christianity (A) Cr.Hrs.3 (Formerly 020.409) An in-depth study of selected topics pertaining to institutional and ideological developments in Western Christianity 1500-1700. *Prerequisite:* written consent of department head.

RLGN 4100 Advanced Studies in Buddhism (B) Cr.Hrs.3 (Formerly 020.410) An in-depth study of selected topics from the wide cultural and historical range of Buddhist traditions. *Prerequisite:* written consent of department head.

RLGN 4110 Studies in Religion and Cultural Memory (C) Cr.Hrs.3 (Formerly 020.411) An examination of selected cultural memory and religion topics. *Prerequisite:* written consent of department head.

RLGN 4120 Augustine (A) Cr.Hrs.3 (Formerly 020.412) A contextual overview and analysis of the religious thought of Augustine of Hippo, giving attention to Manichean and Neo-Platonist influences and to Augustine's creative concerns with God, Trinity, Scriptures, and grace, and his view of symbolism, time, history, and just war. Both Roman Catholic and Protestant perspectives on Augustine will be considered. Special attention will be given to Augustine's shaping of medieval Roman Catholic understandings of church, priesthood, merit, asceticism, and monasticism; as well as Protestant views of grace, freedom, conversion, pre-destination, and sacraments. *Prerequisite:* written consent of department head.

RLGN 4130 Calvin and the Rise of Anglicanism (A) Cr.Hrs.3 (Formerly 020.413) An advanced study of the major religious insights of John Calvin in relation to the rise of Anglicanism in the 16th century. *Prerequisite:* written consent of department head.

RLGN 4140 Luther and the Rise of Anabaptism (A) Cr.Hrs.3 (Formerly 020.414) The course explores the exclusive commitment to the Bible and the notable distance from Rome which Martin Luther and the evangelical Anabaptists shared; the course also explores their mutual differences. Traditional Catholic beliefs held by Luther after his break with Rome will be examined (such as his doctrines of infant baptism and just war theory), as will his radical views of grace, justification by faith, and priesthood. Alongside Luther, the course approaches the teachings of evangelical Anabaptism, considering its views on tolerance, freedom from state oppression, congregation-based authority, infant baptism, the real presence, traditional ordination, and the hierarchical structure of the church. *Prerequisite:* written consent of department head.

RLGN 4150 The Religious Thought of St. Thomas / Aquinas and the Study of Religion (A) Cr.Hrs.3 (Formerly 020.415) This seminar interprets the religious thought of St. Thomas Aquinas and assesses his significance for the academic study of religion. *Prerequisite:* written consent of department head.

RLGN 4160 Religion and Philosophy (C) Cr.Hrs.3 (Formerly 020.416) An examination of the relation between philosophical and religious thought through in-depth study of a selected thinker or thinkers. Students may not hold credit for RLG 4160 (or 020.416) and the former 020.442. *Prerequisite:* written consent of department head.

RLGN 4170 Seminar in Comparative Religious Ethics (C) Cr.Hrs.3 (Formerly 020.417) An examination of selected topics in comparative religious ethics. *Prerequisite:* written consent of department head.

RLGN 4180 Advanced Studies in Islam (B) Cr.Hrs.3 (Formerly 020.418) An in-depth study of selected topics in Islamic philosophy and tradition. *Prerequisite:* written consent of department head.

RLGN 4190 Advanced Studies in Hinduism (B) Cr.Hrs.3 (Formerly 020.419) An in-depth study of selected topics in the philosophy, history, literature, and practices of Hinduism. *Prerequisite:* written consent of department head.

RLGN 4200 Early Christian Gnosticism (A) Cr.Hrs.3 (Formerly 020.420) This course constitutes a partial introduction to the historical and critical study of earliest Christianity and the writings of the Christian "New Testament". The main emphasis will lie on a study of the New Testament and contemporary writings that show strong mystical and Gnostic-leaning tendencies. Above all, the course will focus on the Gospel of Thomas, the Gospel of John, and other New Testament writings related to the Gospel of John. *Prerequisite:* written consent of the department head.

RLGN 4210 The Sayings of Jesus (A) Cr.Hrs.3 (Formerly 020.421) This course examines the sayings gospel "Q" and the Gnostic Gospel of Thomas in detail, focusing on both their literary and historical dimensions. *Prerequisite:* written consent of the department head.

RLGN 4220 Incorporations of History (C) Cr.Hrs.3 (Formerly 020.422) This course explores social formation in relation to "religious" representation. Using examples drawn from Western, mainly Christian, traditions, the course traces the discursive construction of a wide range of social institutions as bodies. *Prerequisite:* written consent of the department head.

RLGN 4230 Studies in Body History (C) Cr.Hrs.3 (Formerly 020.423) A study in the religious-cultural history of the body, this course explores the multiple meanings given to the body, sexuality and sexual difference in historical and contemporary religious traditions. The course gives particular attention to theories of representation of body, and includes study of both written and performative sources. Students may not hold credit for both RLG 4230 (or 020.423) and the former 020.456. *Prerequisite:* written consent of the department head.

RLGN 4240 Research Methods for the Academic Study of Religion (A, B) Cr.Hrs.3 (Formerly 020.424) A survey of current techniques and resources. This course introduces students to such topics as: literature searches and area assessments; effective use of abstracts; handbooks and electronic resources; critical bibliography; academic publishing; research ethics and research sponsorship. Particular attention will be given to the diversity of disciplinary traditions and conventions as they affect the academic study of religion. *Prerequisite:* written consent of the department head.

RLGN 4250 Thesis Seminar (A, B) Cr.Hrs.3 (Formerly 020.425) This course introduces students to all aspects of dissertation and research-paper writing, from effective planning and drafting to editorial techniques and typescript presentation. Particular emphasis will be on practices of peer criticism and on how to revise written work in response to such criticism. *Prerequisite:* written consent of the department head.

RLGN 4260 Theoretical Approaches: Western Religions (C) Cr.Hrs.3 (Formerly 020.426) This course explores theoretical approaches to the study of western religions, focusing in any given year on one of the following: theories of representation, theories of interpretation, theories of contestation. Students may not hold credit for both RLG 4260 (or 020.426) and the former 020.451. *Prerequisite:* written consent of the department head.

RLGN 4270 Theoretical Approaches: Eastern Religions (C) Cr.Hrs.3 (Formerly 020.427) This course explores theoretical approaches to the study of eastern religions, focusing in any given year on one of the following: theories of representation, theories of interpretation, theories of contestation. Students may not hold credit for both RLG 4270 (or 020.427) and the former 020.452. *Prerequisite:* written consent of the department head.

RLGN 4400 Studies in Contemporary Theology (C) Cr.Hrs.6 (Formerly 020.440) Examination of the thought of some major 20th-century thinkers. *Prerequisite:* a grade of "C" or better in 12 credit hours in Religion or written consent of instructor or department head.

RLGN 4430 Selected Topics in Religion 1 Cr.Hrs.3 (Formerly 020.443) An intensive study of specially selected topics in the field of religion. The subject matter of the course will vary from year to year. *Prerequisite:* written consent of department head.

RLGN 4440 Selected Topics in Religion 2 Cr.Hrs.3 (Formerly 020.444) An intensive study of specially selected topics in the field of religion. The subject matter of the course will vary from year to year. *Prerequisite:* written consent of department head.

RLGN 4500 Current Issues in Biblical Studies (A) Cr.Hrs.6 (Formerly 020.450) A seminar on one or more selected issues in contemporary biblical studies. *Prerequisite:* written consent of department head.

RLGN 4540 The Thought of Paul Tillich (C) Cr.Hrs.3 (Formerly 020.454) A study of the major concepts in Tillich's theological perspective. Special attention is given to the structure of his Systematic Theology. *Prerequisite:* written consent of department head.

RLGN 4550 Selected Topics in Religion 3 Cr.Hrs.6 (Formerly 020.455) An intensive study of specially selected topics in the field of religion. The subject matter of the course will vary from year to year. *Prerequisite:* written consent of department head.

8.29 Department of Sociology

Head: Stephen Brickey
General Office: 318B Ibister Building
Telephone: 204 474 9260
E-mail: sociology@umanitoba.ca
Website: www.umanitoba.ca/sociology

8.29.1 Academic Staff

Professor Emeritus

Driedger, L., A.B. (Kansas), B.D. (Bethany Biblical Seminary), M.A. (Chicago), Ph.D. (Michigan State), F.R.S.C.

Senior Scholars

Baureiss, G., B.Ed. (Austria), B.A.(Hons.) (Toronto), M.A. (Calgary), Ph.D.(Alberta); **Boldt, E.**, B.Sc., B.A. (Calgary), M.A., Ph.D. (Alberta); **Currie, R.F.**, M.A. Ph.D. (Fordham); **Driedger, L.**, A.B. (Kansas), B.D. (Bethany Biblical Seminary), M.A. (Chicago), Ph.D. (Michigan State), F.R.S.C.; **Goldstein, J.E.**, B.A. (San Francisco), M.A., Ph.D. (Washington State); **Rennie, D.**, B.Sc. (Sir George Wms.), M.A. (McGill), Ph.D. (Yale); **Tavuchis, N.**, B.A., M.A., Ph.D. (Columbia).

Professors

Albas, D.C., B.A. (Alberta), Ph.D. (Colorado); **Comack, A.E.**, B.A. (Winnipeg), M.A. (Queen's), Ph.D. (Alberta); **Kwong, J.**, B.A. (Hong Kong), M.Ed. (Alberta), Ph.D. (Toronto), F.R.S.C.; **Linden, E.W.**, B.A., M.A. (Alberta), Ph.D. (Washington); **Olsen, G.M.**, B.A. (Windsor), M.A., Ph.D. (Toronto); **Ramu, G.N.**, B.A., M.A., (Mysore), M.A., Ph.D. (Illinois); **Roberts, L.**, B.A., M.A., Ph.D. (Alberta); **Segall, A.**, B.A., M.A. (Manitoba), Ph.D. (Toronto); **Smandych, R.C.**, B.A. (Saskatchewan), M.A. (Simon Fraser), Ph.D. (Toronto).

Associate Professors

Axelrod, C.D., B.A.(Sir George Williams), M.A., Ph.D.(York); **Brickey, S.L.**, B.A. (Wm. Penn.), M.A., Ph.D. (Iowa); **Grant, K.R.**, B.A., M.A. (Manitoba), Ph.D. (Boston); **Kueneman, R.**, B.A. (Waterloo), M.A., Ph.D. (Ohio State); **Payne, B.J.**, B.A. (York), M.Sc., Ph.D. (Toronto); **Prentice, S.L.**, B.A. (Toronto), M.E.S., Ph.D. (York); **Taylor, K.W.**, B.A.(Hons.), M.A. (Saskatchewan), Ph.D. (Southern Illinois); **Ursel, E.J.**, B.A., M.A. (Manitoba), Ph.D. (McMaster).

Assistant Professors

Wilkinson, L., B.A., M.A. (Saskatchewan), Ph. D. (Alberta); **Woolford, A.**, B.A. (Victoria), M.A. (Western Ontario), Ph.D. (UBC).

Adjunct Professors

Strain, L.A., B.A. (Brandon), M.N.R.M. (Manitoba), Ph.D. (Toronto); **Weinrath, M.**, B.A. (Simon Fraser), M.A. (Washington State), Ph.D. (Alberta).

Instructor II

Cormier, F., B.Sc., B.A., M.A. (Manitoba).

Instructor I

Kampen, K., B.A.(Hons.) Winnipeg, M.A. (Manitoba).

8.29.2 Program Information

Sociology examines the patterns of interaction among individuals and the group activity that emerges from such interaction. A basic premise is that social behaviour, and society itself, cannot be fully understood simply by studying the individuals involved. Sociology has a special interest in all those intermediate forms of association between the family and the state which together comprise much of the basis for social solidarity and cohesion. Whether individuals cooperate, compete, or fight is in large measure determined by forces outside themselves, by social forces that encourage or restrain their behaviour.

Criminology is the study of the patterns and causes of crime in society and the operation of the criminal justice system. The criminology program introduces students to the dimensions of the crime problem, the theories advanced to explain the various types of crime, and the array of agencies and programs designed to prevent, control, and respond to criminal activity. Attention is also given to issues relating to women and crime, youth and crime, the sociology of law, criminal law and procedure, comparative criminology, and community policing.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in SOC 1200 or a grade of "C" or better in both SOC 1210 and SOC 1220. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in SOC 1200 or a grade of "C" or better in both SOC 1210 and SOC 1220.

Honours Program

For entry to the Honours Program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

8.29.3 Sociology

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR SOCIOLOGY TOTAL: 30 CREDIT HOURS			
SOC 1200 or SOC 1210 and SOC 1220	<ul style="list-style-type: none"> ● SOC 2220 ● SOC 2290 ● one of SOC 3330, SOC 3350, SOC 3360, SOC 3390, SOC 3470 ● 12 credit hours in Sociology courses numbered at the 2000 or 3000 level 		
GENERAL MAJOR CRIMINOLOGY TOTAL: 30 CREDIT HOURS			
SOC 1200 or SOC 1210 and SOC 1220	SOC 2290, SOC 2510, SOC 2610	12 credit hours from SOC 3700, SOC 3710, SOC 3720, SOC 3740, SOC 3760, SOC 3780, SOC 3790, SOC 3800, SOC 3830, SOC 3850, SOC 4520	
ADVANCED MAJOR SOCIOLOGY (NOT CURRENTLY OFFERED) TOTAL: 48 CREDIT HOURS			
SOC 1200 or SOC 1210 and SOC 1220	<ul style="list-style-type: none"> ● SOC 2220, SOC 2290, SOC 2330 ● one of SOC 2390, SOC 3370, SOC 3810, SOC 3870 ● one of SOC 3330, SOC 3350, SOC 3360, SOC 3390, SOC 3470 ● 6 credit hours in Sociology courses numbered at the 2000 or 3000 level 		18 credit hours in Sociology courses numbered at the 2000 or 3000 level
MINOR TOTAL: 18 CREDIT HOURS			
SOC 1200 or SOC 1210 and SOC 1220	12 credit hours in Sociology courses numbered at the 2000 or 3000 level		

HONOURS SINGLE¹

SOC 1200 or SOC 1210 and SOC 1220	<ul style="list-style-type: none">● SOC 2010, SOC 2220 and SOC 2290● 6 credit hours in Sociology● 12 credit hours in ancillary options	<ul style="list-style-type: none">● 9 credit hours from SOC 3330, SOC 3350, SOC 3360, SOC 3390, SOC 3470● 9 credit hours in Sociology courses numbered at the 2000 or 3000 level● 12 credit hours in ancillary options	<ul style="list-style-type: none">● SOC 4450, SOC 4460, SOC 4470, SOC 4480, and SOC 4560● 6 credit hours in ancillary options
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HONOURS DOUBLE¹

SOC 1200 or SOC 1210 and SOC 1220	<ul style="list-style-type: none">● SOC 2010, SOC 2220 and SOC 2290● At least 36 credit hours in other Honours field● At least 6 credit hours in ancillary options	9 credit hours from SOC 3330, SOC 3350, SOC 3360, SOC 3390, SOC 3470	SOC 4450, SOC 4460, SOC 4470, SOC 4480, and SOC 4560
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NOTES:

¹ Ancillary options are courses taken from outside the Honours field of study.

8.29.4 Sociology Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

Course numbers ending in odd numbers (1, 3, 5, 7, 9) indicate courses given at Collège universitaire de Saint-Boniface.

U1 SOC 1200 Introduction to Sociology Cr.Hrs.6 (Formerly 077.120) A systematic introduction to the scientific perspective of sociology. The following areas will be treated: culture, socialization, groups, social stratification, associations, collective behaviour, and urban and political institutions. Students may not hold credit for SOC 1200 (or 077.120) and any of: SOC 1201 (or 077.120), SOC 1211 (or 077.121), or SOC 1221 (or 077.122).

SOC 1201 Introduction à la sociologie Cr.Hrs.6 (L'ancien 077.120) Introduction systématique à la perspective sociologique: points de vue théorique, méthodes et domaines de recherche. Parmi ces domaines, on initiera l'étudiant(e) à l'étude de la culture, la socialisation, les groupes, la stratification sociale, les mouvements sociaux, la population, la famille, la religion, le système scolaire, les minorités, la déviance, les institutions politiques. L'étudiant(e) qui détient les crédits du SOC 1201 (ou 077.121) ne peut se faire créditer aucun des cours SOC 1200 (ou 077.120), SOC 1211 (ou 077.121), ou SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 1201 Introduction à la microsociologie Cr.Hrs.3 (L'ancien 077.121) Introduction systématique à la perspective sociologique: points de vue théorique, méthodes et domaines de recherche. On initiera l'étudiant(e) à l'étude de la socialisation, des groupes, de la famille, de l'école, des minorités, des rôles sexuels. L'étudiant(e) qui détient les crédits du SOC 1211 (ou 077.121) ne peut se faire créditer aucun des cours SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120). Donné au Collège universitaire de Saint-Boniface.

SOC 1221 Introduction à la macrosociologie Cr.Hrs.3 (L'ancien 077.122) Introduction systématique à la perspective sociologique: points de vue théorique, méthodes et domaines de recherche. On initiera l'étudiant(e) à la culture, la stratification sociale, les mouvements sociaux, la population, les institutions politiques, les différents systèmes de la société. L'étudiant(e) qui détient les crédits du SOC 1221 (ou 077.122) ne peut se faire créditer aucun des cours SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120). *Préalable:* une note minimale de C dans le SOC 1211 (ou 077.121). Donné au Collège universitaire de Saint-Boniface.

SOC 2220 Sociological Theoretical Foundations Cr.Hrs.3 (Formerly 077.222) A review of classical sociological theory. The focus will be on the central figures and schools of thought in Sociology. Students may not hold credit for both SOC 2220 (or 077.222) and SOC 2221 (or 077.222). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2221 Théories sociologiques classiques Cr.Hrs.3 (L'ancien 077.222) Un aperçu de la théorie sociologique classique. Ce cours mettra l'accent sur les principaux penseurs et les principales écoles de pensée en sociologie. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2221 (ou 077.222) et le SOC 2220 (ou 077.222). *Préalable:* une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 2270 Urban Sociology Cr.Hrs.3 (Formerly 077.227) A study of urban communities from demographic, ecological, and institutional points of view. Students may not hold credit for both SOC 2270 (or 077.227) and SOC 2271 (or 077.227). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2271 Sociologie urbaine Cr.Hrs.3 (L'ancien 077.227) Une étude de la communauté urbaine du point de vue de la démographie, de l'écologie et de l'institution. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2271 (ou 077.227) et le SOC 2270 (ou 077.227). *Préalable:* une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122).

077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

M SOC 2290 Introduction to Research Methods Cr.Hrs.6 (Formerly 077.229) An introduction to quantitative and qualitative scientific methods of investigating social phenomena. The course will include introductions to the assumptions of scientific inquiry, the conceptualization of research problems, basic statistical analysis, and use of a packaged computer program. Students may not hold credit for both SOC 2290 (or 077.229) and SOC 2291 (or 077.229). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

M SOC 2291 Introduction aux méthodes de recherche Cr.Hrs.6 (L'ancien 077.229) Ce cours initie l'étudiant aux méthodes quantitatives et qualitatives d'appréhension des phénomènes sociaux. Il traite des présupposés de l'enquête scientifique, de la conceptualisation des problèmes de recherche, de l'analyse statistique élémentaire et de l'utilisation d'un programme informatisé pertinent. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2291 (ou 077.229) et le SOC 2290 (ou 077.229). *Préalable:* une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 2310 Selected Social Problems Cr.Hrs.3 (Formerly 077.231) An examination of one or more contemporary social problems, other than crime and delinquency. Issues that might be addressed include poverty, war, environment, licit and illicit drugs, and death and dying. Consult the Registration Guide or contact the instructor for specific content in any particular academic year. Students may not hold credit for both SOC 2310 (or 077.231) and SOC 2311 (or 077.231). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2311 Choix de problèmes sociaux Cr.Hrs.3 (L'ancien 077.231) Analyse d'un ou de plusieurs problèmes sociaux contemporains (autres que le crime et la délinquance). On pourra examiner, par exemple, des problèmes tels que la pauvreté, la guerre, l'environnement, la consommation de drogues, la mortalité. Pour plus de détails sur le contenu du cours, consulter le guide d'inscription ou s'adresser au professeur. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2311 (ou 077.231) et le SOC 2310 (ou 077.231). *Préalable:* une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

☛ SOC 2320 Canadian Society and Culture Cr.Hrs.3 (Formerly 077.232) A sociological analysis of Canadian institutions with reference to historical, cultural, economic, and political perspectives. Students may not hold credit for both SOC 2320 (or 077.232) and SOC 2321 (or 077.232). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

☛ SOC 2321 La société canadienne et sa culture Cr.Hrs.3 (L'ancien 077.232) Ce cours procède à une analyse sociologique des institutions canadiennes en adoptant, comme point de référence, des perspectives historiques, culturelles, économiques et politiques. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2321 (ou 077.232) et le SOC 2320 (ou 077.232). *Préalable:* une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 2330 Social Psychology in Sociological Perspective Cr.Hrs.3 (Formerly 077.233) The course examines the interrelations of the individual, the group, and society, with emphasis on interaction as the process that gives form, direction, and meaning to the everyday lives of people. Topics to be discussed may include: self-esteem, identity, impression management, motivation and emotion. Students may not hold credit for both SOC 2330 (or 077.233) and SOC 2331 (or 077.233). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2331 Psychosociologie Cr.Hrs.3 (L'ancien 077.233) Ce cours examine la relation entre individu, groupe et société en soulignant l'interaction comme étant le proc-

essus qui donne à la vie quotidienne sa forme, sa direction et sa signification. Les sujets discutés peuvent inclure: le soi, le processus de formation de l'identité, la motivation, le contrôle des émotions. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2331 (ou 077.233) et le SOC 2330 (ou 77.233). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 2340 Socialization Cr.Hrs.3 (Formerly 077.234) The study of the process whereby children and adults are incorporated into human groups. Includes a consideration of the linkages between social structure and socialization practise. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122); SOC 2330 (or 077.233) or SOC 2331 (or 077.233) is recommended.

SOC 2350 Collective Behaviour Cr.Hrs.3 (Formerly 077.235) The analysis of various forms of collective behaviour, such as crowds, mobs, and social movements. The underlying social conditions, action processes, and consequences of such behaviour will be considered. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2360 Small Group Interaction Cr.Hrs.3 (Formerly 077.236) The basic sociological concepts and methods used in analyzing and designing small groups such as the family, children's groups, work groups, and friendship groups. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122); SOC 2330 (or 077.233) or SOC 2331 (or 077.233) is recommended.

✳️ **SOC 2370 Ethnic Relations Cr.Hrs.3** (Formerly 077.237) Introduction to the social and social psychological aspects of ethnic relations in Canada. Students may not hold credit for both SOC 2370 (or 077.237) and SOC 2371 (or 077.237). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

✳️ **SOC 2371 Rapports ethniques Cr.Hrs.3** (L'ancien 077.237) Une introduction aux dimensions sociologiques et socio-psychologiques des rapports ethniques au Canada. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2371 (ou 077.237) et le SOC 2370 (ou 77.237). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 2380 Sociology of Religion Cr.Hrs.3 (Formerly 077.238) A study of the nature and function of religion as a social institution with emphasis on early theorists, primitive religions, belief systems, and typologies. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2390 Social Organization Cr.Hrs.3 (Formerly 077.239) The process of ordering social life and the structures that result. Power, conflict, social control, bureaucracy, industrialization, urbanization, and centralization. Students may not hold credit for both SOC 2390 (or 077.239) and SOC 2391 (or 077.239). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2391 L'organisation sociale Cr.Hrs.3 (L'ancien 077.239) Étude des forces qui influencent la formation de l'ordre dans la société, son maintien et son changement, contrôle social, conflit de pouvoir, intégration. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2391 (ou 077.239) et le SOC 2390 (ou 77.239). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 2460 The Family Cr.Hrs.3 (Formerly 077.246) A sociological analysis of the various family arrangements and practices in contemporary societies and their historical roots. An examination of the relationships between family and other institutions in the context of widespread social changes. Students may not hold credit for both SOC 2460 (or 077.246) and SOC 2461 (or 077.246). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2461 La famille Cr.Hrs.3 (L'ancien 077.246) Analyse sociologique des diverses formes et pratiques familiales dans les sociétés contemporaines, ainsi que de leur évolution à partir de formes plus anciennes. Sont également étudiés les rapports entre les formes familiales et le contexte social global. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2461 (ou 077.246) et le SOC 2460 (ou 77.246). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

‡ **SOC 2470 Courtship and Marriage Cr.Hrs.3** (Formerly 077.247) Mate selection, marital interaction, adjustment, changing roles of wives and husbands, with special emphasis on division of labour, power relations, and sexual adjustment in contemporary Western marriage and across cultures. Experimental marriage forms will be examined. Students may not hold credit for both SOC 2470 (or 077.247) and SOC 2471 (or 077.247). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

‡ **SOC 2471 Les fréquentations et le mariage Cr.Hrs.3** (L'ancien 077.247) Discussion comparative et interculturelle portant sur le choix du conjoint, les rôles au sein du ménage, les modèles d'interaction conjugale. Le cours insistera particulièrement sur les rapport conjugaux observables dans les sociétés développées contemporaines, sous l'angle du partage des tâches ménagères et des rapports de pouvoir au sein du couple. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2471 (ou 077.247) et le

SOC 2470 (ou 77.247). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 2480 Population Problems Cr.Hrs.3 (Formerly 077.248) A survey of the impact of population growth, contraction, density and distribution on the social, political and economic institutions of developing and developed societies. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2490 Sociology of Health and Illness Cr.Hrs.3 (Formerly 077.249) A general introduction to health sociology. The course examines health and illness as social concepts by exploring the personal and structural determinants of health status, and everyday health care practices in which people engage to maintain their health and to manage illness. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2510 Criminology Cr.Hrs.3 (Formerly 077.251) A general introduction to theories of deviant behaviour and criminology. The explanation of crime with reference to physical, psychological, and social factors. Students may not hold credit for both SOC 2510 (or 077.251) and SOC 2511 (or 077.251). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2511 Criminologie Cr.Hrs.3 (L'ancien 077.251) Introduction générale aux théories de comportement déviant et de criminologie. L'explication du crime en se référant aux facteurs physiques, psychologiques et sociaux. L'étudiant(e) ne peut se faire créditer à la fois le SOC 2511 (ou 077.251) et le SOC 2510 (ou 77.251). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

✳️ **SOC 2531 Sociologie du Manitoba Cr.Hrs.6** (L'ancien 077.253) Une étude sociologique de la population du Manitoba avec un accent sur ses regroupements culturels et sa stratification sociale. *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (ou 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

✳️ **SOC 2610 Sociology of Criminal Justice and Corrections Cr.Hrs.3** (Formerly 077.261) The sociological study of the criminal justice system, including the police, the courts, prisons and other correctional agencies. *Prerequisite*: a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

✳️ **SOC 2620 The Sociology of Aging Cr.Hrs.3** (Formerly 077.262) An analysis of social and socio-cultural aspects of aging and old age. An orientation to social gerontology and an overview of the situation of the elderly in Canada. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 2630 Social Change Cr.Hrs.3 (Formerly 077.263) Major trends of social changes in society, revolutionary and evolutionary change; problems in the measurement and prediction of social change patterns, consequences and problems of future change. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3330 Origins of Sociological Thought Cr.Hrs.3 (Formerly 077.333) A systematic introduction to sociological thought from ancient philosophy to the middle of the 19th century. Emphasis is placed on social thought that is to become the foundations of sociological theory. Students may not hold credit for both SOC 3330 (or 077.333) and SOC 3331 (or 077.333). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3331 Origines de la pensée sociologique Cr.Hrs.3 (L'ancien 077.333) Une introduction systématique à la pensée sociologique, de ses origines philosophiques jusqu'au milieu du 19e siècle. Ce cours insistera sur la pensée sociale qui deviendra la base de la théorie sociologique. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3331 (ou 077.333) et le SOC 3330 (ou 77.333). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 3350 Feminism and Sociological Theory Cr.Hrs.3 (Formerly 077.335) A critical examination of how gender has been addressed in classical and contemporary sociological theories, with consideration of how sociological inquiry is being transformed through feminist theory and practice. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3360 Theories in Social Psychology Cr.Hrs.3 (Formerly 077.336) A review of the predominant theoretical perspectives currently utilized in social psychology in relation to contemporary sociological concerns. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3370 Sociology of Work Cr.Hrs.3 (Formerly 077.337) A general examination of work behaviour including the historical development of contemporary attitudes about work, an overview of contemporary occupations and professions, characteristics of the professional, occupational choice, social control, and career patterns. Students may not hold credit for both SOC 3370 (or 077.337) and SOC 3371 (or 077.337). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221

(or 077.122).

SOC 3371 Sociologie du travail Cr.Hrs.3 (L'ancien 077.337) Vue générale du monde du travail; particulièrement études des attitudes envers le travail, du classement et de l'organisation des occupations et professions, du choix des carrières, du chômage, et des relations du travail et des loisirs. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3371 (ou 077.337) et le SOC 3370 (ou 77.337). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 3390 Contemporary Sociological Theory Cr.Hrs.3 (Formerly 077.339) A systematic comparison of contemporary sociological theories. Emphasis will be placed on the development of competing schools in modern sociology, highlighting the contributions of major theorists. Students may not hold credit for both SOC 3390 (or 077.339) and SOC 3391 (or 077.339). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3391 Théories sociologiques contemporaines Cr.Hrs.3 (L'ancien 077.339) Une comparaison systématique des théories sociologique contemporaines. Ce cours mettra l'accent sur l'évolution compétitive des diverses écoles en sociologie et surtout sur l'apport des théoriciens les plus importants. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3391 (ou 077.339) et le SOC 3390 (ou 77.339). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 3420 The Child in Society Cr.Hrs.3 (Formerly 077.342) A study of the position of the child in society, including: childhood in the life cycle; images of childhood; the child in work; the child in the family; the child in the adult world. *Prerequisite*: a grade of "C" or better in SOC 2330 (or 077.233) or SOC 2331 (or 077.233) or written consent of department head; SOC 2340 (or 077.234) is recommended.

SOC 3460 Selected Topics Cr.Hrs.3 (Formerly 077.346) The content of this course will vary from year to year, but will consist of a thorough sociological treatment of some topic of current interest. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

✦**SOC 3470 Political Sociology Cr.Hrs.3** (Formerly 077.347) A critical evaluation of sociological theory and research focusing on power and politics in society. Topics covered include: the dimensions of power (economic, political, ideological), classes and class conflict, political socialization, the origin and nature of the state, and the welfare state. Students may not hold credit for both SOC 3470 (or 077.347) and SOC 3471 (or 077.347). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

✦**SOC 3471 Sociologie politique Cr.Hrs.3** (L'ancien 077.347) Évaluation critique de la théorie et des recherches sociologiques relatives aux rapports de force dans la société. Ce cours traitera des divers aspects du pouvoir (économique, politique, idéologiques), des conflits de classe, de la socialisation, de l'origine, des fonctions et de l'évolution de l'État. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3471 (ou 077.347) et le SOC 3470 (ou 77.347). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 3510 Population Dynamics and Change Cr.Hrs.3 (Formerly 077.351) Changes in size, composition, and distribution of populations, the dynamics underlying these changes, and their social consequences. Issues and problems in population processes from Canadian and world perspectives will be considered. Students may not hold credit for both SOC 3510 (or 077.351) and SOC 3511 (or 077.351). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3511 La dynamique des populations et le changement social Cr.Hrs.3 (L'ancien 077.351) Description et analyse de la population. Étude des facteurs sociaux qui affectent la distribution selon l'âge, le sexe, la fertilité, la mortalité et la classe sociale. Insistance sur l'étude de la population mondiale. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3511 (ou 077.351) et le SOC 3510 (ou 77.351). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122), ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

SOC 3540 The Sociology of Health Care Systems Cr.Hrs.3 (Formerly 077.354) An analysis of the social organization of formal and informal health care, including topics such as professionalism and health care, the nature of therapeutic relationships, institutional vs. community-based care, social reform and health care policy, medicine and the state, and emerging patterns of health care. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122); SOC 2490 (or 077.249) is recommended.

SOC 3590 Mass Communication Cr.Hrs.3 (Formerly 077.359) Consideration of the role of culture in communication and societies as communication systems. Media institutions and their relationship to other institutions in society. Students may not hold credit for both SOC 3590 (or 077.359) and SOC 3591 (or 077.359). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122); SOC 2330 (or 077.233) or SOC 2331 (or 077.233) is recommended.

SOC 3591 Les communications de masse Cr.Hrs.3 (L'ancien 077.359) Le rôle de la culture dans la communication. Les sociétés comme systèmes de communication. Les

institutions communicatives dans leur rapport avec les autres institutions sociales. *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122); le SOC 2330 (ou 077.233) ou SOC 2331 (or 077.233) est recommandé. Donné au Collège universitaire de Saint-Boniface.

SOC 3640 Families in Societal Crisis Cr.Hrs.3 (Formerly 077.364) An analysis of the impact of major social and economic pressure and change on families. The course will focus on institutions, legislation and policies that respond to families and social change. *Prerequisite*: a grade of "C" or better in SOC 2460 (or 077.246) or SOC 2461 (or 077.246) or written consent of department head.

SOC 3660 Sociology of Mental Disorder Cr.Hrs.3 (Formerly 077.366) A study of the social processes involved in becoming and being mentally ill. Topics such as the public imagery of madness, decision-making rules in psychiatry, life in the mental hospital, and community attitudes toward the mentally ill will be considered. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122); SOC 2490 (or 077.249) is recommended.

SOC 3690 Sociology of the Developing Societies Cr.Hrs.3 (Formerly 077.369) An introduction to sociological theories concerning development in Third World societies. The course will focus on selected issues such as the relationship between developmental programs, gender, environment and international financial institutions. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

✦**SOC 3700 Sociology of Law Cr.Hrs.3** (Formerly 077.370) The aim of this course is to gain an understanding of the law-society relationship. Different theoretical approaches will be used to investigate substantive issues that pertain to the role of law in (re)producing social inequalities and its potential for alleviating them. *Prerequisite*: a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

SOC 3710 Sociology of Criminal Careers Cr.Hrs.3 (Formerly 077.371) An examination of patterns of criminal behaviour focusing on the sociological aspects of selected offences, the criminal career of the offender, and on societal reaction and legal processing. *Prerequisite*: a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

SOC 3720 The Criminal Law and Its Procedure Cr.Hrs.3 (Formerly 077.372) An introduction to the criminal law and an overview of the system by which the criminal law is administered. *Prerequisite*: a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

SOC 3730 Society and Education Cr.Hrs.3 (Formerly 077.373) A critical examination of schools at all levels and the challenges they face. Issues such as, curriculum, classroom interaction, gender, race, class and equality of educational opportunities will be explored. The course should be useful to students interested in careers in education and counselling. Students may not hold credit for both SOC 3730 (or 077.373) and SOC 3731 (or 077.373). *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3731 Société et éducation Cr.Hrs.3 (L'ancien 077.373) Un examen critique des enjeux de l'éducation et leur impacte sur l'évolution de la société. On aborde des questions telles que: le curriculum; l'interaction au sein de la classe, compte tenu des caractéristiques socio-économiques des élèves (genre, ethnie, niveau de revenu et profession des parents, etc.). Le cours intéresse particulièrement les personnes qui se préparent à faire carrière en éducation. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3731 (ou 077.373) et le SOC 3730 (ou 77.373). *Préalable*: une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 3740 Selected Topics in Criminology Cr.Hrs.3 (Formerly 077.374) The specific content of this course will vary, but in general it will consist of an examination of a specialized topics relevant to Criminology. *Prerequisite*: a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

SOC 3760 Criminology Field Experience Cr.Hrs.6 (Formerly 077.376) This course is designed to provide students with relevant practical experience through participant observation in a criminal justice agency. The course consists of supervised work within the agency and classroom instruction. Enrolment is competitive and limited to third year Criminology Majors. *Prerequisite*: written consent of department head.

✦**SOC 3770 Women, Health and Medicine Cr.Hrs.3** (Formerly 077.377) A systematic sociological analysis of women's participation in the health care system, as consumers as well as providers. Historical and contemporary health issues of women are explored, as are women's efforts to control their experiences and improve their well-being. *Prerequisite*: a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122); SOC 2490 (or 077.249) is recommended.

SOC 3780 Comparative Criminology and Criminal Justice Cr.Hrs.3 (Formerly 077.378) An advanced course designed to engage students in the cross-cultural study of crime and criminal justice. *Prerequisite*: a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head; SOC 2610 (or 077.261) is strongly recommended.

✦**SOC 3790 Women, Crime and Social Justice Cr.Hrs.3** (Formerly 077.379) The course examines gender differences in crime, theories of women's crime and the treatment of women offenders and victims by the criminal justice system. *Prerequisite*: a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

SOC 3800 Drugs and Crime Cr.Hrs.3 (Formerly 077.380) An analysis of the relationship between licit and illicit drugs and criminality. A variety of approaches to drug control will be examined. *Prerequisite:* a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

‡**SOC 3810 Sociological Perspectives on Gender and Sexuality Cr.Hrs.3** (Formerly 077.381) An exploration of the relations between men and women in contemporary society. This course will use historical and cross-cultural standpoints to examine the social construction of gender and sexuality, and the ideological and material structures which (re)produce gender difference. Students may not hold credit for both SOC 3810 (or 077.381) and SOC 3811 (or 077.381). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

‡**SOC 3811 Sociologie de la sexualité et des rôles sexuels Cr.Hrs.3** (L'ancien 077.381) Étude exploratoire des rapports entre les hommes et les femmes dans la société contemporaine. Ce cours examine le processus de construction sociale de la sexualité et des rôles sexuels, à travers une perspective historique de comparaison entre les cultures. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3811 (ou 077.381) et le SOC 3810 (ou 77.381). *Préalable:* une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 3820 Qualitative and Historical Methods in Sociology Cr.Hrs.3 (Formerly 077.382) An introduction to a variety of data gathering techniques such as participant observation, interviewing, life histories, archival research, document analysis, and the use of case studies. Emphasis will be placed on the use of inductive/deductive procedures in the transformation of raw data into theoretical interpretations. *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3830 Youth, Crime, and Society Cr.Hrs.3 (Formerly 077.383) An analysis of issues surrounding the treatment of children and youth in the Canadian criminal justice system. Topics include: historical changes in the role of children and youth; young offender legislation; young offenders and media; and current research on youth crime and its prevention in Canada and other countries. *Prerequisite:* a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (or 077.251) or written consent of department head.

SOC 3840 Community and Social Reconstruction Cr.Hrs.3 (Formerly 077.384) An examination of the changing relationships between the global economic market, the declining resource base of the nation state, and the shift to local control within civil society. Topics may include: the central role of the household in civil society, the informal sector, local initiatives (e.g., co-housing, cooperative, land trusts), and community development. *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3850 Restorative Justice Cr.Hrs.3 (Formerly 077.385) A general introduction to the social theory and practice of restorative justice. *Prerequisite:* a grade of "C" or better in SOC 2510 (or 077.251) or SOC 2511 (OR 077.251) or written consent of department head.

SOC 3870 Social Inequality Cr.Hrs.3 (Formerly 077.387) An examination of social inequality in contemporary capitalist society from a comparative perspective. The course will critically examine theoretical explanations for various dimensions of social inequality, such as class, gender and race/ethnicity. Poverty, the distribution of wealth, elites, unemployment and the nature of work and the workplace in the context of globalization are among the indicators of social inequality which will be focussed upon. Students may not hold credit for both SOC 3870 (or 077.387) and SOC 3871 (or 077.387). *Prerequisite:* a grade of "C" or better in one of the following: SOC 1200 (or 077.120) or SOC 1201 (or 077.120), or both SOC 1211 (or 077.121) and SOC 1221 (or 077.122).

SOC 3871 Inégalités sociales Cr.Hrs.3 (Formerly 077.387) Ce cours discute des inégalités sociales dans la société capitaliste actuelle. Il examine, de manière critique, les explications proposées au sujet des diverses dimensions de l'inégalité sociale, telles que: la classe sociale d'appartenance, les rôles sexuels l'appartenance ethnique. On y aborde, entre autres, les sujets suivants: la pauvreté, la répartition sociale de la richesse, le chômage, l'évolution des postes et des contextes de travail à l'ère de la globalisation. L'étudiant(e) ne peut se faire créditer à la fois le SOC 3871 (ou 077.387) et le SOC 3870 (ou 77.387). *Préalable:* une note minimale de C dans un des cours suivants: SOC 1200 (ou 077.120) ou SOC 1201 (or 077.120), ou tous les deux SOC 1211 (ou 077.121) et SOC 1221 (ou 077.122). Donné au Collège universitaire de Saint-Boniface.

Honours Courses

SOC 2010 Critical Issues in Sociology Cr.Hrs.3 (Formerly 077.201) A form-specific, content variable course especially designed for Honours students. The intent of this course is to develop critical thinking and improve students' oral, writing and research skills. It is also designed to facilitate the creation of a cohesive cohort of Honours students through the use of group work and assignments. *Prerequisite:* written consent of department head.

SOC 4450 Honours Seminar Cr.Hrs.6 (Formerly 077.445) An intensive discussion of selected sociological problems, culminating in a major Honours thesis. *Prerequisite:* written consent of department head.

SOC 4460 Advanced Sociological Theory Cr.Hrs.3 (Formerly 077.446) A critical examination and analysis of sociological theories. *Prerequisite:* written consent of department head.

SOC 4470 Research Methods 1 Cr.Hrs.3 (Formerly 077.447) An introduction to the philosophy of science and the logic of scientific methods, as well as a survey of social research methods and issues. Students are expected to gain a working knowledge of the research process. *Prerequisite:* written consent of department head.

SOC 4480 Research Methods 2 Cr.Hrs.3 (Formerly 077.448) The application of quantitative data analysis in the social sciences, including the following multivariate procedures: multiple regression, dummy variable regression, simple analysis of variance and covariance, and an introduction to path analysis. *Prerequisite:* written consent of department head.

SOC 4520 Current Issues in Criminology and Corrections Cr.Hrs.3 (Formerly 077.452) An advanced course designed to examine current controversies and issues in the Canadian system of criminal justice and corrections. Emphasis will be placed upon contemporary theory and research. *Prerequisite:* written consent of department head.

SOC 4530 Readings in Sociology Cr.Hrs.3 (Formerly 077.453) A reading course for undergraduates and pre-Master's in sociology. *Prerequisite:* written consent of department head.

SOC 4540 Sociology of Health Care Seminar Cr.Hrs.3 (Formerly 077.454) An analysis of theory and research in health care including topics such as: explanatory models of health and illness; the sick role; self-care health beliefs and behaviour; and professionalism and health care. *Prerequisite:* written consent of department head; SOC 2490 (or 077.249) and SOC 3540 (or 077.354) are recommended.

SOC 4550 Sociology of Aging Seminar Cr.Hrs.3 (Formerly 077.455) This course considers selected aspects of aging with a specific focus on Canada. Topics such as gender, race and ethnicity, socio-economic status, sexuality, family, housing and transportation concerns, work and retirement patterns and use of social and health services may be included. *Prerequisite:* written consent of department head; SOC 2620 (or 077.262) is recommended.

SOC 4560 Advanced Sociological Theory Cr.Hrs.3 (Formerly 077.456) A critical examination and analysis of selected sociological theories. Course content may vary from year to year depending upon the instructor's interest. *Prerequisite:* written consent of department head.

8.30 Theatre (Minor) Program

Program Chair: Chris Johnson

Program Office: 367 University College

Telephone: 204 474 9581

E-mail: theatre@umanitoba.ca

Website: www.umanitoba.ca/theatre

8.30.1 Academic Staff

Professor

Johnson, C.G., B.A., M.A. (UBC), Ph.D. (Leeds).

Assistant Professors

Groome, M., B.A., M.A., Ph.D. (McGill); **Kerr, W., B.A.** (Saskatchewan), M.A., Ph.D. (Alberta).

8.30.2 Program Information

Theatre is a way of finding out what it means to be human and is therefore a good component of a liberal, humanist education. While the Theatre program does not prepare students for a career, it can assist in helping students discover whether they have the talent and the determination to pursue that

goal later. Students will study dramatic expression, dramatic writing, and become part of the Black Hole Theatre Company, which stages 7 or 8 productions each year.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in THTR 1220.

Other

The faculty also offers a General Major and an Advanced Major in Drama. See Section 8.8. Students are encouraged to consult the chair of the Theatre Program or the head of the Department of English.

8.30.3 Theatre (Minor)

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

MINOR TOTAL: 18 CREDIT HOURS

THTR 1220

12 credit hours from THTR 2150, THTR 2160, THTR 2170, THTR 2180, THTR 2470, THTR 2480, THTR 2490, THTR 2600, THTR 2610, THTR 3460, THTR 3470, THTR 3610, THTR 3620, THTR 3630, THTR 3640

8.30.4 Theatre Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 THTR 1220 Introduction to Theatre Cr.Hrs.6 (Formerly 154.122) A study of plays both as literature and as texts for stage presentation. The course will include practical work in studio sessions.

THTR 2150 Theatrical Techniques: Onstage Cr.Hrs.6 (Formerly 154.215) Advanced acting and an introduction to the fundamentals of directing. Lectures on dramatic and theatrical theory, and the analysis of representative plays; workshops on acting and directing, including the presentation of scenes; participation in the current Black Hole Theatre season. *Prerequisite:* a grade of "C" or better in THTR 1220 (or 154.122) and written consent of instructor.

THTR 2160 Theatrical Techniques: Backstage Cr.Hrs.6 (Formerly 154.216) An introduction to the backstage arts and crafts of the Theatre: set, props, and costume design and construction; lighting and sound design and execution; stage management; company management. Practical projects required in conjunction with the current Black Hole Theatre season, the nature of the projects to be determined by the student's interests and the need of the company. *Prerequisite:* a grade of "C" or better in THTR 1220 (or 154.122) and written consent of instructor.

THTR 2170 Specialized Practical Training 1 Cr.Hrs.3 (Formerly 154.217) Two special workshops, such as voice, stage movement, mime, or directing, from the Prairie Theatre Exchange Adult Program and approved in advance by the University of Manitoba Theatre Program. Students may hold credit for only two of THTR 2170 (or 154.217), THTR 2180 (or 154.218) or THTR 2490 (or 154.249). *Prerequisite:* a grade of "C" or better in THTR 1220 (or 154.122) and written consent of the Theatre program chair.

THTR 2180 Specialized Practical Training 2 Cr.Hrs.3 (Formerly 154.218) Two special workshop courses, other than those credited for THTR 2170 (or 154.217), from the Prairie Theatre Exchange Adult Program and approved in advance by the University of Manitoba Theatre Program. Students may hold credit for only two of THTR 2170 (or 154.217), THTR 2180 (or 154.218) or THTR 2490 (or 154.249). *Prerequisite:* a grade of "C" or better in THTR 1220 (or 154.122) and written consent of the Theatre program chair.

THTR 2470 Fundamentals of Dramatic Analysis Cr.Hrs.3 (Formerly 154.247) This course aims at developing critical and analytic skills specific to the understanding of dramatic texts, through an introduction to key concepts, terminology and critical methods. *Prerequisite:* a grade of "C" or better in THTR 1220 (or 154.122) or ENGL 1200 (or 004.120) or ENGL 1201 (or 004.120) or ENGL 1300 (or 004.130) or ENGL 1301 (or 004.130) or the former 004.126, or written consent of instructor.

THTR 2480 Theatre History Cr.Hrs.3 (Formerly 154.248) A study of plays, theatre architecture, dramatic theory, acting theory, and the social context in which theatre was presented in an era in the history of the theatre (e.g. Classical Greek and Roman, British Medieval and Tudor, Restoration and Seventeenth Century French). *Prerequisite:* a grade of "C" or better in THTR 1220 (or 154.122) or written consent of instructor.

THTR 2490 Specialized Practical Training 3 Cr.Hrs.3 (Formerly 154.249) An alter-

native method of taking THTR 2170 (or 154.217) or THTR 2180 (or 154.218). Two special workshops, other than those credited for THTR 2170 (or 154.217) or THTR 2180 (or 154.218), taken one each term in a single academic year, from the Prairie Theatre Exchange Adult Program and approved in advance by the University of Manitoba Theatre Program. Students may hold credit for only two of THTR 2170 (or 154.217), THTR 2180 (or 154.218) or THTR 2490 (or 154.249). *Prerequisite:* a grade of "C" or better in THTR 1220 (or 154.122) and written consent of the Theatre program chair.

THTR 2600 Special Studies 1 Cr.Hrs.3 (Formerly 154.260) An extensive examination of selected topics that will vary from year to year, depending upon the needs and interests of the instructor and students. *Prerequisite:* written consent of instructor.

THTR 2610 Special Studies 2 Cr.Hrs.3 (Formerly 154.261) An extensive examination of selected topics that will vary from year to year, depending upon the needs and interests of the instructor and students. *Prerequisite:* written consent of instructor.

THTR 3460 Theory of Drama and Performance Cr.Hrs.3 (Formerly 154.346) Studies in major theories of drama, performance and its reception from Aristotle to the present day. Theories will be studied in conjunction with an in-depth analysis of a number of dramatic texts. *Prerequisite:* a grade of "C" or better in one of THTR 2470 (or 154.247) or ENGL 2960 (or 004.296) or ENGL 2961 (or 004.296) or written consent of instructor.

THTR 3470 Text and Performance Cr.Hrs.3 (Formerly 154.347) Explores the works of a significant playwright or group of playwrights, the appropriate dramatic theory/ies, the production and performance style involved. Students may be required to direct, act and/or design. *Prerequisite:* a grade of "C" or better in THTR 2150 (or 154.215), or a grade of "C" or better in six credit hours from THTR 2170 (or 154.217), THTR 2180 (or 154.218) or THTR 2490 (or 154.249) or written consent of instructor.

THTR 3610 Special Studies 3 Cr.Hrs.3 (Formerly 154.361) An extensive examination of selected topics that will vary from year to year, depending upon the needs and interests of the instructor and students. *Prerequisite:* written consent of instructor.

THTR 3620 Special Studies 4 Cr.Hrs.3 (Formerly 154.362) An extensive examination of selected topics that will vary from year to year, depending upon the needs and interests of the instructor and students. *Prerequisite:* written consent of instructor.

THTR 3630 Practicum 1 Cr.Hrs.3 (Formerly 154.363) Theatre Practicum in which the student works with a professional mentor on a production at the Prairie Theatre Exchange. Openings contingent on a match between student's theatrical field and interest and PTE's needs. *Prerequisite:* a grade of "C" or better in six credit hours from THTR 2150 (or 154.215), THTR 2160 (or 154.216), THTR 2170 (or 154.217), THTR 2180 (or 154.218), or THTR 2490 (or 154.249) and written consent of the Theatre program chair.

THTR 3640 Practicum 2 Cr.Hrs.6 (Formerly 154.364) Theatre Practicum in which the student works with a professional mentor on a production at the Prairie Theatre Exchange. Openings contingent on a match between student's theatrical field and interest and PTE's needs. *Prerequisite:* a grade of "C" or better in six credit hours from THTR 2150 (or 154.215), THTR 2160 (or 154.216), THTR 2170 (or 154.217), THTR 2180 (or 154.218), or THTR 2490 (or 154.249) and written consent of the Theatre program chair.

8.31 Ukrainian Canadian Heritage Studies Program

Acting Program Director: Denis Hlynka

Program Office: 207 St. Andrew's College

Telephone: 204 474 8907

E-mail: cucs@cc.umanitoba.ca

Website: www.umanitoba.ca/ukrainian_canadian/

8.31.1 Program Information

Canada is a multicultural nation to which people of Ukrainian origin have made a significant contribution. The study of this community, its past and present, provides a general understanding of the Ukrainian heritage and its role in Canadian society. The program is cross-disciplinary and leads to a Major, Advanced Major, and Minor. In addition to its Canadian focus, the program also examines historical and contemporary issues in Ukraine.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in six credit hours from List A below. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in six credit hours from List A below.

8.31.2 Ukrainian Canadian Heritage Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours from List A	● 12 credit hours from List B taken from each of 3 different departments		
	● 12 credit hours from List C taken from each of 2 different departments		
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours from List A	● 15 credit hours from List B		
	● 27 credit hours from List C		
MINOR TOTAL: 18 CREDIT HOURS			
6 credit hours from List A	● 6 credit hours from List B taken from each of 2 different departments		
	● 6 credit hours from List C		

List A

Faculty of Arts

Economics	
ECON 1200 Principles of Economics	6
German and Slavic Studies	
UKRN 1270 Conversational Ukrainian	6
or	
UKRN 2720 Intermediate Ukrainian	6
or	
052.264* Ukrainian 1	6
History	
HIST 1200 An Introduction to the History of Western Civilization (G)	6
HIST 1350 An Introduction to the History of Western Civilization to 1500 (G)	3
HIST 1360 An Introduction to the History of Western Civilization from 1500 (G)	3
HIST 1390 History of Colonial Canada: 1500-1885 (C)	3
HIST 1400 History of the Canadian Nation Since 1867 (C)	3
Political Studies	
POLS 1500 Introduction to Politics	6
or	
POLS 2040 Introduction to International Relations	6
or	
POLS 2070 Introduction to Canadian Government	6
or	
019.151* Introduction to Contemporary Ideologies	6
or	
019.153* Introduction to International Relations	6
or	
019.156* Introduction to Canadian Government	6
Religion	
RLGN 1320 Introduction to World Religion	6
or	
RLGN 1350 The History of Eastern Christianity	6
or	
020.134* Religion and Modern Thought	6
Sociology	
SOC 1200 Introduction to Sociology	6
Clayton H. Riddell Faculty of Environment, Earth, and Resources	
Geography	
GEOG 1200 Introductory Geography	6
GEOG 1280 Introduction to Human Geography	3
GEOG 1290 Introduction to Physical Geography	3
School of Art	
FAAH 1030 Introduction to Art 1A and	3
FAAH 1040 Introduction to Art 2A	3
or	
FAAH 1050 Introduction to Art 1B and	3

FAAH 1060 Introduction to Art 2B	3
*no longer offered	

List B

Faculty of Arts

German and Slavic Studies	
UKRN 2420 Ukrainian Canadian Literature	3
UKRN 2430 Ukrainian Canadian Folklore	3
History	
HIST 3910 The Ukrainians in Canada (C)	3
Religion	
RLGN 2520 Eastern Christianity in North America (A)	3
Ukrainian Canadian Heritage Studies	
UCHS 3100 The Ukrainian Arts in Canada	3

List C

Faculty of Arts

Economics	
ECON 2510 The Economy of Ukraine	3
German and Slavic Studies	
UKRN 2710 Ukrainian Literature of the 16th to 18th Centuries	3
UKRN 3700 Church Slavic: Ukrainian Version	3
History	
HIST 2600 Introduction to Ukraine (E)	3
HIST 2610 Making of Modern Ukraine (E)	3
HIST 3030 Issues in Ukrainian History (E)	3
011.255* The History of Ukraine (E)	6
Political Studies	
POLS 2920 Government, Politics and Society in Ukraine	6
Religion	
RLGN 1350 The History of Eastern Christianity (A)	6
RLGN 2530 Eastern Christianity in the Contemporary World (A)	3
RLGN 3570 Major Thinkers in the Eastern Christian Tradition (A)	6
Clayton H. Riddell Faculty of Environment, Earth, and Resources	
Geography	
GEOG 3600 Geography of Ukraine (A)	3
School of Art	
FAAH 3280 Early Byzantine Art and Architecture	3
FAAH 3290 Later Byzantine Art and Architecture	3
*indicates course no longer offered.	

8.31.3 Ukrainian Canadian Heritage Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

★ **UCHS 3100 The Ukrainian Arts in Canada Cr.Hrs.3** (Formerly 155.310) A study of varied aspects of artistic performance and production among Ukrainians in Canada, past and present: music, theatre, dance, cinema, fine arts and architecture. The course will focus on crucial trends and processes and adopt an evaluative approach in its exploration of the above artistic phenomena. *Prerequisite:* written consent of the instructor or the director of the Centre for Ukrainian Canadian Studies.

8.32 Urban Studies (Minor) Program

Program Office: Faculty of Arts Dean's Office

Telephone: 204 474 9100

8.32.1 Program Information

Approximately three-quarters of Canadians live in cities. These concentrations of people create economic, political, and social issues that can be examined from a number of perspectives. The Urban Studies Minor is a cross-disciplinary program that includes courses from Anthropology, Economics, Geography, History, Political Studies, and Sociology. The minor is relevant to further studies in urban and regional planning and other city-oriented professions.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in a full course (or equivalent) offered by one of the departments from the approved list below:

A Minor in Urban Studies will consist of 18 credit hours to be chosen from the following courses:

Anthropology: ANTH 2570 Urban Anthropology (3)

Economics: ECON 3720 Urban and Regional Economics and Policies (3)

Geography: GEOG 3460 Urban Geography (6)

History: HIST 3780 Studies in Canadian History (3) (History HIST 3780 may only be used as part of the requirement for the Minor when the subject matter is the 'History of Winnipeg.')

Sociology: SOC 2270 Urban Sociology (3)

8.33 Women's Studies Program

Program Coordinator: Linda M. Wilson

Program Office: 328 Fletcher Argue Building

Telephone: 204 474 6984

E-mail: womens_studies@umanitoba.ca

Website: www.umanitoba.ca/womens_studies

8.33.1 Academic Staff

Professors

Dodd, J., B.Sc., M.Sc., Ph.D.(Toronto); **Ristock, J.**, B.A.(Hons.) (Manitoba), M.A. (Guelph), Ph.D. (Toronto).

Associate Professors

Donatelli, C.J., B.A. (SUNY Binghamton), M.A. (New Mexico), M.A. (Toronto), M.S.L. (Pontifical Inst.), Ph.D. (Toronto); **Heald, S.**, B.Sc.(Ottawa), M.A. (Lakehead), Ph.D. (Toronto)

Assistant Professor

Kalbfleisch, J., B.A.(Hons.), M.A.(Waterloo), Ph.D. (Emory).

8.33.2 Program Information

The program explores alternatives within society to achieve equal rights and equal treatment for both sexes. Women's Studies is necessary because of a hitherto limited understanding of the role played by women in history and contemporary society. Women's Studies explores traditional and feminist views of women, the psychology of women, women's economic roles, and their relationships to men and each other. The program is interdisciplinary in focus.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

The following entries contain information which is not contained in Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in each of two 3 credit hour courses in Women's Studies. It is suggested that students wishing to Major in Women's Studies take both WOMN 1530 and WOMN 1540. For students who have taken additional courses toward the major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required to graduate including the higher grade of repeated courses and excluding failed courses.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in each of two 3 credit hour courses in Women's Studies.

Honours Program

For entry to the Honours Program, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

Coordinated Programs in Women's Studies

Students may take courses in the Women's Studies program at the University of Winnipeg and, where applicable, have these courses credited to their degree at the University of Manitoba. The coordinated program offers students access to more faculty resources, greater course selection and additional library facilities and thus can enrich their Women's Studies program.

Students are advised to consult with the Women's Studies coordinator for information on courses available for credit in Women's Studies.

In addition, special courses under the rubric of selected topics or contemporary issues may be available in various Arts departments, particularly Anthropology, English, Psychology, and Sociology, for Women's Studies credit in any given academic session.

8.33.3 † Women's Studies

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
WOMN 1530 or WOMN 1540	● WOMN 2520 and WOMN 3580 ● 18 credit hours from Women's Studies courses and/or List A		
ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
WOMN 1530 or WOMN 1540	● WOMN 2520 and WOMN 3580 ● 9 credit hours from Women's Studies courses ● 6 credit hours from courses numbered at or above the 3000 level from Women's Studies courses and/or List A ● 21 credit hours from Women's Studies courses and/or List A		
MINOR TOTAL: 18 CREDIT HOURS			
WOMN 1530 or WOMN 1540	● 6 credit hours from Women's Studies courses ● 9 credit hours from Women's Studies courses and/or List A		

HONOURS SINGLE¹

WOMN 1530 and WOMN 1540	<ul style="list-style-type: none">● WOMN 2520, WOMN 3580, WOMN 4100, WOMN 4110● 15 credit hours from Women's Studies courses● 9 credit hours from courses numbered at or above the 3000 level from Women's Studies courses and/or List A● 12 credit hours from Women's Studies courses and/or List A● 24 credit hours in ancillary options
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HONOURS DOUBLE¹

WOMN 1530 and WOMN 1540	<ul style="list-style-type: none">● WOMN 2520, WOMN 3580, WOMN 4100, WOMN 4110● 9 credit hours from Women's Studies courses● 9 credit hours from courses numbered at or above the 3000 level from Women's Studies courses and/or List A● 36 credit hours in other Honours field● 6 credit hours in ancillary options
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NOTES:

¹ Ancillary options are courses taken from outside the Honours field of study.

List A**Faculty of Arts**

Anthropology		
ANTH 3320	Women in Cross-Cultural Perspective (B)	3
ANTH 3321	Femmes, société et cultures (B) (CUSB)	3
ANTH 3350	Anthropology of Sex and Sexualities (B)	3
Economics		
ECON 2360	Women in the Canadian Economy	6
French, Spanish and Italian		
FREN 2680	Littérature féminine française (B)	3
FREN 3860	Études sur Beauvoir (B)	3
German		
GRMN 3280	Sex, Gender and Cultural Politics in the German-Speaking World	3
History		
HIST 2710	Women in History (G)	6
HIST 3570	History of Women in Canada (C)	6
HIST 3760	Problems in American History 1 Acceptable for credit only when the topic is "Gender and Sexuality in 20 th Century America".	3
HIST 3810	The Family, Love and Marriage in Western Society, 1500-1800 (E)	6
HIST 3811	Famille, amour et mariage dans la société occidentale, 1500-1800 (E)	6
HIST 3820	The Women's Movement, 1850 to the Present (G)	6
HIST 4060	Gender History in Canada (C)	6
Native Studies		
NATV 3360	Aboriginal Women of Canada	3
NATV 3380	Cultural Constructions of Gender in Canadian Aboriginal Societies	3
Philosophy		
PHIL 3220	Feminist Philosophy	3
Political Studies		
POLS 3100	Gender and Politics in Canada	3
POLS 3240	Feminist Political Theory	3
Psychology		
PSYC 2390	Psychology of Women	3
PSYC 2400	The Psychology of Sex Differences	3
Religion		
RLGN 2680	Women and Religion 1	3
RLGN 2690	Women and Religion 2	3
Slavic Studies		
RUSN 2350	Russian Women's Writing from the 1950s to the Present Day	3
RUSN 3980	Women and Russian Literature	3
UKRN 3970	Women and Ukrainian Literature	3
Sociology		
SOC 2470	Courtship and Marriage	3
SOC 2471	Les fréquentations et le mariage (CUSB)	3
SOC 3770	Women, Health and Medicine	3
SOC 3790	Women, Crime and Social Justice	3
SOC 3810	Sociological Perspectives on Gender and Sexuality	3
SOC 3811	Sociologie de la sexualité et des rôles sexuels (CUSB)	3

School of Art

FAAH 2110	Women and Art	3
FAAH 4090	Seminar on Contemporary Issues in Art Acceptable for credit only when the topic is "Women Artists."	3

Faculty of Music

MUSC 4130	History of Women in Music	3
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Faculty of Nursing

NURS 3330	Women and Health	3
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For course descriptions, see departmental listing.

NOTE: List A courses are identified in departmental course descriptions by †.

8.33.4 Women's Studies Course Descriptions

For prerequisite, corequisite and course availability information, see Section 5.9: Prerequisite, corequisite and course availability.

U1 W †WOMN 1530 Introduction to Women's Studies in the Humanities Cr.Hrs.3 (Formerly 156.153) Examination of women and the humanities, the development of feminism and of the contemporary women's movement, introduction to theories and issues in women's studies.

U1 W †WOMN 1540 Introduction to Women's Studies in the Social Sciences Cr.Hrs.3 (Formerly 156.154) Examination of women's historical and contemporary roles in the economy, family, and society from the perspectives of the social sciences. Investigation of strategies and issues of the contemporary women's movement.

†WOMN 2500 Race, Class and Sexuality Cr.Hrs.3 (Formerly 156.250) An exploration of the various ways race, class, and sexual orientation impact on women's lives and identities. Focus is on how racism, classism and heterosexism are produced and reproduced both within and outside of the feminist movement. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

†WOMN 2510 Women and Education Cr.Hrs.3 (Formerly 156.251) An examination of school knowledge and organization as they affect the experiences of girls and women as students and teachers. Includes an exploration of the interaction between schooling and women's work as mothers, and between education and femininity.

†WOMN 2520 Introduction to Feminist Theory Cr.Hrs.3 (Formerly 156.252) Survey of the varieties of feminist thought and the various approaches feminists have taken toward developing an understanding of women's oppression and the possibilities for change. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

†WOMN 2530 Writing Women's Lives Cr.Hrs.3 (Formerly 156.253) Examination of the ways that traditional scripts for women have been rewritten in literature and film. Topics include coming-of-age, madness, utopia, motherhood, and romantic love as represented in fairytales, autobiographies, documentaries, contemporary novels, and Hollywood films.

†WOMN 2540 Special Topics in Women's Studies Cr.Hrs.3 (Formerly 156.254) Course content will vary according to the needs and interests of students and instructors. Consult the Women's Studies Program office for information as to specific topics offered.

†WOMN 2550 Women in Nicaragua/Women in Canada Cr.Hrs.6 (Formerly 156.255) Offered as part of the Summer Session, this course is an exploration of the political, social, economic and relational lives of women on the Caribbean coast of Nicaragua, as well as of broader questions such as the struggle for truly inclusive feminist theories and activism and the possibilities for transnational feminist solidarity. This course consists of two parts: 5 days at the University of Manitoba followed by 1 month on the Caribbean coast of Nicaragua. In Nicaragua we will be accompanied by students and faculty from the University of the Autonomous Regions of the Caribbean Coast of Nicaragua (URACCAN). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, and written consent of instructor.

U1 W †WOMN 2560 Women, Science and Technology Cr.Hrs.3 (Formerly 156.256) An overview of women's historical and contemporary participation in science, issues in science and math education, feminist critiques and theories on science

and gender, and the impact of technology on women's lives.

‡WOMN 2570 **Soap Operas, Harlequins, and Talk Shows Cr.Hrs.3** (Formerly 156.257) This course looks at gender-specific forms of entertainment that have been identified with women. Using postmodern feminist approaches to media, the course looks at how these forms are scripted for TV and cheap paperbacks, and at how the media constructs women as a marketing category for cultural and product consumption. Students may not hold credit for both WOMN 2570 (or 156.257) and WOMN 2540 (or 156.254) with the topic "Soaps, Harlequins, Talk Shows."

‡WOMN 3500 **Selected Topics in Women's Studies Cr.Hrs.3** (Formerly 156.350) Course in which content varies from year to year according to needs and interests of students and instructors. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3510 **International Feminisms Cr.Hrs.3** (Formerly 156.351) An examination of the social, political, economic and cultural realities facing women around the world, with emphasis on "Third World" women. A major focus will be on feminist struggles for change, international organizing and transnational solidarity efforts. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3530 **Readings in Women's Studies Cr.Hrs.6** (Formerly 156.353) Directed readings in a range of Women's Studies literature. This is an independent study course. *Prerequisite:* written consent of instructor and Women's Studies coordinator.

‡WOMN 3540 **Readings in Women's Studies Cr.Hrs.3** (Formerly 156.354) Directed readings in a range of Women's Studies literature. This is an independent study course. *Prerequisite:* written consent of instructor and Women's Studies coordinator.

‡WOMN 3550 **Feminist Community Organizing: Theories and Practices Cr.Hrs.3** (Formerly 156.355) Overview of organizing efforts and techniques, community issues and strategies that women have developed in North American and especially Canadian communities. Focus is on a synthesis of thought and action, theory and practise. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3560 **Feminist Perspectives on Violence Against Women Cr.Hrs.3** (Formerly 156.356) An overview of feminist research and theories on violence against women as an integral component of our social structure, and on issues of social change to alleviate the problem. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3570 **Feminist Cultural Studies Cr.Hrs.3** (Formerly 156.357) The study of how women are involved in, affected by, and have analysed culture, particularly the arts and popular culture. Includes an examination of how women participate in, are represented within, and are affected by, cultural productions. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3580 **Feminist Approaches to Research Cr.Hrs.6** (Formerly 156.358) An examination of the processes of research on, by and for women. It provides an understanding of epistemology, methodology and methods in feminist research. Students develop their own research proposals as the major assignment for this seminar course. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3590 **Thinking Through the Body Cr.Hrs.3** (Formerly 156.359) A study of the female body in the theory, literature, and performance art of contemporary feminists. Topics include menstruation, desire, disability and beauty. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3600 **Good Girls/Bad Girls Cr.Hrs.3** (Formerly 156.360) This course challenges the good girl/bad girl binary as a way of defining the complex reality of women's lives by closely examining regimes of mental and physical hygiene. The course also considers how the media use this binary to sensationalize women like Princess Diana, Madonna, Amy Fisher, and Monica Lewinsky. Students may not hold credit for both WOMN 3600 (or 156.360) and WOMN 3500 (or 156.350) with the topic "Good Girls/Bad Girls." *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

‡WOMN 3610 **Dream Girls, Show Girls, Riot Grrrrs Cr.Hrs.3** (Formerly 156.361) A feminist survey of women's performances in media in a sexist society. The course explores the relation between women putting on a show and being on show: e.g., Las Vegas revues, Madonna's videos, 90's supermodels, gynecologists' offices, radical feminist street protests, Playboy centerfolds, Riot Grrrr music, and performance art. Students may not hold credit for both WOMN 3610 (or 156.361) and WOMN 3500 (or 156.350) with topic "Good Girls/Bad Girls - The Sequel." *Prerequisite:* a grade of "C" or better in a minimum of three credit hours of Women's Studies courses, or written consent of the Women's Studies coordinator.

Honours Courses

‡WOMN 4100 **Honours Thesis Cr.Hrs.6** (Formerly 156.410) The Thesis presents the results of an independent research project supervised by a faculty member. *Prerequisite:* written consent of the Women's Studies coordinator.

‡WOMN 4110 **Advanced Feminist Theory Cr.Hrs.3** (Formerly 156.411) In-depth analysis of feminist thought through an exploration of the major debates and issues in contemporary feminist theory. *Prerequisite:* a grade of "C" or better in WOMN 2520 (or 156.252) and written consent of the Women's Studies coordinator.

‡WOMN 4120 **Practicum in Feminist Organizing Cr.Hrs.6** (Formerly 156.412) Between September and March, the student will complete a minimum of 80 hours of unpaid independent work in a feminist or woman-centered organization and meet regularly with the instructor and other practicum students. Students will reflect critically on the work experience in course assignments. *Prerequisite:* at least 24 credit hours in Women's Studies courses and written consent of the Women's Studies coordinator.

Section 9: Courses Offered by Other Faculties and Schools Acceptable for Credit in Arts

Courses

All courses listed below are acceptable for credit in the Faculty of Arts. Students registered in the Faculty of Arts may enrol in these courses subject to availability of space and satisfaction of prerequisites. These courses may be used to fulfil the requirements for receiving a Bachelor of Arts degree subject to the restrictions given in Section 4.0 and 5.0. In particular, note the requirement that at least eight of the 15 full-course equivalents required for a General B.A., and at least 11 of the 20 full-course equivalents required for an Advanced B.A., must be taught by, or be acceptable on transfer as equivalent to those taught by the Faculty of Arts, with mathematics, fine arts and music being special cases. For course descriptions, including any prerequisites and/or restrictions, see the appropriate faculty or school chapter in this *Calendar*.

Programs

Also listed below are eight programs which can be used by Faculty of Arts students to satisfy the Major or Minor requirement for graduation with a Bachelor of Arts degree. These programs are:

History of Art General Major	Mathematics Advanced Major
History of Art Minor	Mathematics Minor
Minor in Business	Music Advanced Major
Mathematics General Major	Music Minor

NOTE: Certain departments in the Clayton H. Riddell Faculty of Environment, Earth, and Resources and the Faculty of Science offer a minor program for students in other faculties and schools. All such minor programs can be used to satisfy the minor requirement in Arts. Not all courses included in the History of Art General Major are taught by the School of Art.

9.1 Faculty of Agricultural and Food Sciences

Biosystems Engineering		ENTM 2050 Introductory Entomology	3
BIOE 4450 Radiation Processing of Food and Other Agricultural Commodities	4	ENTM 3160 Veterinary and Wildlife Entomology	3
034.412* Drainage System Design	4	ENTM 3170 Crop Protection Entomology	3
034.418* Irrigation System Design	4	ENTM 4250 Pesticide Toxicology	3
034.450* Water Management	3	ENTM 4280 Aquatic Entomology	3
This course is available to Environmental Science students only.		ENTM 4320 Pollination Biology	3
Animal Science		ENTM 4500 Insect Taxonomy and Morphology	3
ANSC 3500 Principles of Animal Genetics	3	ENTM 4520 Physiological Ecology of Insects	3
ANSC 4280 Applied Animal Genetics	3	038.413* Principles of Insect Control	3
ANSC 4410 Grassland Agriculture: Plant, Animal and Environment	3	038.431* Insect Pests of Crops	3
035.311* Principles of Nutritional Toxicology	3	038.436* Principles of Pest Management	3
Entomology		038.451* Insects Affecting Domestic Animals and Wildlife	3
ENTM 1000 World of Bugs	3	038.454* Pesticides and Toxicology	3
		Plant Science	
		PLNT 2500 Crop Production	3

PLNT 2520	Genetics	3	040.409*	Chemical Analysis of Soils	3	
PLNT 2530	Plant Biotechnology	3	040.411*	Agricultural Pesticides	3	
PLNT 3140	Introductory Cytogenetics	3	040.454*	Pesticides and Toxicology	3	
PLNT 3500	Plant Physiology	3		Agribusiness and Agricultural Economics		
PLNT 3510	Cropping Systems	3	ABIZ 1000	Introduction to Agribusiness and Management	3	
PLNT 3520	Principles of Plant Improvement	3	ABIZ 1010	Economics of World Food Issues and Policies	3	
PLNT 3540	Weed Science	3	ABIZ 2120	World Agribusiness Study Tour	3	
PLNT 3550	Organic Crop Production	3	ABIZ 2210	Transportation Principles	3	
PLNT 3570	Fundamentals of Plant Pathology	3	ABIZ 2390	Introduction to Environmental Economics	3	
PLNT 4270	Plant Disease Control	3	ABIZ 2520	Introduction to Management Science	3	
PLNT 4330	Intermediate Plant Genetics	3	ABIZ 3080	Introduction to Econometrics	3	
PLNT 4410	Grassland Agriculture: Plant, Animal and Environment	3	ABIZ 3120	Commodity Futures Markets	3	
PLNT 4540	Plant Genomics	3	ABIZ 3550	Environmental Policy	3	
PLNT 4550	Developmental Plant Biology	3	ABIZ 3560	Agribusiness Portfolio Management	3	
PLNT 4560	Secondary Plant Metabolism	3	ABIZ 4120	Intermediate Econometrics	3	
PLNT 4570	Research Methods in Plant Pathology	3	061.210*	Economics of World Agriculture	3	
PLNT 4580	Molecular Plant-Microbe Interactions	3		General Agriculture		
039.436*	Principles of Pest Management	3	AGRI 1500	Natural Resources and Primary Agricultural Production	3	
039.450*	Plant Genetic Engineering	3	AGRI 1510	Production, Distribution and Utilization of Agricultural Products	3	
039.451*	Plant Metabolism	3		AGRI 2180	Introductory Toxicology	3
Soil Science				AGEC 2370	Principles of Ecology	3
SOIL 3060	Introduction to Agrometeorology	3		AGEC 2500	Population Genetics	3
SOIL 3520	Pesticides: Environment, Economics and Ethics	3			Food Science	
SOIL 4060	Physical Properties of Soils	3		FOOD 1000	Food Safety Today and Tomorrow	3
SOIL 4120	Soil Microbiology	3		FOOD 2500	Food Chemistry	3
SOIL 4130	Soil Chemistry and Mineralogy	3		FOOD 3200	Baking Science and Technology	3
SOIL 4500	Remediation of Contaminated Land	3		FOOD 4150	Food Microbiology 1	3
SOIL 4510	Soil and Water Management	3		FOOD 4240	Analysis of Water and Wastes	3
SOIL 4520	Soil Fertility	3		FOOD 4280	Food Microbiology 2	3
SOIL 4530	Land Use and Environment	3		FOOD 4300	Food Toxicants	3
040.202*	Introductory Soils	3		FOOD 4540	Functional Foods and Nutraceuticals	3
040.350*	Landscapes and Biophysical Processes (replaces the former 040.202)	3			<i>* No Longer Offered</i>	
040.351*	Fundamentals of Soils and Landscapes (replaces the former 040.405)	3				
040.405*	Soil Genesis and Classification	3				
040.407*	Soil Chemistry and Fertility	3				

9.2 Faculty of Architecture

Interior Design

IDES 2650	The Social Aspects of Aging	3
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Environmental Design

EVDS 1600	Introduction to Environmental Design	3
EVDS 1660	History of Culture, Ideas and Environment 1	3
EVDS 1670	History of Culture, Ideas and Environment 2	3

9.3 School of Art: History of Art

Program Coordinator: L. Stirling

Program Office: 349 University College

Telephone: 204 474 7357

9.3.1 Program Information

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A. **NOTE:** It is strongly recommended that students majoring in Art History have competence in a second language.

9.3.2 History of Art

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours from FAAH 1030, FAAH 1040, FAAH 1050 or FAAH 1060	<ul style="list-style-type: none"> ● FA 1990 ● 12 credit hours from List A ● FAAH 3260 or FAAH 3270 ● FAAH 3210 ● FA 3440 ● 6 credit hours from either List A or List B 		

MINOR TOTAL: 18 CREDIT HOURS

6 credit hours from FAAH 1030, FAAH 1040, FAAH 1050 or FAAH 1060

- FA 1990
 - 12 credit hours from either List A or List B
-

Introductory Courses

FAAH 1030	Introduction to Art 1A	3
FAAH 1040	Introduction to Art 2A	3
FAAH 1050	Introduction to Art 1B	3
FAAH 1060	Introduction to Art 2B	3
FA 1990	First Year Field Trip	0
FA 3440	Field Trip	0

List A**Faculty of Arts**

Classics		
CLAS 2670	Greek Art and Archaeology	3
CLAS 2680	Roman Art and Archaeology	3

School of Art

Art History		
FAAH 2060	Medieval to Early Renaissance Art and Architecture	3
FAAH 2070	Renaissance to Baroque Art and Architecture	3
FAAH 2080	Modern to Contemporary Art	3
FAAH 2090	Art of the North American Aboriginal Peoples	3
FAAH 2100	Survey of Asian Art	3
FAAH 2110	Women and Art	3

List B**School of Art**

FA 2620	Writing About Art	3
FAAH 2910	Field Studies in Art History 1	3
FAAH 2920	Field Studies in Art History 2	6
FAAH 3130	Topics in Medieval Art and Architecture	3
FAAH 3140	Topics in Renaissance and Baroque Art and Architecture	3

FAAH 3150	Topics in 18th and 19th Century Art	3
FAAH 3160	Topics in 20th Century Art	3
FAAH 3170	Contemporary Art	3
FAAH 3180	History of Photography	3
FAAH 3190	History of Ceramics	3
FAAH 3200	Art in New Media	3
FAAH 3210	Introduction to the Theory and Criticism of Art	3
FAAH 3220	Topics in Aboriginal Art	3
FAAH 3230	Chinese Art and Architecture	3
FAAH 3240	Japanese Art and Architecture	3
FAAH 3250	Topics in Art History	3
FAAH 3260	Canadian Art and Architecture to World War II	3
FAAH 3270	Canadian Art Since World War II	3
FAAH 3280	Early Byzantine Art and Architecture	3
FAAH 3290	Later Byzantine Art and Architecture	3
FAAH 3430	Inuit Art	3
FAAH 3590	Islamic Art and Architecture	3
FAAH 3780	Twentieth Century American Art Until 1950	3
FAAH 3910	Field Studies in Art History 3	3
FAAH 3920	Field Studies in Art History 4	3
FAAH 4060	Seminar on the Theory and Criticism of Art	3
FAAH 4070	Seminar in Art History 1	3
FAAH 4080	Seminar in Art History 2	3
FAAH 4090	Seminar on Contemporary Issues in Art	3
FAAH 4710	Directed Study 1	3
FAAH 4720	Directed Study 2	3

Other

FA 1020	Mathematics in Art	3
STDO 1200	Fundamentals of Drawing	9
STDO 1220	Basic Design	9
STDO 1260	Drawing for Non-Majors	6

These courses may not be used for the major or minor in History of Art

9.4 Faculty of Education

Educational Administration, Foundations and Psychology

EDUA 1540	Cross-cultural Education	3
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9.5 Faculty of Engineering

Civil Engineering		
CIVL 2830	Graphics for Civil Engineers	2
CIVL 2840	Civil Engineering Geomatics	3
CIVL 3690	Environmental Engineering Analysis	4
CIVL 3700	Environmental Engineering Design	4
CIVL 3750	Hydrology	4
CIVL 4200	Groundwater Contamination	4
CIVL 4250	Groundwater Hydrology	4

The above courses are available to Environmental Science students only.

General Faculty

ENG 1430	Design in Engineering	3
ENG 1440	Introduction to Statics	3
ENG 1450	Introductory Computer and Electrical Engineering Techniques	3
ENG 1460	Introduction to Thermal Sciences	3
130.112*	Thermal Sciences	4
130.118*	Electric Circuits	4
130.135*	Engineering Statics	4
130.140*	Engineering Design	4

* No longer offered

Electrical and Computer Engineering		
ECE 2160	Electronics 2E	5
ECE 2220	Digital Logic Systems	5

The above courses are available to Physics Honours and Major students only.

9.6 Clayton H. Riddell Faculty of Environment, Earth, and Resources

All courses offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources except GEOL 2250 Geology for Engineers (4) are acceptable for credit in the Faculty of Arts.

9.7 Faculty of Human Ecology

General Faculty		FMLY 1020 Family Issues Across the Lifespan	3
HMEC 2650 The Social Aspects of Aging	3	FMLY 1420 Family Management Principles	3
Human Nutritional Sciences		FMLY 1900 Families, Housing and Community: An Introductory Perspective	3
HNSC 1200 Food: Facts and Fallacies	3	062.114* Family Studies: Relationships	3
HNSC 1210 Nutrition for Health and Changing Lifestyles	3	062.172* Environments for Living	3
HNSC 2140 Basic Principles of Human Nutrition	3	Textile Sciences	
HNSC 3300 Vitamins and Minerals in Human Health	3	TXSC 1600 Textiles for Living	3
HNSC 3310 Macronutrients and Human Health	3	TXSC 1610 Textiles, Products, and Consumers	3
HNSC 4120 Senior Thesis	3	TXSC 3290 Evolution of Western Dress	3
HNSC 4540 Functional Foods and Nutraceuticals	3	TXSC 3320 History of Textiles	3
Family Social Sciences		TXSC 4360 History of Canadian Dress	3
FMLY 1010 Human Development in the Family	3	064.122* Dynamics of the Fashion Industry	3

* No longer offered

9.8 Faculty of Law

045.329* Natural Resource Administration and Law 3

This course available to Environmental Science students only.

* No longer offered

9.9 Faculty of Management/I.H. Asper School of Business

All courses offered by the Asper School of Business in the Faculty of Management are acceptable for credit in the Faculty of Arts. Business courses may be taken by Faculty of Arts students subject to availability of space and satisfaction of prerequisites.

Effective September 2003 non-Asper School of Business students will be limited to a total of 36 credit hours of courses offered by the Faculty of Management/Asper School of Business at the University of Manitoba and/

or transfer credit of Business courses from external institutions. The 36 credit hour limit also includes failed and repeated courses.

Minor in Business

For entry to the Minor, the prerequisite is a grade of "C" or better in the first 6 hours of Business courses. The Business Minor will consist of any 18 credit hours in the Faculty of Management/Asper School of Business courses.

9.10 Faculty of Music

9.10.1 Program Information

For entry, continuation and graduation requirements for the General Degree, Advanced Degree, and Honours Degree, see Section 4: Basic Faculty Regulations for the Three Programs Leading to a B.A.

NOTE: Ensemble courses (MUSC 2180, MUSC 3180, MUSC 4180) are acceptable for credit towards a degree in Arts only when applied to the Major or Minor. They are not acceptable for credit as options.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in each of MUSC 1280 and MUSC 1290, or a grade of "C" or better in each of MUSC 1110 and MUSC 1120. For students who have additional courses

toward the Major, then a minimum cumulative GPA of 2.00 is required on all courses including the higher grade of repeated courses and excluding failed courses.

A minimum cumulative GPA of 2.00 in all courses that comprise the Major is required in order to graduate.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in each of MUSC 1280 and MUSC 1290 or a grade of "C" or better in each of MUSC 1110 and MUSC 1120.

9.10.2 Faculty of Music

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
ADVANCED MAJOR (OPTION 1) TOTAL: 54 CREDIT HOURS			
MUSC 1280 and MUSC 1290	MUSC 1070, MUSC 1080, MUSC 1110, MUSC 1120, MUSC 2070, MUSC 2080, MUSC 2110, MUSC 2120, MUSC 3960, MUSC 3970; 6 credit hours of ensemble courses (MUSC 2180, MUSC 3180, MUSC 4180) ² ; 12 credit hours of Music courses from List A		
ADVANCED MAJOR¹ (OPTION 2) TOTAL: 48 CREDIT HOURS			
MUSC 1110 and MUSC 1120	MUSC 1070, MUSC 1080, MUSC 2070, MUSC 2080, MUSC 2110, MUSC 2120, MUSC 3960, MUSC 3970; 6 credit hours of ensemble courses (MUSC 2180, MUSC 3180, MUSC 4180) ² ; 12 credit hours of Music courses from List A		
MINOR¹ (OPTION 1) TOTAL: 18 CREDIT HOURS			
MUSC 1280 and MUSC 1290	12 credit hours of Music courses from List A ³		
MINOR¹ (OPTION 2) TOTAL: 18 CREDIT HOURS			
MUSC 1110 and MUSC 1120	12 credit hours of Music courses from List A ³		

NOTES:

¹ At most, 12 credit hours at the 1000 level may be used toward the Major or Minor.

² All ensemble courses (MUSC 2180, MUSC 3180, MUSC 4180) are required for the Major.

³ Students who elect ensemble courses from List A are required to complete all three courses.

NOTE: Completion of a major or minor in Music does not satisfy the “teachable” major or minor that is required for admission to the After Degree B. Ed. program.

List A

Students are responsible for ensuring that all prerequisites have been met.

MUSC 1050	The Well-Tempered Concert-Goer	3
MUSC 1070	Introduction to the History of Music	3
MUSC 1080	History of Music 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1280	Musical Style and Structure 1	3
MUSC 1290	Musical Style and Structure 2	3
MUSC 2070	History of Music 3	3
MUSC 2080	History of Music 4	3
MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3
MUSC 2460	Conducting	3
MUSC 3020	History and Performance of Jazz	3
MUSC 3030	History of Music in Worship	3
MUSC 3050	Research Methods	3
MUSC 3090	Introduction to Ethnomusicology	3
MUSC 3100	Opera Repertoire	3
MUSC 3110	Chamber Music Repertoire	3
MUSC 3230	Acoustics of Music	3
MUSC 3600	Conducting	3

MUSC 3640	Orchestration	3
MUSC 3820	Topics in Music	3
MUSC 3830	Topics in Music	3
MUSC 3840	Topics in Music	3
MUSC 3850	Topics in Music	3
MUSC 3960	Music of the Twentieth Century 1	3
MUSC 3970	Music of the Twentieth Century 2	3
MUSC 4060	History of Music 6	3
MUSC 4070	History of Music 7	3
MUSC 4130	History of Women in Music	3
MUSC 4150	Choral Repertoire	3
033.363*	Music Theory 5	3
033.386*	Topics in Music	3
033.387*	Topics in Music	3

The following courses are acceptable for credit in Arts only to those graduating students with a declared Major or Minor in Music. All three Ensemble courses: MUSC 2180 Ensemble (2), MUSC 3180 Ensemble (2), MUSC 4180 Ensemble (2), must be successfully completed in order to obtain credit.

List B

MUSC 1930	Rudiments of Music (formerly 033.093)	3
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(Not acceptable for credit towards this major or minor)

* No Longer Offered

For course descriptions, see departmental listings. For information contact the Faculty of Arts general office.

9.11 Faculty of Nursing

NURS 1260	Human Growth and Development	3
NURS 1280	Introduction to Nursing	3
NURS 2610	Health and Physical Aspects of Aging	3
NURS 3330	Women and Health	3
NURS 3400	Men's Health: Concerns, Issues and Myths	3

9.12 Faculty of Physical Education and Recreation Studies

Physical Education

PHED 1200	Physical Activity, Health and Wellness	3
PHED 1500	Foundations of Physical Education and Exercise Science	3
PHED 2310	Kinesiology	3
PHED 2320	Human Anatomy	3
PHED 2610	Health and Physical Aspects of Aging	3
PHED 3070	Rise of Modern Sport and Physical Education	3
PHED 3460	Sociology of Sport	3

Recreation Studies

REC 1200	Introduction to Leisure Travel	3
REC 1400	Concepts of Recreation and Leisure	3
REC 2650	The Social Aspects of Aging	3
REC 3300	Nature-Based Outdoor Recreation/Education	3

9.13 Faculty of Science

As indicated in Section 5.0, all courses offered by the Faculty of Science are acceptable for credit in the Faculty of Arts except courses designated as service courses for some other faculty or school. Science courses may be taken by Faculty of Arts students subject to availability of space and satisfaction of prerequisites. For information, consult the Faculty of Science chapter of this *Calendar*.

Students may also choose a General or Advanced Major, or a Minor in Mathematics as described below.

The Mathematics General Major offered at the Collège universitaire de Saint-Boniface differs from the one offered at the Fort Garry campus. For a complete description, consult the Collège universitaire de Saint-Boniface's *Calendar*.

9.13.1 Mathematics

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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GENERAL MAJOR TOTAL: 30 CREDIT HOURS

- | | | |
|--|--|--|
| ● one of MATH 1500, MATH 1510, MATH 1520, MATH 1530 | MATH 2300, MATH 2720 ² , MATH 2730 ² | 9 credit hours from MATH 2400, MATH 2450, MATH 2500, MATH 2550, MATH 2600 ¹ , MATH 2800, or any 3000 or 4000 level Mathematics course |
| ● one of MATH 1700, MATH 1710, MATH 1730; or MATH 1690 | | |
| ● MATH 1200 | | |
| ● one of MATH 1300, MATH 1310 | | |
-

ADVANCED MAJOR TOTAL: 48 CREDIT HOURS

- | | | |
|--|---|--|
| ● one of MATH 1500, MATH 1510, MATH 1520, MATH 1530 | MATH 2300, MATH 2600 ¹ or MATH 2800, MATH 2720 ² and MATH 2730 ² | ● MATH 3300, MATH 3310, MATH 3740 |
| ● one of MATH 1700, MATH 1710, MATH 1730; or MATH 1690 | | ● 15 credit hours from MATH 2200, MATH 2400, MATH 2450, MATH 2500, MATH 2550, MATH 2600 ¹ , MATH 2800, or any 3000 or 4000 level Mathematics course |
| ● one of MATH 1300, MATH 1310 | | |
-

MINOR TOTAL: 18 CREDIT HOURS

MATH 1300, MATH 1500, and MATH 1700 (or MATH 1690) plus a minimum of 9 credit hours from MATH 1200 and 2000 and (or) 3000 level Mathematics courses.

NOTES:

¹ MATH 2600 has a prerequisite of COMP 1010

² MATH 2750 may be substituted for MATH 2720 and MATH 2730

The courses listed under the University 1 heading may be taken in any year provided that at least six credit hours are taken from MATH 1200, MATH 1300, MATH 1310, MATH 1500, MATH 1510, MATH 1520, MATH 1530, MATH 1690, MATH 1700, MATH 1710, MATH 1730, and that the normal prerequisites are met.

For entry to either Major in Mathematics, the prerequisite is a grade of "C+" or better in six hours of Mathematics courses taken.

For entry to the Minor in Mathematics, the prerequisite is a grade of "C" or better in six hours of Mathematics courses taken.

A detailed listing of courses in the Department of Mathematics is available in the *Calendar* entries of the Faculty of Science.

Equivalent Honours courses may sometimes be substituted for the courses listed above. In this way, a Major degree can be considerably strengthened. For more detailed advice students should talk to a faculty member in the department.

9.14 Faculty of Social Work

SWRK 1310	Introduction to Social Welfare Policy	3
SWRK 2650	The Social Aspects of Aging	3
SWRK 2080	Interpersonal Communication Skills	3

9.15 Interfaculty Option in Aging

An Interfaculty Option in Aging is offered by: Architecture (Interior Design), Arts, Human Ecology, Nursing, Physical Education and Recreation Studies, and Social Work. To complete the option, Arts students will need to complete each of the following: a) The Social Aspects of Aging, IDES 2650 or HMEC 2650 or REC 2650 or SWRK 2650; b) Health and Physical Aspects of Aging, NURS 2610 or PHED 2610; c) Developmental Psychology from Adolescence to Old Age, PSYC 2370, and Sociology of Aging, SOC 2620. (Prerequisites for these courses are a grade of "C" or better in, respectively, PSYC 1200 or SOC 1200); and d) an additional six credit hours from the following courses:

Faculty of Arts

Psychology		
PSYC 3460	Abnormal Psychology	3
PSYC 3490	Individual Differences	3
PSYC 3610	Memory	3

Religion

RLGN 1410	Death and Concepts of the Future (C)	3
Sociology		
SOC 2490	Sociology of Health and Illness	3
SOC 3510	Population Dynamics and Change	3
SOC 3540	The Sociology of Health Care Systems	3
Clayton H. Riddell Faculty of Environment, Earth, and Resources		
Geography		
GEOG 4710	Geography of the Elderly and Aging	3

Upon completion of these requirements, a "Comment" will be added to the student's transcript. For information concerning the option, interested students are directed to faculty general offices.

School of Dental Hygiene

General Office

D35 Dental Building, Bannatyne Campus

Telephone: (204) 789 3683

Fax: (204) 789 3948

E-mail: dent_hygiene@umanitoba.ca

Website: www.umanitoba.ca/faculties/dentistry/programs8.a.htm

Director: Salme Lavigne

Administrative Assistant: Lisa Chrusch

Student Advisors: Jean Lyon, Susan Petras

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: The Profession of Dental Hygiene

SECTION 3: Admission to the School of Dental Hygiene

- 3.1 Diploma Offered
- 3.2 Course Requirements

SECTION 4: Academic Regulations

- 4.1 Immunization Policy
- 4.2 CPR Certification
- 4.3 Examinations and Promotions
- 4.4 Supplemental Examinations
- 4.5 Challenge for Credit
- 4.6 Honours and Awards Policy
- 4.7 Instruments, Textbooks and Uniforms

SECTION 5: Program Requirements and Course Descriptions

- 5.1 Year 1 and 2 Course Requirements
 - 5.2 Course Descriptions
-

SECTION 1: Academic Staff

Professors:

Fleming, N., B.Sc. (Belfast), Ph.D. (East Anglia); **McNicol**, A., B.Sc., Ph.D. (Glasgow); **Jay**, F., B.Sc. (McGill), M.Sc. (New Brunswick), Ph.D. (Liv.): **Karim**, A.C., B.Sc. (Sir George Williams), M.Sc., Ph.D. (McGill); **Lavigne**, S.E., Dip.D.H. (Toronto), B.A. (Lakehead), M.S.(DH) (Missouri-Kansas City); **Scott**, J.E., B.Sc (Brandon), M.Sc., Ph.D. (Manitoba); **Singer**, D.L., D.D.S. (Alberta), Ph.D., Dip.Perio. (Manitoba)

Associate Professors:

Ahing, S.I., B.Sc. (Sir George Williams), D.D.S. (McGill), M.S.D. (Indiana), F.R.C.D.; **Birek**, C., D.D.S. (Turgu-Mures), Ph.D. (Toronto), Dip. Oral Path. (Toronto); **Louka**, A., B.D.S., B.D.D. (Cairo), M.Sc. (Manitoba); **MacDonald**, L.L., Dip.D.H. (Manitoba), B.Sc.D. (D.H.) (Toronto), M.Ed. (Manitoba); **Perry**, J.B., A.R.C.T., D.M.D. (Manitoba), Cert.Oral Path. (Emory), M.Sc. (Manitoba); **Pruthi**, V.K., B.D.S. (India), Cert. Perio. (Florida), Diplomate, Amer. Board of Perio., F.A.C.D.

Assistant Professors:

Asadoorian, J., ASDH (Erie CC), B.Sc.(D) (Toronto), M.Sc.(Toronto);

Senior Instructor:

Wener, M., R.D.H. (Kentucky), B.S. (Kentucky), M.Ed. (Manitoba).

Instructors:

Bellows, L., B.H.Ec., Dip. D.H. (Manitoba); **Dods**, S., Dip. D.H. (Manitoba); **Girardin**, D., Dip.D.H. (Manitoba); **Glassford**, L., B.A. (Manitoba), Dip.D.H. (Manitoba); **Grasby**, H., Dip.D.H. (Manitoba); **Halas**, G., Dip.D.H. (Manitoba); **Harder**, T., Dip. D.H. (Manitoba), B.A. (Winnipeg); **Hedberg**, L., B.Sc.(Manitoba), R.N. (HSC), Dip. D.H. (Manitoba); **Isaak-Ploegman**, C., B.A. (Manitoba), Dip.D.H. (Manitoba), M.Ed. (Manitoba); **Legary**, K., Dip. D.H. (Manitoba); **Schmidt**, Dip. D.H. (Manitoba); **Sebalj**, H., Dip.D.H. (Dalhousie), B.Sc.N. (Queens); **Yakiwchuk**, C., Dip.D.H. (Manitoba).

SECTION 2: The Profession of Dental Hygiene

Dental hygiene is a health service profession concerned primarily with the prevention of oral disease and the promotion of optimum oral health. As a licensed professional, the dental hygienist's scope of practice is regulated by provincial legislation. The dental hygiene process of care consists of four components: assessment, planning, implementation, and evaluation. Current practice settings include: Private dental practice, community health centres, institutions (e.g., hospitals, long-term care facilities), primary health care centres, home care and other outreach programs, educational institutions (e.g., universities, community colleges), the military, research, and industry. Dental hygienists acquire competence through instruction in basic sciences, oral health sciences, the humanities and clinical practice. Through more than 600 hours of a competency-based clinical curriculum, students are prepared to meet the needs of a broad range of population groups.

The mission of the School of Dental Hygiene: In a tradition of excellence and progressive learning the University of Manitoba, School of Dental Hygiene prepares future dental hygienists to contribute collaboratively to the health and well-being of the public through oral health promotion and disease prevention.

Licence to Practice

In Manitoba, graduates must apply to the Manitoba Dental Association for a licence to practice as a dental hygienist. In other provinces, Dental hygienists must fulfil the requirements of the respective provincial licensing bodies.

SECTION 3: Admission to the School of Dental Hygiene

3.1 Diploma offered

Diploma in Dental Hygiene

Minimum time to graduation: Three years (University 1, or satisfaction of prerequisites, plus two years).

NOTE: Pending approval, a degree completion program, Bachelor of Science in Dental Hygiene (B.Sc.D.H.), may be offered commencing August, 2006. This program will only be offered to graduates of the Diploma program.

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

3.2 Course requirements

CHEM 1300 and CHEM 1310 or CHEM 1320

PSYC 12

ZOOL 1320 and ZOOL 1330 or ZOOL 2530 and ZOOL 2540

STAT 1000

9 credit hours of electives (Sociology is strongly recommended) for a total of 30 credit hours.

Other Requirements

High school prerequisites: Mathematics 40S (pre-calculus or applied), and Chemistry 40S; Biology 40S is strongly recommended, or eligibility as a mature student to the University of Manitoba.

Interview: An interview may be part of the admission process.

Minimum GPA for consideration: 2.5 with no grade less than C; admission is competitive.

The written English requirement will be met through Dental Hygiene courses and is not required in the prerequisite year.

Selection criteria: 100 per cent based on academic standing for the Regular Applicant Category. Interview and Letters of Reference are considered within the Special Applicant Category. Preference will be given to Manitobans in the Special Applicant Category and on the alternate list.

It is recommended that all applicants attend an orientation session. Orientation for dental hygiene takes place at the School of Dental Hygiene, Banatyne Campus.

SECTION 4: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the School of Dental Hygiene has regulations and requirements, published below, that apply specifically to its students.

4.1 Immunization Policy

All students enrolled in dental hygiene must be immunized against the following diseases: diphtheria/tetanus, polio, rubella, measles, mumps, chicken pox and hepatitis B. Students must be tested for tuberculosis if a suspected exposure occurs. Students who cannot be immunized because of allergies or other reasons must provide a physician's certificate to verify these reasons.

Before the first day of classes all students must complete the University of Manitoba Immunization Record Form, provided by the dental hygiene office. Immunization records must be signed by a physician or nurse verifying that all immunizations are up-to-date.

All students are responsible for updating their immunizations as needed.

Students will not be permitted to attend clinics until all immunization requirements are up-to-date.

4.2 CPR Certification

Accepted candidates will be required to show proof of CPR (Basic Rescuer) certification by October 15. This certification must be effective between this date and the date of graduation. Certification is valid for a two year period.

4.3 Examinations and Promotions

Regular attendance in all courses as well as a satisfactory record completed during the term will be required to qualify a student to sit for the annual or other grading examination.

To obtain standing in any year, a student must attain a minimum overall Grade Point Average (GPA) of 2.0 in all courses of that year. If a student is registered for less than 100% of the courses listed for the year, a minimum sessional GPA of a 2.0 must be obtained.

A student who has obtained a grade of "F" in more than two subjects or who fails to obtain an overall GPA of 1.6 will be regarded as having failed the year and will be required to repeat the work of that year in a succeeding annual session. The student must re-apply for admission to the school if the failed year is the first year.

No student will be allowed to register for the full work of any one year who has a condition remaining from a previous year.

Students are prohibited from interviewing individual members of the school with reference to examination standing at any time prior to the posting of official grade lists.

For details on final examinations, see the Chapter General Academic Regulations and Policy of this Calendar.

For appeals process, see the Chapter General Academic Regulations and Policy.

For a description of the grading system, see the Chapter General Academic Regulations and Policy.

4.4 Supplemental Examinations

A student who has failed in not more than two subjects at the regular final examinations of any year, or who fails to obtain an overall GPA of 2.0 in courses of the year, may upon application and at the discretion of the Dental Faculty Council be awarded the privilege of one or two supplemental examination(s).

The Faculty Council will specify in which subjects the student may write supplemental examinations. For the purpose of calculating such a student's GPA for the year, grade points attained in supplemental examinations will replace the grade points previously attained in the same subject.

The passing grade in supplemental examinations is "C" in each subject.

A student must maintain a minimum GPA of 1.6 each year in order to be eligible for supplemental privileges.

A student who, having exercised supplemental privileges, has not more than one condition remaining, may in the ensuing annual session, be allowed to take only that one course in the Dental Hygiene program. If the condition is removed in that session, the student will be regarded as having completed the year to which the condition applied.

Supplemental examinations are held prior to the opening of the session in the autumn, and application must be made to the Registrars Office no later than those deadline dates listed in this Calendar.

4.5 Challenge for Credit

There are a number of courses which may be challenged for credit. Information on the specific courses involved may be obtained from the director of the School of Dental Hygiene.

4.6 Honours and Awards

Honours will be awarded to a maximum of the top 20 per cent of the class, provided that a GPA of 3.5 or greater has been achieved. Only students registered for 80 per cent or more of the normal course load during a regular session are eligible for Honours Standing.

A student who fails in one or more subjects, or who fails the year at the regular final examination, is not eligible to obtain Honours Standing or to receive any awards for the work of that year.

A student repeating a year's work is eligible to obtain Honours Standing or to receive any awards for the work of that year.

The following policy applies to the eligibility of part-time students for academic awards:

A student who is carrying less than 80 per cent of the normal course load for the year is only eligible for an award in the individual subjects taken by him/her.

A student who is repeating a course may not be eligible for an award in that subject.

NOTE: Regulations concerning Admissions, Academic Progress, Examinations and Withdrawal are on file in the general office of the School of Dental Hygiene and through The University of Manitoba webpage at www.umanitoba.ca/faculties/dentistry.

4.7 Instruments, Textbooks and Uniforms

Students must purchase a dental hygiene student kit consisting of two sets of clinical instruments and uniforms. The total cost of the kit is approximately \$6,000. Students are also required to purchase one lab coat. Some laboratory equipment is loaned by the school. Expenditures for textbooks may amount to approximately \$3,000 over the two-year program.

SECTION 5: Program Requirements and Course Descriptions

Pending approval, an additional 2 credit hour course will be added to the dental hygiene curriculum commencing in the 2006-07 academic session. The course, HYGN XXX0-Dental Hygiene Portfolio, will house the evaluation component of the programmatic portfolio of student competencies that all student commence at enrolment and complete prior to graduation.

5.1 Year 1 and 2 Course Requirements

First Year

Course No.		Credit Hours
HYGN 1230	Oral and Dental Anatomy	4
HYGN 1240	Preclinical and Clinical Dental Hygiene	9
HYGN 1260	Radiology	4
HYGN 1270	Biology of the Head and Neck	3
HYGN 1280	Microbiology and Infectious Diseases	3
HYGN 1290	Preclinical Restorative Dentistry Techniques for Dental Hygienists	4
HYGN 1320	Dental Materials	2
HYGN 1340	Communications	2
HYGN 1350	Community Health1	4
HYGN 1360	Periodontology 1	2
	Total credit hours	37

Second Year

HYGN 2280	Pharmacology	2
HYGN 2300	Pathology	3
HYGN 2310	Dental Hygiene	15
HYGN 2340	Periodontology 2	2
HYGN 2350	Biology of Oral Tissues	2
HYGN 2360	Community Health 2	4
HYGN 2370	Nutrition in Dentistry	2
HYGN 2380	Pain Management	2
	Total credit hours	32

HYGN 1230 Oral and Dental Anatomy Cr.Hrs.4 (Formerly 070.123) This course consists of lecture and laboratory work dealing with the normal development, morphology, structure, and function of the dentition and related structures. Lecture (30) and Laboratory (60) 90 hours.

HYGN 1240 Preclinical and Clinical Dental Hygiene Cr.Hrs.9 (Formerly 070.124) Laboratory, didactic and clinical application of basic instrumentation skills, client management and counselling, instrument care and current preventive techniques of dental hygiene practice. Lecture (85), Laboratory (90), and Clinical Practice (165) 340 hours.

HYGN 1260 Radiology Cr.Hrs.4 (Formerly 070.126) An introduction to the production of x-rays, radiation biology, radiation protection, imaging materials, imaging techniques, recognition of radiographic landmarks and structures, and quality control of radiographs through application of basic knowledge in chemistry, physics, anatomy and mathematics. Lecture (15) and Clinical Practice.

HYGN 1270 Biology of the Head and Neck Cr.Hrs.3 (Formerly 070.127) Anatomy, physiology, histology and embryology of the head and neck. Lecture (30) and Laboratory (15) 45 hours.

HYGN 1280 Microbiology and Infectious Diseases Cr.Hrs.3 (Formerly 070.128) A study of different types of microorganisms. Infectious diseases will be discussed in terms of reservoirs, transmission, pathogenesis, treatment and prevention. Emphasis will be given to common communicable diseases, the oral microflora and its role in disease and health. Lecture (30) and Laboratory (15) 45 hours.

HYGN 1290 Preclinical Restorative Dentistry Techniques for Dental Hygienists Cr.Hrs.4 (Formerly 070.129) A study of the principles and techniques of restorative dentistry. Introduction information on restorative dentistry specialties. Lectures (20) and laboratory (28), total 48 hours.

HYGN 1320 Dental Materials Cr.Hrs.2 (Formerly 070.132) A study of the properties of materials used in the oral environment for restorative, prosthetic, orthodontic and preventive purposes. Laboratory demonstrations and exercises are designed to demonstrate the correct preparation and handling of dental materials. Lecture (25) and Laboratory (10) 35 hours.

HYGN 1340 Communications Cr.Hrs.2 (Formerly 070.134) This course provides an introduction to basic principles of communication in relation to everyday and professional interactions. The students are sensitized to the process of communication, its complexities and its related dynamics. Particular attention is given to enabling students to develop effective professional communication skills that have the potential to promote client compliance and harmonious working relationships.

HYGN 1350 Community Health 1 Cr.Hrs.4 (Formerly 070.135) An introductory, participatory course in community oral health promotion intended to inspire a sense of community responsibility in students as health professionals responding to community needs. This is accomplished through group assignments which involves classroom teaching of children; interviews of health agency staff; and participation in a debate. Integral to this sense of active community responsibility is an understanding of disease prevention and health promotion theories, mechanisms and strategies. Lecture (60), field (6), total 66 hours.

HYGN 1360 Periodontology 1 Cr.Hrs.2 (Formerly 070.136) A study of the normal tissues of the periodontium, and an introduction to periodontal diseases, their etiology, epidemiology and treatment, especially as these relate to dental hygiene practice. A critical analysis of periodontal cases is included. Lecture 30 hours.

HYGN 2280 Pharmacology Cr.Hrs.2 (Formerly 070.228) Drugs used in clinical practice; a general knowledge of drugs by groups with emphasis on agents such as local anesthetics, analgesics, and antibiotics used extensively in the practice of dentistry. Lecture 30 hours.

HYGN 2300 Pathology Cr.Hrs.3 (Formerly 070.230) A study of the principles of general and oral pathology involving pathologic mechanisms, disorders of physiologic systems, and pathologic conditions and diseases affecting oral and para-oral structures. Lecture 45 hours.

HYGN 2310 Dental Hygiene Cr.Hrs.15 (Formerly 070.231) Clinical dental hygiene practice, lectures and seminars for discussion of and experience in clinical procedures, client counselling, care of client with special needs, office procedures, employment arrangements, ethics and other topics. Lecture (75), Seminar and Laboratory (30) and Clinical Practice (360) 465 hours.

HYGN 2340 Periodontology 2 Cr.Hrs.2 (Formerly 070.234) Continuation of the study of etiology, diagnosis and treatment of periodontal disease. Lecture 30 hours.

HYGN 2350 Biology of Oral Tissues Cr.Hrs.2 (Formerly 070.235) Consideration of physiology of the oral environment and its microflora in relation to health, dental caries and periodontal diseases. Lecture 30 hours.

HYGN 2360 Community Health 2 Cr.Hrs.4 (Formerly 070.236) This course further develops the students' abilities to deliver community oral health education/promotion programs, with particular attention given to the barriers faced and strategies used to meet the unique needs of target populations which are less likely to have optimal oral health. Field experience in needs assessment, program planning, implementation and evaluation is a major component of this course. Lecture (60) and field work (60) total 120 hours.

HYGN 2370 Nutrition in Dentistry Cr.Hrs.2 (Formerly 070.237) A physiological, psychological, and social insight into the principles of nutrition and their relation to preventive dental practice. Lecture 25 hours.

HYGN 2380 Pain Management Cr.Hrs.2 (Formerly 070.238) This course is designed to enhance the dental hygiene student's knowledge of the mechanisms of pain control through the administration of topical and local anesthetic agents. Emphasis will be placed on the pharmacology of dental anesthetic agents and their interaction with the client's current conditions and medications. The course consists of 20 hours of lectures, and 12 hours of laboratory, total 32 hours.

Faculty of Dentistry

Dean's Office

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Dean: Johann de Vries

Associate Dean (Academic): Randall Mazurat

Associate Dean (Research): Elliott Scott

Associate Dean (Clinical): Jack Stockton

Business Manager: Linda Chartier

Administrative Assistant: Sandra Iwankow

Student Advisors: Jean Lyon (Admissions), Susan Petras

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: The Profession of Dentistry

SECTION 3: Admission to the Faculty of Dentistry

- 3.1 Degrees Offered
- 3.2 Course Requirements
- 3.3 International Dentist Degree Program

SECTION 4: Program Requirements and Regulations

- 4.1 Textbooks and Instruments
- 4.2 Immunization Policy
- 4.3 CPR Certification Policy
- 4.4 Financial Aid
- 4.5 Attendance
- 4.6 Voluntary Withdrawal
- 4.7 Required Withdrawal
- 4.8 Decisions Concerning Promotions
- 4.9 Incomplete Standing in the Faculty of Dentistry
- 4.10 Supplemental Examinations
- 4.11 Honours and Awards

SECTION 5: Program Outline and Course Descriptions

- 5.1 First Year
 - 5.2 Second Year
 - 5.3 Third Year
 - 5.4 Fourth Year
 - 5.5 Course Descriptions
-

SECTION 1: Academic Staff

Deans Emeriti

Neilson, J.W., B.A. (Saskatchewan), D.D.S. (Alberta), M.Sc. (Michigan), F.I.C.D., F.A.C.D., F.R.C.D.(C); **Schwartz, A.,** D.D.S. (Toronto), F.I.C.D., F.A.C.D., F.R.C.D.(C).

Professor

de Vries, J., B.Ch.D., B.Ch.D.(Hons), M.Dent. (Pretoria), Col., F.I.A.D., F.P.F.A., F.I.C.D., F.A.C.D.

Assistant Professor

Schönwetter, D., Dip (Bible Studies) (Columbia Bible Inst), B.Th. (Cdn Mennonite Bible Col), B.A. (Hons), M.A., Ph.D. (Manitoba);

Dental Diagnostic & Surgical Sciences

Professor Emeritus

Borden, S.M., D.D.S. (Toronto), M.S.D. (Northwestern), M.R.D.C.(C), F.I.C.D., F.A.C.D.

Professors

Birek, C., D.D.S. (Turgu-Mures), Ph.D., Dip.Oral Path. (Toronto); **Gelskey, S.C.,** B.Sc. (D.H.) (Marq.), M.P.H (Michigan), Ph.D. (Manitoba); **Singer, D.L.,** D.D.S. (Alberta), Ph.D., Dip.Perio (Manitoba).

Associate Professors

Ahing, S.I., B.Sc. (Sir George Williams), D.D.S. (McGill), M.S.D. (Indiana), F.R.C.D.; **Boyar, R.M.,** D.M.D., M.Sc. (Manitoba), F.I.C.D.; **Cohen, M.,** B.Sc., B.D.S., M.Dent. (Witwatersrand), F.R.C.D.(C); **Curran, J.,** B.D.S. (NUI), F.R.C.D.(C), F.F.D., R.C.S. (Irel); **Perry, J.B.,** A.R.C.T., D.M.D. (Manitoba), Cert.Oral Path. (Emory), M.Sc. (Manitoba), F.R.C.D.(C); **Pruthi, V.K.,** B.D.S. (India), Cert.Perio. (Florida), Diplomate, American Board of Periodontology., F.A.C.D.; **Zimmer, K.,** M.D. (Manitoba), F.R.C.P.

Assistant Professors

Binahmed, A., B.D.S. (Saudi Arabia), M.Dent (OMS) (Manitoba), F.R.C.D.(C); **Blight, T.,** D.D.S. (Toronto), Dip. O.M.S. (Manitoba); **Chahal, O.,** M.D. (Louisiana), Residency OMS (New York), DDS (Quebec); **Chimilari, D.,** D.M.D., (Manitoba), B.Sc.(Manitoba), M.R.C.D.(C); **Cholakis, A.,** B.A., D.M.D., Dip.Perio. (Manitoba); **Cogan, A.,** D.M.D. (Manitoba), Cert. Perio; **Dale, C.,** D.M.D. (Manitoba); **DeBrouwere, R.,** D.M.D. (Manitoba), M.D. (Manitoba), F.R.C.P.C.; **Hyman, G.,** B.Sc., D.M.D. (Manitoba), Dip.Perio (Oregon); **McFadden, L.,** D.D.S. (Alberta), M.Sc. (Dalhousie), M.R.C.D.(C); **Micflikier, I.,** D.M.D., Dip.Perio. (Manitoba); **Penner, C.,** DDS (Missouri), F.R.C.D.(C); **Schroth, B.,** D.M.D. (Manitoba) M.Sc. (Manitoba); **Stoykewych, A.A.,** B.S., D.M.D., Dip. O.M.S. (Manitoba).

Instructors

Benias, G., D.M.D. (Manitoba); **Boroditsky, C.,** D.M.D. (Manitoba); **Cottick, C.,** B.Sc., D.M.D. (Manitoba); **Dhillon, R.,** D.M.D. (Manitoba); **Dillon, J.,** B.D.S. (NUI), F.I.C.D.; **Fogel, H.,** D.M.D. (Manitoba) M.Sc. (Oregon), F.R.C.D.(C); **Girardin, D.,** Dip.D.H. (Manitoba); **Halas, G.,** Dip. D.H. (Manitoba); **Hamin, K.,** D.M.D. (Manitoba); **Hayduk, S.,** D.M.D. (Manitoba); **Kells, L. B.N.,** B.A., D.M.D. (Saskatchewan), M.Dent (Perio) (Manitoba); **Lipkin, J.,** D.M.D. (Manitoba); **Majewski, B.,** D.M.D. (Manitoba); **Rohalsky, W.,** D.M.D. (Manitoba); **Simpson, P.,** Dip.D.H. Adv.Cert.Gerontology (Manitoba); **Toporowski, B.,** D.M.D. (Manitoba); **Yakiwchuk, C.,** Dip.D.H. (Manitoba).

Oral Biology

Professor Emeritus

Bowden, G.H.W., M.Phil., Ph.D. (London); **Dawes, C.,** B.Sc., B.D.S. (Manchester), Ph.D. (Durham); **Hamilton, I.R.,** B.S.A., M.S.A. (Toronto), Ph.D. (Wisconsin).

Senior Scholars

Lavelle, C.L.B., B.Sc., B.D.S., Ph.D., M.D.S., D.Sc. (Birmingham), F.R.C.D.(C), M.R.C.(Path.) (London), Ph.D. (California) D.D.S. (Birmingham) F.R.C.P., M.B.A. (London), F.I.C.D.(C).

Professors

Bhullar, R.P., B.Sc. (McMaster), Ph.D. (Manitoba); **Birek, C.,** D.D.S. (Turgu-Mures), Ph.D., Dip.Oral Path. (Toronto); **Fleming, N.,** B.Sc. (Belfast), Ph.D. (East Anglia); **Gilchrist, J.S.C.,** B.Sc. (Liverpool), M.Sc. (Alberta), Ph.D. (UBC); **Karim, A.C.,** B.Sc. (Sir George Williams), M.Sc., Ph.D. (McGill); **McNicol, A.,** B.Sc., Ph.D. (Glasgow); **Scott, J.E.,** B.Sc. (Brandon), M.Sc., Ph.D. (Manitoba).

Assistant Professors

Banerjee, A., M.Sc., Ph.D., (India).

Preventive Dental Science

Senior Scholars

Odlum, O., B.D.S. (London), B.D.S.(Hons.), M.S.C. (Manitoba).

Professors

Lekic, C., D.D.M. (Belgrade), M.Sc. (Belgrade), Ph.D. (Belgrade), F.R.C.D.(C); **Wiltshire**, W., B.Ch.D., B.Ch.D. (Honors); M.Dent., M.Ch.D. (Ortho), D.Sc. (Odont.) (Pretoria), F.R.C.D.(C).

Associate Professors

Baker, R.C., D.M.D. (Manitoba), Dip.Ortho. (Toronto), F.A.C.D., F.I.C.D.; **Brothwell**, D., B.Ed., D.M.D. (Saskatchewan), M.Sc., D.D.Ph. (Toronto); **Cross**, H.G., B.Sc., D.M.D. (Manitoba), Cert. Pedo. (Connecticut), M.Sc. (Manitoba).

Assistant Professors

Baker, A., Dip. Ortho (Toronto), D.M.D. (Manitoba), F.I.C.D.; **Benami**, M., D.M.D. (Hebrew Univ), Dip Ortho (Tel Aviv); **Biber**, J., D.M.D. (Manitoba), Cert Paed (Minnesota); **Hechter**, F.J., D.M.D., M.Sc., M.Ed. (Manitoba); **Lukas**, S., D.M.D.(Manitoba), M.Sc. (Ortho) (Western); **McFadden**, L., D.D.S. (Alberta), M.Sc. (Dalhousie), M.R.C.D.(C); **Schroth**, B., D.M.D. (Manitoba) M.Sc. (Manitoba).

Instructors

Diamond, R., D.M.D., Cert Paed (Manitoba), Cert Paed (Connecticut); **Doobs**, T., B.S., D.D.S. (Tennessee), Cert. Pedo. (Manitoba); **Dumore**, T., D.M.D. (Manitoba), M.Sc.(Ortho) (San Francisco); **Howorth**, H., D.M.D., B.Sc. (Manitoba); **Ionescu**, D., D.M.D. (Toronto); **Lau**, L., D.M.D. (Manitoba); **Lee**, H. M.Sc. (Biochem)(Wisconsin), D.M.D., Dip. (Ortho) (Washington); **McFarlane**, B., D.M.D., M.Sc. (Ortho) (Western); **McManus**, P., D.M.D. (Manitoba); **Patel**, S., D.M.D. (Manitoba); **Schau**, J., D.M.D. (Manitoba); **Vodrey**, M., D.D.S., Dip.Pedo. (Toronto); **White**, M., D.M.D. (Manitoba).

Restorative Dentistry

Senior Scholars

Love, W.B., D.M.D. (Manitoba), M.S. (Ohio), F.A.C.P (USA), F.R.C.D.(C), F.I.C.D., F.A.C.D., F.A.P., Cert. Prosthodontics; **Snihurowycz**, T.G., D.M.D. (Munich), D.M.D. (Manitoba), F.I.C.D.; **Williams**, P.T., B.A.Sc., D.D.S. (Toronto), M.S. (Indiana), F.I.C.D.

Professors

Christie, W., D.M.D. (Manitoba), M.S. (Ohio), F.R.C.D.(C), F.I.C.D., F.A.C.D.; **Suzuki**, M., D.D.S. (Tokyo), M.S. (Roch.), D.M.D. (Manitoba), F.I.C.D., F.A.C.D.

Associate Professors

Louka, A.N., B.D.S., H.D.D. (Cairo), M.Sc. (Manitoba); **Mazurat**, R., B.Sc. (Calgary), D.D.S. (Alberta), Dip. Prosthodontics (Med.Coll.of Georgia); **Peikoff**, M.D., D.M.D. (Manitoba), M.S.D. (Boston), F.R.C.D.(C), F.I.C.D., F.A.C.D.; **Stockton**, H.J., D.M.D., M.B.A. (Manitoba), F.I.C.D.; **Stockton**, L., D.M.D. (Manitoba), F.I.C.D.

Assistant Professors

Bonstein, T., D.M.D. (Hungary), M.Sc. (Buffalo, NY); **Boorberg**, N., B.Sc.(H) (Manitoba), D.M.D. (Manitoba); **Braun**, J.V., B.Sc., D.M.D. (Manitoba), F.I.C.D.; **Carriere**, S., D.M.D. (Manitoba); **Davidson**, D.F., B.S.A., D.M.D. (Manitoba); **Dong**, C., D.M.D. (Manitoba), M.Sc. (Toronto), F.R.C.D.(C); **Mazurat**, N., B.Sc., D.D.S. (Alberta); **Smith**, D.M., B.A. (Emory), D.D.S. (Maryland), Dip. Fixed Prosthodontics (New York), M.S. (SUNY Binghamton), F.I.C.D.; **Swain**, V., B.Sc. (Manitoba), D.M.D. (Manitoba), B.Sc.(Dent) (Manitoba), M.Sc.(Cert Pros) (Minnesota).

Instructors

Acheson, W., B.Sc., D.M.D. (Manitoba), M.Sc. (Boston), F.I.C.D.; **Backman**, G.W., D.M.D. (Manitoba), Dip.Perio. (Toronto); **Boroditsky**, C., D.M.D. (Manitoba); **Brueckner**, D., D.M.D. (Manitoba); **Bueftner**, M. A., D.M.D. (Manitoba), F.I.C.D.; **Carriere**, S., D.M.D. (Manitoba); **Chuchman**, A., D.M.D. (Manitoba); **Colina**, T., D.M.D. (Manitoba); **Donald**, C., D.M.D. (Manitoba); **Fogel**, H., D.M.D. (Manitoba) M.Sc. (Oregon), F.R.C.D. (C.); **Gilmartin**, T., D.M.D. (Manitoba); **Hamin**, K., D.M.D. (Manitoba); **Holt**, J., D.M.D. (Manitoba); **Hodder**, K. D.D.S. (Dalhousie); **Huynh**, H., D.M.D. (Manitoba); **Jindal**, K., D.M.D. (Manitoba); **Jobb**, D., D.M.D. (Manitoba); **Kim**, A., D.M.D. (Manitoba); **Krukovsky**, R., D.M.D. (Manitoba); **Lau**, L., D.M.D. (Manitoba); **Ling**, P., D.D.S. (Toronto), M.Sc.

(Manitoba); **Mai**, T., D.M.D. (Manitoba); **Mao**, P., D.M.D. (Manitoba); **McClarty**, C., D.M.D., B.Sc. (Manitoba); **Mulhern**, J., B.Sc. (Dublin), M.S.D., Cert.Endo (Indiana); **Nowakowski**, A., B.Sc., D.M.D. (Manitoba); **Pesun**, S., B.Sc.(Dent), D.M.D. (Manitoba), F.R.C.D.(C), M.Sc., Cert Endo (Minnesota); **Rebizant**, T., B.Sc., D.M.D. (Manitoba) Cert.Endo (Boston); **Robertson**, R., D.M.D. (Manitoba); **Rohalsky**, W., D.M.D. (Manitoba); **Santos**, D., D.M.D. (Manitoba); **Schafer**, A.M., B.A.(Hons.) (Manitoba), B.Lit (Oxford); **Sing**, A., D.M.D. (Manitoba); **Solmundson**, K., D.M.D. (Manitoba), F.I.C.D.; **Sroay**, K, D.M.D. (Manitoba); **Tsang**, R., D.M.D. (Manitoba); **Van Woensel**, M., D.M.D. (Manitoba); **Wood**, M., D.M.D. (Manitoba), F.I.C.D.; **Yonza**, M., D.M.D. (Manitoba).

SECTION 2: The Profession of Dentistry

The Faculty of Dentistry is dedicated to educating dental, dental hygiene and graduate students in a progressive learning environment, conducting research in oral health, and serving the community and the oral health professions as a source of knowledge and expertise. The faculty serves as a bridge between the fundamental scientific foundation of the profession and its translation into health care for the public. Dentists enhance and promote the total health of patients through oral health management. Dentists are concerned with promoting oral health and preventing and alleviating the effects of oral diseases and conditions in order to contribute to the well-being of their patients.

The curriculum is designed to ensure that students graduate as competent dentists prepared to meet the oral health care needs of their patients. It provides the knowledge of basic biomedical, behavioural and clinical sciences and biomaterials, the cognitive and behavioural skills, and the professional and ethical values necessary for practice as a dental professional.

Information on the Dental Hygiene program is in the chapter, School of Dental Hygiene.

Licensing Requirements

A graduate of the Faculty of Dentistry is entitled, upon application to the Manitoba Dental Association and upon proof of good character and payment of the appropriate fee, to obtain a license to practice within the province of Manitoba. For information contact: The Registrar, Manitoba Dental Association, 103 - 698 Corydon Avenue, Winnipeg, Manitoba R3M 0X9; telephone (204) 988 5300.

National Examining Body

Graduates of this faculty are required to sit a written examination and an objective structured clinical examination during the calendar year of their graduation, administered by the National Dental Examining Board of Canada. The NDEB certification granted to graduates who pass these examinations, entitles them to apply for a license to practice in all provinces of Canada. The provinces of Ontario and Quebec have additional requirements. For information contact: The Registrar, National Dental Examining Board, 203 - 100 Bronson Avenue, Ottawa, Ontario K1R 6G8; telephone (613) 236 5912.

Other Licensing Bodies

For regulations governing licensure in other areas (e.g., other provinces, the United States), candidates are advised to write the licensing body in the province/state in which they are interested. An up-to-date list of addresses of these licensing bodies is available in the Neil John Maclean Health Sciences Library.

SECTION 3: Admission to the Faculty of Dentistry

3.1 Degrees Offered

Doctor of Dental Medicine

Minimum time to graduation: Six years (University 1, plus one year, plus four years in the Faculty of Dentistry).

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in an application bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre;

this information is also posted on the university's website (www.umanitoba.ca/faculties/dentistry).

Bachelor of Science (Dentistry)

In addition to the basic professional degree, the faculty offers the Bachelor of Science in Dentistry to interested dental students wishing to undertake research during their undergraduate program. The program is designed to assure that participation in it will not interfere with the student's dental degree. Through active participation in a research program, the students will be given the opportunity to develop skills in applying scientific knowledge to dental practice and an interest in dental research. In addition, the program will serve as a preparatory step for entry into various graduate programs. Information on admission to this program is available from the Dean's Office and through the Faculty of Dentistry's web page (www.umanitoba.ca/faculties/dentistry).

3.2 Course Requirements

After University 1, most students choose the Faculty of Science because the pre-Dentistry requirements easily fit Science degree programs.

Minimum 60 credit hours of pre-Dentistry study including:

BIOL 1250
CHEM 1300 and CHEM 1310
CHEM 2210 and 2220
MBIO 2360 and CHEM 2370 or MBIO 2370
PHYS 1020 and 1030 or PHYS 1050 and 1070
6 credit hours of English
24 credit hours of electives, 6 of which must be in the non-applied sciences or non-pure sciences.

All science courses must include the laboratory component.

Other requirements

High school prerequisites: Chemistry 40S, Mathematics 40S, and Physics 40S.

The 6 credit hours of English satisfies the written English requirement; the mathematics requirement must be met in the first 60 credit hours even though it is not a specific admissions requirement.

The Dental Aptitude Test (DAT) must be written.

A personal interview is required.

Admission is competitive.

Information on the admission process may be accessed through the Faculty of Dentistry's web page (www.umanitoba.ca/faculties/dentistry) or by requesting an Information Application Bulletin from either the Faculty of Dentistry or the University of Manitoba Admissions Office (Enrolment Services)

Selection criteria: Grades, interview and DAT score equally weighted.

3.3 International Dentist Degree Program (IDDP)

The Faculty of Dentistry, University of Manitoba, offers the International Dentist Degree Program (IDDP) to graduates of international dental programs that are not accredited by the Commission on Dental Accreditation of Canada. After a 6 to 8 week summer orientation program, students enter the 3rd year of the regular dental program of the Faculty. Upon satisfactory completion of the 3rd and 4th years of the dental program, IDDP participants will be awarded the Doctor of Dental Medicine (DMD) degree. All graduates of DMD programs in Canada, once having passed the National Dental Examining Board of Canada (NDEB) examinations, are eligible for licensure/registration as a dentist in all provinces in Canada.

Requirements for admission/entrance to the IDDP program include: the successful completion, within two years prior to the application deadline, of the Eligibility Examination, sponsored by the Commission on Dental Accreditation of Canada; submission of notarised official transcripts of diploma and dental school grades; letters of good standing, from appropriate licensing body; autobiographical sketch; and references.

Applicants, who have not completed Junior and Senior High School (6 years) in North America, must also complete an English language requirement (IELTS or Can TEST).

Competitive applicants in a given competition will be invited to an On-site Assessment held over a five day period at the Faculty of Dentistry. This assessment will, normally, be held mid-December preceding entry into the program. This assessment consists of a personal interview, a psychomotor skills assessment and an Objective Structured Clinical Examination (OSCE).

Information on admission to this program is available from the Dean's Office and through the Faculty of Dentistry's web page (www.umanitoba.ca/faculties/dentistry).

SECTION 4: Program Requirements and Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Dentistry has regulations and requirements, published below that apply specifically to its students.

4.1 Textbooks and Instruments

Expenditures for textbooks may amount to approximately \$5,500 over the four-year undergraduate program. Each student, on registering, will be provided with a microscope. Otherwise, students are responsible for the purchase of instruments as may be necessary or required. Over the four years of dentistry, the cost of such instruments is approximately \$30,000 (see fee schedule); the bulk of the expenditure is incurred in the first two or three years. Dental Kits are the property of Dental students. The Faculty is unable to accept returns of any student kit or kit items should a student leave the Faculty for whatever reason.

4.2 Immunization Policy

All students enrolled in the Faculty of Dentistry must be immunized against the following diseases: diphtheria/tetanus, polio, rubella, measles, mumps, chicken pox and hepatitis B. Students must be tested for tuberculosis if a suspected exposure occurs. Students who cannot be immunized because of allergies or for other reasons must provide a physician's certificate to verify these reasons.

Before the first day of classes, all students must complete the University of Manitoba Immunization Record Form provided by the Admissions Office. A physician or nurse must sign immunization records. All students are responsible for updating their immunizations as needed.

Students will not be permitted to attend clinics until all immunization requirements are up-to-date.

4.3 CPR Certification Policy

Accepted candidates will be required to show proof of CPR (Basic Rescuer) certification by October 15. This certification must be maintained up to the date of graduation. Certification is valid for a two-year period.

4.4 Financial Aid

A number of loan and bursary funds, including 12 new bursaries for first year students, are available to dental students. Applications and further information are available in the Dean's Office.

4.5 Attendance

See the chapter, General Academic Regulations and Requirements. The Faculty of Dentistry has additional regulations that can be found in the Student Handbook, available on-line via the Faculty's web page (www.umanitoba.ca/faculties/dentistry).

4.6 Voluntary Withdrawal

Students intending to withdraw from a portion or all of their courses must report immediately in person or in writing to the Dean's Office. No fees will be refunded without the authorization of the dean. See chapter, on General Academic Regulations and Requirements.

Students who withdraw from the Faculty of Dentistry without notice will be considered to have terminated their connection with the faculty. If a subsequent application for registration is approved, they will be required to conform to the rules and regulations, fee schedules, sequence of courses, etc., in effect at the time of such subsequent application.

In cases where a student is obliged to withdraw after the final date of withdrawal published in the *Calendar* because of ill health or other sufficient reasons, their cases will be considered by the dean of the faculty.

4.7 Required Withdrawal

The Senate of the university has approved bylaws granting certain faculties and schools the authority to require a student to withdraw on the basis of unsuitability for the practice of the profession to which the program of study normally leads. Senate has approved such a bylaw for the Faculty of Dentistry, and it is available in the Dean's Office.

4.8 Decisions Concerning Academic Promotions

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The letter grade "D" is the lowest acceptable level of performance in each undergraduate course leading to the degree of D.M.D. when the work of any given year is being taken for the first time. (In the case of a repeated year, the minimum passing grade in each course is "C".)

A student who has a failing grade registered against him/her may not register for the program of the subsequent year, but may, at the discretion of Dental Faculty Council, be permitted to repeat the failed year.

A minimum sessional GPA of 2.0 in each year is required to qualify a student for standing in that year.

A student who fails to obtain a minimum sessional GPA of 2.0 and who is not granted supplemental privileges will be considered to have failed the year.

Except by special permission of Dental Faculty Council, no student may repeat more than one year in Dentistry, nor may any year be repeated more than once.

The work requirements of any repeated year may be modified, even increased, at the discretion of the Dental Faculty Council.

The passing grade in each course of a repeated year in Dentistry is "C".

If a student receives an "F" grade in a fourth year clinical course, they will be required to register and pay a fee for the entire repeated year, and the work in that year may be modified or even increased by Dental Faculty Council.

4.9 Incomplete Standing in the Faculty of Dentistry

The incomplete "I(F)" designation is restricted to clinical courses.

Successful completion of course requirements is through extended clinics rather than supplemental assessment.

A student who is unable to complete the quantitative clinical requirements in a course by the end of the academic year may apply for an incomplete grade classification ["I(F)"] and extension of time. Details of this application procedure can be found in Dentistry's "Student Handbook" (on-line).

4.10 Supplemental Examinations

A "Supplemental Examination" is an examination which may be offered as a privilege to a student who has failed a course or failed to achieve a satisfactory result. Such examinations are offered in order to grant the student an opportunity to rectify the inadequacy without repeating the course.

Information on Supplemental Examinations can be found in the chapter, General Academic Regulations and Requirements at the beginning of this *Calendar*. Specific information on The Faculty of Dentistry's supplemental privileges can be found in Dentistry's "Student Handbook" (on-line)

4.11 Honours and Awards

The top 20 per cent of each class who have a minimum sessional GPA of 3.5 will qualify for the Dean's Honour List.

To qualify for Graduation with Honours, a candidate for the D.M.D. degree must qualify for the Dean's Honour List in both third and fourth year.

A student who repeats a year at his/her own request, i.e., not at the request of Dental Faculty Council, is not eligible for the Dean's Honour List or to receive any awards for the work in that repeated year.

The following policy applies to the eligibility of part-time students for academic awards: in allocating any award, the only academic performance of

a student to be considered is that attained during the year(s) for which the award is made. Therefore, a part-time student is not eligible for any purely academic award, other than one in an individual course. However, a part-time student who is carrying 80 per cent or more of the normal course load for the year is eligible for any award where conditions other than academic merit apply, and further, subject to the provisions set forth above, any part-time student is eligible for any award in the individual courses taken in the year for which the award is made.

SECTION 5: Program Outline and Course Descriptions

5.1 First Year

ORLB 1050	Cell and Tissue Biology
ORLB 1060	Head, Neck and Nervous System 1
ORLB 1070	Head, Neck and Nervous System 2
ORLB 1080	Human Growth and Development
ORLB 1090	Development, Structure and Function of Oral Tissues
PDSO 1020	Orthodontics 1
RSTD 1070	Dental Materials 1
RSTD 1100	Operative Dentistry 1
RSTD 1110	Dental Anatomy and Occlusion
RSTD 1120	Introduction to Dentistry
DDSS 1020	Periodontology
DDSS 1140	Radiology 1
DDSS 1010	Early Clinical Experience

5.2 Second Year

ORLB 2070	Structure and Function of Major Organ Systems
ORLB 2090	Cariology and Plaque Associated Diseases
ORLB 2100	Pathology and Microbiology 1
ORLB 2150	Nutrition in Dentistry
PDSO 2020	Orthodontics 2
PDSO 2070	Pediatric Dentistry 1
PDSO 2130	Dental Public Health
RSTD 2020	Dental Materials 2
RSTD 2220	Removable Partial Denture Prosthodontics
RSTD 2230	Complete Denture Prosthodontics
RSTD 2050	Operative Dentistry 2
RSTD 2060	Endodontology 1
RSTD 2140	Fixed Partial Denture Prosthesis 1
DDSS 2010	Oral Pathology
DDSS 2020	Pain and Anxiety Control
DDSS 2120	Periodontology
DDSS 2180	Radiology 2
DENT 2430	Introduction to Comprehensive Care

5.3 Third Year

ORLB 3020	Pathology and Microbiology 2
ORLB 3060	Pharmacology and Dental Therapeutics
PDSO 3040	Orthodontics 3
PDSO 3050	Pediatric Dentistry 2
PDSO 3140	a) Dental Public Health b) Preventive Dental Science
RSTD 3020	Operative Dentistry 3
RSTD 3040	Fixed Partial Denture Prosthesis 2
RSTD 3050	Endodontology 2
RSTD 3090	Complete and Removable Partial Dental Prosthesis
DDSS 3030	Medicine
DDSS 3200	Oral Diagnosis and Radiology
DDSS 3210	Oral and Maxillofacial Surgery
DDSS 3220	Periodontology
DDSS 3230	Pain and Anxiety Control

5.4 Fourth Year

PDSO 4050	Pediatric Dentistry 3
PDSO 4060	Orthodontics 4
PDSO 4080	Community Dentistry Externship
RSTD 4060	Endodontics
RSTD 4160	Dental Jurisprudence
RSTD 4170	Practice Management
DDSS 4080	Psychiatry
DDSS 4130	Hospital Dentistry
DDSS 4200	Oral Diagnosis and Radiology
DDSS 4210	Oral and Maxillofacial Surgery
DENT 4020	Interdisciplinary Case Studies
DENT 4030	General Practice Clinic

Course Descriptions

DENT 1010 Early Clinical Experience Cr.Hrs.6 (Formerly 066.101) A series of lectures and clinical participation sessions designed to introduce the student to clinical dentistry and the relevance of basic science courses in the dental curriculum. Lectures: 30 hours; Clinics: 90 hours.

DENT 2430 Introduction to Comprehensive Care Cr.Hrs.6 (Formerly 066.243) This course is an introduction to an integrated, patient-centered program with patient needs as the primary focus. The course introduces students to clinical protocol and patient record documentation and communication. Students receive experience in comprehensive treatment planning as well as basic treatments in periodontics, operative dentistry, and pain control. This course is evaluated on a pass/fail basis. Clinic: 84 hours; Seminars: 10 hours.

DENT 2440 IDDP Orientation Cr.Hrs.6 (Formerly 066.244)

DENT 4000 Opt'l Sumr Clin Cr.Hrs.0 (Formerly 066.400)

DENT 4020 Interdisciplinary Case Studies Cr.Hrs.6 (Formerly 066.402) Lectures and development of portfolio case designed to enable the student to obtain, organize and critically evaluate information in order to facilitate treatment planning. Lectures: 15 hours; Portfolio/Case Development: 45 hours.

DENT 4030 General Practice Clinic Cr.Hrs.30 (Formerly 066.403) This course consists of an integrated, patient-centered clinical program with patient needs as the primary focus. Patients will be assigned to students and organized to provide the required clinical experiences typical of a contemporary general dental practice. Clinic: 585 hours.

ORLB 1050 Cell and Tissue Biology Cr.Hrs.6 (Formerly 100.105) Structure, function and chemical composition of eucaryotic cells and bacteria will be studied. Molecular interactions within and between cells and the immune system will be described in detail. Lectures and Laboratories: 72 hours.

ORLB 1060 Head, Neck and Nervous System, Part 1 Cr.Hrs.6 (Formerly 100.106) Gross anatomy of the head and neck are described and observed by regional dissection. Overviews of the nervous system and surface anatomy of the mouth are included. Lecture, Laboratories and Demonstrations: 80 hours.

ORLB 1070 Head, Neck and Nervous System, Part 2 Cr.Hrs.6 (Formerly 100.107) An introduction to the structure and function of the central and peripheral nervous systems and associated structures, the neurophysiology and the stomatognathic system, pain and analgesics. Lectures and Laboratories: 71 hours.

ORLB 1080 Human Growth and Development Cr.Hrs.6 (Formerly 100.108) Development from the origin of the reproductive cells through fertilization, embryology, birth, growth and aging. Particular emphasis is given to development and growth of the head and neck. Lectures: 50 hours.

ORLB 1090 Development, Structure and Function of Oral Tissues Cr.Hrs.6 (Formerly 100.109) A study of development, structure and function of hard and soft oral tissues, the role of organic constituents in them, and their importance to the practice of dentistry. Lectures and Laboratories: 55 hours.

ORLB 1500 BSC DENT 1 Cr.Hrs.0 (Formerly 100.150)

ORLB 2070 Structure and Function of Major Organ Systems Cr.Hrs.6 (Formerly 100.207) This course emphasizes the basic structure at both organ and cellular levels of a number of organ systems and an understanding of their role in total body function. Lectures and Laboratories: 70 hours.

ORLB 2090 Cariology and Plaque Associated Diseases Cr.Hrs.6 (Formerly 100.209) A study of the various dietary, host and microbial factors involved in the etiology of dental caries and periodontal disease, and a discussion of the various methods of plaque control. Lectures: 75 hours.

ORLB 2100 Pathology and Microbiology 1 Cr.Hrs.6 (Formerly 100.210) Study of the basic mechanisms of microbial pathogenicity and general pathology as they relate to dentistry and dental treatment. Includes the pathogenesis of bacterial, viral and fungal infections and the aetiology of neoplastic, inflammatory and metabolic diseases. Lectures: 30 hours.

ORLB 2150 Nutrition in Dentistry Cr.Hrs.6 (Formerly 100.215) The course covers the role of nutrition in general health and disease with emphasis on the prevention and management of oral problems in Dentistry. Lectures: 25 hours.

ORLB 2500 BSC DENT 2 Cr.Hrs.0 (Formerly 100.250)

ORLB 3020 Pathology and Microbiology 2 Cr.Hrs.6 (Formerly 100.302) A study of selected infectious diseases and the application of general diagnostic pathology to dental practice. Lectures: 39 hours.

ORLB 3060 Pharmacology and Dental Therapeutics Cr.Hrs.6 (Formerly 100.306) A discussion of the basic pharmacology of local and systemic therapeutic agents and their potential impact on the treatment of dental patients. Lectures: 33 hours.

ORLB 7030 Glandular Metabolism and Secretion Cr.Hrs.3 (Formerly 100.703) Lectures and seminars dealing with all aspects of membrane transport and processes associated with transport within the cell.

ORLB 7090 Pharmacology and Therapeutics Cr.Hrs.3 (Formerly 100.709) A combined lecture and seminar course on the pharmacological basis of therapeutics. Special attention will be paid to drugs used commonly in the practice of dentistry, their side effects and their interaction.

ORLB 7100 Oral Microbial Ecology Cr.Hrs.3 (Formerly 100.710) Study of principles of ecology in relation to the various ecosystems in the oral cavity. In depth examination of the taxonomic relationships of oral bacterial species. Emphasis will be placed on the growth and metabolic activities of oral bacteria which lead to successful colonization of the mouth.

ORLB 7110 Infectious Diseases and the Oral Cavity Cr.Hrs.3 (Formerly 100.711) The description of the aetiology of microbial infections in the mouth and infections

elsewhere in the body which involve oral bacteria. The control of such infections by vaccines, antibiotics and antimicrobial drugs. Treatment of infections in the immunosuppressed, post operative infections and nosocomial infections. The relationships of host immune system to the oral flora.

ORLB 7120 Special Problems in Oral Biology Cr.Hrs.3 (Formerly 100.712) Each student will be required to carry out a minor research project in an area of oral biology other than that of their thesis work. The results of this project will be presented in a seminar and submitted as a written report.

ORLB 7130 Macromolecular Interactions of Connective Tissue in Health and Disease Cr.Hrs.6 (Formerly 100.713) A comprehensive study of the macromolecular constituents of connective tissue, of their synthesis, metabolism, macromolecular interaction in health and disease, and of their regulatory mechanisms.

ORLB 7180 Recent Advances in Oral Biology Cr.Hrs.6 (Formerly 100.718) This course is given by staff in the form of lectures and tutorials. Additional lectures may be given by visiting scientists. Students are expected to familiarize themselves with the relevant literature and are examined for an in-depth appreciation of the topics covered.

ORLB 7190 Communication Skills in Dental Research Cr.Hrs.3 (Formerly 100.719) A course to develop written, visual and oral communication skills in scientific and clinical disciplines related to dentistry.

PDSO 1020 Orthodontics - 1 Cr.Hrs.6 (Formerly 101.102) A series of seminars and tutorials designed to introduce the student to: growth and development of craniofacial structures, relationship of craniofacial growth to general body growth, cephalometric and facial analysis, etiology and classification of malocclusion, development of the dentition and preliminary wire bending and manipulation in orthodontics. Seminars: 24 hours; Tutorials: 12 hours.

PDSO 2020 Orthodontics - 2 Cr.Hrs.6 (Formerly 101.202) A series of lectures and laboratories to introduce the student to: clinical protocol for examination, diagnosis and treatment planning of malocclusions, concepts of occlusion and biomechanics of orthodontic therapy, and fabrication of orthodontic appliances. Lectures: 14 hours; Laboratories: 30 hours.

PDSO 2070 Pediatric Dentistry - 1 Cr.Hrs.6 (Formerly 101.207) A series of lectures and laboratories to introduce the student to: the fundamental principles of dental growth and development of children, introduction to operative dentistry and preventive techniques commonly used in dentistry for children. Lectures: 10 hours; Laboratories: 30 hours.

PDSO 2130 Dental Public Health Cr.Hrs.6 (Formerly 101.213) A series of lectures dealing with dental epidemiology, demography, water fluoridation, and dental health education, program planning and evaluation. The organization of the Canadian health care system is examined with special reference to dental care and Aboriginal health issues. Lectures: 15 hours.

PDSO 3040 Orthodontics - 3 Cr.Hrs.6 (Formerly 101.304) A series of seminars covering the analysis, diagnosis, treatment planning, and mechanotherapy using records of selected cases. The clinical component consists of the diagnosis and treatment planning for individuals seeking orthodontic treatment. The clinical experience includes exposure to removable and fixed appliance mechanotherapy, screening of patients seeking orthodontic care and follow-up of retention of completed cases. Seminars: 14 hours; Clinic: 75 hours.

PDSO 3050 Pediatric Dentistry - 2 Cr.Hrs.6 (Formerly 101.305) A series of seminars and clinics to give the student a basic understanding and some clinical experience with: clinical procedures, emergency treatment, psychological management, preventive medical considerations and the provision of total dental care to pediatric patients. Lectures, Seminars and Clinics: 103 hours.

PDSO 3140 Dental Public Health/Preventive Dental Science Cr.Hrs.6 (Formerly 101.314) (a) Dental Public Health The course focuses on the social and psychological variables that impact on dental care for specific age and disease-related issues in the population. Patient utilization rates and program organization are reviewed. Lectures: 15 hours. (b) Preventive Dental Science Techniques and therapy used to prevent dental diseases are covered. The application of these modalities to specific patient categories follows. Lectures: 15 hours.

PDSO 4050 Pediatric Dentistry - 3 Cr.Hrs.6 (Formerly 101.405) This course consists of clinical experience including exposure to common pediatric dentistry problems, caries preventive and control procedures, routine conservative procedures and the dental treatment of children in community-based clinics. Clinic: 90 hours.

PDSO 4060 Orthodontics - 4 Cr.Hrs.6 (Formerly 101.406) This course consists of seminars on special topics related to the provision of orthodontic therapy. In addition, the clinical component including the diagnosis and treatment planning for individuals seeking orthodontic treatment as well as the continuation of treatment commenced in PDSO 3040 (or 101.304). Clinical seminars cover the analysis, diagnosis, treatment planning, mechanotherapy and post-treatment evaluation of previously treated cases. Lectures: 12 hours; Clinic: 75 hours.

PDSO 4080 Community Dentistry Externship Cr.Hrs.6 (Formerly 101.408) This clinical program is centred in community clinics in Winnipeg and northern Manitoba. The clinics serve elderly, aboriginal, low income or northern patients. Health education seminars may be a requirement at some sites, prepared and delivered by the student interns. Six week rotation.

PDSO 7000 Neural Basis of Oropharyngeal Function Cr.Hrs.3 (Formerly 101.700) A program of problem-oriented seminars on the sensory and reflex mechanisms affecting the respiratory and alimentary functions of the mouth and pharynx, mandibular posture and movement and respective application to oropharyngeal dysfunction and orthodontic therapy. One seminar per week for one term.

PDSO 7010 Cr.Hrs.12

PDSO 7020 The Mechanics of Orthodontic Therapy Cr.Hrs.6 (Formerly 101.702)

The mathematics of three dimensional space, force and moment systems are given as the basis for considering the mechanics of orthodontic treatment. The mechanical properties of some orthodontic materials are studied as a background for appliance design. The quantitative aspects of tooth movement are discussed in terms of patient treatment planning. Seminar and laboratory sessions.

PDS 7030 Biological Basis of Craniofacial Growth and Development Cr.Hrs.3 (Formerly 101.703) A program of student-based seminars on the biophysical, biochemical and histological basis of growth and development of craniofacial structures.

PDS 7040 Clinical Craniofacial Growth and Development Cr.Hrs.3 (Formerly 101.704) A program of student-based seminars on the morphogenesis of craniofacial structures and their significance to clinical problems.

PDS 7050 Cr.Hrs.3

PDS 7060 Cephalometric Analysis Cr.Hrs.3 (Formerly 101.706) A seminar program on the application of cephalometric radiography to craniofacial morphological research, orthodontic diagnosis and case analysis.

PDS 7070 Biology of Orthodontics and Facial Orthopedics Cr.Hrs.3 (Formerly 101.707) A program of student-based seminars and lectures on the biological basis of orthodontic and facial orthopedic diagnosis and therapeutic technique.

PDS 7080 Cr.Hrs.10

PDS 7090 Cr.Hrs.12

RST 1070 Dental Materials - 1 Cr.Hrs.6 (Formerly 102.107) This course introduces the materials commonly used in dental practice. Composition, chemistry, properties, manipulation and manipulative variables are covered by lecture, laboratory exercises and demonstrations. Lectures: 23 hours; Laboratories: 30 hours.

RST 1100 Operative Dentistry - 1 Cr.Hrs.6 (Formerly 102.110) A lecture and laboratory course introducing the fundamentals of tooth restoration. Hand and rotary instrumentation, principles of tooth preparation and restoration with amalgam, inlays and composite resin. Lectures: 27 hours; Laboratory: 135 hours.

RST 1110 Dental Anatomy and Occlusion Cr.Hrs.6 (Formerly 102.111) A lecture and laboratory/seminar course introducing dental terminology, tooth identification, dental morphology and comparative anatomy in first term and the relationships of morphology to functional occlusion in second term. Lectures: 30 hours; Laboratory/Seminar: 117 hours.

RST 1120 Introduction to Dentistry Cr.Hrs.6 (Formerly 102.112) A series of lectures and seminars which introduce the student to the profession, its structure and governance and prevention of dental disease most commonly treated by dental professionals. Lectures/Seminars: 53 hours

RST 2020 Dental Materials - 2 Cr.Hrs.6 (Formerly 102.202) This course develops a scientific basis for the selection, application, manipulation and clinical performance of dental materials. The relationship between the properties of a material and its manipulation, application and clinical behaviour is developed. Lectures: 28 hours.

RST 2050 Operative Dentistry - 2 Cr.Hrs.6 (Formerly 102.205) A lecture and laboratory course presenting modern and advanced techniques in tooth restoration. Composite resins, adhesion to tooth structure, esthetic restorations and protection of tooth vitality. Introduction to clinical treatment modalities and treatment delivery. Lectures: 13 hours; Laboratory: 71 hours.

RST 2060 Endodontology - 1 Cr.Hrs.6 (Formerly 102.206) Introduction to pulp and periapical pathology. The majority of the teaching is directed at the understanding and actual performance of practical endodontic techniques. Lectures: 12 hours; Laboratories: 36 hours.

RST 2140 Fixed Partial Denture Prosthesis - 1 Cr.Hrs.6 (Formerly 102.214) This course consists of lecture and laboratory instruction introducing basic techniques of crown and bridge construction based on classical concepts. Lectures: 19 hours; Laboratories: 147 hours.

RST 2220 Removable Partial Denture Prosthodontics Cr.Hrs.6 (Formerly 102.203) The didactic portion of this course presents the principles for the treatment of partially edentulous patients. The procedures and techniques founded on the basic principles make up the laboratory exposure. Lectures: 14 hours; Laboratories: 42 hours.

RST 2230 Complete Denture Prosthodontics Cr.Hrs.6 (Formerly 102.204) The didactic portion of this course presents the principles for the treatment of edentulous patients. Emphasis is placed on techniques of treatment in the laboratory component. Lectures: 30 hours; Laboratories: 90 hours.

RST 3020 Operative Dentistry - 3 Cr.Hrs.6 (Formerly 102.302) This course consists of lecture and clinic components emphasizing diagnosis, treatment planning and the application of fundamental principles of operative dentistry. A review of the literature dealing with current restorative materials and techniques is also included. Lectures: 26 hours; Clinic 160 hours.

RST 3040 Fixed Partial Denture Prosthesis - 2 Cr.Hrs.6 (Formerly 102.304) An introduction to the clinical practice of crown and bridge techniques. An emphasis is placed on diagnosis and treatment-planning. Clinical exposure is supplemented by lecture materials. Lectures: 39 hours; Clinic: 120 hours.

RST 3050 Endodontology - 2 Cr.Hrs.6 (Formerly 102.305) This course emphasizes the rationale and biologic basis for the practical techniques previously taught. Techniques are discussed in greater detail and are applied to treatment of patients. The second part of the course deals with pulp biology to prepare the student for understanding the rationale behind pulpal protection, prevention and treatment of pulpal disease. Laboratory exercises are performed on more complex root canal systems in preparation for General Practice Clinic. Lectures: 25 hours; Clinic: 96 hours.

RST 3090 Complete and Removable Partial Denture Prosthesis Cr.Hrs.6 (Formerly 102.309) This course consists of a series of lectures and clinics. Theories of applied prosthodontics are discussed and applications of this knowledge are made concur-

rently through the clinical treatment of patients. Lectures: 47 hours; Clinic: 96 hours.

RST 4060 Endodontic Seminars Cr.Hrs.6 (Formerly 102.406) Seminars designed to enhance the clinical endodontics experience with literature review of diagnosis, more complex treatment methods and materials, case selection and student evidence-based literature and case presentations. Seminars: 17 hours.

RST 4160 Dental Jurisprudence Cr.Hrs.6 (Formerly 102.416) This course covers the fundamental legal concepts of professional interest, the extent of legal responsibilities to patients, the constitution of malpractice, the roles of the expert witness, contracts, etc. Lectures: 13 hours.

RST 4170 Practice Management Cr.Hrs.6 (Formerly 102.417) The management, evaluation, economics, organization, design, location, selection and marketing of a dental practice are covered by lectures and seminars. In addition, ethical considerations of dental practice, the options available to new dental graduates and the role of professional associations are discussed. Lecture and Seminars: 46 hours.

RST 7100 Dental Materials Cr.Hrs.6 (Formerly 102.710) This course consists of lecture, seminar and laboratory periods. The student will examine the current literature relevant to the program and will gain experience in the testing procedures used to evaluate dental materials. A project involving the evaluation of a dental material will be required of each student.

RST 7150 Orthodontic Materials Cr.Hrs.3 (Formerly 102.715) Students will examine in depth through lectures, seminars and research of the current literature, those materials used by Orthodontists in their clinical practice. The relationship between materials properties and clinical performance will be emphasized.

DDSS 1020 Periodontology 1 Cr.Hrs.6 (Formerly 103.102) A laboratory course designed to introduce students to periodontal examination procedures and to basic periodontal instrumentation. Laboratories: 30 hours.

DDSS 1140 Radiology 1 Cr.Hrs.6 (Formerly 103.114) A series of lectures which introduces the student to: the elementary principles of dental radiology; radiation physics, radiation biology, imaging techniques, x-ray equipment, radiation protection. Lectures: 16 hours.

DDSS 2010 Oral Pathology Cr.Hrs.6 (Formerly 103.201) A series of lectures emphasizing recognition, description, etiopathogenesis, clinical and/or radiographic features, biologic behaviour, treatment and/or management of oral and paraoral pathologic conditions. Lectures: 76 hours.

DDSS 2020 Pain and Anxiety Control 1 Cr.Hrs.6 (Formerly 103.202) A series of lectures to introduce the student to: local anaesthetics, local anaesthesia techniques, avoidance and management of complications and selection of appropriate drugs and techniques. Lectures: 15 hours.

DDSS 2120 Periodontology 2 Cr.Hrs.6 (Formerly 103.212) An introductory course with emphasis on periodontal structures in health and disease, the etiology and diagnosis of periodontal disease, as well as the role of occlusion. Lectures: 23 hours.

DDSS 2180 Radiology 2 Cr.Hrs.6 (Formerly 103.218) A series of lectures in the theoretical and practical principles of radiographic interpretation of common oral pathologic conditions as well as selected examples of pathologic conditions exhibiting important radiographic principles. Lectures: 16 hours.

DDSS 3030 Medicine Cr.Hrs.6 (Formerly 103.303) Lectures or seminars describing the basic mechanisms, symptoms, diagnosis, and management of various disease processes included in internal medicine and their dental correlations. Lectures: 30 hours.

DDSS 3200 Oral Diagnosis and Radiology 1 Cr.Hrs.6 (Formerly 103.320) This course includes a lecture component covering history-taking, clinical examination, diagnosis and treatment of soft and hard tissue lesions, emergency treatment, dental treatment of patients with systemic disease, and clinical experience. Lectures: 32 hours; Clinic: 48 hours.

DDSS 3210 Oral and Maxillofacial Surgery 1 Cr.Hrs.6 (Formerly 103.321) This course consists of lectures, seminars and clinics, covering all aspects of oral and maxillofacial surgery with an emphasis on those procedures performed by the general practitioner. Lectures/Seminars: 30 hours; Clinics: 18 hours.

DDSS 3220 Periodontology 3 Cr.Hrs.6 (Formerly 103.322) This combined didactic and clinical course is designed to provide experience which will allow students to apply their earlier and current didactic learning to the clinical environment. The lecture periods concern themselves principally with verbal descriptions of treatment modalities and techniques, including non-surgical, surgical intervention and temporomandibular joint problems. Inter-relationships with other clinical disciplines and dental implantology also receives considerable attention. Lectures: 26 hours; Minimum Clinical Experience: 70 hours.

DDSS 3230 Pain and Anxiety Control 2 Cr.Hrs.6 (Formerly 103.323) This course consists of lectures/seminars and clinical experience in: physiology of pain and psychology of anxiety, management of medical emergencies, parenteral injections, and therapeutics of the various modalities of pain and anxiety control. Lectures and Clinical Experiences/Seminars: 30 hours

DDSS 4080 Psychiatry Cr.Hrs.6 (Formerly 103.408) This course is a series of lectures covering: consideration of personality development, the measurement of intelligence, ego defenses, normal and abnormal psychodynamics, psychological problems which initiate and sustain dental pathology, and handling practice psychiatry problems in dental practice. Lectures: 14 hours.

DDSS 4130 Hospital Dentistry Cr.Hrs.6 (Formerly 103.413) This course is designed to provide the student with a familiarization with hospital protocol, reinforcement of understanding in medicine, surgery, pharmacology and therapeutics, the dental treatment of medically compromised patients at the Health Sciences Centre, and handicapped patients in other institutional settings. One week rotation.

DDSS 4200 Oral Diagnosis and Radiology 2 Cr.Hrs.6 (Formerly 103.420) This clinical course is designed to give the student clinical experience with: treatment plan-

ning; diagnostic techniques, differential diagnosis, emergency treatment and non-surgical management related to oral pathologic conditions. Clinical Experience: 60 hours.

DDSS 4210 Oral and Maxillofacial Surgery 2 Cr.Hrs.6 (Formerly 103.421) This course consists of lectures, seminars and clinics covering all aspects of oral and maxillofacial surgery with an emphasis on those procedures performed by the general practitioner. Lectures: 15 hours; Clinics: 18 hours.

DDSS 7010 Biology and Pathology of the Periodontium Cr.Hrs.6 (Formerly 103.701) Selected topics in cell biology precedes a comprehensive and detailed survey of the periodontium, its constituent tissues and its function; the cell dynamics of inflammation and wound healing and the histopathology of the early and advanced periodontal lesion.

DDSS 7050 Oral Medicine and Oral Diagnosis Cr.Hrs.3 (Formerly 103.705) This course provides the student, through clinical rotations, with the opportunity to enhance diagnostic and non-surgical management of oral pathologic conditions including mucosal and intrabony lesions, temporomandibular joint disorders, and oral manifestations of systemic disease in both otherwise healthy and medically compromised patients.

DDSS 7120 Advanced Clinical Periodontics Cr.Hrs.4 (Formerly 103.712) This seminar course will review contemporary clinical periodontics by considering assigned readings in current texts and review articles. This course is intended to assure that students have a comprehensive overview of conventional periodontal therapy early in their education.

DDSS 7130 Occlusion Cr.Hrs.3 (Formerly 103.713) A seminar series devoted to the diagnosis, treatment planning and management of patients with craniomandibular disorders.

DDSS 7150 Review of Periodontal Literature Cr.Hrs.6 (Formerly 103.715) This course will consider the concepts underlying the current practice of periodontics by reviewing assigned readings from the scientific literature. Students will be expected to apply principles of critical evaluation in order to identify and appreciate the limitations of these studies and thus the limitations of the current concepts derived from them.

DDSS 7210 Clinical Practice in Periodontics Cr.Hrs.18 (Formerly 103.721) Designed to provide the clinical experience which is essential for specialty practice in Periodontics (circa 1600 hours).

DDSS 7220 Essay/Research Project Cr.Hrs.0 (Formerly 103.722) An essay/research project is required for each student. It is selected in consultation with, and approved by the department head.

DDSS 7230 Advanced Oral Pathology Cr.Hrs.6 (Formerly 103.723) The four major etiopathogenic categories of diseases affecting the oral and paraoral structures are discussed with emphasis on common conditions and entities significant to various dental specialties. Lectures cover epidemiology, clinical and laboratory features and management principles with supplementation by seminars or laboratories.

DDSS 7240 Advanced Oral and Maxillofacial Surgery Seminar 1 Cr.Hrs.3 (Formerly 103.724) This course includes a thorough review of the applied scientific basis for the practice of oral and maxillofacial surgery and emphasizes surgical anatomy and pathology, diagnosis and technique. Instruction will be given by means of lectures, seminars, case presentations and a critical review of current literature. Year I.

DDSS 7250 Clinical Advanced Oral and Maxillofacial Surgery 1 Cr.Hrs.6 (Formerly 103.725) The first year of hospital residency includes training in history taking and physical diagnosis; hospital protocols and ward procedure; minor oral surgery procedures and pain control techniques; operating room procedures and general in-patient care. Year I.

DDSS 7260 Advanced Oral and Maxillofacial Surgery Seminar 2 Cr.Hrs.3 (Formerly 103.726) Lectures, seminars, case presentations and reviews of current literature will emphasize the state of current knowledge regarding the clinical practice of advanced oral and maxillofacial surgery. Year 2.

DDSS 7270 Clinical Advanced Oral and Maxillofacial Surgery 2 Cr.Hrs.6 (Formerly 103.727) The second year of the hospital residency training program includes training in minor oral surgery, including dento-alveolar, pre-prosthetic surgery and implantology. It also provides an introduction to advanced oral and maxillofacial surgery and maxillofacial imaging. A rotation to Internal Medicine is included. Year II.

DDSS 7280 Clinical Advanced Oral and Maxillofacial Surgery 3 Cr.Hrs.6 (Formerly 103.728) The third year of the hospital residency training program includes rotations in Anaesthesia, Internal Medicine, General and Plastic Surgery, Surgical Intensive Care and Emergency Room. It also includes training in advanced oral and maxillofacial surgery. An elective rotation may also be arranged. Year III.

DDSS 7290 Clinical Advanced Oral and Maxillofacial Surgery 4 Cr.Hrs.6 (Formerly 103.729) The fourth year of the hospital residency training program is devoted to advanced oral and maxillofacial surgery. The student is designated chief resident and assumes a greater degree of responsibility in patient care and administrative activities. Year IV.

DDSS 7300 Dental Implantology Cr.Hrs.3 (Formerly 103.730) A seminar course devoted to providing an in-depth understanding of the basic and applied aspects of the placement of dental root form implants in humans. This course is a *prerequisite* to the actual surgical placement of implants undertaken in DDSS 7210 (or 103.721).

Faculty of Education

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Dean: John Wiens

Associate Deans: David Mandzuk (Undergraduate), Zana Lutfiyya (Graduate & Research)

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Student Services

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Chapter Contents

SECTION 1: Academic Staff

SECTION 2: The Faculty of Education and the Teaching Profession

- 2.1 Professional Teacher Certification Requirements for the Province of Manitoba
- 2.2 Overview of Programs

SECTION 3: Admission to the Faculty of Education

- 3.1 After-Degree Bachelor of Education
- 3.2 Integrated Degrees: Human Ecology and Music
- 3.3 Post Baccalaureate Diploma in Education

SECTION 4: After-Degree Bachelor of Education

Early Years, Middle Years (Including a Weekend College Middle Years Scheduling Option) and Senior Years

- 4.1 Admission Requirements
- 4.2 Admission Procedure
- 4.3 Program Requirements

SECTION 5: Bachelor of Music/Bachelor of Education Integrated

- 5.1 Admission Requirements
- 5.2 Admission Procedure
- 5.3 Program Requirements

SECTION 6: Bachelor of Human Ecology/Bachelor of Education Integrated

- 6.1 Admission Requirements
- 6.2 Admission Procedure
- 6.3 Program Requirements

SECTION 7: Academic Regulations for Bachelor of Education

- 7.1 Academic Regulations for All Bachelor of Education Programs (see also 7.2)
- 7.2 Academic Regulations for the After-Degree Bachelor of Education (Early Years, Middle Years, Middle Years Weekend College Scheduling Option, and Senior Years) (see also 7.1)
- 7.3 Academic Regulations for Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed. (see also 7.1)

SECTION 8: Complementary Courses

SECTION 9: Post Baccalaureate Diploma in Education

- 9.1 Admission Requirements
- 9.2 Admission Procedure
- 9.3 Program Requirements
- 9.4 Academic Regulations
- 9.5 Transfer of Credit

SECTION 10: Course Descriptions

- 10.1 Department of Curriculum, Teaching and Learning
- 10.2 Department of Educational Administration, Foundations and Psychology

SECTION 1: Academic Staff

Curriculum, Teaching and Learning

Dean Emeritus

MacPherson, E.D., B.A., M.A. (British Columbia), Ph.D. (Washington State).

Professors Emeriti

Osborne, K.W., B.A.(Hons.) (Oxford), B.Ed., M.A. (Manitoba); **Trosky**, O., B.A., B.Ed., M.Ed. (Manitoba), Ph.D. (Toronto); **Zakaluk**, B.L., B.A., B.Ed., M.Ed. (Manitoba), Ph.D. (Minnesota).

Senior Scholars

Bochonko, H., B.A., M.A. (Michigan); **Irvine**, J., B.A., B.Paed., B.Ed., M.Ed. (Manitoba); **Mathews**, P.G., B.Ed., M.Ed. (Manitoba), Ph.D. (Minnesota); **Spencer**, P., B.A., B.Ed., M.Ed (Manitoba), Ed.D. (New York).

Professors

Cap, O., B.A. (Quebec), M.Ed. (Rutgers), Ph.D. (Ohio State); **Hlynka**, L.D., B.Sc., B.Ed. (Manitoba), M.A. (Minnesota), Ph.D. (Michigan State); **Jenkinson**, D.H., B.A., B.Ed. (Manitoba), B.L.S., M.Ed. (Alberta), Ph.D. (Minnesota); **Morin**, F., R.C.M., (Affiliate Teacher)(Toronto), B.P.E., M.Ed. (Manitoba), Ph.D. (North Dakota); **Stinner**, A.O., B.A., B.Sc., B.Ed. (Alberta), M.Sc. (York), Ed.D. (Toronto); **Straw**, S.B., B.A., M.A. (Missouri), Ph.D. (Minnesota).

Associate Professors

Johns, B.A., B.S. (Indiana), M.A. (Michigan State); **Kanu**, Y., B.A., Dip.Ed., M.Ed. (Sierra Leone), Cert.Curr.Dev.Soc.St. (Leeds), B.Litt. (Birmingham), Ph.D. (Alberta); **Kouritzin**, S., B.A., M.A., Ph.D. (British Columbia); **Lewthwaite**, B., B.Sc., B.Ed. (Saskatchewan), M.Ed. (Massey), Sc.Ed.D. (Curtin); **Mason**, R., B.Ed., M.A. (Ed.) (Calgary), Ph.D. (Alberta); **Schulz**, R., B.A. (Manitoba), M.Ed. (Queen's), Ph.D. (North Dakota); **Serebrin**, W., B.A., B.Ed. (Dalhousie), Ph.D. (Indiana).

Assistant Professors

Black, J., B.A. (Guelph), B.Ed. (Toronto), M.A. (Concordia), Ph.D. (OISE/Toronto); **Falkenberg**, T., First State Examinations of Studienrat, Ph.D. (Free University, Berlin), Post.Bac.D., Ph.D. (Simon Fraser); **MacPherson**, S., B.A., Ph.D. (British Columbia); **McMillan**, B.A., B.Sc. (Wisconsin), B.Sc. (Hons.), M.Sc., Ph.D. (Manitoba); **Rosenstock**, S.A., B.A. (Manitoba), M.A. (North Dakota), Ph.D. (Ohio State); **Schmidt**, C., B.A. (York), M.A. (Carleton), Ph.D. (OISE/Toronto); **Smith**, K., B.F.A., Cert.Ed. (Manitoba), M.Ed. (British Columbia), Ph.D. (Manitoba); **Welsh**, J.C., B.Sc., B.Ed. (Manitoba), M.A., Ph.D. (Minnesota).

Lecturer

Bryan, G., B.S., M.A. (Brigham Young).

Instructors

Coffman, E., B.F.A. (Goshen College), M.Ed. (Manitoba); **Fecyk-Lamb**, R., B.A. (Hons.)(Ottawa), B.Ed. (Manitoba), M.Ed. (OISE/Toronto); **McIntosh**, H., B.Ed. (Manitoba), M.A. (Concordia); **Sadowy**, P., B.Ped., M.Ed. Ph.D. (Manitoba).

Educational Administration, Foundations, and Psychology

Dean Emeritus

Magsino, R., B.A. (Magna Cum Laude), B.Sc., Ed. (Magna Cum Laude) (Luzonion), M.Ed. (Sydney), M.A., Ph.D. (Wisconsin); **Stapleton**, J.J., B.S. (Iona), M.T.S. (C.U.A.), M.A., Ph.D. (Toronto).

Senior Scholar

Poonwassie, D., B.A. (Manitoba), B.Ed., M.Ed., Ph.D. (Oregon).

Professors Emeriti

Poonwassie, D., B.A. (Manitoba), B.Ed., M.Ed., Ph.D. (Oregon); **Riffel**, J.A., B.A., M.Ed. (Saskatchewan), Ph.D. (Alberta); **Wilson**, K., M.A. (Sheffield), M.Ed. (Manitoba), Ph.D. (Michigan State).

Professors

Bartell, R., B.A., M.A. (Hebrew University, Jerusalem), Ph.D. (Chicago); **Chinien**, C., B.Ed., M.Ed., Ph.D. (Ohio State); **Clifton**, R.A., B.Ed., M.Ed. (Alberta), Ph.D. (Toronto), Ph.D. (Stockholm); **Freeze**, D.R., B.A., B.Ed. (Queen's), M.A., Ph.D. (Victoria); **Long**, J.C., B.Ed. (Alberta), M.Ed. (Calgary), Ph.D. (Alberta); **Lutfiyya**, Z.M., B.A. (Manitoba), M.S., Ph.D. (Syracuse); **Magsino**, R., B.A. (Magna Cum Laude), B.Sc., Ed. (Magna Cum Laude) (Luzonion), M.Ed. (Sydney), M.A., Ph.D. (Wisconsin); **Schulz**, W.E., B.A. (Winnipeg), B.Ed. (Manitoba), M.Ed., Ph.D. (Wyoming); **Seifert**, K.L., B.A. (Swarthmore), M.A., Ph.D. (Michigan); **Stapleton**, J.J., B.S. (Iona), M.T.S. (C.U.A.), M.A., Ph.D. (Toronto); **Wiens**, J.R., B.A., B.Ed., M.Ed. (Manitoba), Ph.D. (Simon Fraser); **Young**, J.C., B.A., M.A. (Durham), P.G.C.E. (Cambridge), M.Ed. (Queen's), Ph.D. (Toronto).

Associate Professor

Enns, C., B.Sc., M.Cl.Sc. (Western), Ph.D. (Manitoba), **Creamer**, D.G., B.Sc., B.Ed. (St. Mary's), M.Div. STB. (Regis College), M.Ed., Ed.D. (OISE).

Assistant Professors

Atleo, M., B.H.E., M.A., Ph.D. (British Columbia); **Crippen**, C., B.A. (Carleton), M.Ed. (Ottawa), Ph.D. (North Dakota); **Fitznor**, L., B.A., M.Ed. (Manitoba), Ed.D. (Toronto); **Mandzuk**, D., B.Ed., M.Ed., Ph.D. (Manitoba); **Mani**, P., B.Ed. (Alberta), M.Ed. (Ottawa), Ph.D. (Victoria); **McCabe**, G., B.A. (Winnipeg), M.Ed., Ph.D. (Manitoba); **Piquemal**, N., DEUG, Licence, Maitrise, D.E.A. (Strasbourg), Ph.D. (Alberta); **Renaud**, R., B.A. (Hons.), M.A., Ph.D. (Western Ontario); **Wallin**, D., B.Ed., B.A., M.Ed., Ph.D. (Saskatchewan).

Division of Post-Secondary Studies

Professors

Clifton, R.A., B.Ed., M.Ed. (Alberta), Ph.D. (Toronto), Ph.D. (Stockholm); **Kirby**, D.M., B.Sc., Ed.Cert. (London), M.Ed. (Memorial), Ph.D. (London); **Morphy**, D.R., B.A. (Alberta), M.A. (Calgary), Ph.D. (Michigan State); **Perry**, R.P., B.A. (British Columbia), M.Sc., Ph.D. (Calgary); **Straw**, S. B., B.A., M.A. (Missouri), Ph.D. (Minnesota).

Associate Professor

Kristjanson, C., BPE., M.Ed., Ph.D. (Manitoba).

Assistant Professors

Renaud, R.D., B.A., M.A., Ph.D. (Western Ontario); **Schonwetter**, D.J., B.Th. (CMBC), B.A., M.A., Ph.D. (Manitoba).

SECTION 2: The Faculty of Education and the Teaching Profession

The educational objective of the Faculty of Education is to prepare students for a career in the teaching profession. Attaining the B.Ed. degree leads to professional certification by Manitoba Education, Citizenship and Youth and the opportunity to attain initial employment as a classroom teacher in Manitoba and elsewhere. Those desiring other roles in education can achieve the professional requirements via the Post Baccalaureate Diploma in Education (PBDE) or graduate degrees in education (M.Ed. or Ph.D.).

Teacher education in Manitoba dates to 1882, but the Faculty of Education was not created until 1935. Initially charged with offering programs that led to secondary school teaching certificates and Master of Education degrees, in 1965, through amalgamation with the Manitoba Teacher's College, the faculty had its mandate enlarged to include the elementary certification programs. From 1986 to 1998, the four year Bachelor of Education was the prerequisite degree for professional certification; however, effective May, 2003, all future Manitoba teachers must graduate from 150 credit hour teacher education programs and hold two degrees, one of them a B.Ed. The faculty has, therefore, introduced a two-year Bachelor of Education degree which is completed following the awarding of an initial degree from another faculty or university.

2.1 Professional Teacher Certification Requirements for Manitoba Education

During the final year of the B.Ed. degree, the university will provide a list of potential Bachelor of Education graduates to the Professional Certification and Student Records Unit, Manitoba Education, Citizenship and Youth. Students are required to apply for certification. The application form can be found on the Manitoba Education, Citizenship and Youth website at <http://www.edu.gov.mb.ca/ks4/profcert/teachapp.html>. As well students are required to submit the following:

- Official transcripts. Upon graduation, students can order transcripts from the Registrar's Office to be forwarded to Professional Certification and Student Records Unit, Manitoba Education, Citizenship and Youth;
- Photocopy of proof of Canadian citizenship or landed immigrant status;
- Photocopy of proof of birth date (birth certificate, treaty card, Canadian Passport, or Landed Immigrant status);
- Photocopy of documentary proof of change of name, if applicable;
- Cheque or money order for \$50, payable to the Minister of Finance, to cover the certification fee.
- Criminal Records Check – students must provide an original and current (no more than 3 months old) *criminal record check* and *vulnerable sector screening* completed at local Police Station.

Students who receive the B.Ed. degree are recommended for certification by the university, and, if they meet all certification requirements, they will receive the Professional Certificate. This certificate is permanent and entitles the holder to teach any subject, at any level (K – S4) in Manitoba.

Contact the Professional Certification and Student Records Unit at toll free 1 800 667 2378 in Manitoba, or 1-204 773 2998 or Email: certification@gov.mb.ca, or write to Box 700, Russell, Manitoba, R0J 1W0 for further information about certification.

2.2 Overview of Programs

The Faculty of Education offers programs at both the undergraduate and graduate levels leading to the following degrees and certificates: the Bachelor of Education degree (see below); the Post Baccalaureate Diploma in Education (see Section 9.0); the Certificate in Adult and Continuing Education (CACE); the Certificate in Teaching English as a Second Language (CTESL); the Master of Education degree and the Doctor of Philosophy (see *Graduate Calendar*).

All courses offered by the Faculty of Education are designated "Education" courses and are distinguished from courses offered by other faculties or schools of the university which are designated "Non Education" courses.

After Degree Bachelor of Education: Early Years, Middle Years (Including a Weekend College Middle Years Scheduling Option) and Senior Years

Following a first degree, the After-Degree Bachelor of Education program consists of 60 credit hours (two years) of course work taken within the Faculty of Education and leads to general certification and a Bachelor of Education degree. The Weekend College Middle Years scheduling option takes three years of study to complete 60 credit hours. Unless otherwise stated, the Weekend College scheduling option follows the same regulations as Middle Years. The Faculty anticipates an intake to the Weekend College Middle Years Scheduling Option every two years (subject to enrolment). The next proposed intake will be September 2007. Current certification requirements for the Province of Manitoba require 24 weeks of practicum which are completed as part of the 60 credit hours required for the Bachelor of Education degree.

Bachelor of Music/Bachelor of Education Integrated

A program leading to general certification and preparing of teachers for specialist Music and classroom teaching. Both degrees are awarded upon completion of the program.

Bachelor of Human Ecology/Bachelor of Education Integrated

(The last intake of students for the Human Ecology/Education Integrated program was the 2006-2007 academic session.)

A program leading to general certification and preparing teachers for Senior Years Home Economics. Both degrees are awarded upon completion of the program.

Post Baccalaureate Diploma in Education (PBDE)

Designed for teacher professional development, the PBDE is a 30 credit hour program following the completion of an undergraduate degree, normally a B.Ed.

Certificate in Adult and Continuing Education (CACE)

The following four courses in addition to 100 hours in elective courses offered through Extended Education completes a Certificate in Adult and Continuing Education (CACE). For further information contact Sandra Stechisen at (204) 474-6685 or Sandra_stechisen@umanitoba.ca.

EDUA 1560 Adult Learning and Development

EDUA 1570 Foundations of Adult Education

EDUA 1580 Program Planning in Adult Education

EDUA 1590 Facilitating Adult Education

Certificate in Teaching English as a Second Language (CTESL)

Extended Education, in collaboration with the Faculty of Education, offers a 15 credit hour (200 hour) Certificate in Teaching English as a Second Language. Education students may take courses in this program to fulfil Education complementary course requirements of their B.Ed. CTESL courses include: EDUB 1620 Principles and Procedures of Second Language Teaching (3), EDUB 1640 Teaching ESL Vocabulary and Pronunciation (3), EDUB 1650 Teaching ESL Grammar (3), EDUB 1660 Computers in Second Language Teaching (3), EDUB 1670 English for Non-Native Speaking (NSS) Teachers of English (3), EDUB 1820 Language and Content Instruction of ESL/ Bilingual Students (3), EDUB 1840 Recent Developments in Curriculum, Teaching and Learning 1: TESL Literacy (3), and EDUB 1860 Practicum in Teaching English as a Second Language (TESL) (3). For further information, contact Heather McIntosh, 474-9861, mcintos1@ms.umanitoba.ca.

Special Students

The Faculty of Education does not admit students to this category.

Students Enrolled in Other Faculties/Schools

Students currently enrolled in other faculties/schools at the University of Manitoba may take a maximum of six credit hours of Education complementary courses (see Section 8). Students who hold a first degree may take a maximum of six credit hours of 5000-level courses and those holding a non-University of Manitoba degree must obtain permission from an Education advisor. The maximum credits a non-Education student may take is six credit hours.

Visiting Students

See the chapter, Registration and Fees, of this *Calendar* and contact the Student Services Office, Faculty of Education, for admission procedure.

SECTION 3: Admission to the Faculty of Education

Degrees Offered

3.1 After Degree Bachelor of Education

The Bachelor of Education program is a two year program following the completion of a first degree of at least 90 credit hours (three years in duration). See admission requirements for detailed information.

3.2 Integrated Degrees: Human Ecology and Music

(The last intake of students for the Human Ecology/Education Integrated program will be for the 2006-2007 academic session.)

The Faculty of Human Ecology and the Faculty of Music each offer a degree program that integrates the requirements of its degree program with those of the Faculty of Education. See section 5 and 6 or the chapters for the Faculty of Human Ecology and the Faculty of Music for information. The integrated programs are five years in length. Students are awarded both degrees upon completion.

3.3 Post Baccalaureate Diploma in Education

Designed for teacher professional development, the Post Baccalaureate Diploma in Education is a 30 credit hour program following completion of a Bachelor's degree, normally a B.Ed.

SECTION 4: After-Degree Bachelor of Education

Early Years, Middle Years (Including a Weekend College Scheduling Option) and Senior Years.

Early Years and Middle Years admission requirements will be changing for upcoming academic sessions to meet the requirements established by the Minister of Education, Citizenship and Youth for the Province of Manitoba. (Subject to Senate approval) Please check the Faculty of Education website for updates to the admission criteria.

4.1 Admission Requirements

(Currently under review)

A first degree of a minimum of 90 credit hours and the requirement for teachable subjects as follows:

- 30 credit hours in a teachable major,
- 18 credit hours in a teachable minor.

Other requirements

Minimum GPA for consideration: 2.0 with a minimum grade of C in each teachable major/minor course. The GPA is calculated on the basis of the courses used toward the teachable major and minor.

- Experience profile, interview and writing skills exercise.
- References and a criminal record self-declaration.

Selection criteria: 60.0% on GPA; 13.3% on experience profile/interview; and 26.7% on writing skills.

To be eligible for this program, applicants must have a conferred first degree and teachable courses completed from a recognized institution by May of the year of application.

The Weekend College Middle Years scheduling option may not admit students each year; however, an intake of students is anticipated for September, 2007.

Special Consideration Category

The Faculty of Education has a Special Consideration Category. The Faculty recognizes the importance of providing the highest quality of education

to all students in Manitoba via a teaching force that is fully representative of the cultural, ethnic and racial diversity of the province.

As the largest teacher education institution in the province, the Faculty recognizes its responsibility to facilitate the development of such a teaching force.

Furthermore, the Faculty recognizes the need to ensure that its recruitment and admission policies and procedures do not inappropriately obstruct the achievement of such a goal, but rather actively promote its attainment.

In keeping with the above, the Faculty will admit up to 10 percent of the After Degree B.Ed. applicants under this category. The Special Consideration Category includes: Canadian Aboriginal peoples, members of a visible minority or persons with disabilities.

Canadian Aboriginal Peoples – An aboriginal person is either one who by birth is a Registered Indian as provided for in the Indian Act, or who is an Indian person without legal status by the Indian Act, or who is a Metis, or who is an Inuit person.

Visible Minority – Persons other than Aboriginal Peoples who, because of their colour, are a visible minority in Canada.

Persons with Disabilities – Persons with disabilities are those who would consider themselves disadvantaged by reason of any physical, intellectual, mental, sensory or learning impairment.

Information on admission within this category is included in the admissions bulletin.

All admission requirements are described in detail in an admissions bulletin that includes application deadline dates and application forms. This material is available from the Faculty of Education, 230 Education Building, or Enrolment Services, 424 University Centre or their website at: http://www.umanitoba.ca/student/admissions/guide/other_programs.shtml. The detailed admission information is also posted on the university website. The criteria outlined in this section are applicable for 2006-2007 session only. Please refer to the Faculty website for updates to the admission criteria for subsequent sessions.

Early Years (Kindergarten - Grade 4)

Applicants must have two teachable subjects. One area must be from English, Geography, History, Mathematics, or Science. See table below.

NOTE: Potential applicants in the process of completing their first degree are advised that meeting the teachable major/minor requirements for Education may not meet the requirements for a first degree in their home faculty. Applicants are advised to consult the chapter of this *Calendar* for their current faculty.

Teachable Subject	Major (30 credit hours)	Minor (18 credit hours)	Major/Minor Notes
Art	✓	✓	
English (Language Arts)	✓	✓	
French	✓	✓	
Geography	✓	✓	6 credit hours of Canadian or North American Geography are required in the major or minor
History	✓	✓	6 credit hours of Canadian or North American History are required in the major or minor
Mathematics	✓	✓	Major or minor may include combinations of courses from the departments of Mathematics and Statistics (with a minimum of 6 credit hours above the 1000-level)
Music	✓	✓	
Native Studies	✓	✓	May include 6 credit hours of a Native Language course
Physical Education	✓	✓	All Physical Education courses at the University of Manitoba are identified with department designation PHED. Recreational Studies courses (REC) are not acceptable

Science (currently under review)	✓	✓	Major or minor may include a combination from Environmental and Geological Science courses in the Faculty of Environment, Earth, and Resources and Science courses from different departments in the Faculty of Science (excluding Mathematics and Statistics)
Second Language	✓	✓	Major or minor in a language other than English or French
Social Studies (currently under review)	no major	✓	Include: 6 credit hours in Geography; 6 credit hours in History, 6 credit hours in another Social Science
Drama/Theatre	✓	✓	

Middle Years (Grades 5 – 8)

Applicants must have two teachable subjects. One area must be from English, Geography, History, Mathematics, or Science. See table below.

NOTE: Potential applicants in the process of completing their first degree are advised that meeting the teachable major/minor requirements for Education may not meet the requirements for a first degree in their home faculty. Applicants are advised to consult the chapter of this *Calendar* for their current faculty.

Teachable Subject	Major (30 cred- it hours)	Minor (18 credit hours)	Major/Minor Notes
Art	✓	✓	Applicants must possess a minimum of 18 credit hours of studio courses for a major or 12 credit hours of studio courses for a minor
Computer Science	✓	✓	
English (Language Arts)	✓	✓	
French	✓	✓	
Geography	✓	✓	6 credit hours of Canadian or North American Geography are required in the major or minor
History	✓	✓	6 credit hours of Canadian or North American History are required in the major or minor
Human Ecology (Home Economics)	✓	✓	
Mathematics	✓	✓	Major or minor may include combinations of courses from the departments of Mathematics and Statistics (with a minimum of 6 credit hours above the 1000-level)
Music	✓	✓	Applicants must possess a major or minor in one of the following specializations: choral, instrumental or early/middle general music (see specialization under Section 5.3)
Native Studies	✓	✓	May include 6 credit hours of a Native Language course
Physical Education	✓	✓	All Physical Education courses at the University of Manitoba are identified with department designation PHED. Recreational Studies courses (REC) are not acceptable
Science (currently under review)	✓	✓	Major or minor may include a combination from Environmental and Geological Science courses in the Faculty of Environment, Earth, and Resources and Science courses from different departments in the Faculty of Science (excluding Mathematics and Statistics). 6 credit hours must be above the 1000-level
Second Language	✓	✓	Major or minor in languages other than English or French

Social Studies (currently under review)	no major	✓	Include: 6 credit hours in Geography; 6 credit hours in History, 6 credit hours in another Social Science
Drama/Theatre	✓	✓	

Senior Years (S1 – S4)

Applicants must have two teachable subjects; one Major and one Minor. See table below.

NOTE: Potential applicants in the process of completing their first degree are advised that meeting the teachable major/minor requirements for Education may not meet the requirements for a first degree in their home faculty. Applicants are advised to consult the chapter in this *Calendar* for their current faculty.

Teachable Subject	Major (30 credit hours)	Minor (18 credit hours)	Major/Minor Notes
Art	✓	✓	Applicants must possess a minimum of 18 credit hours of studio courses for a major or 12 credit hours of studio courses for a minor
Biology	✓	✓	
Chemistry	✓	✓	
Computer Science	✓	✓	
English (Language Arts)	✓	✓	
French	✓	✓	
General Science (currently under review)	✓	✓	Major or minor may include a combination from Environmental and Geological Science courses in the Faculty of Environment, Earth, and Resources and Science courses from different departments in the Faculty of Science (excluding Mathematics and Statistics). 6 credit hours must be above the 1000-level
Geography	✓	✓	
History	✓	✓	
Human Ecology (Home Economics)	✓	✓	Students with a major and minor must have two areas of concentration selected from: Clothing and Textiles, Family Social Sciences, Human Nutritional Sciences. For a major or minor, students may have coursework from all three concentrations
Mathematics	✓	✓	Major or minor may include combinations of courses from the departments of Mathematics and Statistics (with a minimum of 6 credit hours above the 1000-level)
Music	✓	✓	Applicants must possess a major and/or minor in different areas of specialization. These include: choral or instrumental music (see specializations under Section 5.3)
Native Studies	✓	✓	May include 6 credit hours of a Native Language course
Physical Education	✓	✓	All Physical Education courses at the University of Manitoba are identified with department designation PHED. Recreational Studies courses (REC) are not acceptable
Physics	✓	✓	
Second Language	✓	✓	Major or minor in languages other than English or French
Drama/Theatre	✓	✓	

4.1.1 Adult Criminal Records Self Declaration

The Minister of Education, Citizenship and Youth for the Province of Manitoba requires that background checks be conducted on all candidates for teacher education in Manitoba and on all applications for certification for this province. Accordingly, all applicants offered admission to Bachelor of Education programs will be required to complete the "Adult Criminal Records Self-Declaration" form as a condition of final acceptance to the program. Only adult criminal records must be disclosed, and the existence of such a record will not automatically exclude applicants. Applicants should also be aware that the Professional Certification and Student Records Unit will also require students graduating from the Bachelor of Education program to undergo a criminal record check, including vulnerable sector screening as part of the certification process. Information on the Adult Criminal Records Self-Declaration is included in the admission bulletin available from the Enrolment Services/Admissions, 424 University Centre and the website: http://www.umanitoba.ca/student/admissions/guide/other_programs.shtml.

4.2 Admission Procedure

Application forms are available from the Faculty of Education, 230 Education Building, or Enrolment Services/Admissions, 424 University Centre, or at the website: http://www.umanitoba.ca/student/admissions/guide/other_programs.shtml. Completed applications with supporting documentation must be submitted by February 1.

4.3 Program Requirements

REMINDER: While Education student advisors are available to clarify faculty and university regulations and degree requirements, it is the student's responsibility to ensure that degree and program requirements are met.

Returning students planning to take School Experience (EDUB 1960, EDUB 1970, EDUB 1980, EDUB 2960, EDUB 2970, or EDUB 2980) during the upcoming Regular Session must make application for a School Placement no later than February 1. Forms will be available from the Student Services Office, Room 230 Education Building, Faculty of Education, beginning December 15. Failure to apply for School Placement by February 1 may result in students being denied a placement.

Early Years: Year 1

Course No.		Credit Hours
EDUB 1000	Early Years Philosophy and Practice 1	1
EDUB 1010	Early Years Curriculum and Instruction in Language and Literacy 1	3
EDUB 1020	Early Years Curriculum and Instruction in Music and Movement 1	1
EDUB 1030	Early Years Curriculum and Instruction in Art and Drama 1	2
EDUB 1040	Early Years Curriculum and Instruction in Social Studies 1	1
EDUB 1050	Early Years Curriculum and Instruction in Mathematics 1	2
EDUB 1060	Early Years Curriculum and Instruction in Science and Health 1	2
EDUB 1960	Early Years School Experience 1	6
EDUB 1990	Teacher and Technology	3
EDUA 1800	Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810	School and Society 1: The Social Foundations of Education	3
	Complementary Course	3
	Total credit hours	30

Early Years: Year 2

EDUB 2000	Early Years Philosophy and Practice 2	1
EDUB 2010	Early Years Curriculum and Instruction in Language and Literacy 2	3
EDUB 2020	Early Years Curriculum and Instruction in Music and Movement 2	2
EDUB 2030	Early Years Curriculum and Instruction in Art and Drama 2	1
EDUB 2040	Early Years Curriculum and Instruction in Social Studies 2	2
EDUB 2050	Early Years Curriculum and Instruction in Mathematics 2	2
EDUB 2060	Early Years Curriculum and Instruction in Science and Health 2	2

EDUB 2070	Early Years Curriculum and Instruction Children's Literature	1
EDUB 2080	Early Years Multi-Language Development	1
EDUB 2960	Early Years School Experience 2	6
EDUA 2800	Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA 2810	School and Society 2: The Administrative Foundations of Education	3
	Complementary Course	3

Total credit hours 30

Middle Years: Year 1

EDUB 1100	Introduction to Teaching Language Arts in the Middle Years	3
EDUB 1110	Introduction to Teaching Social Studies in the Middle Years	1
EDUB 1120	Teaching Drama in the Middle Years	1
EDUB 1130	Introduction to Teaching Science in the Middle Years	1
EDUB 1140	Introduction to Teaching Mathematics in the Middle Years	3
EDUB 1970	Middle Years School Experience 1	3
EDUB 1990	Teacher and Technology	3
EDUA 1800	Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810	School and Society 1: The Social Foundations of Education	3
EDUA 2800	Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA 2810	School and Society 2: The Administrative Foundations of Education	3
	Complementary Course	3

Total credit hours 30

Middle Years: Year 2

EDUB 2100	Teaching Language Arts in the Middle Years	3
EDUB 2110	Teaching Social Studies in the Middle Years	3
EDUB 2120	Teaching Art in the Middle Years	2
EDUB 2130	Teaching Science in the Middle Years	3
EDUB 2140	Teaching Mathematics in the Middle Years	3
EDUB 2150	Teaching Physical Education in the Middle Years	2
EDUB 2400	Teaching in the Middle Years	2
EDUB 2970	Middle Years School Experience 2	9
	Complementary Course	3

Total credit hours 30

Weekend College Middle Years Scheduling Option

Classes are held on Saturdays (9am – 4pm) and most Sundays (9am – 12pm). Over the three years of the program, students must spend a total of 24 weeks in schools to complete their School Experience requirements.

Year 1

September - December		
EDUA 1800	Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810	School and Society 1: The Social Foundations of Education	3
EDUB 1970	Middle Years School Experience 1 (First block - 2 weeks)	3
EDUB 1990	Teacher and Technology	3
January - April		
EDUB 1100	Introduction to Teaching Language Arts in the Middle Years	3
EDUB 1130	Introduction to Teaching Science in the Middle Years	1
EDUB 1140	Introduction to Teaching Mathematics in the Middle Years	3
EDUB 1970	Middle Years School Experience 1 (Second block - 4 weeks)	3

May - June		
EDUB 1110	Introduction to Teaching Social Studies in the Middle Years	1
EDUB 1120	Teaching Drama in the Middle Years	1

Total Credit Hours 21

Year 2

September - December		
EDUB 2110	Teaching Social Studies in Middle Years	3
EDUB 2120	Teaching Art in the Middle Years	2
EDUB 2130	Teaching Science in Middle Years	3
EDUB 2970	Middle Years School Experience 2 (First block - 4 weeks)	9

January - April		
EDUB 2100	Teaching Language Arts in the Middle Years	3
EDUB 2140	Teaching Mathematics in the Middle Years	3
EDUB 2970	Middle Years School Experience 2 (Second block - 4 weeks)	3
	Complementary Course	3

Total Credit Hours 26

NOTE:

EDUB 2970 Middle Years School Experience continues into year three.

Year 3

September - December		
EDUB 2970	Middle Years School Experience 2 (First block - 1 week)	3
EDUA 2800	Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA 2810	School and Society 2: The Administrative Foundations of Education	3
EDUB 2400	Teaching in the Middle Years	2
EDUB 2970	Middle Years School Experience 2 (Second block - 4 weeks)	3
January - April		
EDUB 2150	Teaching Physical Education in the Middle Years	2
EDUB 2970	Middle Years School Experience 2 (Third block - 5 weeks)	3
	Complementary Course	3

Total Credit Hours 13

Senior Years: Year 1

Curriculum and Instruction (select two from the following - one for the teachable Major and one for the teachable Minor) 6

NOTE: Students with a major/minor combination of History/Geography/ Native Studies; Art/Music/Theatre; or any two of the Sciences, will complete three credit hours of Curriculum and Instruction courses for their major/minor and 3 credit hours of a complementary education course of their choosing. For students admitted September 2003 or later, EDUB 1800 Recent Developments in Learning and Teaching Senior Years Mathematics is a pre- or co-requisite for the Curriculum and Instruction course EDUB 1250 Teaching Mathematics in Seniors Years 1.

EDUB 1200	Teaching the Arts in Senior Years for (Art, Music and Theatre teachable majors and minors)	3
EDUB 1210	Teaching English Language Arts in Senior Years 1	3
EDUB 1230	Teaching Social Studies in Senior Years (for History, Geography and Native Studies teachable majors and teachable minors)	3
EDUB 1240	Teaching Human Ecology in Senior Years 1	3
EDUB 1250	Teaching Mathematics in Senior Years 1	3
EDUB 1260	Teaching Physical Education/Health Education in Senior Years 1	3
EDUB 1270	Teaching Senior Years Science (for Biology, Chemistry, Computer Science, General Science and Physics teachable majors and teachable minors)	3
EDUB 1280	L'enseignement du français de base au Niveau Secondaire 1	3
EDUB 1350	Teaching a Heritage, Aboriginal or International Language 1	3

and all of the following:

EDUB 1500	Education in the Senior Years	3
EDUB 1510	Principles and Processes of Teaching	3
EDUB 1980	Senior Years School Experience 1	6
EDUB 1990	Teacher and Technology	3
EDUA 1800	Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810	School and Society 1: The Social Foundations of Education	3
	Complementary Course	3

Total credit hours 30

Senior Years: Year 2

Curriculum and Instruction (select two from the following: one for the teachable Major and one for the teachable Minor) 6
 Courses EDUB 2320 Teaching Physics in Senior Years and EDUB 2330 Teaching Computer Science in Senior Years are offered every second year. In the years the courses are offered, Year 1 students must take both the Year 1 and Year 2 courses.

EDUA 1520	Recent Developments in Educational Administration, Foundations & Psychology: Integrating Aboriginal Perspectives in the Manitoba Curriculum.	3
EDUB 2200	Teaching Art in Senior Years	3
EDUB 2210	Teaching English Language Arts in Senior Years 2	3
EDUB 2220	Teaching Geography in Senior Years	3
EDUB 2230	Teaching History in Senior Years	3
EDUB 2240	Teaching Music in Senior Years	3
EDUB 2250	Teaching Drama and Theatre in Senior Years	3
EDUB 2260	Teaching Biology in Senior Years	3
EDUB 2270	Teaching Chemistry in Senior Years	3
EDUB 2280	Teaching General Science in Senior Years	3
EDUB 2290	Teaching Human Ecology in Senior Years 2	3
EDUB 2300	Teaching Mathematics in Senior Years 2	3
EDUB 2310	Teaching Physical Education/Health Education in Senior Years 2	3
EDUB 2320	Teaching Physics in Senior Years	3
EDUB 2330	Teaching Computer Science in Senior Years	3
EDUB 2340	L'enseignement du français de base au Niveau Secondaire 2	3
EDUB 2350	Teaching a Heritage, Aboriginal or International Language 2 and <i>all the following</i> :	3
EDUB 2500	Themes in Senior Years Education	3
EDUB 2510	Language and Literacy Across the Curriculum	3
EDUB 2980	Senior Years School Experience 2	6
EDUA 2800	Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA 2810	School and Society 2: The Administrative Foundations of Education Complementary Courses	3 6
Total credit hours		30

SECTION 5: Bachelor of Music/ Bachelor of Education Integrated

5.1 Admission Requirements

Successful completion of second year in the Faculty of Music with a minimum cumulative Grade Point Average of 2.0 by May of year of application is required for admission. Applicants are required to complete an Adult Criminal Records Self Declaration form (see Section 4.1.1. Adult Criminal Records Self Declaration).

Other Requirements

- Experience profile, interview and writing skills exercise.
- References and a criminal record self-declaration.

Selection criteria: 60.0% on GPA; 13.3% on experience profile/interview; and 26.7% on writing skills.

5.2 Admission Procedure

Application forms are available from the Admissions Office, Enrolment Services, 424 University Centre, Room 230 Faculty of Education or General Office, Faculty of Music. The completed application must be returned to the Enrolment Services by February 1.

5.3 Program Requirements

REMINDER: While Education student advisors are available to clarify faculty and university regulations and degree requirements, it is the student's responsibility to ensure that degree and program requirements are met.

Students choose either:

- 1) Music specialization for their teachable major and a subject from the Senior Years selection for their teachable minor (See section 4 of this *Calendar*) or
- 2) two Music specializations.

Students planning to take School Experience (EDUB 1940, EDUB 1950) during the Spring Session must make application for a School Placement no later than November 1. Forms will be distributed during the first week of classes in September. Failure to apply for School Placement by November 1 may result in students being denied a placement.

Students planning to take EDUB 2980 School Experience during the upcoming Regular Session must make application for a School Placement no later than February 1. Forms will be available from the Student Services Office, Room 230 Education Building, Faculty of Education, beginning December 15. Failure to apply for School Placement by February 1 may result in students being denied a placement.

Year 1: Faculty of Music

MUSC 1070	Introduction to the History of Music	3
MUSC 1080	History of Music 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2
MUSC 1380	Basic Musical Skills 1	2
MUSC 1390	Basic Musical Skills 2	2
MUSC 1400	Major Practical Study	6
MUSC 1XXX	English (Any Course Meeting Written English Requirement)	3
MUSC 3230	Acoustics of Music (Meets Mathematics Requirement)	3
Total credit hours		32

Year 2: Faculty of Music

MUSC 2070	History of Music 3	3
MUSC 2080	History of Music 4	3
MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2
MUSC 2190	Ensemble	2
MUSC 2380	Basic Musical Skills 3	2
MUSC 2390	Basic Musical Skills 4	2
MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting Teachable Minor* or second Music specialization**	3 6
Total credit hours		35

NOTE: Apply to Integrated Program During Year 2. Deadline date to apply is February 1.

Year 3: Faculty of Education/Music Program

MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6
MUSC 3960	Music of the 20th Century 1 Music Specialization	3 9
EDUB 1200	Teaching the Arts in Senior Years	3
EDUB 1600	Teaching General Music Teachable Minor* or second Music specialization**	3 6
Total credit hours		34

Interession

EDUB 1520	Education in the Senior Years Integrated Programs 1	2
EDUB 1940	Integrated Programs School Experience 1	3

Year 4: Faculty of Education/Music Program

MUSC 3970	Music of the 20th Century 2	3
MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2
MUSC 4470	Major Practical Study	6
EDUB 2240	Teaching Music in Senior Years or	3
EDUB 2160	Teaching Music in Early/Middle Years Music Specialization Teachable Minor* or second Music specialization**	3 12 6
Total credit hours		34

Interession

EDUB 1530	Education in the Senior Years Integrated Programs 2	1
EDUB 1950	Integrated Programs School Experience 2	3

Year 5: Faculty of Education/Music Program

EDUB 2980	Senior Years School Experience	6
EDUA 1800	Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810	School and Society 1: The Foundations of Education	3
EDUB 1990	Teacher and Technology	3
EDUA 2800	Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA 2810	School and Society 2: The Administrative Foundations of Education	3

EDUB 2500	Themes in Senior Years Education (for Early/Middle Years specialization, students may take a 3 credit hour Education complementary course)	3
EDUB 2510	Language and Literacy Across the Curriculum (for Early/ Middle Years specialization, students may take a 3 credit hour Education complementary course)	3
	Students with a Music teachable minor take an Education Complementary Course. Students with a non-music teachable minor take a Year 1 Curriculum & Instruction Course.	3
Total credit hours		30
Total Program hours		174

Students who complete the above program of studies satisfactorily receive a Bachelor of Music degree and a Bachelor of Education degree. Students are expected to maintain academic standards consistent with the granting of the degrees in non-integrated programs.

*For listing of teachable minors, see Senior Years teachable major/minor chart in section 4.

Where two areas of music specialization have been selected to fulfil the requirements of two teachables, three credit hours of coursework common to both areas will be counted to satisfy requirements of both areas.

**Specialization: Instrumental Music		
MUSC 3690	Percussion Techniques	3
MUSC 3780	Woodwind Techniques	3
MUSC 3790	Brass Techniques	3
MUSC 3880	Jazz Ensemble Techniques	3
MUSC 4770	Band and Orchestral Techniques 1	3
MUSC 4780	Band and Orchestral Techniques 2	3
	Music Education Elective	3
Total credit hours		21
Specialization: Choral Music		
MUSC 3770	Vocal Techniques	3
MUSC 3880	Jazz Ensemble Techniques	3
MUSC 4150	Choral Repertoire	3
MUSC 4750	Choral Techniques 1	3
MUSC 4760	Choral Techniques 2	3
	Music Education Electives	6
Total credit hours		21
Specialization: Early/Middle Years Music		
MUSC 3130	Music for Children 1	6
MUSC 3730	Early Musical Development	3
MUSC 3770	Vocal Techniques	3
	Music Education Electives	9
Total credit hours		21

Music Education Electives		
MUSC 3090	Introduction to Ethnomusicology	3
MUSC 3130	Music for Children 1	6
MUSC 3140	Music for Children 2	6
MUSC 3150	Orchestration	3
MUSC 3360	Topics in Music Education	3
MUSC 3370	Topics in Music Education	3
MUSC 3600	Conducting	3
MUSC 3690	Percussion Techniques	3
MUSC 3620	Independent Study	3
MUSC 3730	Early Musical Development	3
MUSC 3770	Vocal Techniques	3
MUSC 3780	Woodwind Techniques	3
MUSC 3790	Brass Techniques	3
MUSC 3800	String Techniques	3
MUSC 3880	Jazz Ensemble Techniques	3
MUSC 4150	Choral Repertoire	3
MUSC 4350	Music for Children 3	6
MUSC 4750	Choral Techniques 1	3
MUSC 4760	Choral Techniques 2	3
MUSC 4770	Band and Orchestral Techniques 1	3
MUSC 4780	Band and Orchestral Techniques 2	3

Features
 Music - 72 credit hours; Area of Music Specialization 21 credit hours
 Education - 60 credit hours; Written English - 3 credit hours
 Mathematics - 3 credit hours; Teachable Minor - 18 credit hours
 Second Music Specialization - 21 credit hours

SECTION 6: Bachelor of Human Ecology/ Bachelor of Education Integrated

(The last intake of students for the Human Ecology/Education Integrated program will be for the 2006-2007 academic session.)

6.1 Admission Requirements

Successful completion of two years (at least 66 credit hours) of the comprehensive major in Human Ecology with a minimum cumulative Grade Point Average of 2.0 by May of year of application is required for admission. A grade of C or better is required in all courses which apply to the major and minor. Applicants are required to complete an Adult Criminal Records Self Declaration form (see Section 4.1.1 Adult Criminal Records Self Declaration).

Other Requirements

- Experience profile, interview and writing skills exercise.
- References and a criminal record self-declaration.

Selection criteria: 60.0% on GPA; 13.3% on experience profile/interview; and 26.7% on writing skills.

6.2 Admission Procedure

Application forms are available from the Enrolment Services/Admissions, 424 University Centre, Room 230 Faculty of Education or General Office, Faculty of Human Ecology. The application must be returned to the Enrolment Services/Admissions Office by February 1.

6.3 Program Requirements

REMINDER: While Education student advisors are available to clarify faculty and university regulations and degree requirements, it is the student's responsibility to ensure that degree and program requirements are met.

Students choose a Human Ecology concentration for their major and a Human Ecology concentration for their minor selected from Family Social Sciences, Human Nutritional Science, and Textile Sciences.

Students in this program can also select a teachable subject from the list for Senior Years, but these subject areas may require additional coursework over and above the 156 credit hours outlined below.

NOTE: Apply to Integrated Program During Year 2 of Human Ecology. The deadline for applications is February 1.

Students planning to take School Experience (EDUB 1940, EDUB 1950) during the Spring Session must make application for a School Placement no later than November 1. Forms will be distributed during the first week of classes in September. Failure to apply for School Placement by November 1 may result in students being denied a placement.

Students planning to take EDUB 2980 School Experience during the upcoming Regular Session must make application for a School Placement no later than February 1. Forms will be available from the Student Services Office, Room 230 Education Building, Faculty of Education, beginning December 15. Failure to apply for School Placement by February 1 may result in students being denied a placement.

Year 1: Faculty of Education/Human Ecology Program (Year 3 Human Ecology)

HMEC 3100	Communication for Professional Practice	3
HNSC 2160	Principles of Food Preparation and Preservation	3
TXSC 2240	Textile Product Development: Construction Basics (The last offering of this course will be 2006-2007)	3
EDUB 1240	Teaching Human Ecology in Senior Years 1	3
	Human Ecology Electives*	6
	Free electives (any faculty including Education Complementary courses)	6
Total credit hours		24

Intersession

EDUB 1520	Education in the Senior Years Integrated Programs 1	2
EDUB 1940	Integrated Programs School Experience 1	3

Year 2: Faculty of Education/Human Ecology Program (Year 4 Human Ecology)

	Human Ecology Electives	15
EDUB 2290	Teaching Human Ecology in Senior Years 2	3
	Education Complementary Course	3

Free electives (any faculty including Education complementary courses)	6
Total credit hours	27
Interestession	
EDUB 1530 Education in the Senior Years Integrated Programs 2	1
EDUB 1950 Integrated Programs School Experience 2	3
Year 3: Faculty of Education/Human Ecology Program (Year 5 Human Ecology)	
EDUB 2980 Senior Years School Experience 2	6
EDUA 1800 Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810 School and Society 1: The Social Foundations of Education	3
EDUB 1990 Teacher and Technology	3
EDUA 2800 Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA 2810 School and Society 2: The Administrative Foundations of Education	3
EDUB 2500 Themes in Senior Years Education	3
EDUB 2510 Language and Literacy Across the Curriculum	3
Students with a Human Ecology teachable minor take an Education Complementary Course.	3
Students with a non-Human Ecology minor take a Year 1 Curriculum & Instruction Course	3
Total Credit hours	30
Total Program hours	156
*Human Ecology Electives: At least 12 credit hours must be at the 3000 or 4000-level.	

NOTE:

In addition to Human Ecology teachable, students may choose a teachable minor from the Senior Years teachable minors listed in Section 4 of this chapter. Students who complete the above program of studies satisfactorily receive a Bachelor of Human Ecology degree and a Bachelor of Education degree. Students are expected to maintain academic standards consistent with the granting of the degrees in non-integrated programs.

SECTION 7: Academic Regulations for Bachelor of Education

All students are asked to note that academic policies and regulations are currently under review and may change. Please check the web *Calendar* after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Education has regulations and requirements, published below, that apply specifically to its students.

7.1 Academic Regulations for All Bachelor of Education Programs

(See also sections 7.2, 7.3)

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web *Calendar* at www.umanitoba.ca after July 1, 2006 for updated information.

Academic Requirement for Graduation

A cumulative Grade Point Average of 2.0 is required for graduation in the Bachelor of Education.

Academic Standing

A minimum Grade Point Average of 2.0 must be maintained in the Bachelor of Education for clear standing. A grade of "D" is considered a passing grade for Education courses.

Additional Academic Considerations

Each student in the Faculty of Education is presumed to be generally suited to a teaching program. Should this prove not to be the case, the Faculty reserves the right, at any time, to require a student to withdraw from the Bachelor of Education degree program. Unsatisfactory performance in School Experience courses may be considered reason to require a student to withdraw from the faculty.

Appeal Procedures

The general university policy for appeal of assigned grades applies to the Faculty of Education. See the chapter, General Academic Regulations and Policy, of this Calendar, Appeals of Assigned Grades. Information about admission decision appeals may be found in the chapter, Admissions.

Application Deadline for School Placement

Returning students planning to take School Experience (EDUB 1960, EDUB 1970, EDUB 1980, EDUB 2960, EDUB 2970 or EDUB 2980) during the upcoming Regular Session must make application for a School Placement no later than February 1. Forms will be available from the Student Services Office, Room 230 Education Building, Faculty of Education beginning December 15. Failure to apply for School Placement by February 1 may result in students being denied a placement.

Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed students planning to take School Experience (EDUB 1940, EDUB 1950) during the Spring Session must make application for a School Placement no later than November 1. Forms will be distributed during the first week of classes in September. Failure to apply for School Placement by November 1 may result in students being denied a placement.

Assessment of Student Academic Performance

Academic performance is assessed at the end of each regular session in which the student is registered on all courses that are used for credit towards the B.Ed. degree.

Based on the Grade Point Average attained in these courses, the following decisions with respect to the student's eligibility to continue as a Faculty of Education student will be made. Normally,

- The student with a minimum of 2.0 is eligible to proceed;
- The student with a 1.5 to 1.99 is placed on academic probation; and
- The student with less than 1.5 is placed on academic suspension.

Attendance at Class

Regular attendance is expected of all students in all courses. An instructor can initiate procedures to debar a student from attending classes and from final examinations where unexcused absences exceed three hours of scheduled classes in any one term.

Continuing Students

See the chapter, University of Manitoba Admissions.

Dean's Honour List

Students registered in a minimum of 24 credit hours during the regular session and who achieve a sessional Grade Point Average of 3.5 or better will be included in the Dean's Honour List.

Debarment

See the chapter, General Academic Regulations and Requirements, Attendance at Class and Debarment.

Degree with Distinction

A student graduating from the Bachelor of Education program will have the degree granted "With Distinction" if a minimum cumulative Grade Point Average of 3.80 has been attained on all courses that are used for credit towards the B.Ed. degree. This distinction will be noted on the parchment and on the student's transcript.

Gold Medal

The Gold Medal is awarded each year to the B.Ed. graduate who has the highest cumulative Grade Point Average (minimum 3.75) in the last 60 credit hours of the B.Ed. degree and who has completed at least 80 per cent of what is considered to be the normal full course load in each of the last two years of the program.

Grading Scale

Effective in 2000-2001 academic session, the Faculty of Education adopted the following grading scale:

Letter Grade	Grade Point	Level of Achievement	Percentage Range
A+	4.50	Exceptional	95 and above
A	4.00	Excellent	90-94
B+	3.50	Very Good	85-89
B	3.00	Good	80-84
C+	2.50	Satisfactory	75-79

C	2.00	Adequate	70-74
D	1.00	Marginal	60-69
F	0.00	Failure	Below 60

Incompletes

See the chapter, General Academic Regulations and Requirements, Academic Evaluation.

Part-Time Programs

Opportunities for part-time study are available in all streams as well as the integrated programs. In any of the program streams, the curriculum and instruction courses and the practicum experience for each year must be taken concurrently. Normally, all Year 1 course requirements must be completed before proceeding to Year 2. Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed. students must complete Years 1 to 4 inclusive before proceeding to Year 5. When exceptions are permitted, they would normally only be allowed as a result of scheduling conflicts, unavailability of courses scheduled on a rotating basis, compassionate grounds or other exceptional circumstances.

Repeating a Course

Required courses which receive a grade of "F" must be repeated. Complementary courses which receive a grade of "F" must be repeated or replaced with other complementary courses. Courses which receive a "D" grade may be repeated; however, courses in which a grade of "C" or higher is obtained may only be repeated with the consent of the Associate Dean, Undergraduate Programs. When a course is repeated, the last grade achieved will be used in calculating the Degree Grade Point Average.

The following required Education courses may be repeated only once:

EDUB 1940	Integrated Programs School Experience 1
EDUB 1950	Integrated Programs School Experience 2
EDUB 1960	Early Years School Experience 1
EDUB 2960	Early Years School Experience 2
EDUB 1970	Middle Years School Experience 1
EDUB 2970	Middle Years School Experience 2
EDUB 1980	Senior Years School Experience 1
EDUB 2980	Senior Years School Experience 2
All Curriculum and Instruction Courses	

Early Years and Middle Years students who fail a school experience course will normally be required to repeat all of the Curriculum and Instruction courses related to that year's practicum.

Weekend College Middle Years students who fail Curriculum and Instruction course(s) may not be able to complete their program through this scheduling option, given that a new intake is every other year.

Senior Years and Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed. students who fail a school experience course will normally be required to repeat the Curriculum and Instruction courses associated with that practicum. Students who fail a Curriculum and Instruction course will normally be required to repeat the practicum course associated with that curriculum area. Statute of Limitation

The normal maximum time allowed for the completion of the B.Ed. degree is six years from the date of admission. (This regulation applies to those admitted September, 2002 or later.)

Supplemental Examinations

Supplemental examinations are not permitted in education courses.

University Written English and Mathematics Requirement for Students in the Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.

All students admitted since September, 1997, are required to complete the university written English and Mathematics requirement. This requirement is described in the chapter, General Academic Regulations and Requirements.

Voluntary Withdrawals

See the chapter, General Academic Regulations and Requirements.

Authorized Withdrawals (AWs) may be permitted on medical or compassionate grounds, subject to satisfactory documentation. Students must contact an Education Student Advisor to initiate an authorized withdrawal.

7.2 Academic Regulations for the After-Degree Bachelor of Education

Early Years, Middle Years (Including a Middle Years Weekend College Scheduling Option) and Senior Years (see also 7.1)

Maximum Course Load (excluding Weekend College Middle Years Scheduling Option)

The maximum credit hour load for B.Ed. students is 30 credit hours in the regular session (September-April). Students wishing to take courses above the maximum may do so with the following conditions:

- Requests to complete 33 credit hours are approved by the student advisor provided the student's minimum Degree Grade Point average is 2.50.
- Requests to complete 36 credit hours are approved by the student advisor provided the student's minimum Degree Grade Point average is 3.50.
- Requests to complete in excess of 30 credit hours where the student's grade point average is below the minimums noted above or where the student wishes to complete more than 36 credit hours must be approved by the Associate Dean, Undergraduate Programs. In this case, students must make formal request in writing to the Associate Dean, Undergraduate Programs.

Students in the Senior Years Stream may request written permission to complete additional Curriculum and Instruction courses, provided they have previously completed the course requirements for this additional major/minor and where there is space in that Curriculum and Instruction course. Where permission is granted, students may substitute this credit for three credit hours of complementary course work as outlined in their program plan. Students who choose to take more than the required two Curriculum and Instruction courses in their program have no guarantee that a practicum teaching experience will be provided in that additional teachable area.

Transfer of Credit

Students may transfer a maximum of five full courses (30 credit hours) from another recognized university or college toward the After-Degree B.Ed. provided the courses are acceptable to the Bachelor of Education program.

Students admitted to the After-Degree B.Ed. program for September 2004 academic year and thereafter may not receive advance standing for any Education course which is more than six years old at the point of their admission to the Faculty of Education.

Courses taken as part of the Certificate in Teaching English as a Second Language (CTESL) or Certificate in Adult and Continuing Education (CACE) through Extended Education, U of M, may receive credit for some coursework. See 9.5 PBDE Transfer of Credit for a listing of equivalents.

Those students who are currently in the program and wish to register for a course at another university or college must complete an "Application for Letter of Permission" prior to registering.

7.3 Academic Regulations for the Integrated B.Mus./B.Ed. and B.H.Ecol./ B.Ed. (see also 7.1)

Major/Minor Academic Requirements

Students must achieve a grade of C or greater in all courses which apply to the major and minor.

Transfer of Credit

Students may transfer a maximum of ten full course equivalents (60 credit hours) from another recognized university or college toward the Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed. degree provided the courses are acceptable to the program. Those students who are currently in the program and wish to register for a course at another university or college must complete an "Application for Letter of Permission" prior to registering.

SECTION 8: Complementary Courses

Not all courses are offered every year. The schedule of courses currently available is published in the *Registration Guide* section of this publication.

- EDUA 1500 Aboriginal Education
- EDUA 1510 Foundations of Moral and Religious Education
- EDUA 1520 Recent Developments in Educational Administration and Foundations

- EDUA 1520 Integrating Aboriginal Perspectives into the Manitoba Curriculum is not available to students outside the B.Ed. Program
- EDUA 1530 Recent Developments in Educational Psychology
- EDUA 1540 Cross-Cultural Education
- EDUA 1550 Communication and Interpersonal Relationships in Education
- EDUA 1560 Adult Learning and Development
- EDUA 1570 Foundations of Adult Education
- EDUA 1580 Program Planning in Adult Education
- EDUA 1590 Facilitating Adult Education
- EDUB 1600 Teaching General Music
- EDUB 1620 Principles and Procedures of Second Language Teaching
- EDUB 1640 Teaching ESL Vocabulary and Pronunciation
- EDUB 1650 Teaching ESL Grammar
- EDUB 1660 Computers in Second Language Teaching
- EDUB 1670 English for NNS (Non-Native Speaking) Teachers of ESL
- EDUB 1680 Media Literacy
- EDUB 1700 Teaching Canadian Studies
- EDUB 1710 Literature for Adolescents
- EDUB 1720 Literature for Children
- EDUB 1730 Art Across the Curriculum
- EDUB 1740 Drama Across the Curriculum
- EDUB 1750 Basic Experiences in Movement and Dance Education
- EDUB 1760 Historical Development of Physical Science Up to the 20th Century
- EDUB 1770 Historical Development of Physical Science in the 20th Century
- EDUB 1780 Integration of Technological Literacy Across the K-12 Curriculum
- EDUB 1800 Recent Developments in Learning and Teaching Senior Years Mathematics
- EDUB 1810 Computer-Based Multimedia in Education
- EDUB 1820 Language and Content Instruction of ESL/Bilingual Students
- EDUB 1830 La pédagogie du français de base aux niveaux intermédiaire et de la jeune enfance
- EDUB 1840 Recent Developments in CTL 1 (Different topics are offered under these course numbers)
- EDUB 1850 Recent Developments in CTL 2 (Different topics are offered under these course numbers)
- EDUB 1860 Practicum in Teaching English as a Second Language
- EDUB 2160 Teaching Music in Early/Middle Years

SECTION 9: Post Baccalaureate Diploma in Education

All students are asked to note that academic policies and regulations are currently under review and may change. Please check the web *Calendar* after July 1, 2006 for updated information.

Courses in this program may not be used to fulfil the degree requirements of the Bachelor of Education program.

The Faculty of Education offers a Post Baccalaureate Diploma in Education (PBDE) designed for teachers and other professionals.

The unique features of the PBDE program are that students can: design their own program of study and tailor it to their own areas of interest; take courses at the Faculty of Education as well as at other faculties and schools at the U of M or other approved institutions; and can transfer up to three credit hours of approved professional development courses offered by other agencies or organizations (currently under review). A wide selection of courses is available through Summer Session, distance education, via the internet and summer institutes.

The PBDE is recognized by Manitoba Education, Citizenship and Youth for salary classification purposes. To move to Class 7, teachers must hold a master's degree from a recognized institution. Further, the PBDE program provides the opportunity for teachers to follow courses of study leading to the special education and special education coordinator certificates, and to partial fulfilment of the requirements of the school administrators' (Level 1) and principals' (Level 2) certificates, all of which are issued by Manitoba Education, Citizenship and Youth. For information regarding specialist certificates, contact: Professional Certification and Student Records Unit, Manitoba Education, Citizenship and Youth, Box 700, Russell, Manitoba, R0J 1W0; telephone toll free at: 1 800 667 2378, or 1 204 773 2998, or e-mail certification@gov.mb.ca, or web: www.edu.gov.mb.ca.

9.1 Admission Requirements

Applicants for Admission must possess:

- A Bachelor of Education degree and one of the following types of certificates granted by Manitoba Education, Citizenship and Youth: General Certificate, Limited Certificate, or Clinicians' Certificate; or equivalent from other provinces [See note 1 on teacher certification] or a bachelor's degree and two years of appropriate teaching/work experience (see note 2);
- A Grade Point Average of 2.00 in the bachelor's degree (including any after degree certification program).

Note 1:

Teacher Certification

The majority of applicants will possess a valid teaching certificate before being admitted to the Post Baccalaureate Diploma in Education Program.

The granting of a certificate to teach in the public schools of Manitoba is the prerogative of Manitoba Education, Citizenship and Youth and is based on a recognized program of teacher education. Individuals wishing to apply for such certification should contact the Professional Certification and Student Records Unit, Manitoba Education, Citizenship and Youth.

Note 2:

Applicants must include a brief statement as to educational plans and a resume showing evidence of two years of appropriate full-time teaching or work experience.

9.2 Admission Procedure

Applications may be obtained from the Graduate and PBDE Programs Office, Faculty of Education, or Enrolment Services, 424 University Centre. Applications can also be found at www.umanitoba.ca/education/programs/pbde.shtml. Completed applications must be returned to Enrolment Services/Admissions Office, 424 University Centre by:

Canadian/US Applicants

- April 1 for classes beginning in May (Summer 1)
- June 1 for classes beginning in July (Summer 2)
- August 1 for classes beginning in September (Fall)
- December 1 for classes beginning in January (Winter)

International Applicants

- April 1 for classes beginning in September (Fall)
- June 1 for classes beginning in January (Winter)

9.3 Program Requirements

REMINDER: While Education student advisors are available to clarify faculty and university regulations and degree requirements, it is the student's responsibility to ensure that diploma and program requirements are met.

The Post Baccalaureate Diploma in Education consists of 30 credit hours of coursework, subject to the following regulations:

- a) A minimum of 12 credit hours must be taken in the Faculty of Education at the 5000-level;
- b) A maximum of 18 credit hours may be taken in the Faculty of Education below the 5000-level;
- c) A maximum of 18 credit hours may be taken outside the Faculty of Education at the introductory or higher level of which six credit hours may be taken at the 1000-level. In the case of language study other than English or French, a maximum of 12 credit hours may be taken at the 1000-level provided both are in the same language;
- d) A maximum of three credit hours may be earned through approved external professional courses (currently under review and subject to revision). These courses are offered by professional groups, and credit may be arranged where prior approval has been given to the course sponsor. Effective January, 2000, students applying for transfer of credit for external professional courses must do so within 24 months of course completion.

9.4 Academic Regulations

Appeal Procedures

The general university policy for appeal of assigned grades applies to the Faculty of Education. See the chapter, General Academic Regulations and

Policy, of this Calendar, Appeals of Assigned Grades. Information about admission decision appeals may be found in the chapter, Admissions.

Assessment of Student Academic Performance

Academic performance is normally assessed at the completion of nine credit hours of course work and at the end of every session thereafter. A minimum grade of "C" is required for each course that is to be included in the student's diploma program. In addition, a student must maintain a minimum cumulative Grade Point Average of 2.00 to continue in the program. A student whose cumulative Grade Point Average falls below 2.00 will be placed on academic suspension for two years. Reapplication is required for readmission to the program.

Attendance at Class

Regular attendance is expected of all students in all courses. An instructor can initiate procedures to debar a student from attending classes and from final examinations where unexcused absences exceed three hours of scheduled classes in any one term.

Continuing Students

See the chapter, University of Manitoba Admissions.

Debarment

See the chapter, General Academic Regulations and Requirements, Attendance at Class and Debarment.

Grading Scale

Effective in 2000-2001 academic session, the Faculty of Education adopted the following grading scale:

Letter Grade	Grade Point	Level of Achievement	Percentage Range
A+	4.50	Exceptional	95 and above
A	4.00	Excellent	90-94
B+	3.50	Very Good	85-89
B	3.00	Good	80-84
C+	2.50	Satisfactory	75-79
C	2.00	Adequate	70-74
D	1.00	Marginal	60-69
F	0.00	Failure	Below 60

Incompletes

See the chapter, General Academic Regulations and Requirements, Academic Evaluation.

Maximum Time Limits

The maximum time allowed for completing the PBDE is nine years. In addition, a student will not be permitted to count toward the diploma any course completed more than nine years prior to the completion date of the diploma.

Repeating a Course

Courses for which a grade of "F" or "D" is obtained, must be repeated or replaced; however, courses in which a grade of "C" or higher is obtained may only be repeated with the consent of the Assistant Dean, PBDE Program. When a course is repeated, the last grade achieved will be used in calculating the Degree Grade Point Average.

Supplemental Examinations

Supplemental examinations are not permitted in education courses.

Voluntary Withdrawals

See the chapter, General Academic Regulations and Requirements.

Authorized Withdrawals (AWs) may be permitted on medical or compassionate grounds, subject to satisfactory documentation. Students must contact an Education Student Advisor to initiate an authorized withdrawal.

9.5 Transfer of Credit

Subject to approval by the Faculty, transfer of credit may be granted on the basis of:

- completed university level courses that have not been previously used towards a degree,
- completed M.Ed. courses not used to satisfy requirements for the M.Ed. degree, and
- the following courses completed through the Certificate in Adult and Continuing Education (CACE), University of Manitoba:

CACE 43001 Foundations of Adult Education transferred as EDUA 1570 Foundations of Adult Education (3); CACE 43002 Program Planning in Adult Education transferred as EDUA 1580 Program Planning in Adult Education (3); CACE 43003 Adult Learning and Development transferred as EDUA 1560 Adult Learning and Development (3); CACE 43004 Facilitating Adult Education transferred as EDUA 1590 Facilitating Adult Education (3).

Completion of the CACE certificate is not required to receive individual credit.

- the following courses completed through the Certificate in Teaching English as a Second Language (CTESL), University of Manitoba:

39301 Principles and Procedures of Second Language transferred as EDUB 1620 Principles and Procedures of Second Language Teaching (3); 39302 Teaching ESL Vocabulary and Pronunciation as EDUB 1640 Teaching ESL Vocabulary and Pronunciation (3); 39303 Teaching ESL Grammar as EDUB 1650 Teaching ESL Grammar (3); 39306 Computers in Second Language Teaching as EDUB 1660 Computers in Second Language Teaching (3); 39307 English for Non-Native Speaking (NNS) Teachers of English as EDUB 1670 English for NNS (Non-Native Speaking) Teachers of ESL (3); 39305 Content-based Second Language Instruction as EDUB 1820 Language and Content Instruction of ESL/Bilingual Students (3); 39308 Teaching ESL Literacy as EDUB 1840 Recent Developments in Curriculum, Teaching and Learning 1: TESL Literacy (3); and 39304 Practicum in Teaching English as a Second Language (TESL) as EDUB 1860 Practicum in Teaching English as a Second Language (TESL) (3).

Completion of the CTESL certificate is not required to receive individual credit.

A maximum of 12 credit hours may be transferred, including those in 9.3 d) above from an institution other than the University of Manitoba. There is no maximum limit for courses completed at the University of Manitoba.

Courses transferred to the PBDE must fall within the nine year statute of limitation at the completion date, must be within the program requirements, and must have a grade of C or better.

SECTION 10: Course Descriptions

Head: F. Morin

Office: 261 Education Building

Telephone: (204) 474-9014

10.1 Department of Curriculum, Teaching and Learning

EDUB 1000 Early Years Philosophy and Practice 1 Cr.Hrs.1 (Formerly 132.100) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.105. Corequisite: EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1010 Early Years Curriculum and Instruction in Language and Literacy 1 Cr.Hrs.3 (Formerly 132.101) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.106. Corequisite: EDUB 1000 (or 132.100), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1020 Early Years Curriculum and Instruction in Music and Movement 1 Cr.Hrs.1 (Formerly 132.102) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.107. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1030 Early Years Curriculum and Instruction in Art and Drama 1 Cr.Hrs.2 (Formerly 132.103) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.108. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1040 Early Years Curriculum and Instruction in Social Studies 1 Cr.Hrs.1 (Formerly 132.104) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.109. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1050 Early Years Curriculum and Instruction in Mathematics 1 Cr.Hrs.2 (Formerly 132.105) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 081.105. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1060 Early Years Curriculum and Instruction in Science and Health 1 Cr.Hrs.2 (Formerly 132.106) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 081.106. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1100 Introduction to Teaching Language Arts in the Middle Years Cr.Hrs.3 (Formerly 132.110) An overview of curriculum, instructional approaches, and techniques relevant to language literacy education at the Middle Years level, with emphasis on oracy and reading instruction. Not to be held with the former 063.120. Corequisite: EDUB 1110 (or 132.111), EDUB 1120 (or 132.112), EDUB 1130 (or 132.113), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1110 Introduction to Teaching Social Studies in the Middle Years Cr.Hrs.1 (Formerly 132.111) A study of the fundamentals of social studies education in the Middle Years, with particular emphasis on the goals, curriculum approaches, content, and initial planning issues. Not to be held with the former 063.121. Corequisite: EDUB 1100 (or 132.110), EDUB 1120 (or 132.112), EDUB 1130 (or 132.113), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1120 Teaching Drama in the Middle Years Cr.Hrs.1 (Formerly 132.112) An overview of the teaching strategies appropriate to teaching drama in the Middle Years. Not to be held with the former 063.122. Corequisite: EDUB 1100 (or 132.110), EDUB 1110 (or 132.111), EDUB 1130 (or 132.113), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1130 Introduction to Teaching Science in the Middle Years Cr.Hrs.1 (Formerly 132.113) This course will explore Middle Years science curricular content and issues. It will also provide teaching and learning models and tools for structuring science knowledge and drawing relationships among theory, evidence, and values in Science. Not to be held with the former 081.120. Corequisite: EDUB 1100 (or 132.110), EDUB 1110 (or 132.111), EDUB 1120 (or 132.112), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1140 Introduction to Teaching Mathematics in the Middle Years Cr.Hrs.3 (Formerly 132.114) An overview of Middle Years mathematics curricula. Not to be held with the former 081.121. Corequisite: EDUB 1100 (or 132.110), EDUB 1110 (or 132.111), EDUB 1120 (or 132.112), EDUB 1130 (or 132.113), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1200 Teaching the Arts in Senior Years Cr.Hrs.3 (Formerly 132.120) For specialists in art, drama and music and those without a specialist background, the course will address common elements and issues in arts education at the Senior Years level. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.H.Ecol./B.Ed.: *prerequisite*: Year 1-4 inclusive.

EDUB 1210 Teaching English Language Arts in Senior Years 1 Cr.Hrs.3 (Formerly 132.121) The course will introduce students to the history, theories, principles, and practices of teaching English language arts at the Senior Years level. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *prerequisite*: Year 1-4 inclusive.

EDUB 1230 Teaching Social Studies in Senior Years Cr.Hrs.3 (Formerly 132.123) A study of theoretical and practical issues relating to the curriculum, resources, instructional approaches and evaluation processes relevant to the teaching of social studies at the Senior Years level. Includes the exploration of current issues and trends in Canadian social studies. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *prerequisite*: Year 1-4 inclusive.

EDUB 1240 Teaching Human Ecology in Senior Years 1 Cr.Hrs.3 (Formerly 132.124) The study of curriculum and instructional approaches relevant to the teaching of human ecology at the Senior Years level. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199).

EDUB 1250 Teaching Mathematics in Senior Years 1 Cr.Hrs.3 (Formerly 132.125) A study of curriculum and instructional approaches relevant to teaching mathematics at the Senior Years level. Senior Years: corequisite: EDUB 1500, EDUB 1800, EDUB 1980, Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800

(or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *prerequisite*: Year 1-4 inclusive.

EDUB 1260 Teaching Physical Education/Health Education in Senior Years 1 Cr.Hrs.3 (Formerly 132.126) A study of curriculum and instructional approaches relevant to the teaching of physical education and health education at the Senior Years level. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *prerequisite*: Year 1-4 inclusive.

EDUB 1270 Teaching Senior Years Science Cr.Hrs.3 (Formerly 132.127) General principles of science education, conceptual development, cognitive and learning theories, scientific literacy, the nature of science, contextual teaching, and the science-technology-society connection are presented and discussed. Emphasis will be placed on using conceptual development models to help science teachers present concepts and topics. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *prerequisite*: Year 1-4 inclusive.

EDUB 1280 L'enseignement du français de base au Niveau Secondaire 1 Cr.Hrs.3 (Formerly 132.128) Ce cours examine les principes fondamentaux et la mise en pratique de l'enseignement et l'apprentissage du français langue seconde au niveau secondaire. L'accent est mis sur les pratiques pédagogiques de l'approche communicative expérientielle. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *prerequisite*: Year 1-4 inclusive.

EDUB 1350 Teaching a Heritage, Aboriginal, or International Language 1 Cr.Hrs.3 (Formerly 132.135) Curriculum principles and procedures in teaching a language other than English or French. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed. *prerequisite*: Year 1-4 inclusive. Early/Middle Years: Complementary course; *prerequisite*: 18 credits in a language other than English or French. Not to be held with the former courses 132.122, 063.409, or 063.323.

EDUB 1500 Education in the Senior Years Cr.Hrs.3 (Formerly 132.150) An examination of the assumptions about and goals of Senior Years education, the role of the Senior Years teacher, and the Senior Years curriculum in the schools. Corequisite: EDUB 1980 (or 132.198), curriculum and instruction for major and minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199).

EDUB 1510 Principles and Processes of Teaching Cr.Hrs.3 (Formerly 132.151) This foundational course is required for all Senior Years students. In it, students will develop richer orientations to the teaching processes of organizing and leading learning in Senior Years classrooms. Not to be held with the former 081.317.

EDUB 1520 Education in the Senior Years Integrated Programs 1 Cr.Hrs.2 (Formerly 132.152) An examination of the assumptions about and goals of Senior Years education, the role of the Senior Years teacher, and the Senior Years curriculum in the schools. For students in the integrated B.Ed. programs. Not to be held with EDUB 1500 (or 132.150). Corequisite: EDUB 1940 (or 132.194).

EDUB 1530 Education in the Senior Years Integrated Programs 2 Cr.Hrs.1 (Formerly 132.153) An examination of the assumptions about and goals of Senior Years education, the role of the Senior Years teacher, and the Senior Years curriculum in the schools. For students in the integrated B.Ed. programs. Not to be held with EDUB 1500 (or 132.150). *Prerequisite*: EDUB 1520 (or 132.152). Corequisite: EDUB 1950 (or 132.195).

EDUB 1600 Teaching General Music Cr.Hrs.3 (Formerly 132.160) A study of teaching music in Early and Middle Years schools. For both classroom teachers and Music specialists, the course covers all traditional areas of music instruction as well as music's role across the curriculum.

EDUB 1620 Principles and Procedures of Second Language Teaching Cr.Hrs.3 (Formerly 132.162) Examination of principles and demonstration of procedures for developing basic second language knowledge and skills in various contexts, e.g., ESL, EFL, AL, HL, IL.

EDUB 1640 Teaching ESL Vocabulary and Pronunciation Cr.Hrs.3 (Formerly 132.164) Systematic and principled procedures for teaching English vocabulary, and for teaching comprehensible and acceptable English pronunciation (vowels, diphthongs, semi-vowels, consonants, stress, rhythm, and intonation).

EDUB 1650 Teaching ESL Grammar Cr.Hrs.3 (Formerly 132.165) Examination of English sentence and discourse grammar, and demonstration of procedures of teaching grammar in communicative and academic contexts.

EDUB 1660 Computers in Second Language Teaching Cr.Hrs.3 (Formerly 132.166) Concepts and methodology in computer assisted language learning (CALL), with emphasis on using the Internet.

EDUB 1670 English for NNS (Non-Native Speaking) Teachers of ESL Cr.Hrs.3 (Formerly 132.167) English language development for non-native speaking teachers of English as a second language. Focus is on teacher classroom and professional English.

EDUB 1680 Media Literacy Cr.Hrs.3 (Formerly 132.168) This course will examine the role of the media in society and assist educators in all disciplines and levels to help students develop an informed and critical understanding of the mass media; including

television, film, popular music, news, and advertising, etc. Not to be held with the former 063.162.

EDUB 1700 Teaching Canadian Studies Cr.Hrs.3 (Formerly 132.170) An introduction to Canadian Studies as a school subject, K-54, touching on recent developments, and concentrating on questions of program development, teaching strategies, and resources. Not to be held with the former 063.214.

EDUB 1710 Literature for Adolescents Cr.Hrs.3 (Formerly 132.171) A survey of the literature available for adolescents. The course includes reading and discussion of the literature, and consideration of techniques for encouraging extensive reading. Not to be held with the former 063.204.

EDUB 1720 Literature for Children Cr.Hrs.3 (Formerly 132.172) A survey of the literature available for children. The course includes reading and discussion of the literature, and consideration of techniques for encouraging extensive reading. Not to be held with the former 063.212.

EDUB 1730 Art Across the Curriculum Cr.Hrs.3 (Formerly 132.173) This course will emphasize the importance of visual learning and its potential for teaching in the various curriculum areas at all levels. Opportunities for studio work, discussion and planning will be provided.

EDUB 1740 Drama Across the Curriculum Cr.Hrs.3 (Formerly 132.174) For all students, specialist and non-specialist, who wish to develop a greater understanding and practice of drama in the classroom across the curriculum.

EDUB 1750 Basic Experiences in Movement and Dance Education Cr.Hrs.3 (Formerly 132.175) A study of teaching movements/dance education in Early (K-4) and Middle Years (5-8) schools. For both classroom teachers and physical education specialists, the course covers all traditional areas of movement instruction as well as movements' role across the curriculum. Not to be held with the former 081.212 and 081.213.

EDUB 1760 Historical Development of Physical Science up to the 20th Century Cr.Hrs.3 (Formerly 132.176) The major ideas and discoveries in science of the Ionians and the Greeks, the scientific revolution of the 16th and 17th centuries, and the 'modern' period of science, up to the end of the 19th century will be explored with an emphasis on science education and scientific literacy. Not to be held with the former 081.203.

EDUB 1770 Historical Development of Physical Science in the 20th Century Cr.Hrs.3 (Formerly 132.177) An examination of Mendeleev's periodic table of the elements, the discovery of X-rays, radioactivity and the electron, early quantum theory, Einstein's Theory of Relativity, the Bohr-Rutherford atom, and wave-particle duality. Case histories will be emphasized and the implications for science education and scientific literacy explored. Not to be held with the former 081.203. *Prerequisite:* EDUB 1760 (or 132.176).

EDUB 1780 Integration of Technological Literacy Across the K-12 Curriculum Cr.Hrs.3 (Formerly 132.178) Training teachers to analyze subject matter content, to identify potential to teach about technological principles within the content area, and to develop specific teaching and learning interventions to infuse technological literacy across content. Not to be held with the former 081.153.

EDUB 1800 Recent Developments in Learning and Teaching Senior Years Mathematics Cr.Hrs.3 (Formerly 132.180) The study of selected topics in mathematics in Senior Years. Not to be held with the former 081.302. *Corequisites:* EDUB 1250, EDUB 1500, and EDUB 1980.

EDUB 1810 Computer-Based Multimedia in Education Cr.Hrs.3 (Formerly 132.181) An examination of computers in education focusing on the utilization and creation of educational computer-based multimedia. Not to be held with the former 081.156. *Prerequisites:* EDUB 1990 (or 132.199); COMP 1260 (or 074.126); the former courses 081.182, 081.218, 043.306; or written permission of the instructor.

EDUB 1820 Language and Content Instruction of ESL/Bilingual Students Cr.Hrs.3 (Formerly 132.182) Principles and procedures of teaching ESL/bilingual students in subject-area classrooms, using content-based language instruction and language sensitive content instruction. Not to be held with the former 132.161 or 063.152 or 063.322.

EDUB 1830 La pédagogie du français de base aux niveaux intermédiaire et de la jeune enfance Cr.Hrs.3 (Formerly 132.183) Ce cours examine les principes fondamentaux et la mise en pratique de l'enseignement de l'apprentissage du français langue seconde au niveau intermédiaire ainsi qu'au niveau de la jeune enfance. L'accent est mis sur les pratiques pédagogiques de l'approche communicative expérimentielle. *Prerequisite:* 18 credit hours of French or permission of instructor.

EDUB 1840 Recent Developments in CTL 1 Cr.Hrs.3 (Formerly 132.184) The study of selected topics in curriculum, teaching, and learning.

EDUB 1850 Recent Developments in CTL 2 Cr.Hrs.3 (Formerly 132.185) The study of selected topics in curriculum, teaching and learning.

EDUB 1860 Practicum in Teaching English as a Second Language (TESL) Cr.Hrs.3 (Formerly 132.186) Practical second language teaching experiences, including: observing recorded and live teaching, planning lessons and units, micro and live teaching, and reflective practice. Not to be held with the former 132.163. *Pre- or corequisites:* EDUB 1620 (or 132.162), EDUB 1640 (or 132.164), and EDUB 1650 (or 132.165).

EDUB 1870 Practical Work in School Science Cr.Hrs.3 (Formerly 132.187) This course, which is appropriate for early, middle and senior teacher candidates, will critically examine the role of practical work in the teaching and learning of school science. Topics will include: demonstrations, experiments, investigations, field experiences, simulations, data collection and interpretation, new educational technologies, assessment and laboratory safety.

EDUB 1940 Integrated Programs School Experience 1 Cr.Hrs.3 (Formerly 132.194) For students in the Integrated Bachelor of Human Ecology/Bachelor of Education and

Bachelor of Music/Bachelor of Education programs. Practical teaching experience in schools under the guidance and supervision of faculty members and collaborating teachers. *Prerequisite:* EDUB 1200 (or 132.120) for Integrated B.Mus./B.Ed. and EDUB 1240 (or 132.124) for Integrated B.H.Ecol./B.Ed. *Corequisite:* EDUB 1520 (or 132.152).

EDUB 1950 Integrated Programs School Experience 2 Cr.Hrs.3 (Formerly 132.195) For students in the Integrated Bachelor of Human Ecology/Bachelor of Education and Bachelor of Music/Bachelor of Education programs. A continuation of practical teaching experience in schools under the guidance and supervision of faculty members and collaborating teachers. *Prerequisite:* EDUB 1940 (or 132.194); EDUB 2240 (or 132.224) for Integrated B.Mus./B.Ed. and EDUB 2290 (or 132.229) for Integrated B.H.Ecol./B.Ed. *corequisite:* EDUB 1530 (or 132.153).

EDUB 1960 Early Years School Experience 1 Cr.Hrs.6 (Formerly 132.196) Practical teaching experience in Early Years schools under the guidance and supervision of faculty members and collaborating teachers. The practicum will be closely integrated with the study of curriculum and instruction at the Early Years level. Not to be held with the former 063.190. *Corequisite:* EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106); *pre- or corequisite:* EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1970 Middle Years School Experience 1 Cr.Hrs.3 (Formerly 132.197) Practical teaching experience in Middle Years schools under the guidance and supervision of faculty members and collaborating teachers. The practicum will be closely integrated with the study of curriculum and instruction at the Middle Years level. Not to be held with the former 063.191. *Corequisite:* EDUB 1100 (or 132.110), EDUB 1110 (or 132.111), EDUB 1120 (or 132.112), EDUB 1130 (or 132.113), EDUB 1140 (or 132.114); *pre- or corequisite:* EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1980 Senior Years School Experience 1 Cr.Hrs.6 (Formerly 132.198) Practical teaching experience in the schools under the guidance and supervision of faculty members and collaborating teachers. The practicum will be closely integrated with the study of curriculum and instruction at the Senior Years level. *Corequisite:* EDUB 1500 (or 132.150); Curriculum and Instruction courses for the major and minor; *pre- or corequisite:* EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199).

EDUB 1990 Teacher and Technology Cr.Hrs.3 (Formerly 132.199) An introduction to educational and information technology in the classroom. Focus will be on the utilization of technology, the development of information skills for teachers and critical analyses of the potential of educational technology. Not to be held with the former 081.182 or 081.218.

EDUB 2000 Early Years Philosophy and Practice 2 Cr.Hrs.1 (Formerly 132.200) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); *pre- or corequisite:* EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2010 Early Years Curriculum and Instruction in Language and Literacy 2 Cr.Hrs.3 (Formerly 132.201) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2000 (or 132.200), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); *pre- or corequisite:* EDUA 2800 (or 129.280), EDUA 2810 (or 129.281)

EDUB 2020 Early Years Curriculum and Instruction in Music and Movement 2 Cr.Hrs.2 (Formerly 132.202) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); *pre- or corequisite:* EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2030 Early Years Curriculum and Instruction in Art and Drama 2 Cr.Hrs.1 (Formerly 132.203) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); *pre- or corequisite:* EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2040 Early Years Curriculum and Instruction in Social Studies 2 Cr.Hrs.2 (Formerly 132.204) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); *pre- or corequisite:* EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2050 Early Years Curriculum and Instruction in Mathematics 2 Cr.Hrs.2 (Formerly 132.205) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030

(or 132.203), EDUB 2040 (or 132.204), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2060 Early Years Curriculum and Instruction in Science and Health 2 Cr.Hrs.2 (Formerly 132.206) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2070 Early Years Curriculum and Instruction Children's Literature Cr.Hrs.1 (Formerly 132.207) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296), pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2080 Early Years Multi-Language Development Cr.Hrs.1 (Formerly 132.208) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). *Prerequisite:* successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2100 Teaching Language Arts in the Middle Years Cr.Hrs.3 (Formerly 132.210) A study of curriculum, instructional approaches, and techniques relevant to language and literacy at the Middle Years level, with emphasis on writing instruction, the teaching of literature, and writing across the curriculum. *Prerequisite:* successful completion of year one; corequisite: EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2110 Teaching Social Studies in the Middle Years Cr.Hrs.3 (Formerly 132.211) A study of curriculum and instruction in Middle Years social studies education, with particular emphasis on its theories, developments, instructional approaches, evaluation, and contemporary issues. *Prerequisite:* successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2120 Teaching Art in the Middle Years Cr.Hrs.2 (Formerly 132.212) An overview of art processes and teaching strategies appropriate for Middle Years students, with an emphasis on general visual awareness, art appreciation and art production. *Prerequisite:* successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2130 Teaching Science in the Middle Years Cr.Hrs.3 (Formerly 132.213) This course will examine learning in Middle Years science from multi-perspectives. Contemporary teaching and learning models will be assessed. Unit and lesson plans will be developed using multi-voices in science. *Prerequisite:* successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2140 Teaching Mathematics in the Middle Years Cr.Hrs.3 (Formerly 132.214) A study of instructional approaches needed to teach mathematics at the Middle Years level. *Prerequisite:* successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2150 Teaching Physical Education in the Middle Years Cr.Hrs.2 (Formerly 132.215) This course introduces students to the rationale for, and methods of, teaching of health and physical education in the Middle Years grades. *Prerequisite:* successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2160 Teaching Music in Early/Middle Years Cr.Hrs.3 (Formerly 132.216) The specialized study and application of curriculum, instructional approaches and techniques relevant to music education at the early and middle years levels (K-8). This course is intended for music specialists (music majors/minors, or with permission or instructor). *Prerequisite:* EDUB 1200 (or 132.120) and EDUB 1940 (or 132.194) or permission of instructor.

EDUB 2200 Teaching Art in Senior Years Cr.Hrs.3 (Formerly 132.220) A study of curriculum and instruction approaches relevant to teaching the visual arts at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1200 (or 132.120); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2210 Teaching English Language Arts in Senior Years 2 Cr.Hrs.3 (Formerly 132.221) The course will extend further the groundwork undertaken in the previous introductory course into the understanding and application of the principles and practices of teaching English language arts at the Senior Years level. *Prerequisite:* successful completion of year one; EDUB 1210 (or 132.121); corequisite: EDUB 2500 (or

132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2220 Teaching Geography in Senior Years Cr.Hrs.3 (Formerly 132.222) A study of curriculum and instructional approaches relevant to the teaching of geography at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1230 (or 132.123); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2230 Teaching History in Senior Years Cr.Hrs.3 (Formerly 132.223) A study of curriculum, instructional approaches relevant to the teaching of history at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1230 (or 132.123); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2240 Teaching Music in Senior Years Cr.Hrs.3 (Formerly 132.224) A study of curriculum, instructional approaches and techniques relevant to the teaching of music at the Senior Years level. *Senior Years: Prerequisite:* successful completion of year one, EDUB 1200 (or 132.120); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251); Integrated B.Mus./B.Ed.: *prerequisite:* EDUB 1200 (or 132.120), EDUB 1520 (or 132.152), EDUB 1940 (or 132.194).

EDUB 2250 Teaching Drama and Theatre in Senior Years Cr.Hrs.3 (Formerly 132.225) A study of curriculum and instructional approaches relevant to the teaching of drama and theatre at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1200 (or 132.120); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2260 Teaching Biology in Senior Years Cr.Hrs.3 (Formerly 132.226) A study of curriculum and instructional approaches relevant to the teaching of biology at the Senior Years level. *Prerequisite:* successful completion of year one; EDUB 1270 (or 132.127); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298). Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2270 Teaching Chemistry in Senior Years Cr.Hrs.3 (Formerly 132.227) A study of curriculum and instructional approaches relevant to the teaching of Chemistry at the Senior Years level. *Prerequisite:* successful completion of year one; EDUB 1270 (or 132.127), corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2280 Teaching General Science in Senior Years Cr.Hrs.3 (Formerly 132.228) The study of curriculum and instructional approaches relevant to the teaching of general science at the Senior Years level. *Prerequisite:* successful completion of year one; EDUB 1270 (or 132.127); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2290 Teaching Human Ecology in Senior Years 2 Cr.Hrs.3 (Formerly 132.229) A continuation of the study of curriculum and instructional approaches relevant to the teaching of human ecology at the Senior Years level. *Senior Years: prerequisite:* successful completion of year one; EDUB 1240 (or 132.124); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251); Integrated B.H.Ecol./B.Ed.: *prerequisite:* EDUB 1240 (or 132.124), EDUB 1520 (or 132.152), EDUB 1940 (or 132.194).

EDUB 2300 Teaching Mathematics in Senior Years 2 Cr.Hrs.3 (Formerly 132.230) A continuation of the study of curriculum and instructional approaches relevant to teaching mathematics at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1250 (or 132.125); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2310 Teaching Physical Education/Health Education in Senior Years 2 Cr.Hrs.3 (Formerly 132.231) A continuation of the study of curriculum and instructional approaches relevant to the teaching of physical education and health education at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1260 (or 132.126); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2320 Teaching Physics in Senior Years Cr.Hrs.3 (Formerly 132.232) A study of curriculum and instructional approaches relevant to the teaching of physics at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1270 (or 132.127); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251). Offered 2003-2004 and every other year thereafter.

EDUB 2330 Teaching Computer Science in Senior Years Cr.Hrs.3 (Formerly 132.233) A study of curriculum and instructional approaches relevant to the teaching of computer science at the Senior Years level. *Prerequisite:* successful completion of year one, EDUB 1270 (or 132.127); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251). Offered 2004-2005 and every other year thereafter.

EDUB 2340 L'enseignement du français de Base au Niveau Secondaire 2 Cr.Hrs.3 (Formerly 132.234) La deuxième partie du cours constitue un approfondissement des

éléments-clés ainsi qu'une introduction aux nouveaux sujets particuliers en vue de développer chez l'étudiant une philosophie personnelle de l'enseignement du français langue seconde. *Prerequisite:* successful completion of year one, EDUB 1280 (or 132.128); *corequisite:* EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2350 Teaching a Heritage, Aboriginal, or International Language 2 Cr.Hrs.3 (Formerly 132.235) Curriculum applications and practice in teaching a language other than English or French. Senior Years: *prerequisite:* successful completion of year one, EDUB 1350 (or 132.135) or former 132.122; *corequisite:* EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251); Early/Middle Years: Complementary Course; *prerequisite:* EDUB 1350 (or 132.135) or the former 132.122.

EDUB 2400 Teaching in the Middle Years Cr.Hrs.2 (Formerly 132.240) Examines the assumptions underlying the goals of Middle Years education. Topics include unit and lesson planning, special topics in adolescent development, classroom management, student evaluation, and integrating curriculum. *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2970 (or 132.297), EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215).

EDUB 2500 Themes in Senior Years Education Cr.Hrs.3 (Formerly 132.250) Examination of selected themes or issues relevant to Senior Years education, and the development of the beginning teacher's personal professional identity. Course activities will be coordinated with in-school experiences and will vary from year to year. Senior Years: *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2980 (or 132.298), six credit hours year 2 Curriculum and Instruction courses specific to major and minor. Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *Prerequisite:* successful completion of years 1-4.

EDUB 2510 Language and Literacy Across the Curriculum Cr.Hrs.3 (Formerly 132.251) An introduction to language as a medium of teaching and learning and how teachers of all content areas can apply language to enhance students' understanding of subject area content. *Prerequisite:* Senior Years: successful completion of year one. Integrated B.Mus./B.Ed. and B. H.Ecol./B.Ed.: successful completion of years 1-4.

EDUB 2960 Early Years School Experience 2 Cr.Hrs.6 (Formerly 132.296) A continuation of practical teaching experience in Early Years schools under the guidance and supervision of faculty members and collaborating teachers. The practicum will be closely integrated with the study of curriculum and instruction at the Early Years level. *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2970 Middle Years School Experience 2 Cr.Hrs.9 (Formerly 132.297) A continuation of practical teaching experience in Middle Years schools under the guidance and supervision of faculty members and collaborating teachers. The practicum will be closely integrated with the study of curriculum and instruction at the Middle Years level. *Prerequisite:* successful completion of year one; *corequisite:* EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), and EDUB 2400 (or 132.240).

EDUB 2980 Senior Years School Experience 2 Cr.Hrs.6 (Formerly 132.298) A continuation of practical teaching experience under the guidance and supervision of faculty members and collaborating teachers. The practicum will be closely integrated with the study of curriculum and instruction at the Senior Years level. Senior Years: *prerequisite:* successful completion of year one; *corequisite:* EDUB 2500 (or 132.250) and six credit hours year two curriculum and instruction courses specific to major and minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: *prerequisite:* successful completion of years 1-4 inclusive; *corequisite:* EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2500 (or 132.251) (Early/Middle Years Music specialization take an Education complementary course), EDUB 2510 (or 132.251), (Early/Middle Years Music specialization take an Education complementary course); pre- or corequisite: EDUB 1990 (or 132.199).

Ungrouped courses

EDUB 5870 Mentoring for Teachers Cr.Hrs.3 (formerly 132.587) An examination of mentoring practices with particular focus on educative ways of mentoring teacher candidates and new teachers.

EDUB 5940 Instructional Product Development Cr.Hrs.3 (Formerly 132.594) Systematic development of an instructional product. Includes needs assessment, goal setting, writing objectives, task analyses, product development, evaluation techniques. Not to be held with the former 081.532. Not currently offered.

Educational Technology

EDUB 5840 Internet Pedagogy Cr.Hrs.3 (Formerly 132.584) Theory and practice of teaching and learning with the Internet. Focus on instructional applications of the Internet, for all levels from K-12 as well as adult, post-secondary and training settings. Current research will be examined and monitored for its relevance to this fast-changing field.

EDUB 5850 Theory and Practice of Designing and Developing Web-based Courses Cr.Hrs.3 (Formerly 132.585) Theory and practice of the design, development and evaluation of on-line web-based distance education courses for K-12 through adult/post-secondary programs.

EDUB 5860 Project Management in Education and Training Cr.Hrs.3 (Formerly 132.586) Theory and practice of project management principles in education and training. Emphasis on application of concepts and procedures of educational project management including planning and proposal creation for developmental and/or research activities in educational agencies.

English as a Second Language

EDUB 5510 ESL Materials Development and Practicum Cr.Hrs.3 (Formerly 132.551) A general survey of published ESL instructional materials will form the basis for students to develop lesson materials to be demonstrated in a supervised practicum. Not to be held with the former 063.587. Pre- or corequisite: one or more of EDUB 5580 (or 132.558) or 063.322, or 132.549 or 063.509, or 132.550 or 063.586 or instructor's permission.

EDUB 5520 Grammar in ESL Learning and Instruction Cr.Hrs.3 (Formerly 132.552) A survey of English grammar and its applications to teaching all levels of ESL, from beginning to very advanced. Lectures, readings, group discussions, and demonstrations are designed to develop knowledge and skills necessary to teach oral and written grammar in traditional and innovative ways. Not to be held with the former 063.596.

EDUB 5530 ESL and Content Instruction Cr.Hrs.3 (Formerly 132.553) Principles and procedures of teaching ESL/bilingual students in subject-area classrooms, using content-based language instruction and language sensitive content instruction.

EDUB 5540 Vocabulary and Pronunciation Instruction Cr.Hrs.3 (Formerly 132.554) Principles and procedures in teaching English vocabulary and pronunciation for effective communication (sounds, spellings, word and sentence stress, rhythm, intonation, connected speech, integration). Not to be held with EDUB 1640 (or 132.164).

EDUB 5580 Fundamentals of ESL (English Second Language) Instruction Cr.Hrs.3 (Formerly 132.558) Examination of principles and demonstration of procedures for teaching ESL in Canada and EFL overseas. Not to be held with the former courses 132.550 or 063.586.

EDUB 5830 Developing ESL/Bilingual Literacies Cr.Hrs.3 (Formerly 132.583) A focus on the theoretical and practical aspects of teaching literacy foundations and/or English language literacy to adult and adolescent English language learners. Definitions, assessment, and instructional strategies will be examined with a view to meeting the diverse needs of ESL/bilingual learners.

Expressive Arts

EDUB 5010 Theory and Practice of Teaching Dramatic Arts Cr.Hrs.6 (Formerly 132.501) The theory and practice of standard and innovative techniques of directing high school plays, with emphasis on the application of theories of grouping, movement, and speech in actual directing and acting experiences. Enrolment limited. Not to be held with the former 063.510.

EDUB 5040 Theory and Practice of Teaching Art (Elementary) Cr.Hrs.6 (Formerly 132.504) The theory and practice of teaching Art in the Elementary School will be examined through an inquiry into both the development of the child through his/her art expression and related curricular experiences. Not to be held with the former 063.518.

EDUB 5060 Theory and Practice of Teaching Art in the Senior Years 1 Cr.Hrs.3 (Formerly 132.506) An overview of major aspects of Art Education in the context of Senior Years 1 curriculum through a study of current theory, a variety of studio areas and related aesthetic concepts. Not to be held with the former 063.546.

EDUB 5070 Theory and Practice of Teaching Art in the Senior Years 2 Cr.Hrs.3 (Formerly 132.507) An examination of major aspects of art education in the context of the Senior Years 2 curriculum through an in-depth study of selected theoretical topics, studio areas and related aesthetic concepts. Not to be held with the former 063.547.

EDUB 5120 Music in the Early Years/Middle Years School 1 Cr.Hrs.3 (Formerly 132.512) A course to assist classroom teachers plan for music making activities based on knowledge and proficiency in the use of Orff instruments and recorder. Not to be held with the former 063.552.

EDUB 5130 Music in the Early Years/Middle Years School 2 Cr.Hrs.3 (Formerly 132.513) A course to assist classroom teachers plan for music making activities based on knowledge and proficiency in the use of a wide range of string instruments (guitar, baritone ukulele, dulcimer, etc.). Not to be held with the former 063.553.

EDUB 5140 Special Methods in Music 1 Cr.Hrs.3 (Formerly 132.514) An advanced study of the Orff method as it applies to Early and Middle Years schools with emphasis on ensemble performance. The course is designed for the music specialist. Not to be held with the former 063.554.

EDUB 5150 Special Methods in Music 2 Cr.Hrs.3 (Formerly 132.515) An advanced study of the Kodaly method as it applies to Early and Middle Years schools with emphasis on the contributions of the method to fine choral performance. The course is designed for the music specialist. Not to be held with the former 063.555.

EDUB 5160 School Band Cr.Hrs.3 (Formerly 132.516) An advanced study of the methods for initiating and continuing a band in Middle and Senior Years schools with emphasis on the contributions of a band program to Middle Years education. Not to be held with the former 063.556.

EDUB 5190 School Music Productions Cr.Hrs.3 (Formerly 132.519) A study of the principles and procedures for presenting school music productions. Not to be held with the former 063.559.

EDUB 5240 Music: Advanced Vocal Methods Cr.Hrs.3 (Formerly 132.524) Advanced methods for group instruction in voice related to the Senior School music option. Not to be held with the former 063.564.

EDUB 5250 Music: Advanced Choral Methods Cr.Hrs.3 (Formerly 132.525) Advanced methods in choral instruction and conducting through a study of choral liter-

ature related to school music programs. Not to be held with the former 063.565.

Library Science

EDUB 5550 Library Reference and Informational Materials Cr.Hrs.6 (Formerly 132.555) Principles of reference and research with special emphasis on interdisciplinary investigation; the problems of access to information; types of reference sources, their evaluation and selection for library reference collections; services to library users. Not to be held with the former 063.541.

EDUB 5560 School Library Organization and Administration Cr.Hrs.6 (Formerly 132.556) A critical examination of the implications of current theories of education for school libraries and an analysis of basic problems in organization and administration, including budget, collections, staff, quarters, and services to teachers and pupils. Not to be held with the former 063.542.

Mathematics

EDUB 5760 Recent Developments in Mathematics Education Cr.Hrs.3 (Formerly 132.576) Reading and research in mathematics education (selected topics).

EDUB 5770 Diagnosis and Remediation in Elementary School Mathematics Cr.Hrs.3 (Formerly 132.577) Diagnostic and remedial methods in elementary school mathematics. Not to be held with the former 081.558.

Readings in Curriculum

EDUB 5200 Readings in Curriculum, Teaching and Learning 1 Cr.Hrs.3 (Formerly 132.520) Readings and research in special areas of curricular study related to curriculum, teaching and learning.

EDUB 5210 Readings in Curriculum, Teaching and Learning 2 Cr.Hrs.3 (Formerly 132.521) Readings and research in special areas of curricular study related to curriculum, teaching and learning.

EDUB 5220 Recent Developments in Curriculum, Teaching and Learning 1 Cr.Hrs.3 (Formerly 132.522) An opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in the area.

EDUB 5230 Recent Developments in Curriculum, Teaching and Learning 2 Cr.Hrs.3 (Formerly 132.523) A continuation of certain topics of EDUB 5220 (or 132.522) to extend and develop the study previously undertaken in these areas.

EDUB 5470 Recent Developments in Curriculum: Mathematics and Natural Sciences 1 Cr.Hrs.3 (Formerly 132.547) This course will provide an opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in the area.

EDUB 5480 Recent Developments in Curriculum: Mathematics and Natural Sciences 2 Cr.Hrs.3 (Formerly 132.548) A continuation of certain topics of EDUB 5470 (or 132.547) to extend and develop the previous study undertaken in these areas.

Reading/Language Arts

EDUB 5330 Teaching Language and Literacy in the Content Areas Cr.Hrs.3 (Formerly 132.533) An examination of approaches to literacy in the content areas (science, mathematics, social studies, etc.); emphasis on strategies for reading, writing, and studying, materials, and material assessment, procedures, and supporting research. Not to be held with the former 132.531 or 063.571.

EDUB 5340 Foundations of Literacy Cr.Hrs.3 (Formerly 132.534) Nature of literacy in relation to various dimensions of human development and instruction such as language, vision, hearing, cognition, motivation, and instructional focus. Not to be held with the former 132.526 or 063.566.

EDUB 5350 Current Issues in Language and Literacy Cr.Hrs.3 (Formerly 132.535) A special topics course designed to update students on the most recent developments in Language and Literacy Education.

EDUB 5360 Children's Literature Cr.Hrs.3 (Formerly 132.536) The nature and psychology of literature for children in the elementary grades. Areas for consideration include an examination of materials, use of evaluative criteria to assess the materials, and research findings concerning development, interest and use of the material. Not to be held with the former 063.544.

EDUB 5370 Adolescent Literature Cr.Hrs.3 (Formerly 132.537) The nature and psychology of literature for students in Grades 7-12. Areas for consideration include an examination of materials, use of evaluative criteria to assess the materials, and research findings concerning development, interest and use of the material. Not to be held with the former 063.545.

EDUB 5380 Theory and Practice in Written Composition Cr.Hrs.3 (Formerly 132.538) A course designed to explore the nature of written composition and to provide practice in various types of writing. Not to be held with the former 063.584.

EDUB 5390 The Teaching of Written Composition Cr.Hrs.3 (Formerly 132.539) A course designed to assist teachers in organizing and implementing writing programs. Consideration will be given to motivational strategies, useful writing activities and exercises, and practice in editing and evaluation. Not to be held with the former 063.585.

EDUB 5400 Diagnostic and Remedial Techniques in Language Arts Cr.Hrs.6 (Formerly 132.540) Diagnosis and correction at the classroom level. Opportunities for detailed analysis of diagnostic instruments. Practical aspects include diagnosis of language arts problems, prescriptions, and correction on the basis of evaluation. Not to be held with the former 063.599.

EDUB 5820 Literacy in Adult Education Cr.Hrs.3 (Formerly 132.582) A study of both theoretical and practical aspects of teaching adult literacy with emphasis first on assessment measures to inform instruction and second on designing programs in both reading and writing to meet the diverse needs of adult learners.

Science

EDUB 5780 Theory of Teaching Science: Elementary Cr.Hrs.3 (Formerly 132.578) Approaches to the teaching and learning of elementary science (K-8). Elementary science curriculum and instruction will be studied in terms of the nature of science, and the nature of the learner, as well as goals, objectives, content, organization and evaluation. Not to be held with the former 081.546.

EDUB 5790 Theory of Teaching Science: Secondary Cr.Hrs.3 (Formerly 132.579) Approaches to the teaching and learning of Science, Grades 7-12. Objectives, content, and organization of science curriculum will be studied from the viewpoint of Science teachers. Not to be held with the former 081.547.

Social Studies

EDUB 5570 Recent Developments in Teaching History Cr.Hrs.3 (Formerly 132.557) A study of approaches that have been taken to curriculum development in history, focusing on specific curriculum projects. Emphasis will be on curricular rather than instructional concerns. Not to be held with the former 063.580.

EDUB 5590 The Theory and Development of Geographic Education Cr.Hrs.3 (Formerly 132.559) A consideration of the nature and development of geography, with particular reference to its place in the secondary school curriculum. Not to be held with the former 063.582.

EDUB 5600 The Teaching of Social Studies in the Early and Middle Years Cr.Hrs.3 (Formerly 132.560) This course concentrates on the teaching of social studies in schools from Kindergarten to approximately Grade Nine, with particular reference to the implications of social studies teachers of the characteristics of students at those levels. Not to be held with the former 132.567 or 063.595

EDUB 5630 The Teaching of Canadian Studies in Schools Cr.Hrs.3 (Formerly 132.563) An examination of current issues related to the teaching of Canadian studies in the public schools, including a critical appraisal of programs, materials, teaching strategies and related issues. Not to be held with the former 063.591.

EDUB 5660 Theoretical Foundations of Social Studies Cr.Hrs.3 (Formerly 132.566) This course examines recent developments in social studies education. It aims to familiarize students with the debates, the research and the innovations (successful and otherwise) that have characterized social studies curriculum. Not to be held with the former 063.594.

Technical/Vocational

EDUB 5100 Developing Competency Skills in Enterprise Education 1 Cr.Hrs.3 (Formerly 132.510) Promotes the development and integration of skills of creativity, innovation, self-reliance and responsibility in students, within the framework of an enterprise education/entrepreneurship paradigm. Participants develop teaching strategies and materials and learn to integrate these skills into current educational practices. Corequisite: EDUB 5110 (or 132.511).

EDUB 5110 Developing Competency Skills in Enterprise Education 2 Cr.Hrs.3 (Formerly 132.511) This course continues the promotion and application of student competency skills, within the framework of an enterprise education/entrepreneurship paradigm. Participants plan and organize a school, community or business venture, develop plans for the promotion and marketing of the product or service, arrange financial support, and make a presentation of their venture plan to a panel of evaluators. Corequisite: EDUB 5100 (or 132.510).

EDUB 5690 Seminar in Business Education Cr.Hrs.6 (Formerly 132.569) Curriculum development; methodologies; evaluation and measurement; research. Not to be held with the former 081.514.

EDUB 5700 Seminar in Industrial Education Cr.Hrs.6 (Formerly 132.570) Curriculum development; advanced techniques; current trends; research. Not to be held with the former 081.515.

10.2 Department of Educational Administration, Foundations and Psychology

Head: J. Young

Office: 204 Education Building

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EDUA 1500 Aboriginal Education Cr.Hrs.3 (Formerly 129.150) A study of fundamental issues, philosophies, and models of Aboriginal education. Cultural, spiritual, social, and political perspectives regarding Aboriginal education will be critically explored.

EDUA 1510 Foundations of Moral and Religious Education Cr.Hrs.3 (Formerly 129.151) Examination of the theory and practice of moral and religious education, including curricular and pedagogical issues in both humanistic and religious perspectives.

EDUA 1520 Recent Developments in Educational Administration and Foundations Cr.Hrs.3 (Formerly 129.152) Topics will vary depending on the needs and interests of students, and will include specialized topics in educational administration and foundations.

EDUA 1530 Recent Developments in Educational Psychology Cr.Hrs.3 (Formerly 129.153) Topics will vary depending on the needs and interests of students, and will include specialized topics in educational psychology not studied in regular program courses.

EDUA 1540 Cross-Cultural Education Cr.Hrs.3 (Formerly 129.154) An examination of teacher attitudes, teaching techniques and curricular modifications which will facilitate learning in cross-cultural situations. Studies will focus on accommodation among cultural groups in rural and urban centres. Not to be held with the former 116.303.

EDUA 1550 Communication and Interpersonal Relationships in Education Cr.Hrs.3 (Formerly 129.155) The purpose of this course is to help teacher candidates increase their awareness, understanding, and proficiency in communication and interpersonal relationships. Emphasis in this course is on the integration of theory, research, and practice in the areas of communication and interpersonal relationships.

EDUA 1560 Adult Learning and Development Cr.Hrs.3 (Formerly 129.156) A study of the extensive knowledge of lifespan development and its importance for adult education practitioners. With a focus on development, learning and change, emphasis is placed on the importance of context and individual differences in adult learning.

EDUA 1570 Foundations of Adult Education Cr.Hrs.3 (Formerly 129.157) An introduction to the field of Education from a local and global perspective. Attention will be given to historical movements in adult education, philosophical perspectives, participation and motivation, transformative perspectives on adult learning, and current and future perspectives on adult education. Not to be held with EDUA 5300 (or 129.530) or former 116.532.

EDUA 1580 Program Planning in Adult Education Cr.Hrs.3 (Formerly 129.158) An introduction to the theory and practice of program planning in adult education. Attention is given to the context in which learning is to take place, the structuring of adult learning opportunities, and the logistics of successful programming.

EDUA 1590 Facilitating Adult Education Cr.Hrs.3 (Formerly 129.159) A study of the theoretical and practical aspects of facilitation in adult education.

EDUA 1800 Psychology of Learning and Instruction 1: Theory and Practice Cr.Hrs.3 (Formerly 129.180) An examination of theoretical concepts and practical issues related to the learning and development of learners as individuals in classrooms and other settings. Not to be held with the former 043.202.

EDUA 1810 School and Society 1: The Social Foundations of Education Cr.Hrs.3 (Formerly 129.181) An examination of educational ideas and practices, especially schooling, in the context of a diverse society. The course focuses upon understanding schooling through historical, philosophical, sociological and cross-cultural perspectives. Not to be held with the former 116.101 or 037.101.

EDUA 2800 Psychology of Learning and Instruction 2: Inclusive Special Education Cr.Hrs.3 (Formerly 129.280) An examination of concepts and issues related to meeting the diverse needs of all students including methods and resources for accommodating student diversity in classrooms and schools. Not to be held with the former 043.305. Pre- or corequisite: EDUA 1800 (or 129.180).

EDUA 2810 School and Society 2: Administrative Foundations of Education Cr.Hrs.3 (Formerly 129.281) An examination of the form, functioning, and organizational aspects of contemporary schooling in Canada in the context of legislation, policy and public expectations. Not to be held with the former 116.301 or 059.301. Pre- or corequisite: EDUA 1810 (or 129.181).

Adult Education

EDUA 5300 Introduction to Adult Education Cr.Hrs.3 (Formerly 129.530) An introduction to adult education, with particular attention being given to the characteristics and needs of the adult-learner, and to the current issues concerning adult education. Not to be held with the former 116.532.

Early Years Education

EDUA 5900 Education and the Developmental Process 1 Cr.Hrs.3 (Formerly 129.590) A survey of the developmental process from conception to pubescence. Specific emphasis will be placed upon biological foundations, cognitive development, and social aspects of behaviour as related to the educational process. Not to be held with the former 043.506.

EDUA 5910 Education and the Developmental Process 2 Cr.Hrs.3 (Formerly 129.591) A study of growth and development in the post-pubescent period with specific emphasis on implications for the secondary school. Not to be held with the former 043.507.

EDUA 5920 Children's Play Cr.Hrs.3 (Formerly 129.592) The role of play in children's learning, including historical aspects of play; play as intrinsic to the child's development; conceptual, perceptual, linguistic, physical attributes of play; and the delineation of work and play. Not to be held with the former 043.529.

EDUA 5930 Observing Child Behaviour Cr.Hrs.3 (Formerly 129.593) The use of qualitative observation techniques, especially in educational settings, to understand children's behaviour, thinking, and motivations. Not to be held with the former 043.530.

EDUA 5940 Language and Symbolic Process Cr.Hrs.3 (Formerly 129.594) The focus in this course is on the role of symbolic learning in the development of the young child. A study of theories on symbol formation is intended to serve as a framework for examining the emergence of representational capacities in movement, gesture, play, drawing and three dimensional media. Not to be held with the former 043.541. *Prerequisite:* former 043.307. Not currently offered.

Educational Administration

EDUA 5010 Introduction to Educational Administration Cr.Hrs.3 (Formerly 129.501) A study of the basic concepts, tasks and processes of administration as they apply to education. Not to be held with the former 116.501.

EDUA 5020 Principles of Curriculum Development Cr.Hrs.3 (Formerly 129.502) An examination of approaches to curriculum design. Influences on the design process, and aspects of implementation. Emphasis is given to teacher participation in creating curriculum. Not to be held with the former 116.502.

EDUA 5030 Management of Educational Institutions Cr.Hrs.3 (Formerly 129.503) A study of basic patterns of organization and the administrator's role in educational institutions. The focus is on decision making, communicating, planning and evaluating

in educational institutions. Not to be held with the former 116.503.

EDUA 5040 Personnel Administration in Education Cr.Hrs.3 (Formerly 129.504) An examination of the administrator's relationships with other personnel in education, with emphasis on personnel policy, staff development and motivation. Not to be held with the former 116.504.

EDUA 5060 Principles of Instructional Supervision Cr.Hrs.3 (Formerly 129.506) An analysis of theoretical models of instruction and supervision and their application in education. Not to be held with the former 116.506.

EDUA 5070 Organizational Behaviour in Educational Institutions Cr.Hrs.3 (Formerly 129.507) A study of theory and research in the socio-behavioural sciences which concern the behaviour of individuals and groups in organizational settings. Attention is given to the implications of such theory and research for administration in educational institutions. Not to be held with the former 116.507.

EDUA 5080 Recent Developments in Educational Administration 1 Cr.Hrs.3 (Formerly 129.508) An opportunity to examine the theoretical bases for, and application of, recent or emerging developments in educational administration.

EDUA 5090 Recent Developments in Educational Administration 2 Cr.Hrs.3 (Formerly 129.509) A continuation of certain topics of EDUA 5080 (or 129.508) to extend and develop studies previously undertaken in these areas.

EDUA 5100 Issues in the Administration of Education Cr.Hrs.3 (Formerly 129.510) An analysis of issues in the administration of educational organizations. Not to be held with the former 116.510.

Educational Psychology

EDUA 5700 Social Psychology of Education Cr.Hrs.3 (Formerly 129.570) An examination of the influence of social factors on the individual's achievement and adjustment in school. Additional emphasis will be placed upon the functioning of small groups and interaction in the classroom together with an analysis of the social structure of the school and the teacher's social role. Not to be held with the former 043.508.

EDUA 5710 Readings in Educational Psychology 1 Cr.Hrs.3 (Formerly 129.571) Directed readings and study of topics in various aspects of education from the psychological viewpoint.

EDUA 5720 Readings in Educational Psychology 2 Cr.Hrs.3 (Formerly 129.572) Directed readings and study of topics in various aspects of education from the psychological viewpoint.

EDUA 5730 Recent Developments in Educational Psychology 1 Cr.Hrs.3 (Formerly 129.573) An opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in this area.

EDUA 5740 Recent Developments in Educational Psychology 2 Cr.Hrs.3 (Formerly 129.574) An opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in this area.

EDUA 5750 Psychology of Learning in Educational Contexts Cr.Hrs.3 (Formerly 129.575) An examination of basic theories of learning as applied to classroom instruction, and as used for designing curricula. Emphasis will be given to cognitive information processing, through behaviourist, developmental, and psychosocial explanations of learning will also be covered. Not to be held with the former 043.543. *Prerequisite:* EDUA 1800 (or 129.180), PSYC 1200 (or 017.120), the former 043.202 or equivalent.

EDUA 5760 Psychology of Instruction in Educational Contexts Cr.Hrs.3 (Formerly 129.576) Designed primarily, although not exclusively, for classroom teachers and school personnel. A critical examination of major theoretical foundations and models of instruction. The course aims at the integration and application of traditional and emerging approaches and strategies of classroom instruction. Not to be held with the former 043.544. *Prerequisite:* EDUA 1800 (or 129.180) or PSYC 1200 (or 017.120), the former 043.202, or equivalent.

Guidance and Counselling

EDUA 5480 Counselling Skills Cr.Hrs.3 (Formerly 129.548) Emphasis will be on the development of counselling skills such as attending and listening, reflection of content and feelings, feedback and self-disclosure, focusing and summarization. Not to be held with the former 129.556 or 043.516. Pre- or corequisite EDUA 5500 (or 129.550) or 043.509.

EDUA 5490 Field Placement in Counselling Cr.Hrs.3 (Formerly 129.549) A field-based counselling situation for students to apply counselling skills under qualified professionals in the field, and supported by university instructors. Not to be held with the former 129.556 or 043.516. Pre- or corequisite: EDUA 5500 (or 129.550) or 043.509 and EDUA 5480 (or 129.548).

EDUA 5500 Theories and Issues in School Counselling Cr.Hrs.3 (Formerly 129.550) A study of the philosophy and theories of counselling, issues in school guidance and counselling. Not to be held with the former 043.509.

EDUA 5510 Elementary School Counselling Cr.Hrs.3 (Formerly 129.551) An examination of the role and functions of the counsellor in the elementary school. Not to be held with the former 043.510. Pre- or corequisite: EDUA 5500 (or 129.550) or 043.509.

EDUA 5520 Ethics in Counselling Cr.Hrs.3 (Formerly 129.552) In this course, participants will be introduced to the Codes of Ethics for counsellors. Major ethical issues related to the following topics

will be discussed: informed consent, confidentiality, record-keeping, boundary issues, training and competence, clinical supervision and multicultural and diversity issues. Participants will get an opportunity to practice various ethical decision-making models.

EDUA 5530 Secondary School Counselling Cr.Hrs.3 (Formerly 129.553) A study of counselling as related to secondary-school practice. Emphasis on the secondary-school counsellor's role and functions. Examination of the various counsellor services: educational, orientation, staff, etc. Not to be held with the former 043.511. Pre- or corequisite: EDUA 5500 (or 129.550) or 043.509.

EDUA 5540 Groups in Guidance Cr.Hrs.3 (Formerly 129.554) A study of groups, group leadership and related skill development, especially as related to a counsellor's functioning in the schools. Not to be held with the former 043.512. Pre- or corequisite: EDUA 5500 (or 129.550) or 043.509.

EDUA 5550 Psychology of Human Relationships Cr.Hrs.3 (Formerly 129.555) A study of

interpersonal relationships. A laboratory approach is used to increase the personal sensitivity of the participants to people. Particularly suitable for teachers, school administrators, and other professionals. Not to be held with the former 043.515.

EDUA 5570 Family Life Education Cr.Hrs.3 (Formerly 129.557) A study of human sexuality and family relationships. Consideration is given to research findings, teaching resources and the methods, development, and cooperation with home and community. Not to be held with the former 043.517.

EDUA 5580 Career Development Cr.Hrs.3 (Formerly 129.558) Study and application of theories of career development, occupational choice, and decision making; evaluation and design or self-knowledge programs in counselling for decision. Not to be held with the former 043.513 or 043.545.

EDUA 5590 Career Information Cr.Hrs.3 (Formerly 129.559) A study of work, local employment, and training; analysis of career information; evaluation and design of career resource centres; a development study of career education. Not to be held with the former 043.514 or 043.546.

Inclusive Special Education

EDUA 5600 Introduction to Inclusive Special Education Cr.Hrs.6 (Formerly 129.560) A survey course for educators interested in inclusive special education - legislative, pedagogical, attitudinal and systemic barriers to inclusion and exemplary inclusive provisions are covered. Not to be held with the former 043.518.

EDUA 5610 Field Experience in Inclusive Special Education Cr.Hrs.6 (Formerly 129.561) A field-based situation for full and part-time students to apply inclusive special education skills under the supervision of qualified school staff and supported by professional peer mentors and university instructors. Approximately 160 hours of field-based service required. Not to be held with the former 043.523. Pre- or corequisite: EDUA 5600 (or 129.560) or 043.518 or equivalent, EDUA 5630 (or 129.563) or 043.536 or equivalent and EDUA 5660 (or 129.566) or 043.539 or equivalent.

EDUA 5620 Teaching Children Through Alternative and Augmented Communication Cr.Hrs.3 (Formerly 129.562) An examination of alternative and augmented communication issues, services, supports, and inclusive teaching and learning strategies. Not to be held with the former 043.533.

EDUA 5630 Assessment and Instruction in Inclusive Special Education Cr.Hrs.6 (Formerly 129.563) An examination of curriculum-based and classroom-based assessment to guide the

instruction of students experiencing learning or behavioural difficulties in inclusive classrooms. Not to be held with the former 043.536. Pre- or corequisite: EDUA 5600 (or 129.560) or 043.518 or equivalent.

EDUA 5640 Inclusive Special Education: Early and Middle Years Cr.Hrs.3 (Formerly 129.564) This course is designed for educators responsible for the integration of students with special learning needs into the early and/or middle years classroom. Not to be held with the former 043.537.

EDUA 5650 Inclusive Special Education: High School and Transition to Adult Life Cr.Hrs.3 (Formerly 129.565) This course is designed for those responsible for the education of students with special learning needs into high school. Not to be held with the former 043.538.

EDUA 5660 Organization and Delivery of Resource Program and Support Services Cr.Hrs.3 (Formerly 129.566) A critical study of the nature of resource teacher programs and an analysis of factors influencing program development and effectiveness. Not to be held with the former 043.539. Pre- or corequisite: EDUA 5600 (or 129.560) or 043.518.

EDUA 5670 Strategies for Organizing Inclusive Classrooms and Schools Cr.Hrs.3 (Formerly 129.567) An examination of the organization and implementation of school-wide supports for access, learning, socialization, behaviour, family liaison, clinical engagement, and community services. Organizational strategies to enhance consultation, cooperation, collaboration and professional development are included. Not to be held with the former 043.540. Pre- or corequisite: EDUA 5600 (or 129.560) or 043.518 or equivalent and EDUA 5630 (or 129.563) or 043.536 or equivalent.

EDUA 5680 Promoting Responsible Behaviour in Educational Settings Cr.Hrs.3 (Formerly 129.568) The course is designed to provide teachers with an understanding of the needs of children who display maladaptive behaviours in a school setting. Conceptualization of behaviour disorders, identification/assessment procedures, and intervention strategies will be studied. The purpose of the course is to enable teachers to generate intervention strategies which are appropriate in an educational setting. Not to be held with the former 043.542. Pre- or corequisite: EDUA 5600 (or 129.560) or 043.518 or equivalent.

EDUA 5690 Focus on Exceptionality: Gifted and Talented Cr.Hrs.3 (Formerly 129.569) Students will be introduced to various topics and issues in the realm of gifted education, including theoretical models; relevant research, and appropriate teaching and assessment practices.

EDUA 5770 Focus on Exceptionality: An Ecological Approach to FAS/E Cr.Hrs.3 (Formerly 129.577) Students will be introduced to an ecological or multidisciplinary approach regarding children with FAS/E. Theoretical frameworks and evidence based assessment and instructional practices will be covered.

Instructional Design and Evaluation

EDUA 5800 Introduction to Educational Research Cr.Hrs.3 (Formerly 129.580) A study of scientific inquiry in the field of education. Research and statistical methods are surveyed within the context of educational research. Particularly recommended for students interested in the evaluation and application of research findings. Not to be held with the former 043.503.

EDUA 5810 Theory of Test Construction Cr.Hrs.3 (Formerly 129.581) Particular attention is given to problems of item analysis, validity, reliability, and test evaluation in the educational setting. Norm and criterion referenced tests are considered. Not to be held with the former 043.504.

EDUA 5820 Test Administrative Analysis Cr.Hrs.3 (Formerly 129.582) An overview of test classification and factors affecting test scores together with an analysis of the testing situation. Specific problems of test administration in schools will be treated. Not to be held with the former 043.505.

EDUA 5850 Computer Application in Education 2 Cr.Hrs.3 (Formerly 129.585) An advanced course dealing with tutorial applications of computers in both regular and special education classrooms. Not to be held with the former 043.526. *Prerequisite:* the former 081.528, or consent of instructor, or 043.306.

Post Secondary Education

EDUA 5400 The Development of Higher Education Cr.Hrs.3 (Formerly 129.540) A survey of the development of structures, philosophies and curricula of higher education, especially in Canada. Not to be held with the former 116.528.

EDUA 5410 Contemporary Issues in Higher Education Cr.Hrs.3 (Formerly 129.541) An analysis of contemporary problems and issues in higher education. Not to be held with the former 116.529.

EDUA 5420 Teaching and Learning in Post-Secondary Institutions Cr.Hrs.3 (Formerly 129.542) An analysis of the various aspects of post-secondary instruction, including the design and implementation of curriculum and instruction; the evaluation of courses, programs, instructors and students; and staff development. Consideration will be given to the role of the teacher in a variety of institutional settings. Not to be held with the former 116.530.

Social Foundations of Education

EDUA 5200 Readings in Educational Foundations Cr.Hrs.3 (Formerly 129.520) Readings and research in selected areas of the study of education.

EDUA 5210 Recent Developments in Educational Foundations 1 Cr.Hrs.3 (Formerly 129.521) An opportunity to examine the theoretical bases for, and application of, recent or emerging developments in educational foundations.

EDUA 5220 Alternatives in Education Cr.Hrs.6 (Formerly 129.522) A study of educational alternatives through an analysis of their historical and philosophical backgrounds, their form in a variety of settings, and their value in contemporary education. Not to be held with the former 116.524.

EDUA 5230 Studies in International Education Cr.Hrs.3 (Formerly 129.523) An examination of educational issues and practices in other countries, especially those of the third world. Emphasis will be given to teaching and administration in developing countries. Not to be held with the former 116.525.

EDUA 5240 Problems in Cross-Cultural Education Cr.Hrs.3 (Formerly 129.524) A study of selected problems encountered by cultural minorities in various educational settings. Not to be held with the former 116.531.

EDUA 5250 Perspectives on the Education of Minorities in Canada Cr.Hrs.3 (Formerly 129.525) An examination of the nature of Canadian social development within the framework of a pluralistic society. Questions of intergroup relations, immigration policy, ethnic cohesion, and tensions of integration versus assimilation will be examined as they relate to the history of Canadian education. Not to be held with the former 116.516.

EDUA 5260 Education in the Middle Ages Cr.Hrs.3 (Formerly 129.526) A study of the development of education from classical times to the end of the Middle Ages. Not to be held with the former 116.518. Not currently offered.

EDUA 5270 Education from the Renaissance Cr.Hrs.3 (Formerly 129.527) A study of the development of education from the Renaissance to modern times. Not to be held with the former 116.519. Not currently offered.

Faculty of Engineering

General Office

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Dean: Douglas Ruth, P.Eng.

Associate Deans: Ron Britton, P.Eng. (Design Engineering);
Ahmed Shalaby, P.Eng. (Undergraduate);
Joe LoVetri, P.Eng. (Research)

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: The Profession of Engineering

SECTION 3: Admission to the Faculty of Engineering

3.1 Degrees Offered

3.2 Course Requirements for Admission

SECTION 4: Academic Regulations

4.1 Foreign Language Requirements for co-op and Non-co-op Students

4.2 Professional Registration

4.3 Student Schedules

4.4 Students Transiting to Departments

4.5 Grading and Assessment

4.6 Requirements for the Bachelor's Degree

4.7 Categories of Students

4.8 Student Progress and Academic Status

4.9 Course Selection

4.10 Examinations

4.11 Withdrawal from Courses

4.12 Appeals

4.13 Attendance and Assignments

4.14 Use of Calculators

4.15 Complementary Studies Electives

4.16 Management Minor

4.17 Arts Minor

4.18 Music Minor

SECTION 5: Program Requirements

5.1 Engineering Access Program

5.2 Preliminary Engineering Program

5.3 Common Courses Taught by the Faculty of Engineering

5.4 Biosystems Engineering

5.5 Civil Engineering

5.6 Electrical and Computer Engineering

5.7 Mechanical and Manufacturing Engineering

SECTION 1: Academic Staff

Biosystems Engineering

Biosystems Engineering academic staff are appointed by the Faculty of Agricultural and Food Sciences.

Dean Emeritus

Laliberte, G.E., B.E., M.Sc. (Manitoba), Ph.D. (Colorado State), P.Eng.

Professor Emeritus

Muir, W.E., B.E. (Saskatchewan), M.S. (Illinois), Ph.D. (Saskatchewan), P.Eng.

Professors

Britton, M.G., B.E. (Saskatchewan), M.Sc. (Manitoba), Ph.D. (Texas A&M), P.Eng.; **Cenkowski**, S., B.Sc., M.Sc. (Technical Univ., PL), Ph.D. (Agric. Univ., PL), Sc.D. (Agric. Univ.), P.Eng.; **Jayas**, D.S., B.Sc. (G.B.Pant), M.Sc. (Manitoba), Ph.D. (Saskatchewan), P.Ag., P.Eng.; **Zhang**, Q., B.Sc. (Hefei Polytechnical), M.S., Ph.D. (Pennsylvania State), P.Eng.

Associate Professors

Chen, Y., B.Sc., M.Sc. (China), Ph.D. (McGill), P.Eng.; **Mann**, D.D., B.Sc., M.Sc., Ph.D. (Manitoba), P.Eng.; **Sri Ranjan**, R., B.Sc. (Peradeniya), M.Sc., Ph.D. (Colorado State), P.Eng.

Assistant Professors

Cicek, N., B.Sc. (Turkey), M.Sc., Ph.D. (Cincinnati), EIT; **Morrison**, J., B.Eng., B.Sc.Hon. (McMaster), M.C.S., Ph.D. (Carleton); **Paliwal**, J., B.Sc. (G.B.Pant), M.Sc., Ph.D. (Manitoba), P.Eng.

Senior Instructors

Dick, K.J., B.Sc., M.Sc., Ph.D. (Manitoba), P.Eng.

Civil Engineering

Professors Emeriti

Baracos, A., M.Sc.(C.E.) (Alberta), M.E.I.C., P.Eng.; **Graham**, J., B.Sc.(C.E.), Ph.D., D.Sc. (Belfast), P.Eng.; **Lajtai**, E.Z., B.A.Sc.(Geol.), M.A.Sc., Ph.D. (Toronto), P.Eng.; **Morris**, G.A., M.Sc. (Manitoba), Ph.D. (Illinois), M.E.I.C., P.Eng.

Professors

Britton, M.G., B.E. (Saskatchewan), M.Sc. (Manitoba), Ph.D. (Texas A. & M.), P.Eng.; **Clayton**, A., B.Sc.(C.E.), M.Sc. (Saskatchewan), P.Eng.; **Doering**, J.C., B.Sc.(Hons.) (Queen's), Ph.D. (Dalhousie), P.Eng.; **Mufti**, A.A., B.Eng. (Karachi), M.Eng., Ph.D. (McGill), P.Eng.; **Oleszkiewicz**, J.A., M.Sc. (Wroclaw), M.Sc., Ph.D. (Vanderbilt), P.Eng.; **Polyzois**, D., B.A.Sc., M.A.Sc., Ph.D.(C.E.) (Toronto), P.Eng.; **Shah**, A.H., B.E. (Poona), M.Sc. (Stanford), Ph.D. (Berkeley), P.Eng.; **Stimpson**, B., B.Sc., M.Sc., D.I.C., Ph.D. (London), P.Eng.; **Woodbury**, A.D., B.Sc.(Geophys.), M.Sc. (Geol.), Ph.D. (UBC), P.Eng.

Associate Professors

Alfaro, M., B.Sc. (Philippines), M.Eng. (Thailand), Ph.D. (Saga, Japan), P.Eng.; **Rasmussen**, P.F., M.Sc., Ph.D. (Denmark), P.Eng.; **Shalaby**, A., B.Sc.(C.E.), M.Sc. (Cairo), Ph.D. (Carleton), P.Eng.; **Svecova**, D., M.Sc. (Slovakia) M.Sc., Ph.D. (Carleton), P.Eng.

Assistant Professors

Blatz, J.A., B.Sc.(C.E.), Ph.D. (Manitoba), P.Eng.; **Gheorghiu**, C., B.Sc. (Iasi), M.Sc. (Tokyo), Ph.D. (Sherbrooke); **Gorczyca**, B., M.Sc. (Poland), M.Sc., Ph.D. (Toronto), P.Eng.; **Montufar**, I.J., B.Sc. (C.E.), M.Sc., Ph.D. (Manitoba), P.Eng.; **Rattanawangcharoen**, N., B.Eng. (Chiang Mai), M.Sc. (Asian Inst. of Tech.), Ph.D. (Manitoba), P.Eng.; **VanGulck**, J.F., B.E.Sc. (UWO), Ph.D. (Queen's), P.Eng.

Senior Instructors

Frye, M.J., B.Sc., M.Sc., Ph.D. (Manitoba), P.Eng.

Electrical and Computer Engineering

Dean Emeritus

Kuffel, E., B.Sc., M.Sc., Ph.D.(E.E.) (Dublin), D.Sc.(E.E.) (Manchester), P.Eng.

Professors Emeriti

Bridges, E., M.Sc.(E.E.) (Manitoba), P.Eng.; **Kao**, K.C., B.Sc.(E.E.) (Nanking), M.Sc. (Michigan), Ph.D., D.Sc. (Birmingham), F.Inst.P., F.I.E.E., C.Eng.,

P.Eng.; **Martens**, G.O., B.Sc.(E.E.) (Manitoba), M.A.Sc. (Toronto), Ph.D. (Illinois), P.Eng.; **Swift**, G.W., M.Sc.(E.E.) (Alberta), Ph.D. (Illinois Institute of Technology), P.Eng.; **Wexler**, A., B.Sc.(E.E.) (Manitoba), Ph.D., D.I.C. (London) F.R.S.A., P.Eng.

Distinguished Professors

Card, H.C., B.Sc.(E.E.), M.Sc. (Manitoba), Ph.D. (Manchester), P.Eng.; **Shafai**, L., B.E.Sc. (Tehran), M.A.Sc., Ph.D. (Toronto), F.I.E.E.E., P.Eng.

Senior Scholars

Lehn, W.H., B.Sc.(E.P.) (Manitoba), M.Sc.(E.E.) (Massachusetts), P.Eng.; **Onyshko**, S., M.Sc. (Alberta), Ph.D. (Washington), P.Eng.

Professors

Alfa, A.S. B.Eng. (Ahmadu Bello), M.Sc. (Manitoba), Ph.D. (New South Wales); **Annakkage**, U., B.Sc. (Moratuwa), M.Sc., Ph.D. (Manchester); **Bridges**, G.E.J., B.Sc.(E.E.), M.Sc., Ph.D. (Manitoba), P.Eng.; **Buchanan**, D.A., B.Sc.(Manitoba), M.Sc. (Manitoba), Ph.D. (Durham); **Ciric**, I.M.R., B.Sc., Dipl.Ing., Ph.D., Dr.Ing. (Bucharest), F.I.E.E.E.; **Gole**, A.M., B.Tech. (Bombay), M.Sc.(EE), Ph.D. (Manitoba), P.Eng.; **Kinsner**, W., M.Sc. (Wroclaw-Breslau), Ph.D. (McMaster), P.Eng.; **Lovetri**, J., B.Sc., M.Sc. (Manitoba), Ph.D. (Ottawa); **McLeod**, R.D., B.Sc. (E.E.), M.Sc., Ph.D. (Manitoba); **Menzies**, R.W., B.Sc.(E.E.) (Hons.) (McMaster), Ph.D. (St. Andrews), P.Eng.; **Pawlak**, M., M.S. (Control and Comp Eng.), Ph.D. (Comp Eng.) (Wroclaw); **Peters**, J.F., B.A. (California), M.S. (Santa Clara), Ph.D. (Kansas); **Raghuveer**, M.R., B.Sc.(Hons.), B.Eng. (India), M.Sc. (Manitoba), Ph.D. (WindSOR), P.Eng.; **Shweddyk**, E., M.Sc.(E.E.) (Manitoba), Ph.D. (New Brunswick), P.Eng.; **Thomson**, D.J., B.Sc.(E.E.), M.Sc. (Manitoba), Ph.D. (Stanford).

Associate Professors

Shafai, C., B.Sc.(E.E.) (Manitoba), M.Sc. (Manitoba), Ph.D. (Alberta).

Assistant Professors

Fazel-Rezai, R. B.Sc. (Sharif), M.Sc.(Amirkabir); Ph.D. (Manitoba); **Ferens**, K. B.Sc. (Manitoba), Ph.D. (Manitoba); **Filizadeh**, S. B.Sc., M.Sc. (Sharif), Ph.D. (Manitoba); **Hossain**, E., B.Sc., M.Sc. (Bangladesh), Ph.D. (Victoria); **McNeill**, D., B.Sc., M.Sc. Ph.D. (Manitoba); **Moussavi**, Z., B.Sc. (Sharif U.), M.Sc. (Calgary), Ph.D. (Manitoba); **Noghianian**, S., B.Sc. (Sharif U.), M.Sc., Ph.D., (Manitoba); **Okhmatovski**, V., M.Sc., Ph.D. (Moscow Power Eng. Inst.); **Oliver**, D., B.Sc. (Western Australia), Ph.D. (Monash U); **Rajapakse**, A. B.Sc. (U Moratuwa), M.Eng. (Asian Inst. of Tech.), Ph.D. (Tokyo); **Thomas**, G. B.S.E.E. (ITSEM, Mexico), M.Sc., Ph.D. (Texas-El Paso); **Yahamath**, P., B.Sc., (Moratuwa), M.Sc. (Trondheim), Ph.D. (Manitoba).

Senior Instructors

Yoshida, B., B.Sc., M.Sc. (Manitoba).

Mechanical and Manufacturing Engineering:

Professors Emeriti

Azad, R.S., B.Sc.(Hons.), Ph.D. (Nottingham), P.Eng.; **Chant**, R. E., B.Eng., M.Eng. (Mech.) (McGill), F.E.I.C., M.C.S.M.E., P.Eng.; **Hawaleshka**, O., B.Eng. (McGill), M.Eng. (McGill), Shewchuk, J., B.Sc. (Saskatchewan), M.Sc. (Saskatchewan), Ph.D. (Pennsylvania State); **Sims**, G.E., B.Sc. (M.E.) (Manitoba), M.Sc. (Birmingham), Ph.D. (London), C.S.M.E., P.Eng.; **Tangri**, K. K., B.Sc. (Punjab), B.Sc. (Met. Eng.) (B.H.U., India), M.Sc., Ph.D. (Missouri), P.Eng.

Chair Professors

Chaturvedi, M.C., B.Sc. (Met.) (Banara) M.Met., Ph.D. (Sheffield), P.Eng.; **Jayaraman**, R., M.Sc. (Wayne State), Ph.D. (Northwestern).

Professors

Bal Krishnan, S., B.Tech., M.Tech. (IIT, Madras), Ph.D. (M.E.) (Manitoba), P.Eng.; **Bassim**, M.N., B.Sc. (Cairo), M.Sc., Ph.D. (Virginia), P.Eng.; **Cahoon**, J.R., B.Sc. (Met.E.), M.Sc., Ph.D. (Alberta), P.Eng., F.A.S.M.; **Chaturvedi**, M.C., B.Sc. (Met.) (Banara) M.Met., Ph.D. (Sheffield), P.Eng.; **Naterer**, G.F., B.Math (Waterloo), M.A.Sc. (M.E.) (Waterloo), Ph.D. (M.I.E.) (Waterloo); **Ormiston**, S.J., B.Sc. (Manitoba), M.A.Sc., Ph.D. (Waterloo), P.Eng.; **Popplewell**, N., B.Sc.(Hons.) (Math.) (Leeds), M.Sc., Ph.D. (Southampton), P.Eng.; **Richards**, N.L., Ph.D. (Aston), Dip.Met.Class I (West Glamorgan); **Ruth**, D.W., B.Sc. (M.E.), M.Sc. (M.E.) (Manitoba), Ph.D. (Waterloo), P.Eng.; **Sepehri**, N., B.Sc. (Iran), M.A.Sc., Ph.D. (UBC), P.Eng.; **Soliman**, H.M., B.Sc. (M.E.) (Assiut), M.S., Ph.D. (M.E.) (Kansas), P.Eng.

Associate Professors

Birouk, M., M.Sc., Ph.D. (M.E.) (OrlŽans); **Chatoorgoon**, V.R., M.S. (California), B.Sc. (Manchester, UK), Ph.D. (Toronto); **Derksen**, R., B.Sc., M.Sc., Ph.D. (Manitoba), P.Eng.; **Jayaraman**, R., M.Sc. (Wayne State), Ph.D. (North-

western), G., B.Sc. (H.U.S.T.) (China), M.Sc. (H.U.S.T.) (China), Ph.D. (Victoria) P.Eng.; **Tachie**, M. F., M.Sc. Ph.D. (M.E.) (Saskatchewan); **Wu**, C.Q., B.Sc. (Beijing), M.Sc. (UBC), Ph.D. (Manitoba), P.Eng.

Assistant Professors

Bibeau, E., B.Sc. (McGill), M.Sc., Ph.D. (UBC) (M.E.); **Bartley**, J.T., B. Eng. (Lakehead), M.Sc., (M.E.), (Manitoba), Ph.D. (M.E.), (Manitoba); **EImekavay**, T., B.Sc. (M.E.), M.Sc. (I.E.) (Cairo Univ.), Ph.D. (U. of Windsor); **Fraser**, D. W., B.Sc., M.Sc. (M.E.) (Manitoba) Ph.D. (M.E.) (Toronto); **Ojo**, O.A., B.Sc., (Obafemi Awolowu University), M.Sc. (M.E.), (Manitoba), Ph.D. (M.E.), (Manitoba); **Peng**, Q. B.Eng. M.Eng. (Xian Jiaotong Univ.), Ph.D. (Birmingham, UK); **Singh**, M.N., B.Sc. (Calgary), M.A.Sc. (Waterloo), Ph.D. (Waterloo).

Adjunct Professors

Alfa, A.S., B. Eng. (Ahmadu Bello), M.Sc. (Manitoba), Ph.D. (NSW), P.Eng.; **Caley**, W. F., B.Sc. (Queens), Ph.D. (Toronto); **Chan** C., Ph. D. (California), M.Sc.; **Chen**, D. M.Sc. (China), Ph.D. (C.A.S.) (China) N.U.T.; **Naterer**, G.F., B. Math (Waterloo), M.A.Sc. (M.E.) (Waterloo), Ph.D. (M.I.E.) (Waterloo); **Strong**, D., B.Sc. (Toronto), M.Sc. (Toronto), Ph.D., (Toronto).

SECTION 2: The Profession of Engineering

Engineers use fundamental principles and energy sources from the natural world and direct them to the benefit of people. They interpret science in terms of material human needs and manage personnel, money, and materials. The profession is involved in all aspects of construction and manufacturing, including conceptualization, design, preparation of plans and specifications, and fabrication of products to meet predetermined standards of reliability and performance. Engineers acquire competence through instruction in basic sciences, mathematics, and engineering sciences; by introduction to the processes of synthesis and design; by complementary studies in the humanities, social sciences, and management; and by learning from the skills and experience of more senior engineers during the early years of employment.

The educational objective in the Faculty of Engineering is to prepare students for positions of leadership in a world where engineering, science, and management are of major importance.

SECTION 3: Admission to the Faculty of Engineering

3.1 Degrees Offered

Bachelor of Science in Engineering (Biosystems)

Bachelor of Science in Engineering (Civil)

Bachelor of Science in Engineering (Computer)

Bachelor of Science in Engineering (Electrical)

Bachelor of Science in Engineering (Manufacturing)

Bachelor of Science in Engineering (Mechanical)

Minimum time to graduation: Four years (One year in Preliminary Program for direct admission students or in Preliminary Program courses (or equivalent) taken while in University I, plus three years in a departmental program.)

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

3.2 Course Requirements for Admission:

Direct admission into the Faculty of Engineering from high school:

Applicants who have completed Chemistry 40S, Mathematics 40S (pre-calculus), and Physics 40S with a minimum overall average of 85 per cent, and no grade lower than 60 per cent in any one course, may be admitted to Engineering directly from high school.

From University 1:

At least eight courses of the following courses or their equivalent, each with a minimum grade of "C", and a minimum Grade Point Average of 2.0:

CHEM 1300 University 1 Chemistry
COMP 1010 Introductory Computer Science 2
ENG 1460 Introduction to Thermal Sciences
ENG 1450 Introductory Electrical and Computer Engineering Techniques
ENG 1440 Introduction to Statics
ENG 1430 Design in Engineering
ENGL1310 Literary Topics 1
MATH 1510M Applied Calculus 1 (MATH 1500M or MATH 1530M)
MATH 1710M Applied Calculus 2 (MATH 1700M or MATH 1730M)
MATH 1210 M Classical/Linear Algebra
PHIL 2900 Critical Thinking
PHYS 1050 Physics 1

Other requirements

The university written English and mathematics requirements are satisfied by including the English and mathematics courses from the above list in the University 1 year.

Chemical Engineering and Geological Engineering at the University of North Dakota

The University of Manitoba has an agreement with the University of North Dakota, Grand Forks, N.D., which allows students to obtain a degree in chemical engineering from the University of North Dakota by taking the Preliminary Engineering program at the University of Manitoba and three years at the University of North Dakota. The chemical engineering program at the University of North Dakota is accredited by the Accreditation Board for Engineering and Technology in the United States and is recognized by the Association of Professional Engineers and Geoscientists of Manitoba. Information on this program may be obtained from the general office, E2-290 Engineering Building.

An agreement has also been reached whereby an accredited degree in Geological Engineering can be obtained from the University of North Dakota by transferring there after completing the first two years of courses in the Faculty of Engineering at the University of Manitoba. Contact the Department of Civil Engineering for details.

SECTION 4: Academic Regulations

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Engineering has regulations and requirements, published below, which apply specifically to its students. Notwithstanding the regulations given in this section, the Faculty Council of Engineering reserves the right to rule on individual cases in exceptional circumstances. The following regulations are subject to approval of Senate.

4.1 Foreign Language Requirements for co-op and non-co-op Students

There are some opportunities for undergraduate co-op and non-co-op students to work in foreign countries. However, there are foreign language requirements that must be fulfilled before placement can be considered. Students interested in foreign work assignments should acquaint themselves with these language requirements by consulting with their department head as soon as possible after their entry into the Faculty of Engineering.

4.2 Professional Registration

In order to practice engineering in any province or territory in Canada, it is necessary to be a member of the professional engineering association of that province or territory. The requirements for membership are acceptable academic preparation and a subsequent period of acceptable engineering experience gained under the supervision of a registered professional engineer. The undergraduate programs in Biosystems, Civil, Computer, Electrical, Manufacturing, and Mechanical Engineering are accredited by the Canadian Engineering Accreditation Board (CEAB), reflecting acceptable academic preparation for membership in the association of professional engineers in any province or territory in Canada. Through a mutual recognition agreement, the programs are recognized as satisfying accreditation requirements in the United States, the United Kingdom, Ireland, New Zealand, Australia, and Hong Kong.

Graduates of an accredited program are eligible to apply for membership as an engineer-in-training, in the association of professional engineers in their province of residence in Canada. After a period of acceptable experi-

ence, they are eligible to apply to the association for registration as a professional engineer in that province.

4.3 Student Schedules

Students will progress through the various engineering programs subject to pre- and corequisite requirements and the seven-year rule (Section 4.6). Five courses per term (10 courses per session) are the nominal load; this schedule will allow completion in five years. An accelerated schedule is available for those students capable of completing six courses per term (12 courses per session); this schedule will allow completion in four years.

Information on nominal and accelerated schedules may be obtained from the Faculty of Engineering departmental offices. For students entering engineering in or after the fall of 1998, the upper year programs will consist of the courses listed under the various department headings.

4.4 Students Transiting to Departments

Students will be accepted into department programs based on the following criteria. Direct entry students who have completed all 13 Preliminary program courses with no "D" or "F" grades within a time frame, from the beginning of a regular academic session (September) to the end of the immediately following Intersession, will be admitted to their program of choice, subject only to the enrolment cap of that program. If the enrolment cap is exceeded, students will be admitted on a competitive basis based on the average of the best eight marks in courses in the Preliminary program. Students with less than 13 (direct entry or University I) but eight or more required courses will be admitted to programs on a competitive basis. Applicants will be ranked based on the average of the best eight marks that they have achieved on courses in the Preliminary program or University I required courses. Students transferring in from programs, faculties, or colleges will have all courses or equivalent courses that are required in a particular engineering program transferred in, including failed grades ("D's" and "F's") in those courses. The cumulative credit hours for the failed grades will count towards the 40 credit hour limit allowed within a single degree program.

4.5 Grading and Assessment

All grades awarded by instructors for undergraduate courses offered in the Faculty of Engineering are reviewed by examiners' boards, which comprise all of the instructors in the student's program year. After approval by department councils, they are presented to the Faculty Council of Engineering for acceptance.

Term Grade Point Average (TGPA)

The TGPA is computed from all of the grades in all courses completed during a given academic term.

Degree Grade Point Average (DGPA)

The DGPA is computed from the grades obtained in all courses taken as part of a student's current degree program. Where a course has been repeated or replaced by an approved equivalent course only the last grade shall be included in the computation.

Cumulative Grade Point Average (CGPA)

The CGPA is computed from the grades in all undergraduate courses earned by a student through the University of Manitoba.

Dean's Honour List

The Dean of Engineering will recommend to Faculty Council those eligible students that are to be placed on the Dean's Honour List. Please contact the Dean's Office for the complete criteria used for assessing recipients.

Awards

A number of scholarships, bursaries and other academic awards are available to Engineering students. Information on them is available in the Awards Office, 422 University Centre, and in the general office of Engineering, 349 Engineering Building

4.6 Requirements for the Bachelor's Degree

For students first registered in Engineering in September 1998 or thereafter, the requirement for a Bachelor of Science degree in Engineering is a grade of "C" or better in all required and elective courses in the student's program. All other students are governed by the rules in effect at the time of their first registration in Engineering. (Note: Admission to Graduate Studies requires graduating from Engineering with a minimum CGPA of 3.0 or equivalent over the last 2 previous years of full-time study [60 credit hours]).

The candidate must complete at least 50 per cent of an engineering degree program as a full-time student in the Faculty of Engineering. Unless otherwise approved by the Dean of Engineering, students must complete all degree requirements within seven calendar years after being accepted into an Engineering department.

An engineering student who has fulfilled the requirements for graduation except for a failing grade in one engineering course may apply for a special examination in that course to be completed within three months of planned fulfilment of degree requirements. If granted, a special examination shall be given before July 15, and, if successful, the student would graduate in October. This privilege applies only to courses offered by the Faculty of Engineering.

Degree with Distinction

A student who on graduation achieves a Degree Grade Point Average (DGPA) of 3.80 or higher is awarded the degree "With Distinction."

Criteria for Medal Awards

The Faculty of Engineering Program Gold Medal shall be awarded to the graduating student in each engineering program who has achieved the highest Degree Grade Point Average (DGPA) above a minimum of 3.80. The Program Gold Medal will be awarded at spring Convocation to the student who has completed that program in the past academic year (including October and February Convocation.)

The University Gold Medal for the Faculty of Engineering shall be awarded to the graduating student in the Faculty of Engineering who has achieved the highest Degree Grade Point Average (DPGA) above a minimum of 3.80, and is a recipient of the Program Gold Medal.

4.7 Categories of Student

A student shall normally register for three to six courses in a term (six to 12 per session). Registration for more than six or fewer than three courses in a term must be approved by the Department Head or, in the preliminary program, by the Associate Dean (undergraduate).

Full-Time Student: For students registered in the faculty prior to September 1997, full-time students are those who are registered in at least 60 per cent of the credit hours specified for the regular academic session of their specific programs. For students first registered in engineering in September 1997 or thereafter, full-time students are those registered in at least 21 credit hours. All other students are part-time students.

4.8 Student Progress and Academic Status

Students shall be evaluated at the conclusion of each academic term in which they receive a final grade in a minimum of 6 credit hours of course material (excluding Special Student credit hours), with the assessment being based on the resulting Term Grade point Average (TGPA) in those courses.

Good Academic Standing

A student with a TGPA of 2.00 or higher is in *Good Academic Standing*.

Academic Warning Letter

The first time the student's TGPA drops below 2.00, he/she will receive an *Academic Warning*. Students who receive such a warning are required to meet with an academic advisor from their department or, in the preliminary program, with the Associate Dean (undergraduate).

Academic Probation

The second time that a student's TGPA drops below 2.00, the student will be placed on *Academic Probation*.

Engineering Suspension

The third time that a student's TGPA drops below 2.00, the student will receive an *Engineering Suspension*. Students who receive such a suspension shall be ineligible to take Engineering courses from the end of the term for which the suspension was issued through to the start of that same term in the subsequent academic year (normally, a period of 8 months.)

In order to be reinstated following the suspension period, the student must submit a written application for reinstatement to the Associate Dean (Undergraduate). Applications must be made by August 14, for reinstatement by September 1, or December 7 for reinstatement by January 1.

Ineligible to Proceed in Engineering

A student shall be *Ineligible to Proceed in Engineering* under either of the following conditions:

- a) The student's TGPA drops below 2.00 for a fourth time, or;
- b) The student has accumulated in excess of 40 credit hours of repeated or replaced credit hours.

Repeated or replaced credit hours do not include Voluntary Withdrawal (VW), Authorized Withdrawal (AW), or Special Student (SS) credit hours.

4.9 Course Selection

When arranging a program of study, a student must satisfy the following requirements:

- All prerequisite and corequisite course requirements must be met.
- All previously failed compulsory courses must be repeated.
- Students are not normally allowed to repeat courses graded "C" or higher, except under special circumstances with the approval of the Department Head.
- Failed elective courses may be repeated or replaced with alternative elective courses.

Prerequisite Course: A prerequisite course must have been completed with a "C" grade or better before a subsequent course can be attempted. Under exceptional circumstances, a course instructor may waive, subject to approval by the Department Head (or designate), a prerequisite requirement.

Corequisite Course: A corequisite course must be taken concurrently or before its companion course. Under exceptional circumstances, a course instructor may waive, subject to approval by the Department Head (or designate), a corequisite requirement.

4.10 Examinations

Deferred Examinations

Deferred Examinations (See *Chapter, General Academic Regulations and Requirements* of this Calendar for details) are normally scheduled to take place within 30 working days from the end of the examination series from which the examination was deferred. The date of the deferred examination for a particular course will be set by the Dean's Office no later than January 15, May 15 or July 7, and in consultation with the instructor.

Special Examinations

A student who has attempted to meet all requirements for the degree and has a single failure in their final session, in an engineering course, can apply for a special examination in that course. Special examinations may not be requested for any other reason. However, a special examination may be given on the recommendation of a Board of Examiners under exceptional circumstances. A special examination is given in addition to the regular examination. The grades from both examinations are retained on the student's record, and both are used in the calculation of TGPA and CGPA. The results of special examinations must be reported to the Faculty Council of Engineering. The special examination privileges apply only to courses offered by the Faculty of Engineering.

Supplemental Examinations

The Faculty of Engineering does not provide supplemental examinations.

Challenge for Credit

None of the courses offered in Engineering may be challenged for credit.

4.11 Appeals

Students who feel that they have received unfair treatment in a course should appeal to the instructor. If the matter is not thereby resolved, it should be raised with the Department Head, or in the general office of the faculty. Students wishing to appeal their academic status should write to the Secretary, Committee on Standing and Appeals, 349 Engineering before August 15th. Information regarding this process is available from the general office, 349 Engineering Building.

4.12 Withdrawal from Courses

The responsibility for initiating withdrawals rests solely with the student, and no voluntary withdrawals are permitted after the deadlines for voluntary withdrawal without academic penalty (see the chapter, *General Academic Regulations and Requirements*, of this Calendar). For documented medical or compassionate reasons, Authorized Withdrawals may be permitted by the Dean.

A student who, after registering for Intersession/Summer Session, becomes ineligible to proceed or ineligible to register in Engineering is withdrawn from his or her Intersession/Summer Session program.

4.13 Attendance

When the number of undisclosed absences recorded against a student in the Faculty of Engineering in any course exceeds 10 per cent of the number of lectures and laboratories for that course the instructor may report the case to the Dean of Engineering. When a student's attendance or work continues to be unsatisfactory, the instructor has the authority to exclude the student from classes, or examinations, or both. Such cases shall be reported to the Faculty Council of Engineering at the first opportunity. Students who are excluded from an examination for inadequate attendance in a compulsory course are required to repeat the course.

4.14 Use of Calculating Devices

For courses offered by the Faculty of Engineering in which the use of devices capable of calculations is permitted in tests or examinations, such devices must be incapable of receiving and/or transmitting signals. Instructors wishing to restrict devices to certain capabilities must inform students, in writing, within the first week of term. Questions concerning the suitability of any given device should be directed to the course instructor(s).

4.15 Complementary Studies Electives

Complementary studies electives are an integral part of the curriculum. Their purpose is to broaden the student's experience beyond the purely scientific and technical content of engineering. They include studies in engineering economics and the impact of technology on society, as well as the central issues, methodologies and thought processes characteristic of the humanities and social sciences. Opportunities for development of the student's oral and written communication skills are also provided. The coursework requirements may vary from one department to another. XXX.09X0 courses will not be allowed as complementary studies electives. ARTS 1110 Introduction to University may not be used for credit in the Faculty of Engineering.

4.16 Management Minor

The minor in Management offered by the Faculty of Management is available to Engineering students. The minor consists of any 18 credit hours of Management courses; students must meet all prerequisite requirements. Depending on the approval of the Engineering department, courses used for the minor may also be used to fulfil course requirements in Engineering. Admission requirements for the minor are based on all courses transferred to Engineering or completed while in Engineering; the requirements are a minimum of 30 credit hours with a minimum Degree Grade Point Average (DGPA) of 3.00. Up to 10 spaces are available each year for engineering students on a competitive basis. Applications can be made in the Engineering Dean's office up to May 30th.

4.17 Arts Minor

A minor in Arts is available to Engineering students. The minor consists of 18 credit hours of Arts courses, including a minimum of 6 credit hours in the Humanities and six credit hours in the Social Sciences; students must meet all pre-requisite requirements. Depending on the approval of the Engineering department, courses used for the minor may also be used to fulfil course requirements in Engineering.

4.18 Music Minor

A Minor in Music is available to Engineering students. The minimum requirement is 18 credit hours of music courses subject to the following constraints: i) Courses MUSC 1110 (Music Theory 1) and MUSC 1120 (Music Theory 2) are compulsory. ii) Students may take ensemble courses but in order to earn credit toward the minor all three of the courses MUSC 2180 (Ensemble), MUSC 3180 (Ensemble), and MUSC 4180 (Ensemble) must be completed. These three courses will count for 6 of the 18 required credit hours. iii) Any course offered by the Faculty of Music may be used for credit toward the minor. However, permission to register for any course must be granted by the Faculty of Music. Registration will be controlled by normal pre-requisites and class size restrictions. Students registered in the minor will not be allowed to register in Major Practical Study courses. Depending on the approval of the student's Engineering department, courses used for the minor may also be used to fulfil course requirements in Engineering.

SECTION 5: Program Requirements

5.1 Engineering Access Program

General Office: E2-442 Engineering Building

Telephone: (204) 474 9872

Toll Free: 1800 432 1960 ext. 9872

Fax: (204) 474 7518

E-mail: hran@ms.umanitoba.ca

Web: www.engap.com

The Engineering Access Program (ENGAP) recognizes that students of Aboriginal ancestry may be challenged with geographic and economic barriers, and/or lack of access to academic preparation, which may make them unable to meet the faculty's admission requirements. ENGAP serves as a specifically designed post-secondary program that provides an opportunity for students to complete their Bachelor of Science degree in Engineering. The program accomplishes this objective by offering upgrading courses in mathematics, chemistry, and physics, as well as providing academic advice, personal and family counselling along with financial supports. Aboriginal students who do not meet the regular requirements may still wish to join the program to benefit from these supports.

5.2 Preliminary Engineering Program

General Office: E2-290 Engineering Building

Telephone: (204) 474 9807

E-mail: eng_info@umanitoba.ca

Website: www.umanitoba.ca/faculties/engineering

The Preliminary Engineering Program is common to all programs in engineering and students must complete a minimum of 8 of the following courses to enter a department:

Course No.		Credit Hours
CHEM 1300	Chemistry	3
PHYS 1050	Physics	3
COMP 1010	Computer Science	3
ENG 1460	Intro Thermal Sciences	3
ENG 1450	Intro Electrical and Computer Eng Tech.	3
ENG 1440	Introduction to Statics	3
ENG 1430	Design in Engineering	3
MATH 1510	Applied Calculus 1 or equivalent	3
MATH 1710	Applied Calculus 2 or equivalent	3
MATH 1210	Tech of Classical and Linear Algebra	3
PHIL 1290	Critical Thinking 1	3
ENGL 1310	Literary Topics 1	3

University Written English and Mathematics Requirements

All students are required to complete the university written English and mathematics requirement within the first 60 credit hours of their program. This requirement is described in the chapter, General Academic Regulations and Requirements, of this *Calendar*. In the Engineering programs the mathematics requirement is satisfied by one of MATH 1510 or MATH 1710, and the written English requirement by ENG.1310.

5.3 Common Courses Taught by the Faculty of Engineering

Common courses taken by all engineering students occur in the Preliminary Program and within departmental programs. Descriptions of common courses taught by the Faculty of Engineering (ENG 1460, ENG 1450, ENG 1440, ENG 1430, ENG 2010) are listed below.

ENG 1430 Design in Engineering Cr.Hrs.3 The Creative Process; The Design Process; Working in a Team. The Engineering Profession from the Perspective of Students and Professionals. Academic, Legal and Ethical considerations. Not to be held with the former 130.113 or 130.140. *Prerequisite:* Acceptance to Engineering or permission of the instructor.

ENG 1440 Introduction to Statics Cr.Hrs.3 (Lab/Tutorial Required) Statics of Particles; Rigid Bodies, Equilibrium of Rigid Bodies; Analysis of Structures; Distributed Forces. Not to be held with the former 130.135. *Prerequisites:* A minimum grade of 60% in pre-calculus Mathematics 40S, or the former Mathematics 40S, Physics 40S, and Chemistry 40S.

ENG 1450 Introduction to Electrical and Computer Engineering Cr.Hrs.3 Part I; Current, voltage, energy, potential, power Ohm's law; independent sources; capacitor, inductor, ideal diode, op-amp; Kirchoff's law; simple circuits (Resistive, RC, RL, OP-Amp; Diode); introduction to ac theory (Sinusoidal waveform, phase relations of voltage and current waveforms for R,L,C. RL and RC circuits). Part II; Applications (Digital

Logic, motors). Not to be held with the former 130.118. *Prerequisites:* A minimum grade of 60% in pre-calculus Mathematics 40S, or the former Mathematics 40S, Physics 40S, and Calculus 40S.

ENG 1460 Introduction to Thermal Sciences Cr.Hrs.3 Properties of pure substances; First Law for Closed Systems; First Law for Open Systems; Second Law; Examples of Power Cycles and Refrigeration Cycles. Not to be held with the former 130.112. *Prerequisites:* A minimum grade of 60% in pre-calculus Mathematics 40S, or the former Mathematics 40S, Physics 40S, and Chemistry 40S.

ENG 2010 Technical Communications Cr.Hrs.3 (Formerly 130.201) Students work collaboratively in teams and develop strong project management skills. Focus is on the connection between engineering and communication design; the importance of audience analysis; a clear definition of the technical issues and the criteria by which to measure a design or solution; well-designed graphic aids which support the text; and clear writing and speaking. *Prerequisite:* ENGL 1310 (or 004.131)W Literary Topics (or equivalent).

Descriptions of common courses taught to all engineering students by other faculties are found in their respective chapters of this *Calendar* as follows:

Faculty of Science: CHEM 1300, STAT 2220, PHYS 1050, COMP 1010, MATH 1510, MATH 1710, MATH 1210, MATH 210, MATH 2110, and MATH 2120.

Faculty of Arts: ENGL 1310, and PHIL 1290.

5.4 Biosystems Engineering Degree

General Office: E2-376 EITC (Eng Bldg)

Telephone: 474 6033

Fax: 474 7512

Website: www.umanitoba.ca/faculties/afs/biosystems_engineering/

Head: Q. (Chong) Zhang

The Department of Biosystems Engineering offers an accredited degree program in Biosystems Engineering. The program is designed to give students knowledge of the basic principles of engineering and, in particular, an adequate training and education in the fundamentals and professional applications of Biosystems Engineering. The program is offered in both a traditional and a co-operative education format. The department offers an Environmental Engineering option in both traditional and co-operative education formats. With the appropriate selection of elective courses the bachelor's degree in Biosystems Engineering meets the requirements for admission to the Faculty of Medicine.

Biosystems Engineering emphasizes the application of engineering principles to biologically based systems (plants, animals, and microorganisms). The main areas of emphasis are environmental engineering, bioprocess engineering, biomedical engineering, and agricultural engineering (farm machinery, animal and plant production systems, water management, bioenvironmental controls, and light-frame buildings).

The undergraduate curriculum in Biosystems Engineering is an academic program in the Faculty of Engineering. Students wishing to study in the program in Biosystems Engineering must be admitted to the Faculty of Engineering. They are required to complete the Preliminary Engineering Program as a prerequisite to the courses in Biosystems Engineering.

Biosystems Engineering Degree Program

Students are encouraged to consult the department for eight- and ten-term program models. Students are strongly encouraged to follow the model programs when possible, as timetabling and course offerings are based on these program models.

Environmental Option

The departments of Biosystems Engineering and Civil Engineering offer an option in Environmental Engineering and it provides an opportunity for students to focus on environmental engineering related courses. Successful completion of the option in Environmental Engineering will be indicated on graduates' transcripts. Students selecting the environmental option within the Biosystems Engineering department will have the knowledge to solve problems associated with the natural environment (groundwater contamination, soil degradation, pollution of rivers and lakes, air pollution, environmental impact assessment) as well as the built environment (building air quality, temperature and humidity control). Biosystems Engineering students will gain a thorough understanding of the fundamental concepts and interactions between biology, engineering science and engineering design to prepare them well for a career in environmental engineering.

Preliminary Engineering Program

Common to all engineering programs (see Section 5.2 for details).

Departmental Program

Course No.		Credit Hours
CHEM 1310	University Chemistry 1	3
STAT 2220	Engineering Statistics	3
MATH 2100	Mathematical Methods for Engineers 1	4
MATH 2110	Mathematical Methods for Engineers 2	4
MATH 2120	Introduction to Numerical Methods for Engineers	4
CIVL 2790	Fluid Mechanics	4
CIVL 2800	Solid Mechanics 1	4
Or		
MECH 2220	Stress Analysis and Design 2M	4
CIVL 3710	Finite Element Analysis	4
CIVL 4050	Engineering Economics	3
ECE 3680	Introduction to Digital Systems	4
MECH 2120	Mechanics of Machines	4
MECH 3480	Dynamics	3
BIOE 2110	Transport Phenomena	3
BIOE 2580	Biosystems Engineering Design Trilogy 1	4
BIOE 2590	Biology for Engineers	3
BIOE 3270	Instrumentation and Measurement for Biosystems	4
BIOE 3320	Engineering Properties of Biological Materials	4
BIOE 3580	Biosystems Engineering Design Trilogy 2	4
BIOE 3590	Mechanics of Materials in Biosystems	4
BIOE 4240	Graduation Project	3
BIOE 4390	Unit Operations 1	4
BIOE 4580	Biosystems Engineering Design Trilogy 3	4
SOIL 4060	Physical Properties of Soil	3
Or		
ZOOL 1320	Human Anatomy	3
MBIO 2100	General Microbiology A	3
AGRI 2200	Principles of Plant and Animal Physiology	4
Or		
ZOOL 1330	Physiology of the Human Body	3
AGRI 2370	Principles of Ecology	3
One course in Technology and Society		3
One Engineering or Science Elective		3-4
Two Complementary Studies Elective		6
Four Biosystems Engineering Design Electives (see list below)		16
Two Free Electives		6-8
Total credit hours for graduation		168 to 172
Biosystems Engineering Design Electives		
These electives are offered in alternate years:		
BIOE 4400	Unit Operations 2	4
BIOE 4420	Crop Preservation	4
BIOE 4460	Air Pollution Assessment and Management	4
BIOE 4480	Environmental Impact Assessment	4
BIOE 4530	Analysis and Design of Biomachinery	4
BIOE 4540	Controlled Environment Production Systems	4
BIOE 4560	Structural Design in Wood	4
BIOE 4590	Management of By-Products from Animal Production	4
BIOE 4600	Design of Water Management Systems	4
BIOE 4610	Design of Assistive Technology Devices	4
BIOE 4620	Pollution Prevention Practices	4
BIOE 4630	Remediation Engineering	4
Biosystems Engineering Science Electives		
These electives are offered in alternate years:		
BIOE 2080	Agricultural Survey Systems	3
BIOE 4450	Radiation Processing of Food and other Agricultural Commodities	4

Environmental Option

The students can enter the Environmental Engineering option after the completion of 60 credit hours. Students taking the Environmental Engineering option in Biosystems Engineering are required to select the following courses as their electives:

PHIL 2750	Environmental Ethics (as a Complementary Studies Elective)	3
CIVL 3690	Environmental Engineering Analysis	4
CIVL 3700	Environmental Engineering Design	4
BIOE 4480	Environmental Impact Assessment	4

or
CIVL 4100 Engineering Management and the Environment 4
Three Biosystems Engineering Design Electives 12

Admissions to Medicine

The bachelor's degree in Biosystems Engineering provides the background to meet eligibility requirements for admission into the Faculty of Medicine. Students planning to apply for entrance to Medicine after completing the B.Sc. in Biosystems Engineering are advised to take CHEM 2210 and CHEM 2220 Organic Chemistry as their two free electives. They will also need to take CHEM 2360 Biochemistry 1 as their Science Elective and CHEM 2370 Biochemistry 2 as an additional course.

Co-operative Education Program in Biosystems Engineering

Coordinator: D. (Derek) Inglis

The co-operative education program is an approach to education in which academic study is complemented and enriched with practical work experience. A student alternates periods of attendance in university with periods of employment in industry or government. The work terms provide the students with practical experience, help to finance their education, and provide guidance for further career specialization.

A student on good academic standing may apply to enter the co-operative program format in Biosystems Engineering after completing 80 credit hours. Acceptance into the program is dependent upon the student's receiving a job placement through the office of co-operative education in Biosystems Engineering. Students may seek employment on their own, but must consult with the co-op coordinator before doing so. Once a job placement has been secured through the office, the student is accepted into the program and enrolls in the course BIOE 3550 Co-operative Work Study 1 (and subsequently, BIOE 4550 Co-operative Work Study 2) for the specific work term (W1, winter, summer; W2, summer, fall) of employment.

In order to stay in the co-operative program format in Biosystems Engineering, a student must maintain a minimum GPA of 2.00 and must obtain a grade of "pass" for each work term report. All rules and regulations of the Faculty of Engineering apply. Students, who do not maintain these standards, may not remain in the co-operative format program and may be transferred back into the traditional program format or required to withdraw completely.

The course and grade requirements for completion of the co-operative program are the same as those for the traditional program. However, in order to satisfy course prerequisite needs, and the timetable, course arrangements of a student in the co-operative program may differ from those of a student in the traditional program.

Each successfully completed work term and its corresponding work term report carries one credit hour. Work term reports are given grades of "Pass" or "Fail." The co-op office assigns faculty advisors to mark work term reports. A graduate who successfully complete both work terms and the required work term reports will have the words "Co-operative Education Option" placed on their diploma.

Course Descriptions Biosystems Engineering

BIOE 2080 Agricultural Survey Systems Cr.Hrs.3 (Formerly 034.208) Survey systems and techniques applicable to agriculture. Use of level, transit and tape. Theory of errors and error adjustment; mapping. Not offered in 2006-2007.

BIOE 2110 Transport Phenomena Cr.Hrs.3 (Formerly 034.211) Principles of heat transfer, solar radiation, psychometrics, molecular diffusion, mass transfer and refrigeration and their application to biosystems. *Prerequisite:* ENG 1120 (or 130.112).

BIOE 2580 Biosystems Engineering Design Trilogy 1 Cr.Hrs.4 (Formerly 034.258) Biosystems Engineering and its place in the professions of engineering and agronomy. Design concepts, with an emphasis on team building and technical communication skills. Philosophy of project planning. Preparation of a conceptual design by teams in response to design assignment submitted by industry. Written report presented orally. *Prerequisite:* ENG 1400 (or 130.140). Not to be held with the former 034.214.

BIOE 2590 Biology for Engineers Cr.Hrs.3 (Formerly 034.259) Provide theories and principles of Biology to engineering students and present applications of biological principles to engineering problems. Fundamental theories involved in cell structure and function, metabolism, genetics and heredity, bacteria and virus structure and function, plant and animal structure and function are covered. An introduction to animal and plant physiology is also provided. Laboratory sessions and term assignments focus on the engineering applications of these basic theories and principles to provide a good understanding of the role of Biology in Engineering. *Prerequisite:* CHEM 1300 (or 002.130). Not to be held with the former 071.201.

BIOE 3270 Instrumentation and Measurement for Biosystems Cr.Hrs.4 (Formerly 034.327) Basic instrumentation for measuring electrical and nonelectrical quantities associated with biosystems engineering and industry; transducers for automatic con-

trol. *Prerequisites:* 006.261 or MATH 2110 (or 136.211), ENG 1180 (or 130.118).

BIOE 3320 Engineering Properties of Biological Materials Cr.Hrs.4 (Formerly 034.332) Engineering properties of biological and interacting materials within the system. Relationship between composition, structure, and properties of plant, animal, and human tissues. Definition and measurement of mechanical, thermal, electromagnetic, chemical and biological properties and their variability. Use of these properties in engineering calculations. *Prerequisites:* MATH 2100 (or 136.210 or 006.260), CIVL 2800 (or 023.280) or MECH 2220 (or 025.222), BIOE 2580 (or 034.258 or 034.214). Not to be held with the former 034.323.

BIOE 3550 Co-operative Work Study 1 Cr.Hrs.1 (Formerly 034.355) Work assignment in business, industry, or government for Co-operative education students in Biosystems Engineering. Requires a written report covering the work completed during a minimum 25-week work period. Available from January to August. (Pass/Fail grade only)

BIOE 3580 Biosystems Engineering Design Trilogy 2 Cr.Hrs.4 (Formerly 034.358) Advanced design concepts associated with Biosystems Engineering, with emphasis on the principles of safety and human factors engineering. Theory of project planning. Preparation of a preliminary design by design teams in response to a design assignment submitted by industry. Written report with engineering drawings presented orally. *Prerequisites:* BIOE 2580 (or 034.258 or 034.214). Not to be held with the former 034.326.

BIOE 3590 Mechanics of Materials in Biosystems Cr.Hrs.4 (Formerly 034.359) In this course students will be exposed to both the theory and physical behaviour of materials when subjected to loads. The course will be delivered using a combination of lectures and hands-on labs. The materials presented include a wide range of design biosystems engineers may be involved with, including plastics, bone, wood, concrete, steel, other biological materials and composites. *Prerequisite:* CIVL 2800 (or 023.280), or consent of instructor. Not to be with the former 034.324

BIOE 4240 Graduation Project Cr.Hrs.3 (Formerly 034.424) Either an independent or a directed study including at least one of: a comprehensive literature review, an experimental research project, or an engineering design problem. The project is to be concluded by a formal report or thesis. *Corequisites:* ENG 2010 (or 130.201), approval of department. (Pass/Fail grade only)

BIOE 4390 Unit Operations 1 Cr.Hrs.4 (Formerly 034.439) Equipment and systems used in handling, mixing, size reduction, separation and size enlargement of value-added food products. *Prerequisites:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226), BIOE 3270 (or 034.327). *Corequisites:* BIOE 3320 (or 034.332 or 034.323), BIOE 3580 (or 034.358 or 034.326).

BIOE 4400 Unit Operations 2 Cr.Hrs.4 (Formerly 034.440) Physical and mechanical operations for process and equipment design for handling, processing, and distribution of foods and food products. *Prerequisites:* BIOE 2110 (or 034.211), BIOE 3320 (or 034.332 or 034.323). Offered in 2006-2007 and alternate years thereafter.

BIOE 4420 Crop Preservation Cr.Hrs.4 (Formerly 034.442) Biological and physical deterioration during storage. Methods of preserving and storing cereals, oilseeds, and other agricultural crops. *Prerequisite:* BIOE 2110 (or 034.211). Offered in 2006-2007 and alternate years thereafter.

BIOE 4450 Radiation Processing of Food and Other Agricultural Commodities Cr.Hrs.4 (Formerly 034.445) An introduction to the scientific principles underlying the radiation processing of food and other agricultural commodities; its development and implementation within the context of societal needs and concerns. *Prerequisites:* BIOE 2590 (or 034.259) or 071.201 or BIOL 1020 and BIOL 1030 or the former 071.125 (C) and CHEM 1300 (or 002.130) or the former 002.123 or 002.127. Not offered in 2006-2007.

BIOE 4460 Air Pollution Assessment and Management Cr.Hrs.4 (Formerly 034.446) Air pollutant sources and characteristics, their impact on the environment, their behaviour in the atmosphere. Methods of sampling and measurement and the basic technological alternatives available for separation/removal and control. Particular problems of regional interest are discussed. *Corequisites:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226). Offered in 2006-2007 and alternate years thereafter.

BIOE 4480 Environmental Impact Assessment Cr.Hrs.4 (Formerly 034.448) Basic methodologies for conducting impact assessments, including physical, chemical and ecological impacts. *Prerequisites:* approval of department. Offered in 2006-2007 and alternate years thereafter.

BIOE 4530 Analysis and Design of Biomachinery Cr.Hrs.4 (Formerly 034.453) Design of machines for bioprocessing; traction mechanics and tractor chassis mechanics; power transmission components; functional requirements for field and process machines; fluid power hydraulics. *Prerequisite:* BIOE 3580 (or 034.358) or 034.326. Not offered in 2006-2007.

BIOE 4540 Controlled Environment Production Systems Cr.Hrs.4 (Formerly 034.454) Thermal and functional design of plant and animal production systems. *Prerequisites:* BIOE 2110 (or 034.211) and AGRI 2200 (or 065.220). Not offered in 2006-2007.

BIOE 4550 Co-operative Work Study 2 Cr.Hrs.1 (Formerly 034.455) Work assignment in business, industry, or government for Co-operative education students in Biosystems Engineering. Requires a written report covering the work completed during a minimum 25 week work period. Available from May to December. (Pass-Fail grade only)

BIOE 4560 Structural Design in Wood Cr.Hrs.4 (Formerly 034.456) Design using wood as a structural material in light-frame buildings. Consideration of design constraints associated with sawn lumber as well as based composite materials. Emphasis on use of computer based design aids. *Prerequisites:* CIVL 3440 (or 023.344) or BIOE 3240 (or 034.324).

BIOE 4580 Biosystems Engineering Design Trilogy 3 Cr.Hrs.4 (Formerly 034.458)

Advanced design concepts, with emphasis on the principle of quality control. Application of project planning techniques. Principles of owning and operating an engineering consulting company. Preparation of a final design by design teams in response to a design assignment submitted by industry. Written report with cost of services rendered, presented orally. *Prerequisite:* BIOE 3580 (or 034.358) or 034.326. Not to be held with the former 034.413.

BIOE 4590 Management of By-Products from Animal Production Cr.Hrs.4 (Formerly 034.459) Topics covered include solid and liquid manure, manure characteristics, manure collection, storage, land application and utilization, biological treatment, design of equipment and facilities for manure handling. Environment issues, such as odour and water pollution associated with manure management will also be discussed. *Prerequisites:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226). Not offered in 2006-2007.

BIOE 4600 Design of Water Management Systems Cr.Hrs.4 (Formerly 034.460) To introduce the basic theoretical principles in the design of irrigation and drainage systems. Topics covered include the determination of irrigation depth and interval, evapotranspiration, measurement and analysis of precipitation, design of sprinkler and drip irrigation systems, selection of pumps, surface and subsurface drainage design, water quality issues, salinity management, and the environmental impact of water management practices. *Corequisite:* SOIL 4060 (or 040.406) or CIVL 3730 (or 023.373) or consent of instructor. Not to be held with the former 034 412 or 034.418. Not offered in 2006-2007.

BIOE 4610 Design of Assistive Technology Devices Cr.Hrs.4 (Formerly 034.461) Application and design of technology for individuals with disabilities; emphasizing the development of the requisite knowledge, skills, and attitudes to evaluate, design, and implement client-centred assistive technology. A multi-disciplinary approach to learning and applying knowledge will be emphasized with engineering and medical rehabilitation students collaborating on a design project. *Prerequisite:* AGRI 2200 (or 065.220). Not offered in 2006-2007.

BIOE 4620 Remediation Engineering Cr.Hrs.4 (Formerly 034.462) The theoretical basis for the engineering design of different remediation technologies to treat contaminated soil and groundwater will be introduced. Methods for site characterization, monitoring of progress in remediation, and modelling of the remediation process will be presented. Different methods such as soil washing, air sparging, bioremediation, phytoremediation, constructed wetlands, electrokinetic remediation, reactive barriers will be discussed. *Prerequisite:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226). Offered in 2006-2007 and alternate years thereafter.

BIOE 4630 Pollution Prevention Practices Cr.Hrs.4 (Formerly 034.463) To give students an understanding of pollution prevention as it relates to solids and hazardous waste management, air and water pollution, energy usage, and resource depletion. To evaluate practices on improved manufacturing operations, present fundamentals of pollution prevention economics, examine waste minimization incentives, design improvements to existing systems, and investigate overall sustainability of industrial practices. *Prerequisite:* CIVL 2790 (or 023.279) or MECH 2260 (or 025.226). Offered in 2006-2007 and alternate years thereafter.

5.5 Civil Engineering

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The Department of Civil Engineering offers a fully accredited degree program in Civil Engineering. The program is designed to give students knowledge of the basic principles of engineering and, in particular, an adequate training and education in the fundamentals and professional applications of Civil Engineering. The program is offered in both a traditional and a co-operative education format. The department offers an Environmental Engineering Option in both the traditional and co-operative education formats.

Civil engineering involves the planning, design, supervision of construction and management of infrastructure facilities essential to modern life in both the public and private sectors — facilities that vary widely in nature, size and scope: space structures and launching facilities, bridges, buildings, transportation networks, water treatment and distribution facilities, waste treatment and waste containment projects, dams, tunnels, hydroelectric and irrigation projects, power transmission and communication towers, offshore structures, and pipelines, are a few examples. Civil Engineers are at the forefront of the application of advanced technologies and materials, and computer-aided engineering. Advanced technologies such as fibre optic sensors, global positioning systems, intelligent transportation systems, and geographical information systems are fundamental to modern civil engineering projects. Modern engineering materials such as fibre reinforced composites are increasingly used by civil engineers in design and construction.

Civil Engineering Degree Program

Students are to consult with the department for four and five-year program plans. Students are expected to follow the program plans when possible, as timetabling and course offerings are based on these plans.

Environmental Engineering Option

An option in Environmental Engineering is offered by the departments of Civil Engineering, and Biosystems Engineering to respond to the changing needs of society and it provides an opportunity for students to focus on environmental engineering related courses.

Geological Engineering

After two years at the University of Manitoba (Preliminary Year plus one year in Civil Engineering) a student may transfer to the University of North Dakota to complete a Geological Engineering Degree. More information is available from the department.

Student Support

Summer employment for a limited number of undergraduate students may be offered by the Department of Civil Engineering. Typical duties include assisting academic staff members with their research projects.

Laboratory Safety

Students entering Civil Engineering are required to attend a seminar on laboratory safety. The seminar will normally be held in September.

Preliminary Engineering Program

Common to all Engineering programs. (See Section 5.2 for details.)

Civil Engineering Program and Environmental Engineering Option

Common Core Program

Course No.		Credit Hours
STAT 2220 (005.222)	Introduction to Probability and Statistics	3
GEOL 2250 (007.225)	Geology for Engineers	4
CIVL 2760 (023.276)	Introduction to Environmental Engineering	5
CIVL 2770 (023.277)	Civil Engineering Materials	5
CIVL 2780 (023.278)	Civil Engineering Systems	4
CIVL 2790 (023.279)	Fluid Mechanics	4
CIVL 2800 (023.280)	Solid Mechanics 1	4
CIVL 2820 (023.282)	Fundamentals of Geomatics	4
CIVL 3590 (023.359)	Numerical Methods for Engineers	4
CIVL 3690 (023.369)	Environmental Engineering Analysis	4
CIVL 3700 (023.370)	Environmental Engineering Design	4
CIVL 3710 (023.371)	Finite Element Analysis	4
CIVL 3730 (023.373)	Geotechnical Materials and Analysis	4
CIVL 3740 (023.374)	Hydraulics	4
CIVL 3750 (023.375)	Hydrology	4
CIVL 3760 (023.376)	Structural Analysis	4
CIVL 3770 (023.377)	Structural Design 1	4
CIVL 3790 (023.379)	Transportation Engineering 1	4
CIVL 4050 (023.405)	Engineering Economics	3
CIVL 4220 (023.422)	Geotechnical Design	4
CIVL 4250 (023.425)	Groundwater Hydrology	4
CIVL 4380 (023.438)	Infrastructure Engineering and Construction Management	4
CIVL 4390 (023.439)	Structural Design 2	4
CIVL 4400 (023.440)	Transportation Engineering 2	4
CIVL 4460 (023.446)	Technology, Society and the Future	3
CIVL 4590 (023.459)	Design Project	6
ENG 2010 (130.201)	Technical Communications	3
MATH 2100 (136.210)	Mathematical Methods for Engineers 1	4
MATH 2110 (136.211)	Mathematical Methods for Engineers 2	4
xxx.xxx	Civil Engineering: Complementary Studies Elective (see Note 1)	3
PHIL 2750 (015.275)	Environmental Option: Environmental Ethics	3

Plus 3 of the following technical electives (see Note 2)

Civil Engineering Technical Electives: (3)		
CIVL 4030 (023.403)	Structural Design 3	4
CIVL 4040 (023.404)	Structural Dynamics	4
CIVL 4100 (023.410)	Engineering Management and the Environment	4
or		
BIOE 4480 (034.448)	Environmental Impact Assessment	4

CIVL 4180 (023.418)	Environmental Systems	4
CIVL 4200 (023.420)	Groundwater Contamination	4
CIVL 4230 (023.423)	Geotechnical Engineering	4
CIVL 4330 (023.433)	Graduation Project	4
CIVL 4350 (023.435)	Hazardous Waste Treatment	4
CIVL 4410 (023.441)	Transportation Systems	4
CIVL 4420 (023.442)	Highway Pavement Design	4
CIVL 4470 (023.447)	Watershed Processes	4
BIOE 4560 (034.456)	Structural Design in Wood	4

Environmental Option	Technical Electives: (3)	
CIVL 4100 (023.410)	Engineering Management and the Environment	4

or		
BIOE 4480 (034.448)	Environmental Impact Assessment	4
SOIL 4090 (040.409)	Chemical Analysis of Soils	3
SOIL 4500 (040.450)	Remediation of Contaminated Land	3
CIVL 4180 (023.418)	Environmental Systems	4
CIVL 4200 (023.420)	Groundwater Contamination	4
CIVL 4330 (023.433)	Graduation Project	4
CIVL 4350 (023.435)	Hazardous Waste Treatment	4
CIVL 4470 (023.447)	Watershed Processes	4
BIOE 4460 (034.446)	Air Pollution Assessment and Management	4

1) Students may take any course from the Faculty of Arts or Faculty of Management, at the 1000 level or above, as a complementary studies elective. However, ARTS 1110 Introduction to University may not be used for credit in the Faculty of Engineering.

2) Students may take one technical elective course with a significant engineering science and/or design component from another department, subject to the approval by the head (or designate) of Civil Engineering.

Co-operative Education Option in Civil Engineering

Chair Co-op Committee: Dr. James Blatz, P.Eng.
(204) 474-9816

Coordinator: Kathie Anderson
(204) 474-6251 (E3 - 386 Engineering)

The Department of Civil Engineering offers Civil and Environmental students a co-operative education option. The co-op program provides a combination of education and experience by alternating academic terms with work terms.

Students generally apply for the co-op program in their fourth term of engineering studies. Entry into the program is competitive. Acceptance is based on EGPA and general aptitude, and is contingent upon receiving a work term placement through the co-op office. Students are required to complete at least 80 credit hours of engineering study before their first work term. The Department of Civil Engineering reserves the right to determine and select the best-qualified applicants. Students who are unable to maintain the standards of the co-op program will be transferred back into the regular program.

The course and grade requirements for completion of the Co-operative Education Option are the same as those required for the regular program. However, in order to satisfy course prerequisite requirements, timetables may differ from the regular program. Co-op students are evaluated in the same manner as regular students and all rules and regulations of the Faculty of Engineering apply.

Work term reports must be completed at the end of each work term. Each successfully completed work term and its corresponding work term report carries one credit hour. Work term reports are assigned a letter grade. Co-op graduates with a passing grade in at least three work terms and having completed at least one work term during an academic term will have the Co-operative Education Option acknowledged on their B.Sc. (C.E.) graduation parchment.

Civil Engineering Course Descriptions

CIVL 2760 Introduction to Environmental Engineering Cr.Hrs.5 (Lab Required) (Formerly 023.276) An overview of the generic approach used to solve environmental process engineering problems. Topics include characterization of the polluted material, identification of environmental quality or treatment goals, and the identification of possible mitigation or treatment technologies. Topics are discussed within the context of water, air, or land systems. *Prerequisite:* CHEM 1300 (or 002.130).

CIVL 2770 Civil Engineering Materials Cr.Hrs.5 (Lab Required) (Formerly 023.277) Principles of testing; testing standards; instrumentation; data acquisition systems; mechanical properties of steel, iron, cement, concrete, asphalt, wood and composites; classification and particle size analysis of soils and aggregates. *Prerequisite:* CIVL 2800 (or 023.280).

CIVL 2780 Civil Engineering Systems Cr.Hrs.4 (Tutorial Required) (Formerly

023.278) Introduction to applied systems analysis approach. Use of applied systems analysis in Civil Engineering. Optimization techniques: linear programming; dynamic programming; other techniques. Evaluation: decision analysis. *Prerequisite:* MATH 1710 (or 136.171).

CIVL 2790 Fluid Mechanics Cr.Hrs.4 (Lab Required) (Formerly 023.279) Definition of fluid; fluid properties; variation of pressure in a fluid; hydrostatic forces; buoyancy; kinematics of flow; control volumes; continuity; Bernoulli's equation; momentum equation; energy equation; flow in closed conduits; open channel flow. *Prerequisite:* ENG 1350 (or 130.135).

CIVL 2800 Solid Mechanics 1 Cr.Hrs.4 (Tutorial Required) (Formerly 023.280) Analysis of deformable bodies; stress and strain in three dimensions; equilibrium equations and strain-displacement relations; constitutive relations and mechanical behaviour of materials; radially symmetric and plane problems in elasticity; relevant experimental demonstrations. *Prerequisite:* ENG 1350 (or 130.135).

CIVL 2820 Fundamentals of Geomatics Engineering Cr.Hrs.4 (Tutorial Required) (Formerly 023.282) Geomatics in civil engineering, map-making, map-reading, computerized maps; leveling; distance measurement; angles, directions, traverses; coordinate geometry; electronic survey instruments; global positioning system; geographic information systems; digital photogrammetric methods and data; aspects of route surveying. Not to be held with the former 023.281.

CIVL 3560 Engineering Co-operative Education Assignment 1 Cr.Hrs.1 (Formerly 023.356) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment.

CIVL 3570 Engineering Co-operative Education Assignment 2 Cr.Hrs.1 (Formerly 023.357) See CIVL 3560 (or 023.356) for course description.

CIVL 3590 Numerical Methods in Engineering Analysis Cr.Hrs.4 (Tutorial Required) (Formerly 023.359) Variety of numerical techniques applicable to solutions of problems in civil engineering. Students may not hold credit for CIVL 3590 (023.359) and MATH 2120 (or 136.212). *Prerequisite:* MATH 2100 or the former 136.210.

CIVL 3690 Environmental Engineering Analysis Cr.Hrs.4 (Lab Required) (Formerly 023.369) Introduction to environmental engineering analysis concept; risk assessment; colloidal dispersions; mass balances, reaction kinetics and reactor design principles. Water pollution and water quality in rivers and lakes. Physical, chemical and biological unit operations and processes applied in water and/or wastewater treatment. Meteorology and air pollution; atmospheric dispersion. Solid waste management issues. *Prerequisites:* CIVL 2760 (or 023.276), STAT 2220 (or 005.222).

CIVL 3700 Environmental Engineering Design Cr.Hrs.4 (Tutorial Required) (Formerly 023.370) Design principles are developed for water, solid/soil and air pollution control. Application of the principles in design projects which may include surface and groundwater remediation, solid waste management, landfilling, soil remediation and site assessment; municipal and industrial wastewater treatment; odour and air pollution abatement facilities. *Prerequisite:* CIVL 3690 (or 023.369).

CIVL 3710 Finite Element Analysis Cr.Hrs.4 (Tutorial Required) (Formerly 023.371) One-dimensional analysis of fluid flow, seepage and heat transfer; truss, beam and frame elements; two-dimensional problems; isoparametric elements and Gauss quadrature; time-dependent problems, diffusion, consolidation, and time integration methods; introduction to commercial packages; solution of problems in civil engineering (seepage, dams, pavements). *Prerequisites:* CIVL 2790 (or 023.279), CIVL 2800 (or 023.280).

CIVL 3730 Geotechnical Materials and Analysis Cr.Hrs.4 (Tutorial Required) (Formerly 023.373) Soil and rock properties: laboratory and field techniques; in situ states of stress and consolidations; constitutive models; stress beneath loaded areas and around tunnels; analysis of simple retaining structures and slopes; stability and settlement of shallow and deep foundations in soil and rock. *Prerequisites:* GEOL 2250 (or 007.225), CIVL 2770 (23.277), CIVL 2800 (or 023.280).

CIVL 3740 Hydraulics Cr.Hrs.4 (Tutorial Required) (Formerly 023.374) Hydraulics of uniform and gradually varied flow; backwater computation and classification of surface water profiles; hydraulics jumps, spillways, and stilling basins; flow over weirs; hydraulic models; theory of turbo-machinery. *Prerequisite:* CIVL 2790 (or 023.279).

CIVL 3750 Hydrology Cr.Hrs.4 (Tutorial Required) (Formerly 023.375) Basic hydrological processes; precipitation; evapotranspiration; infiltration and runoff; analytical methods; hydrograph theory and application; application to reservoir design; project floods and flow forecasting; statistical analysis. *Prerequisite:* STAT 2220 (or 005.222).

CIVL 3760 Structural Analysis Cr.Hrs.4 (Tutorial Required) (Formerly 023.376) Different structural forms and load distribution, analysis of cables; statically determinate curved, beams and frames; influence lines; energy methods and deflections of structures; flexibility and stiffness methods; computer-aided structural analysis; introduction to structural dynamics. *Prerequisite:* CIVL 2800 (or 023.280).

CIVL 3770 Structural Design 1 Cr.Hrs.4 (Tutorial Required) (Formerly 023.377) Introduction to design of steel structures; loading, structural configurations; design of simple members and connections; building code requirements. *Prerequisites:* CIVL 2770 (or 023.277).

CIVL 3790 Transportation Engineering 1 Cr.Hrs.4 (Tutorial Required) (Formerly 023.379) Introduction to transportation. Overview of Canada and U.S. transport systems. Fundamentals of transport systems analysis. Introduction to sequential demand modeling. Analysis and evaluation of uninterrupted flow on highways. Basics of geometric design of highways. Basics of design of at-grade intersections. Introduction to computer applications in transportation engineering. Basics of pavement engineering and design. *Prerequisites:* CIVL 2810 (or 023.281) or CIVL 2820 (023.282), and CIVL 2770 (or 023.277), CIVL 2780 (or 023.278), STAT 2220 (or 005.222).

CIVL 4030 Structural Design 3 Cr.Hrs.4 (Tutorial Required) (Formerly 023.403) Pre-

stressed concrete structures; fibre-reinforced concrete structures; bridge loading, analysis and design in steel and concrete; special topics in structural engineering. *Prerequisite:* CIVL 4390 (or 023.439).

CIVL 4040 Structural Dynamics Cr.Hrs. 4(Tutorial Required) (Formerly 023.404) Dynamic loads in civil engineering; overview of structural dynamics; single-degree-of-freedom systems; free-vibration, harmonic, periodic and impulsive loads; multi-degree-of-freedom systems; distributed systems; beam vibrations; steady-state vibrations of foundations; introduction to earthquake engineering; elastic waves in soils, response and design spectrums; wind vibrations. *Prerequisite:* CIVL 3760 (or 023.376).

CIVL 4050 Engineering Economics Cr.Hrs.3 (Formerly 023.405) Introduction to engineering economics. Time value of money and discounted cash flow calculations. Comparing alternatives. Replacement analysis and life-cycle costing. Public sector engineering economy studies. Private sector engineering economy studies. Before and after-tax analysis. Applications in cost-estimating. Applications in asset management systems. Basic accounting. Accommodating capital limitations. Dealing with inflation. Dealing with risk and uncertainty. *Prerequisites or Corequisites:* CIVL 2780 (or 023.278), STAT 2220 (or 005.222).

CIVL 4100 Engineering Management and the Environment Cr.Hrs.4 (Tutorial Required) (Formerly 023.410) Teams of students apply environmental management techniques, such as: impact assessment, site assessment, and auditing to selected engineering construction projects and operations; several oral and written reports are required. *Prerequisite or Corequisite:* CIVL 3700 (or 023.370).

CIVL 4180 Environmental Systems Cr.Hrs.4 (Tutorial Required) (Formerly 023.418) Development of a river water quality model; waste allocation modelling; modelling of the sites selection process; analysis of environmental impact using technical and non-technical (i.e. sociological, ethical, aesthetic) parameters. *Prerequisites:* CIVL 2780 (or 023.278), CIVL 3690 (or 023.369), CIVL 3750 (or 023.375).

CIVL 4200 Groundwater Contamination Cr.Hrs.4 (Tutorial Required) (Formerly 023.420) Introduction to the principles of groundwater chemistry; chemical evolution of natural groundwater flow systems; sources of contamination; mass transport processes; hydrochemical behaviour of contaminants; nuclear waste disposal; non-aqueous phase organics; aquifer remediation. *Prerequisites:* CIVL 4250 (or 023.425), MATH 2100 (or 136.210), GEOL 2250 (or 007.225).

CIVL 4210 Engineering Co-operative Education Assignment 5 Cr.Hrs.1 (Formerly 023.421) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment.

CIVL 4220 Geotechnical Design Cr.Hrs.4 (Tutorial Required) (Formerly 023.422) Site characterization; design and construction of surface footings, deep foundations, tunnels, earth and rock support systems; design and remediation of slopes; frozen soils and foundation design; geosynthetics and geofabrics in geotechnical construction; reinforced earth; geoenvironmental issues; tailing dams, clean-up, and remediation. *Prerequisite:* CIVL 3730 (or 023.373).

CIVL 4230 Geotechnical Engineering Cr.Hrs.4 (Tutorial Required) (Formerly 023.423) Case-history approach to geotechnical engineering practice from civil and mining engineering; relationship between predicted and observed behaviour; surface and shallow footings; propped walls and bulkheads; rock and soft ground tunneling; deep foundations; rock and soil slopes; culverts; geoenvironmental problems. *Prerequisite:* CIVL 3730 (or 023.373).

CIVL 4250 Groundwater Hydrology Cr.Hrs.4 (Tutorial Required) (Formerly 023.425) Introduction to theory of groundwater flow; flow nets; regional groundwater flow; well hydraulics; role of groundwater in geologic and engineering processes; multiphase flow. *Prerequisites:* MATH 2110 (or 136.211), GEOL 2250 (or 007.225).

CIVL 4330 Graduation Project Cr.Hrs.4 (Formerly 023.433) The student will undertake an original study involving engineering design, procedure, or experimental investigation that emphasizes the student's initiative and judgement. The student must demonstrate an ability to plan, conduct and formally report on the study by written thesis and oral presentation. *Pre-requisite:* Completion of 120 credit hours, ENG 2010 (or 130.201).

CIVL 4350 Hazardous Waste Treatment Cr.Hrs.4 (Tutorial Required) (Formerly 023.435) Sources and classification of hazardous and industrial wastes. Overview of the waste management problem. Theory and applications of various physical, chemical, and thermal, waste treatment processes. Waste elimination options and strategies. *Prerequisite:* CIVL 3690 (or 023.369).

CIVL 4380 Infrastructure Engineering and Construction Management Cr.Hrs.4 (Tutorial Required) (Formerly 023.438) Infrastructure engineering; drainage systems, maintenance engineering and management. Construction and project management; workplace health and safety, construction site field trips, construction equipment, temporary facilities, project management. Elements of law for civil engineers. *Prerequisites:* CIVL 4050 (or 023.405), CIVL 3740 (or 023.374).

CIVL 4390 Structural Design 2 Cr.Hrs.4 (Tutorial Required) (Formerly 023.439) Design in reinforced concrete; properties of materials; ultimate strength design; analysis and design of sections in bending; shear and development considerations; short- and long-term deflection; sections subjected to bending and axial stresses; design of simple floor systems; column footings. *Prerequisite:* CIVL 2770 (or 023.277), CIVL 3760 (or 023.376), CIVL 3770 (or 023.377).

CIVL 4400 Transportation Engineering 2 Cr.Hrs.4 (Tutorial Required) (Formerly 023.440) Fundamentals of traffic control for highways. Capacity and level of service analysis on urban streets. Urban supplement to geometric design guide for Canadian roads. Modelling vehicle performance. Elements of railway engineering. Design for trucks. Transportation systems management. Application of intelligent transportation systems. Basic pavement design methods. Introduction to pavement management systems. Highway accidents and design for safety. Legislative and policy framework for transportation engineering. *Prerequisite:* CIVL 3790 (or 023.379).

CIVL 4410 Transportation Systems Cr.Hrs.4 (Tutorial Required) (Formerly 023.441) Contemporary approaches to transportation planning. Data for transportation planning. Advanced demand analysis and modelling. Illustrative transport planning studies. Planning and design for public passenger transportation. Planning and design for barrier-free transportation and transport of disabled persons. Goods movement and trucking studies. Planning and design for motor carrier operations. Planning and design for grain handling and transportation. Transport planning in developing countries. Evaluating transport plans and projects. Transport and the environment. Transport and energy. Vehicle operating costs and engineering unit cost models. *Prerequisite:* CIVL 3790 (or 023.379).

CIVL 4420 Highway Pavement Design Cr.Hrs.4 (Tutorial Required) (Formerly 023.442) Soil classification and properties; soil-moisture-density-strength relationships; earthwork operations and specifications; soil stabilization; granular bases; surface drainage; structural design of flexible and rigid pavements. *Prerequisites:* CIVL 2770 (or 023.277), CIVL 3790 (or 023.379).

CIVL 4460 Technology, Society, and the Future Cr.Hrs.3 (Formerly 023.446) Impact of technology and technological change on society - past, present, future; specific technologies, e.g. construction, machine power, computers, communications, medical, military: the process of technological change; invisible effects of technology; technology and resource use; sustainable development, limits to growth and the role of technology. *Prerequisite:* ENGL 1310 (or 004.131).

CIVL 4470 Watershed Processes Cr.Hrs.4 (Tutorial Required) (Formerly 023.447) Rainfall-runoff processes, flood routing; characteristics and mechanics of flow in (natural) channels; computer modelling of watershed hydrology and hydraulics; influence of man-made structures; river morphology, sediment transport prediction, design of a stable channel; river ice processes. *Prerequisites:* CIVL 2790 (or 023.279), CIVL 3750 (or 023.375).

CIVL 4590 Design Project Cr.Hrs.6 (Tutorial Required) (Formerly 023.459) An interdisciplinary project-based course involving engineering design, teamwork and delivered in studio format. Students are expected to work in pre-assigned teams under the guidance of professional engineers on a pre-determined project. Lecture material will cover project management, construction, environmental and economic issues. Each team will be required to give an oral presentation of their design project. *Prerequisite:* CIVL 3770 (or 023.377), CIVL 3700 (or 023.370) and ENG 2010 (or 130.201).

CIVL 4900 Engineering Co-operative Education Assignment 3 Cr.Hrs.1 (Formerly 023.490) See CIVL 3560 (or 023.356) for course description.

CIVL 4910 Engineering Co-operative Education Assignment 4 Cr.Hrs.1 (Formerly 023.491) See CIVL 3560 (or 023.356) for course description.

New Courses Pending Senate Approval in January:

CIVL 2830 Graphics for Civil Engineers Cr.Hrs.2 (Tutorial Required) Orthographic Drawing: Object orientation and views, space dimensions, surfaces, lines, and hidden features. Computer-based drawings. Applications: steel and reinforced concrete structures, digital terrain models. Ethical, legal and professional issues. Not to be held with former 130.140. Co-requisite: CIVL 2840.

CIVL 2840 Civil Engineering Geomatics Cr.Hrs.3 (Laboratory Required) Geomatics in civil engineering, map-making, map-reading, computerized maps; levelling; distance measurement; angles, directions, traverses, coordinate geometry; electronic survey instruments; global positioning system; geographic information systems; digital photogrammetric methods and data; aspects of route surveying. Not to be held with the former 023.281 or 023.282. Co-requisite: CIVL 2830.

5.6 Electrical and Computer Engineering

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Website: www.ee.umanitoba.ca

Head: J. Kuffel

Associate Head (Computer Engineering): W. Kinsner

Associate Head (Electrical Engineering): U. Annakkage

The Department of Electrical and Computer Engineering offers two fully accredited degree programs, one in Electrical Engineering and one in Computer Engineering. Both programs may include an industry internship. The programs are designed to give students knowledge of the basic principles of engineering and, in particular, an adequate training and education in the fundamentals and professional applications of Electrical and Computer Engineering. It is recommended that students entering Electrical or Computer Engineering acquire their own computer.

Industry Internship Program (IIP)

Director: R. McLeod

Coordinator: C. De Cruyenaere

The Department of Electrical and Computer Engineering offers an Industry Internship Program. This program is designed to complement and enrich the academic program with practical work experience. Preceding the final year, a student in either the Electrical Engineering or the Computer Engineering program has the option of spending a continuous work term period of 12 to 16 months in industry. This work term provides the student with

practical experience, helps to finance the student's education, and provides guidance for further career specialization.

A student in good academic standing, who will have completed 120 credit hours of the academic program by the end of the session, may apply to participate in the Industry Internship Program. Acceptance in 024.472 Industry Internship is dependent upon the student receiving job placement.

Satisfactory work reports, which will be evaluated by faculty members in the Department of Electrical and Computer Engineering, are required upon returning in order to have this participation recorded in the student's transcript.

Electrical Engineering Degree Program

The program in Electrical Engineering has a core-plus-elective structure. The core develops the necessary base in mathematics, the physical sciences, dynamics, thermodynamics, electric fields and circuits, and fundamental professional courses focused on energy conversion and transmission, electronics, materials and devices, communications, and control systems. The final year includes a graduation thesis, control systems, and communication systems as core requirements, with the remaining program based on electives. A certain level of specialization is possible through the selection of elective courses offered in the final year.

The student's program must include a three credit hour complementary studies elective. Courses in engineering economics, technical writing, and engineering law, the environment and society are compulsory.

Students are encouraged to consult with the department for model four- and five-year programs. Students are strongly encouraged to follow the model programs when possible, as timetabling and course offerings are based on these.

Preliminary Engineering Program

Common to all Engineering programs. (See Section 5.2 for details.)

Departmental Program

Course No.	Credit Hours	
005.222	Contemporary Statistics for Engineers	3
136.210	Mathematical Methods for Engineers 1	4
136.211	Mathematical Methods for Engineers 2	4
136.212	Introductory Numerical Methods for Engineers	4
136.310	Mathematical Methods for Engineers 3	3
136.311	Mathematical Methods and Complex Analysis	4
136.312	Applied Discrete Mathematics	3
023.405	Engineering Economics	3
024.213	Electric Fields	4
024.216	Electronics 2E	5
024.222	Digital Logic Systems	5
024.226	Circuits and Transmission Lines	4
024.353	Network Theory	4
024.359	Electromagnetic Theory	4
024.360	Physical Electronics	4
024.361	Microprocessing Systems	4
024.365	Electric Machines (see Note 7)	5
024.367	Electronics 3E	4
024.371	Design of Engineering Software	4
024.378	Signal Processing 1	4
024.372	Electric Power and Machines	4
024.415	Control Systems	4
024.424	Microprocessor Interfacing	4
024.426	Communications Systems	4
024.483	Signal Processing 2	4
024.460	Group Design Project (see Note 1)	6
076.243	Ecology, Technology and Society	3
130.201	Technical Communications	3
Technical Electives (5 Required) (see Notes 3,4)		
024.414	Power Transmission Lines	4
024.416	Control Engineering	4
024.419	Solid State Electronics	4
024.420	Electric Filter Design	4
024.425	Digital Communications	4
024.427	Antennas	4
024.428	Engineering Electromagnetics	4
024.429	Microwave Engineering	4
024.430	Electrical Energy Systems 1	4
024.431	Electrical Energy Systems 2	4
024.437	Power Electronics	4
024.439	Engineering Computations 4E	4

024.461	Biomedical Instrumentation And Signal Processing	4
024.442	Digital Control	4
024.458	Optoelectronics	4
024.475	Contemporary Topics in Electrical Engineering (See Note 8)	4
024.476	Contemporary Topics in Electrical Engineering (See Note 8)	3
024.477	Contemporary Topics in Electrical Engineering (See Note 8)	4
024.478	Contemporary Topics in Electrical Engineering (See Note 8)	3
025.486	Engineering Design (see Note 6)	5
Computer Engineering Courses (1 required)		
024.376	Digital Systems Design 1	4
024.377	Digital Systems Design 2	4
024.444	Computer Vision	4
024.474	Digital Systems Implementation	4
Complementary Studies Elective (1 required) (see Note 2)		3
Total credits for Graduation		177-180

NOTES:

1. Course continuing through both terms. Credit on completion of course.
2. The complementary studies elective can be any course at the 1000 level or above from either the faculties of Arts or Management. However, ARTS 1110 Introduction to University, may not be used for credit in the Faculty of Engineering.
3. The Department of Electrical and Computer Engineering does not guarantee that all elective courses will be offered every session or that it will be possible to fit courses into all of the many possible timetable combinations of students taking the programs. The term in which an elective course is offered is specified each year in the *Registration Guide*.
4. There may be a maximum limit set on the number of students allowed to take a particular elective in a session. Similarly, there may be a minimum limit and if registration is below the minimum, the elective will be cancelled and those registered will be required to transfer to another elective before the deadline date for course changes.
5. Students are urged to discuss their program of courses with members of the instructional staff toward the end of their third year to obtain advice concerning the best choice of electives for their needs.
6. Subject to the approval of course instructor.
7. A certificate in Cardiopulmonary Resuscitation (CPR) is required as a prerequisite for this course. The three hour course is available through Occupational Health and Safety; telephone (204) 474 6438.
8. Requires permission of the Department

Computer Engineering Degree Program

The program in Computer Engineering has a core-plus-elective structure. The core develops the necessary base in mathematics, physical sciences, computer science, circuits and systems, fundamental professional courses such as digital logic, discrete mathematics, electronics, microprocessors, microcontrollers, data communications, embedded systems, operating systems, software engineering, and compiler design. The final year core includes the capstone group design project.

Some specialization is possible in either the software or the hardware area through the selection of technical electives in the final year.

The student's program must include a specified number of complementary studies electives. Courses in engineering economics, technical writing, and engineering law, the environment and society, are compulsory.

Students are encouraged to consult with the department for model four- and five-year programs. Students are strongly encouraged to follow the model programs when possible, as timetabling and course offerings are based on these.

Preliminary Engineering Program

Common to all Engineering Programs. (See Section 5.2 for details.)

Departmental Program

Course No.	Credit Hours	
STAT 2220	Contemporary Statistics for Engineers	3
MATH 2100	Mathematical Methods for Engineers 1	4
MATH 2110	Mathematical Methods for Engineers 2	4
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 3100	Mathematical Methods for Engineers 3	3
MATH 3110	Mathematical Methods and Complex Analysis	4
MATH 3120	Applied Discrete Mathematics	3
CIVL 4050	Engineering Economics	3
ECE 2130	Electric Fields	4
ECE 2160	Electronics 2E	5
ECE 2220	Digital Logic Systems	5

ECE 2260	Circuits and Transmission Lines	4
ECE 3530	Network Theory	4
ECE 3590	Electromagnetic Theory	4
ECE 3600	Physical Electronics	4
ECE 3610	Microprocessing Systems	4
ECE 3650	Electric Machines (see Note 7)	5
ECE 3670	Electronics 3E	4
ECE 3710	Design of Engineering Software	4
ECE 3780	Signal Processing 1	4
ECE 3720	Electric Power and Machines	4
ECE 4150	Control Systems	4
ECE 4240	Microprocessor Interfacing	4
ECE 4260	Communications Systems	4
ECE 4830	Signal Processing 2	4
ECE 4600	Group Design Project (see Note 1)	6
ANTH 2430	Ecology, Technology and Society	3
ENG 2010	Technical Communications	3
Technical Electives (5 Required) (see Notes 3,4)		
ECE 4140	Power Transmission Lines	4
ECE 4160	Control Engineering	4
ECE 4190	Solid State Electronics	4
ECE 4200	Electric Filter Design	4
ECE 4250	Digital Communications	4
ECE 4270	Antennas	4
ECE 4280	Engineering Electromagnetics	4
ECE 4290	Microwave Engineering	4
ECE 4300	Electrical Energy Systems 1	4
ECE 4310	Electrical Energy Systems 2	4
ECE 4370	Power Electronics	4
ECE 4390	Engineering Computations 4E	4
ECE 4610	Biomedical Instrumentation And Signal Processing	4
ECE 4420	Digital Control	4
ECE 4580	Optoelectronics	4
ECE 4750	Contemporary Topics in Electrical Engineering (See Note 8)	4
ECE 4760	Contemporary Topics in Electrical Engineering (See Note 8)	3
ECE 4770	Contemporary Topics in Electrical Engineering (See Note 8)	4
ECE 4780	Contemporary Topics in Electrical Engineering (See Note 8)	3
MECH4860	Engineering Design (see Note 6)	5
Computer Engineering Courses (1 required)		
ECE 3760	Digital Systems Design 1	4
ECE 3770	Digital Systems Design 2	4
ECE 4440	Computer Vision	4
ECE 4740	Digital Systems Implementation	4
Complementary Studies Elective (1 required) (see Note 2)		
Total credits for Graduation		177-180

NOTES:

1. Course continuing through both terms. Credit on completion of course.
2. The complementary studies elective can be any course at the 1000 level or above from either the faculties of Arts or Management. However, ARTS 1110, Introduction to University, may not be used for credit in the Faculty of Engineering.
3. The Department of Electrical and Computer Engineering does not guarantee that all elective courses will be offered every session or that it will be possible to fit courses into all of the many possible timetable combinations of students taking the programs. The term in which an elective course is listed each year in the *Registration Guide*.
4. There may be a maximum limit on the number of students allowed to take an elective in a particular session. Similarly, there may be a minimum limit and if registration is below the minimum, the elective will be cancelled for the session, and those registered will be required to transfer to another elective before the deadline date for course changes.
5. Students are urged to discuss their program of courses with members of the instructional staff toward the end of their third year to obtain advice concerning the best choice of electives for their needs.

Course Descriptions Electrical and Computer Engineering

ECE 2130 Electric Fields Cr.Hrs.4 (Tutorial Required) (Formerly 024.213) Fundamental laws of field theory; Maxwell's equations in integral and point form. Corequisite: MATH 3100 (or 136.310) or 006.360.

ECE 2160 Electronics 2E Cr.Hrs.5 (Lab Required) (Formerly 024.216) Characteristics of integrated circuits and transistors; design of DC and AC amplifiers in the steady state. *Prerequisite:* ENG 1180 (or 130.118). *Corequisite:* MATH 2110 (or 136.211) or 006.261.

ECE 2220 Digital Logic Systems Cr.Hrs.5 (Lab Required) (Formerly 024.222) Boolean algebra and logic primitives, net-work simplification techniques, physical realiza-

tions, number systems and codes; analysis and design of asynchronous and synchronous sequential circuits; applications to computation, measurements, and control.

ECE 2260 Circuits and Transmission Lines Cr.Hrs.4 (Lab Required) (Formerly 024.226) The application of circuit concepts: AC power, frequency and transient response, instrumentation, transmission lines as lumped element models, transmission line behaviour. *Prerequisite:* ENG 1180 (or 130.118) *Corequisite:* MATH 2110 (or 136.211).

ECE 3530 Network Theory Cr.Hrs.4 (Lab Required) (Formerly 024.353) Application of the Laplace Transform in the analysis of linear time-invariant networks, poles, zeros and frequency response; natural frequencies; general network theorems; two ports; energy and passivity. *Prerequisite:* ECE 2260 (or 024.226), *corequisite:* MATH 3110 (or 136.311).

ECE 3590 Electromagnetic Theory Cr.Hrs.4 (Lab Required) (Formerly 024.359) Electrodynamics; magnetostatics, Maxwell's equations and time-varying electromagnetic fields; polarization, boundary value problems; reflection and refraction; Poynting vector. *Prerequisite:* ECE 2130 (or 024.213).

ECE 3600 Physical Electronics Cr.Hrs.4 (Lab Required) (Formerly 024.360) Basic solid state theory; properties of semi-conductors; principles of metal-semiconductor junctions, p-n junctions and transistors; optoelectronic processes. *Prerequisites:* PHYS 1070 (or 016.107), MATH 3100 (or 136.310), and ECE 3670 (or 024.367).

ECE 3610 Microprocessing Systems Cr.Hrs.4 (Lab Required) (Formerly 024.361) Fundamentals of microprocessors and microcomputers; data flow; machine programming; architectures and instructions sets; stacks, subroutines, I/O, and interrupts; interfacing fundamentals; designing with microprocessors. *Prerequisite:* ECE 2220 (or 024.222).

ECE 3650 Electric Machines Cr.Hrs.5 (Lab Required) (Formerly 024.365) Continuation of ECE 3720 (or 024.372), including steady state and transient performance and introductory power systems theory. *Prerequisite:* ECE 3720 (or 024.372) and a certificate in CPR.

ECE 3670 Electronics 3E Cr.Hrs.4 (Lab Required) (Formerly 024.367) Continuation of ECE 2160 (or 024.216), including device models, feedback, regulators, frequency effects, oscillators, and bistability and gates. *Prerequisite:* ECE 2160 (or 024.216).

ECE 3680 Introduction to Digital Systems Cr.Hrs.4 (Lab Required) (Formerly 024.368) Numeric systems and computer arithmetic. Digital logic, gates, flip flops and tristate devices. Sequential and combinational circuits. Decoders, encoders and multiplexing. Microprocessor structures. Introduction to I/O devices and data acquisition. Not to be held with ECE 3610 (or 024.361). *Prerequisite:* ENG 1180 (or 130.118).

ECE 3690 Engineering Law, the Environment and Society Cr.Hrs.3 (Formerly 024.369) Engineering law: public responsibility and liability of the Professional Engineer; patents, copyrights, trademarks, designs, contracts; environment ethics: energy choices, depleting resources and growth of demand. [not offered in 2006-2007 . Replaced in the program by ANTH 2430 (formerly 076.243) Ecology, Technology and Society]

ECE 3700 Telecommunication Network Engineering Cr.Hrs.4 (Lab Required) (Formerly 024.370) This course will introduce modern concepts in telecommunications, including LANs, WANs, telephone networks, wireless and mobile networks, and Internet networks. Focus will be on design engineering, and management of networks, and on network programming for client server architectures. *Prerequisite:* COMP 2140 (or 074.214).

ECE 3710 Design of Engineering Software Cr.Hrs.4 (Lab Required) (Formerly 024.371) This course will introduce various practical tools and techniques for developing engineering software. Topics to be covered include: Object oriented analysis and design, data structures, network programming, graphical user interfaces, and software engineering. *Prerequisite:* COMP 1010 (or 074.101).

ECE 3720 Electric Power and Machines Cr.Hrs.4 (Lab Required) (Formerly 024.372) Principles and applications of electric power, energy conversion and machines. *Prerequisite:* ENG 1180 (or 130.118).

ECE 3740 Systems Engineering Principles 1 Cr.Hrs.4 (Lab Required) (Formerly 024.374) Complexity and other system measures and analysis, system architectures and architectural elements for embedded systems, hardware and software, incremental design elaboration. Coding, testing, debugging, verification and validation. Project planning, cost analysis and maintenance. Real-time systems, graphical user interfaces and computational models. *Prerequisite:* COMP 2140 (or 074.214).

ECE 3750 Systems Engineering Principles 2 Cr.Hrs.4 (Lab Required) (Formerly 024.375) Reliability measures and analysis, software system architectures, system metrics, system verification for embedded systems. Coding practices for large scale embedded system development. Real-time systems, graphical user interfaces, and computational models. *Prerequisite:* ECE 3740 (or 024.374)

ECE 3760 Digital Systems Design 1 Cr.Hrs.4 (Lab Required) (Formerly 024.376) Register-transfer and control-sequence design using a hardware description language. Design of finite-state machines with data path definitions and algorithms and algorithmic state machine charts. Hard-ware-software co-design. *Prerequisite:* ECE 4240 (or 024.424).

ECE 3770 Digital Systems Design 2 Cr.Hrs.4 (Lab Required) (Formerly 024.377) Executable system specification and a methodology for system partitioning and refinement into system-level components. Models and architectures, specification languages, translation to an HDL, system partitioning, design quality estimation, specification refinement into synthesizable models. *Prerequisite:* ECE 4240 (or 024.424) and MATH 3120 (or 136.312).

ECE 3780 Signal Processing 1 Cr.Hrs.4 (Lab Required) (Formerly 024.378) Introduction to signals and systems; spectral analysis (Fourier Series) of continuous-time periodic signals; spectral analysis of aperiodic signals (Fourier Transform); the impulse

response and convolution operator; frequency analysis of linear time-invariant systems; applications to filtering, communications systems, and biological systems; A/D conversion; sampling. Laboratory periods will be used to give students hands-on experience in programming many of the techniques covered in the theoretical parts of the course. *Prerequisites:* ECE 2260 (or 024.226) and MATH 3100 (or 136.310).

ECE 3790 Engineering Algorithms Cr.Hrs.4 (Lab Required) (Formerly 024.379) Numerical algorithms, optimization, statistical description of data random number generation, string processing, geometric algorithms, algorithm machines, dynamic programming and NP complete problems. *Prerequisite:* COMP 2140 (or 074.214). *Corequisite:* MATH 3100 (or 136.310). May not be held with the former 24.451.

ECE 4140 Power Transmission Lines; Field Effects and Insulation Coordination Cr.Hrs.4 (Lab Required) (Formerly 024.414) AC and DC transmission line corona and its environmental effects. Electric field calculations; design methods to reduce electric field. Electrostatic and electromagnetic effects. Insulation design for power frequency, switching and lightning induced surges. Insulation coordination - conventional and probabilistic methods. Power apparatus testing - criteria and significance. *Prerequisite:* ECE 3720 (or 024.372).

ECE 4150 Control Systems Cr.Hrs.4 (Lab Required) (Formerly 024.415) Principal methods of analysis and design for feedback control systems. *Prerequisite:* ECE 3780 (or 024.378) or 024.358.

ECE 4160 Control Engineering Cr.Hrs.4 (Lab Required) (Formerly 024.416) Design of control systems by frequency domain and root locus method; state equations; introduction to nonlinear analysis. *Prerequisite:* ECE 4150 (or 024.415).

ECE 4190 Solid State Electronics Cr.Hrs.4 (Lab Required) (Formerly 024.419) Micro-electronic fabrication principles. Bipolar and FET structures: discrete devices and integrated LSI logic and memory cells. Lasers, LEDs, displays, optical and infrared photodetectors, photovoltaic solar cells, magnetic bubbles. Introduction to VLSI systems. *Prerequisite:* ECE 3670 (or 024.367).

ECE 4200 Electric Filter Design Cr.Hrs.4 (Lab Required) (Formerly 024.420) Realizability theory, approximation of filtering characteristics, ladder networks and transmission zeros, active RC filter design with regard to sensitivity minimization, phase-shifting and time-delay filters, impulse response of filters, rudiments of digital filters. *Prerequisite:* ECE 3530 (or 024.353).

ECE 4240 Microprocessor Interfacing Cr.Hrs.4 (Lab Required) (Formerly 024.424) Interfacing of microcomputers to the external world: interfacing of I/O devices with minimum hardware and software; data acquisition with and without microprocessors; data communication, transmission and logging with small computers. *Prerequisite:* ECE 2160 (or 024.216) and ECE 3610 (or 024.361).

ECE 4250 Digital Communications Cr.Hrs.4 (Lab Required) (Formerly 024.425) Transmission of digital data; error rates, interference. Information measures, information rate and channel capacity. Coding. *Prerequisite:* ECE 4260 (or 024.426) and ECE 4830 (or 024.483) or 024.373.

ECE 4260 Communications Systems Cr.Hrs.4 (Lab Required) (Formerly 024.426) Development and applications of random processes. Analysis and comparison of modulation schemes: AM, FM, PM, PCM. *Prerequisites:* ECE 3780 (or 024.378) and STAT 2220 (or 005.222).

ECE 4270 Antennas Cr.Hrs.4 (Lab Required) (Formerly 024.427) Radiation fundamentals, linear antennas, point source arrays, aperture antennas, antenna impedance, antenna systems. *Prerequisite:* ECE 3590 (or 024.359).

ECE 4280 Engineering Electromagnetics Cr.Hrs.4 (Lab Required) (Formerly 024.428) Plane, cylindrical and spherical waves, introduction to scattering and diffraction, waveguides, transmission line applications. *Prerequisite:* ECE 3590 (or 024.359).

ECE 4290 Microwave Engineering Cr.Hrs.4 (Lab Required) (Formerly 024.429) Microwave circuit analysis; passive and active devices; communication system power budget and signal-to-noise ratio calculations. *Prerequisite:* ECE 3590 (or 024.359).

ECE 4300 Electrical Energy Systems 1 Cr.Hrs.4 (Lab Required) (Formerly 024.430) Power system component modelling and computational methods for system problems such as load flow, faults, and stability. *Prerequisite:* ECE 3650 (or 024.365).

ECE 4310 Electrical Energy Systems 2 Cr.Hrs.4 (Lab/Tub Required) (Formerly 024.431) Generating stations. Power system stability and optimal operation. EHV-ac and HVDC power transmission. Power system protective relaying and reliability evaluation. *Prerequisite:* ECE 4300 (or 024.430).

ECE 4370 Power Electronics Cr.Hrs.4 (Lab Required) (Formerly 024.437) Thyristor device theory and operation, controlled rectifiers and line-commutated inverters, and forced commutation as applied to d/c choppers and a/c variable frequency and voltage inverters. *Prerequisites:* ECE 3650 (or 024.365) and ECE 3670 (or 024.367).

ECE 4390 Engineering Computations 4E Cr.Hrs.4 (Lab Required) (Formerly 024.439) Development and application of numerical methods for the solution of electrical and computer engineering problems. Optimization techniques. Finite difference, finite element and boundary element methods. Solution of large systems of linear and nonlinear equations. *Prerequisite:* MATH 3110 (or 136.311).

ECE 4420 Digital Control Cr.Hrs.4 (Lab Required) (Formerly 024.442) Mathematical modelling of sampling switches. Z-transforms. Response and stability of systems involving sampling. Design of digital compensators. *Prerequisites:* ECE 4830 (or 024.483) or 024.373 and ECE 4150 (or 024.415).

ECE 4440 Computer Vision Cr.Hrs.4 (Lab Required) (Formerly 024.444) Image formation and sensing, image compression, degradation and restoration, geometrical and topological properties, pattern classification, segmentation procedures, line-drawing images, texture analysis, 3-D image processing. *Prerequisite:* ECE 3780 (or 024.378).

ECE 4520 Simulation and Modelling Cr.Hrs.4 (Lab Required) (Formerly 024.452) Monte Carlo Methods, random processes, simulation of complex systems in the design of computer systems. Use of statistical interference and measures of performance

in hardware and software systems. *Prerequisites:* STAT 2220 (or 005.222) or 005.250 and COMP 2140 (or 074.214).

ECE 4530 Parallel Processing Cr.Hrs.4 (Lab Required) (Formerly 024.453) Classification of parallel processors, SIMD vs. MIMD, multiprocessing Vs parallel processing, interconnection topology, communications, and node complexity, pipelining and vector processors, array processors, connection machines, multiprocessors, data flow and VLSI algorithmic machines. *Prerequisites:* COMP 2140 (or 074.214) and ECE 3760 (or 024.376).

ECE 4580 Optoelectronics Cr.Hrs.4 (Lab Required) (Formerly 024.458) Basic theory of quantum mechanics; solution of Schrodinger equations; interaction of radiation with matter; masers and lasers; propagation, modulation, excitation and detection in optical waveguides; introduction to fiber and integrated optics. *Prerequisite:* ECE 3600 (or 024.360).

ECE 4600 Group Design Project Cr.Hrs.6 (Formerly 024.460) The engineering curriculum must culminate in a significant design experience which is based on the knowledge and skills acquired in earlier course work and which gives students an exposure to the concepts of team work and project management. *Prerequisites:* ENG 2010 (or 130.201) and completion of the program within 16 months.

ECE 4610 Biomedical Instrumentation and Signal Processing Cr.Hrs.4 (Lab Required) (Formerly 024.461) Introduction for senior Engineering students to the solution of medical and biological problems using engineering techniques and equipment. *Prerequisites:* ECE 3530 (or 024.353) and ECE 3780 (or 024.378).

ECE 4720 Industry Internship Cr.Hrs.0 (Formerly 024.472) Industry Internship Super-vised work experience, normally of 12-16 month's duration, concluded by a work report. (Pass-Fail grade only).

ECE 4740 Digital Systems Implementation Cr.Hrs.4 (Lab Required) (Formerly 024.474) Implementation methodologies and technologies for digital systems, including VLSI implementations, PCB implementations, and rapid prototyping (FPGA). *Prerequisite:* ECE 4240 (or 024.424). Not to be held with ECE 4500 (or 024.450).

ECE 4750 Topics in Electrical Engineering 1 Cr.Hrs.4 (Lab Required) (Formerly 024.475) This course will cover contemporary topics in Electrical Engineering via lectures and laboratory sessions. The specific topics and a detailed course outline will be available at the time of registration. *Prerequisite:* Permission of the Department.

ECE 4760 Topics in Electrical Engineering 2 Cr.Hrs.3 (Formerly 024.476) This lecture based course will cover contemporary topics in Electrical Engineering. The specific topics and a detailed course outline will be available at the time of registration. *Prerequisite:* Permission of the Department.

ECE 4770 Topics in Electrical Engineering 3 Cr.Hrs.4 (Lab Required) (Formerly 024.477) This course will cover contemporary topics in Electrical Engineering via lectures and laboratory sessions. The specific topics and a detailed course outline will be available at the time of registration. *Prerequisite:* Permission of the Department.

ECE 4780 Topics in Electrical Engineering 4 Cr.Hrs.3 (Lab Required) (Formerly 024.478) This lecture based course will cover contemporary topics in Electrical Engineering. The specific topics and a detailed course outline will be available at the time of registration. *Prerequisite:* Permission of the Department.

ECE 4830 Signal Processing 2 Cr.Hrs.4 (Lab Required) (Formerly 024.483) Representation of discrete-time signals and systems in the time and frequency domains; the z-transform; application to various discrete-time linear time-invariant systems; design of digital filters. Laboratory periods will be used to give students hands-on experience in programming many of the techniques covered in the theoretical parts of the course. *Prerequisite:* ECE 3780 (or 024.378).

5.7 Mechanical and Manufacturing Engineering

General Office: E2 -327 Engineering Building

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Acting Head: N. Richards

Associate Head: N. Sepehri

Associate Head: J. Cahoon

The Department of Mechanical and Manufacturing Engineering offers a fully accredited degree program in Mechanical Engineering and Manufacturing Engineering. The programs are designed to give students an understanding of the basic principles of engineering, and in particular, an adequate training and education in the fundamentals and their applications. The department offers an Aerospace Engineering Option within the Mechanical Engineering program.

Mechanical Engineering Degree Program

The program in Mechanical Engineering provides the education required by those who wish to practice in Mechanical Engineering that embraces, among other subdivisions, the design of mechanical devices and systems, manufacturing engineering and management, computer-aided design and computer-aided manufacturing, power generation and utilization, air conditioning, the material sciences, and the aeronautical sciences. The program places special emphasis on the use of computers in solving engineering problems.

The program offers a basic training in the sciences, mathematics and fundamental engineering subjects followed by more specialized subjects related directly to mechanical engineering discipline. Students are allowed to choose three technical electives to suit their career objectives and are also required to take one complementary studies elective related to social issues. During the program, arrangements are made for conducted visits to local power and industrial plants.

Upon completion of the preliminary engineering program, students may enter the mechanical engineering program or the mechanical engineering program with aerospace option or the manufacturing engineering program. The students are urged to consult appropriate program requirements shown for each program/option. Please note that students entering the aerospace option during the 2006/2007 regular session and thereafter are required to take MECH 3420, Vibrations and Acoustics as part of the core program.

Co-operative Education Programs in Mechanical and Manufacturing Engineering

Director: N. Richards

Co-op Coordinator: Cindy Gregoire

The Co-operative Education Program is one in which academic study is complemented and enriched with practical work experience. Following the second term of second year Mechanical Engineering, a student alternates periods of attendance at the university with periods of employment in industry or government. The process of placing a student recognizes the requirements of both the employer and the student. The work terms provide the students with practical experience, assistance in financing their education and guidance for future career specialization.

The Department of Mechanical and Manufacturing Engineering offers students the choice of a traditional program and a co-operative program in each program area. A schedule listing the work terms and academic terms for these programs is available in the Co-operative Education Office located in the Department of Mechanical and Manufacturing Engineering.

Mechanical Engineering Students who have successfully completed all courses in first year and first term of second year of engineering are eligible to enter the program and apply for job placement. Admission to Mechanical Co-op occurs during the first academic term of second year for placement in May. Acceptance into the program is dependent upon the student receiving a job placement through the Co-operative Education Office. Students may seek employment on their own, but must consult with the co-op office before doing so. Once a job placement has been secured through the office, the student is accepted into the program and enrolls in the course MECH 2050, Mechanical Engineering Co-operative Education Assignment (and subsequently, MECH 3050, MECH 4050 and MECH 4060) for the specific work term of employment. Admission to Manufacturing Co-op occurs after the student has completed the second academic term of the second year for placement in January. Corresponding courses for the Manufacturing Engineering program are: MECH 3910, MECH 3920, MECH 4910 and MECH 4920. Program course fees are \$292.50 per course (this fee is subject to change without notice).

In order to stay in the co-operative program, a student must maintain a minimum Cumulative Grade Point Average of 2.00 and must obtain a grade of "Pass" for each work term report. All rules and regulations of the Faculty of Engineering apply. Students who do not maintain these standards, may not remain in the co-operative program and may be transferred back into the traditional program or required to withdraw completely.

The course and grade requirements for completion of the co-operative program are the same as those for the traditional program. However, in order to satisfy course prerequisite needs, the timetable and course arrangements of a student in the co-operative program may differ from those of a student in the traditional program.

Each successfully completed work term and its corresponding work term report are rated at one credit hour. The requirement to take the fourth year Graduation Thesis (course# MECH 4160) is waived for those students successfully completing at least three work terms. The Co-op office assigns faculty advisors to mark work term reports. Graduates who successfully complete at least three work terms and the required work term reports will have the words "Co-operative Education Option" printed on their diplomas. For more information regarding the work term report guidelines please see the Co-op Coordinator.

A student who is employed for a fourth work term may or may not submit a fourth work term report. The student is however encouraged to submit

one. The Co-op program fee payment for the fourth work term is mandatory if the student's employment with the company for the fourth work term was arranged through the Co-op office. This includes employment secured by the re-hiring of the same student from his/her previous work term. The grade for a fourth work term in which a report was not submitted will be based on an evaluation of the student's performance during that work term.

If the co-op student secures employment for the fourth work term at a company for which he/she was not yet employed then the student need not register for the fourth work term nor submit a report.

A student who has completed a degree in one of these programs, and then decides to register for a second degree in the other, will be permitted to enter the Co-op program only after the student has completed one academic term in the program in which a second degree is pursued.

Mechanical Engineering Industry Internship Program (MEIIP)

The Mechanical and Manufacturing Engineering Department offers an Industry Internship Program in Mechanical and Manufacturing Engineering. Upon successful completion of 120 credit hours, a student has the opportunity of spending a continuous work term period of twelve to sixteen months in industry. Interested students may apply in the first term of third year. After an internship placement has been secured the student registers for course MECH 4930. One technical report is submitted upon completion of the internship. A student who has successfully completed an IIP will not be exempt from completing an undergraduate thesis. Students can obtain additional information from the Co-op Coordinator.

Second Degree in Mechanical and Manufacturing Engineering

Those students who have already completed a degree in Mechanical Engineering and who are seeking a second degree in Manufacturing Engineering or the Aerospace Option should consult the Mechanical and Manufacturing Engineering office for details. The required courses for a second degree option must be approved by the Head of Mechanical and Manufacturing Engineering prior to the start of the second degree.

Graduation Thesis

Students must be in their final graduating year to register for MECH 4160, Graduation Thesis. The thesis work is to be a significant experience of fundamental knowledge and skills acquired in the program. Students are required to demonstrate, within a fixed time period, an ability to organize, conduct and report on an original study of a mechanical, manufacturing or aerospace engineering project.

The format to be used for the project proposal, the progress reports, and the formal report; as well as the guidelines for the oral presentation will be provided at a graduation thesis information session to be held mid-September. Normal due dates for the various components of the thesis are outlined with the rules and regulations. Students should be aware that failure to meet the department deadlines would carry the penalty of a failing thesis grade.

Mechanical Engineering Program

Preliminary Engineering Program

Common to all Engineering Programs. (See Section 5.2 for details).

Departmental Program:

Course No.	Credit Hours	
CHEM 2240	Applied Chemistry for Engineers	3
STAT 2220	Contemporary Statistics for Engineers	3
MECH 4050	Engineering Economics (former 23.483)	3
ELEC 3680	Introduction to Digital Systems	4
	Or	
ELEC 3720	Electric Power and Machines	4
MECH 2120	Mechanics of Machines	4
MECH 2200	Thermodynamics 2M	4
MECH 2220	Stress Analysis and Design	4
MECH 2260	Introduction to Fluid Mechanics	3
MECH 2270	Principles of Engineering Materials	4
MECH 2290	Manufacturing Engineering	3
MECH 2300	Introduction to Production and Manufacturing (former 025.217)	3
MECH 3420	Vibrations and Acoustics	4
MECH 3430	Measurement and Control	4
MECH 3470	Heat Transfer	3

MECH 3480	Dynamics	3
MECH 3490	Advanced Fluid Mechanics and Design	3
MECH 3500	Stress Analysis and Design 3M	3
MECH 3530	CAE Design and Analysis	3
MECH 3540	Modern Engineering Materials	4
MECH 4160	Mechanical Graduation Thesis (See Note 4)	3
MECH 4650	Machine Design 4M	4
MECH 4680	Energy Conversion Utilization	4
MECH 4820	Computational Thermofluids	3
MECH 4860	Engineering Design	5
MECH 4980	Mechanical Engineering Lab1	2
MECH 4990	Mechanical Engineering Lab2	2
ANTH 2430	Ecology, Technology and Society	3
ANTH 2430	Technical Communications	3
MATH 2100	Mathematical Methods for Engineers 1	4
MATH 2110	Mathematical Methods for Engineers 2	4
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 3100	Mathematical Methods for Engineers 3	3
One Complementary Studies Elective		3/4
Three Technical Electives		3/4
Total credit hours (excluding preliminary engineering program)		116-120

NOTES:

- Students are required to select either ELEC 3720 Electric Power and Machines or ELEC 3680 Introduction to Digital Systems.
- A student's selection and timetabling of electives are subject to the following conditions:
 - Only one complementary elective required upon completion of Critical Thinking (PHIL 1290) and English (ENGL 1310) in the preliminary program.
 - The complementary studies electives can be any course at the 1000-level, or above, from the faculties of Arts or Management. However, ARTS 1110, Introduction to University, may not be used for credit in the Faculty of Engineering.
 - Some courses from the Clayton H. Riddell Faculty of Environment, Earth, and Resources may be taken as complementary studies electives upon approval by the department head.
 - Three Technical Electives of three or four credit hours each are required. Those students in the Aerospace option are required to take one technical elective.
- For courses continuing through both terms, credit is given on completion of course.
- For those students graduating in December, register in A01 (first term) section of MECH 4160, and if graduating in May, register in A02 (second term) section of MECH 4160.

Technical Electives in Mechanical Engineering

Course No.		Credit Hours
MECH 3520	Aerodynamics	4
MECH 3550	Robotics and Computer Numerical Control	4
MECH 3560	and Analysis of Manufacturing Systems	3
MECH 3570	Manufacturing Automation	4
MECH 3580	Production Planning and Control	3
MECH 3590	Systems Simulation and Facilities Planning	3
MECH 3600	Manufacturing Processes: Applied Fundamentals (see Note 5. below)	3
MECH 4170	Program Management and Systems Engineering	3
MECH 4180	Analysis and Design of Aerospace Structures	3
MECH 4190	Aerospace Materials and Advanced Manufacturing Processes	3
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4240	Design for Manufacturing	4
MECH 4290	Internal Combustion Engines	3
MECH 4410	Air Conditioning	4
MECH 4430	Boundary Layer	4
MECH 4440	Comp Fluid Flow	4
MECH 4450	Aircraft and Spacecraft Dynamics (former 025.351)	3
MECH 4530	Strength of Materials 4M	3
MECH 4550	Noise Control	4
MECH 4560	Selected Topics in Fluid Mechanics	4
MECH 4620	Corrosion of Metals and Alloys	4
MECH 4670	Applied Linkage Synthesis	3
MECH 4690	Topics in Heat Transfer and Energy	3
MECH 4700	Thermal Systems Design	3
MECH 4780	Quality Assurance in Industry	3
MECH 4810	Automotive Engineering and Design	3
MECH 4870	Fracture and Failure of Engineering Materials	4
MECH 4900	Mechatronics Systems Design	4
MECH 4960	Manufacturing Process I	4
MECH 4970	Manufacturing Process II	4

NOTES:

- The Department of Mechanical and Manufacturing Engineering may not be able to offer all technical electives listed above. Students are urged to consult the Mechanical and Manufacturing Engineering office for a current list of technical electives.
- Core courses in Manufacturing Engineering that are not part of the core program in Mechanical Engineering will be accepted as technical electives in Mechanical Engineering. Similarly, core courses in Mechanical and Manufacturing Engineering that are not part of the core program in the Aerospace option, will be accepted as technical electives in the Aerospace option. The associate head of Mechanical and Manufacturing Engineering must approve these electives.
- There will normally be a minimum registration limit of six students for each technical elective. If registration is below the minimum, the elective will be cancelled for the session, and those registered will be required to transfer to another course before the course-changing date.
- Students are urged to discuss their elective courses with members of the instructional staff toward the end of their second year, in order to obtain advice concerning the best choice of electives to meet their needs.
- MECH 3600 will be offered through Red River College as an equivalent course. Credit, therefore, will be granted upon completion of the RRC course. Students should consult the department regarding scheduling.

Aerospace Engineering Option

The Department of Mechanical and Manufacturing Engineering implemented an Aerospace option in the 1996-97 academic session. It is open to all third year students in the Mechanical Engineering program and requires two years to complete after second year Mechanical Engineering. The option consists of six courses. These courses are MECH 3520, MECH 4170, MECH 4180, MECH 4190, MECH 4200 and MECH 4450. These courses replace an equivalent number of courses in the Mechanical Engineering curriculum.

Preliminary Engineering Program

Common to all Engineering programs. (See Section 5.2 for details.)

Departmental Program

Course No.	Credit Hours	
CHEM 2240	Applied Chemistry for Engineers	3
STAT 2220	Contemporary Statistics for Engineers	3
MECH 4050	Engineering Economics (former 023.483)	3
MECH 2120	Mechanics of Machines	4
MECH 2200	Thermodynamics 2M	4
MECH 2220	Stress Analysis and Design	4
MECH 2260	Introduction to Fluid Mechanics	3
MECH 2270	Principles of Engineering Materials	4
MECH 2290	Manufacturing Engineering	3
MECH 2300	Introduction to Production and Manufacturing (former 025.217)	3
MECH 3420	Vibrations and Acoustics (see note #4 below)	4
MECH 3430	Measurements and Control	4
MECH 3470	Heat Transfer 3M	3
MECH 3480	Dynamics	3
MECH 3490	Advanced Fluid Mechanics	3
MECH 3500	Stress Analysis and Design 3M	3
MECH 3520	Aerodynamics	4
MECH 3530	CAE Design and Analysis	3
MECH 3540	Modern Engineering Materials	4
MECH 4160	Graduation Thesis (See Note 4 in Mechanical Engineering program)	3
MECH 4170	Program Management and Engineering Systems	3
MECH 4180	Analysis and Design of Aerospace Structures	3
MECH 4190	Aerospace Materials and Advanced Manufacturing Processes	3
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4450	Aircraft and Spacecraft Dynamics (former 25.351)	3
MECH 4860	Engineering Design	5
MECH 4980	Mechanical Engineering Laboratory 1	2
MECH 4990	Mechanical Engineering Laboratory 2	2
ANTH 2430	Ecology, Technology and Society	3
ANTH 2430	Technical Communications	3
MATH 2100	Mathematical Methods for Engineers 1	4
MATH 2110	Mathematical Methods for Engineers 2	4
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 3100	Mathematical Methods for Engineers 3	3
One Complementary Studies Elective		3/4
One Technical Elective		3/4

NOTES:

1. Only one complementary elective required upon completion of Critical Thinking (PHIL 1290) and English (ENGL 1310 or ENGL 1320) in the preliminary program.
2. Minimum of 3 credit hours of technical electives.
3. Core and technical elective courses from the Mechanical and Manufacturing Engineering programs (with the exception of courses from List B of technical electives for manufacturing engineering), that are not included in the Aerospace Option, may be taken as technical electives.
4. Students entering the Aerospace option during the 2004/2005 regular session and thereafter are required to take MECH 3420, Vibrations and Acoustics as part of the core program.

Mechanical Engineering and Aerospace Option Co-op Courses

MECH 2050	Mechanical Engineering Co-op Education Assignment 1	1
MECH 3050	Mechanical Engineering Co-op Education Assignment 2	2
MECH 4050	Mechanical Engineering Co-op Education Assignment 3	3
MECH 4060	Mechanical Engineering Co-op Education Assignment 4	4

Manufacturing Engineering Degree Program

The program in Manufacturing Engineering comprises a thorough study in the engineering sciences followed by courses directly related to the field.

The students will acquire creative and analytic skills to apply scientific approach to study macro/micro components of manufacturing systems. Advanced technologies such as robots, computer controlled machine tools, automation, mechatronics, production control methods and analysis of manufacturing systems and processes will be emphasized. Students are allowed to choose 2 technical electives to suit their career objectives. One complimentary elective related to social issues will also be part of the course requirements. During the course of study, students will participate in projects in co-operation with local engineering industries.

Preliminary Engineering Program

Common to all Engineering programs. (See Section 5.2 for details.)

Departmental Program

Course No.	Credit Hours	
CHEM 2240	Applied Chemistry for Engineers	3
STAT 2220	Contemporary Statistics for Engineers	3
MECH 4050	Engineering Economics (former 023.483)	3
ELEC 3680	Digital Systems	4
or		
ELEC 3720	Electric Power and Machines	4
MECH 2120	Mechanics of Machine	4
MECH 2200	Thermodynamics 2M	4
MECH 2220	Stress Analysis and Design	4
MECH 2260	Introduction to Fluid Mechanics	3
MECH 2270	Principles of Engineering Materials	4
MECH 2290	Manufacturing Engineering	3
MECH 2300	Introduction to Production and Manufacturing	3
MECH 3420	Vibrations and Acoustics	4
MECH 3430	Measurement and Control	4
MECH 3480	Dynamics	3
MECH 3500	Stress Analysis and Design IIIM	3
MECH 3540	Modern Engineering Materials	4
MECH 3550	Robotics and Computer Numerical Control and Analysis of Manufacturing Systems	4
MECH 3560		3
MECH 3570	Manufacturing Automation	4
MECH 3580	Production Planning and Control	3
MECH 3590	Systems Simulation and Facilities Planning	3
MECH 4160	Graduation Thesis Project or Technical Elective #3	3
MECH 4650	Machine Design 4M	4
MECH 4680	Energy Conservation and Utilization	4
MECH 4860	Engineering Design	4
MECH 4900	Mechatronics Systems Design	4
MECH 4960	Manufacturing Process I	4
MECH 4970	Manufacturing Process II	4
ANTH 2430	Ecology, Technology and Society	3
ANTH 2430	Technical Communications	3
MATH 2100	Mathematical Methods for Engineers 1	4
MATH 2110	Mathematical Methods for Engineers 2	4
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 3100	Mathematical Methods for Engineers 3	3
One complementary studies elective		3/4
Three technical electives or two technical electives and a graduation thesis project		3/4

NOTES:

1. Students are required to select either ELEC 3720 Electric Power and Machines or ELEC 3680 Introduction to Digital Systems.
2. The one required complementary studies elective may be any course at the 1000 level or above from the Faculty of Arts or the Faculty of Management. However, ARTS 1110, Introduction to University, may not be used for credit in the Faculty of Engineering.
3. Technical electives in Manufacturing Engineering: Students are required to take a total of two technical electives (one from List A, and one from list B) from the approved list of technical electives for manufacturing engineering. If the student elects to do a thesis (MECH 4160), then only one technical elective is required.

Technical Electives in Manufacturing Engineering

Course No. Credit Hours
Choose one from List A and one from List B or one from List A and a graduation thesis project (MECH 4160).

LIST A

ELEC 3680	Introduction to Digital Systems or	4
ELEC 3720	Electric Power and Machines	4
ELEC 4240	Microprocessor Interfacing	4
MECH 3470	Heat Transfer	3
MECH 3490	Advanced Fluid Mechanics and Design	3
MECH 3520	Aerodynamics	4
MECH 3530	Computer-Aided Engineering Design and Analysis	3
MECH 3600	Manufacturing Processes: Applied Fundamentals see note 4. below)	4
MECH 4160	Graduation Thesis	3
MECH 4170	Program Management & Systems Engineering	3
MECH 4190	Aerospace Materials	3
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4240	Design for Manufacturing	4
MECH 4290	Internal Combustion Engines	3
MECH 4410	Air Conditioning	3
MECH 4450	Aircraft and Spacecraft Performance and Dynamics	3
MECH 4550	Noise Control	4
MECH 4620	Corrosion of Metals and Alloys	4
MECH 4670	Applied Linkage Synthesis	4
MECH 4690	Topics in Heat Transfer and Energy	3
MECH 4700	Thermal Systems Design	3
MECH 4810	Automotive Engineering and Design	3
MECH 4870	Fracture and Failure of Engineering Materials	3
BIOE 4390	Unit Operations 1	3
ECOL 3420	Apparel Manufacturing	4

List B

MANG 1100	Introduction to Financial Accounting	3
MANG 2210	Fundamentals of Marketing	4
MANG 3240	Selected Topics in Marketing	3
MANG 3060	Workplace Health and Safety or	3
MANG 3070	Labour Relations and Occupational Safety and Health Law	3

NOTES:

1. Core or technical elective courses in Mechanical Engineering that are not part of the core program in Manufacturing Engineering will be accepted as technical electives in Manufacturing Engineering.
2. The Department of Mechanical and Manufacturing Engineering may not be able to offer all of the technical electives that are shown. Students are urged to consult the Mechanical Engineering office for a list of technical electives that will be offered in that year.
3. There will normally be a minimum registration limit of six students for each technical elective. If registration is below the minimum, the elective will be cancelled for the session, and those registered will be required to transfer to another course before the final date for registration revisions.
4. MECH 3600 will be offered through Red River College as an equivalent course. Credit, therefore, will be granted upon completion of the RRC course. Students should consult the department regarding scheduling.

Manufacturing Engineering Co-op Courses

MECH 3910	Manufacturing Engineering Co-op Education Assignment 1
MECH 3920	Manufacturing Engineering Co-op Education Assignment 2
MECH 4910	Manufacturing Engineering Co-op Education Assignment 3
MECH 4920	Manufacturing Engineering Co-op Education Assignment 4

NOTES:

1. Co-op students must complete the same number of technical electives as the non-co-op manufacturing engineering students.

Course Descriptions Mechanical and Manufacturing Engineering

MECH 2050 Mechanical Engineering Co-op Education Assignment 1 Cr.Hrs.1 (Formerly 025.205) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only)

MECH 2120 Mechanics of Machines Cr.Hrs.4 (Tutorial Required) (Formerly 025.212) Graphical and analytical techniques for determining velocity, acceleration, and forces in mechanical linkages, cams, and gear trains. Computer solutions for kinematic design. *Prerequisites:* PHYS 1050 (or 016.105), ENG 1350 (or 130.135) and COMP 1010 (or 074.101).

MECH 2200 Thermodynamics 2M Cr.Hrs.4 (Tutorial Required) (Formerly 025.220) Cycles, compressors, transient flow processes, irreversibility and availability, thermo-

dynamic relations, departure charts, gas mixtures, psychrometry, combustion. *Prerequisites:* ENG 1120 (or 130.112), 136.151 and MATH 1710 (or 136.171).

MECH 2220 Stress Analysis and Design 2M Cr.Hrs.4 (Tutorial Required) (Formerly 025.222) Axial and torsional loading-stress, strain and deformation in statically determinate and indeterminate systems. Thermally induced stress. Stresses in beams under pure bending and bending with shear. Reinforced beams. Stresses under combined loading. The transformation of plane stress and Mohr's circle. Instability and columns. *Prerequisites:* PHYS 1050 (or 016.105), ENG 1350 (or 130.135) and MATH 1710 (or 136.171).

MECH 2260 Introduction to Fluid Mechanics Cr.Hrs.3 (Tutorial Required) (Formerly 025.226) Fundamental concepts used in analysis of fluid behaviour, pressure in stationary fluids, forces on submerged surfaces, buoyancy, integral methods, the Bernoulli equation, pipeline analysis. *Prerequisite:* MATH 2100 (or 136.210). *Corequisite:* MATH 2110 (or 136.211).

MECH 2270 Principles of Engineering Materials Cr.Hrs.4 (Lab Required) (Formerly 025.227) Relationship of physical and mechanical properties of metals, alloys, polymers, glasses and ceramics to bonding, molecular structure and microstructure. Effect of environment including stress and temperature on short and long term behaviour. *Prerequisite:* CHEM 1300 (or 002.130).

MECH 2290 Manufacturing Engineering Cr.Hrs.3 (Tutorial Required) (Formerly 025.229) A study of the various ways of shaping and fabricating components. An introduction to manufacturing systems, production systems and automation. Plant tours.

MECH 2300 Introduction to Production and Manufacturing Cr.Hrs.3 (Tutorial Required) (Formerly 025.230) The objective of this course is to introduce the fundamental principles of a manufacturing engineer needs to know in managing a production facility. Manufacturing and important related processes are described, along with the problem areas that need to be controlled to maintain productivity, flexibility, and quality within a timeframe. The basic techniques for maintaining control and solving manufacturing problems are described, and the students will be given a number of industrial problems to solve.

MECH 3050 Mechanical Engineering Co-op Education Assignment 2 Cr.Hrs.1 (Formerly 025.305) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only)

MECH 3420 Vibrations and Acoustics Cr.Hrs.4 (Tutorial Required) (Formerly 025.342) Vibrations and computer simulations of single-degree-of-freedom systems, viscous and friction damping, MD of systems and modal analysis, measurement and sources of noise, noise control. *Prerequisites:* MECH 2120 (or 025.212) and MECH 3480 (or 025.348), MATH 3100 (or 136.310).

MECH 3430 Measurements and Control Cr.Hrs.4 (Lab Required) (Formerly 025.343) Mathematical modelling of mechanical systems. Feedback systems and stability. Digital control; analog to digital and digital to analog control systems. *Prerequisites:* MATH 3100 (or 136.310) and ENG 1180 (or 130.118).

MECH 3470 Heat Transfer 3M Cr.Hrs.3 (Tutorial Required) (Formerly 025.347) Steady-state and transient heat conduction, fins. Forced and free convection, laminar and turbulent conditions, internal and external flows. Heat exchangers. Radiation properties and exchange. *Prerequisites:* MATH 3100 (or 136.310) and ENG 1120 (or 130.112).

MECH 3480 Dynamics Cr.Hrs.3 (Tutorial Required) (Formerly 025.348) Kinematics and kinetics of a system of particles. Extension to three-dimensional, rigid-body motions involving Euler's equations, bearing reactions and balancing. *Prerequisites:* MECH 2120 (or 025.212) and MATH 1710 (or 136.171).

MECH 3490 Advanced Fluid Mechanics and Design Cr.Hrs.3 (Tutorial Required) (Formerly 025.349) Dimensional analysis and similitude, flow measurement, differential analysis. Introduction to boundary-layer theory. Design of flow systems and devices. *Prerequisite:* MECH 2260 (or 025.226). *Corequisite:* MATH 3100 (or 136.310).

MECH 3500 Stress Analysis and Design 3M Cr.Hrs.3 (Tutorial Required) (Formerly 025.350) Strength and stability of columns, torsion of thin-walled members, unsymmetric loading and shear centres, beam deflection and energy methods. Time and temperature behaviour of materials, design against fatigue and creep. *Prerequisites:* MATH 2110 (or 136.211), MECH 2220 (or 025.222).

MECH 3520 Aerodynamics Cr.Hrs.4 (Formerly 025.352) Aeronautical definitions, compressible flow, plane normal shock waves, Mach. no. and shock waves in two-dimensional flow, potential flow theory in two-dimensional and axisymmetric flows. Two-dimensional wing theory, finite wing theory panel methods, elements of boundary layer theory. Compressibility and wings, wing design, flow control. *Prerequisite:* MECH 3490 (025.349).

MECH 3530 Computer-Aided Engineering Design and Analysis Cr.Hrs.3 (Lab Required) (Formerly 025.353) Overview of numerical techniques for CAD; principles of computer graphics; geometric modeling; introduction to finite element analysis and development of integrated CAD systems; coursework includes design labs and a comprehensive design project. *Prerequisites:* MECH 2220 (or 025.222), COMP 1010 (or 074.101) and MATH 3100 (or 136.310).

MECH 3540 Modern Engineering Materials Cr.Hrs.4 (Lab Required) (Formerly 025.354) A study of the relationship between the mechanical properties of metallic materials and microstructure. The development and manipulation of microstructures through thermomechanical treatments to obtain desired properties. The selection of materials for given applications. *Prerequisite:* MECH 2270 (or 025.227).

MECH 3550 Robotics and Computer Numerical Control Cr.Hrs.4 (Lab Required) (Formerly 025.355) This course builds up a foundation in the area of Computer Aided Manufacturing (CAM) such as computer numerically controlled machine tools and ro-

botics. Intense hands on experience are provided in the laboratory sessions on part programming using Computer aided design (CAD) packages and robots to demonstrate application in the area of CAM. Several case studies and industrial applications will be discussed. (Not to be held with the former 025.484)

MECH 3560 Modeling and Analysis of Manufacturing Systems Cr.Hrs.3 (Tutorial Required) (Formerly 025.356) The objective of this course is to develop the ability to formulate and analyze problems that will be encountered in a manufacturing system. The skills acquired will allow the students to approach problems from an optimization perspective. The students will be provided experience in related software packages. *Prerequisites:* MECH 2300 (or 025.230) or MECH 2170 (or 025.217), and STAT 2220 (or 005.222). (Not to be held with the former 025.341)

MECH 3570 Manufacturing Automation Cr.Hrs.4 (Lab Required) (Formerly 025.357) This course builds upon the foundation developed in a previous course: namely Robotics and Computer Numerical Control. The course covers a wide variety of topics in the area of computer controlled automation. The students are provided with hands on experience in design for automation. It will synthesize several aspects associated with integrated operation of computer controlled automated devices. *Prerequisite:* MECH 3550 (or 025.355). (Not to be held with the former 025.485)

MECH 3580 Production Planning and Control Cr.Hrs.3 (Tutorial Required) (Formerly 025.358) The course covers topics such as: Group technology, Just-in-Time, Computer aided process planning, Statistical Process Control and Manufacturing Planning and Control. Issues related to the integration of several areas that fall with CIM are emphasized. Systems approach is introduced. *Prerequisite:* MECH 2300 (or 025.230). (Not to be held with the former 025.485)

MECH 3590 Systems Simulation and Facilities Planning Cr.Hrs.3 (Tutorial Required) (Formerly 025.359) The objective of this course is to introduce simulation for manufacturing operations and the concepts of facilities location and layout. The students will learn how to program WITNESS, a simulation language, and through simulation, explore the effects of facility planning; resource availability e.g., machines and quality related problems on manufacturing productivity and timing. (not to be held with the former 025.471)

MECH 3600 Manufacturing Processes: Applied Fundamentals Cr.Hrs.3 (Lab Required) (Formerly 025.360) The course will give students hands on experience with numerous manufacturing processes, machines and systems by having them build a miniature Sterling engine, for example. Using CNC mills, lathes, conventional machine shop equipment and hand tools, the students will manufacture engine components, assemble them and trouble shoot any problems. The object of the course is to provide Mechanical and Manufacturing students with a hands-on-exposure to the application of basic manufacturing process tools. The course will be offered in collaboration with the Mechanical and Manufacturing and Communications department, Red River College. *Prerequisite:* MECH 2290 (or 025.229)

MECH 3910 Manufacturing Co-operative Education Assignment 1 Cr.Hrs.1 (Formerly 025.391) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only).

MECH 3920 Manufacturing Co-operative Education Assignment 2 Cr.Hrs.1 (Formerly 025.392) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only).

MECH 4050 Mechanical Engineering Co-op Education Assignment 3 Cr.Hrs.1 (Formerly 025.405) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only)

MECH 4060 Mechanical Engineering Co-op Education Assignment 4 Cr.Hrs.1 (Formerly 025.406) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only)

MECH 4160 Graduation Thesis Cr.Hrs.3 (Formerly 025.416) Each graduating student must submit a satisfactory thesis on a subject which will be designated or approved by the head of the department. These are to be handed in to the Department of Mechanical and Industrial Engineering office by the designated deadline. *Prerequisite:* ENG 2010 (or 130.201) and eligible to graduate.

MECH 4170 Program Management and Systems Engineering Cr.Hrs.3 (Formerly 025.417) Authority and support controlling the logical relationship among the many simultaneous activities involved in the systems engineering process. Study of the steps required to produce a coordinated functioning system with a minimum of undesirable side effects. *Prerequisite:* MECH 2290 (or 025.229).

MECH 4180 Analysis and Design of Aerospace Structures Cr.Hrs.3 (Formerly 025.418) Methodology and techniques for design of aerospace structures and components to preclude failure with minimum weight, cost and resource consumption. Analysis of structural, air, gust and manoeuvre loads. *Prerequisite:* MECH 3500 (or 025.350).

MECH 4190 Aerospace Materials and Advanced Manufacturing Processes Cr.Hrs.3 (Formerly 025.419) Properties of aerospace structural materials including glass and graphite fibre composites, light metal alloys and high strength steels. Properties of high temperature materials; superalloys, ceramics, intermetallic compounds, metal matrix composites. Specialized methods for manufacture of these materials. *Prerequisite:* MECH 3540 (or 025.354).

MECH 4200 Gas Turbine Propulsion Systems Cr.Hrs.4 (Formerly 025.420) Gas turbine systems, shaft power cycles, gas turbine propulsion cycles, centrifugal compres-

sors, axial flow compressors, combustion systems, design performance predictions, off-design operations and transient behaviour of gas turbines. Design performance predictions. *Prerequisites:* MECH 2200 (or 025.220) and MECH 3520 (or 025.352).

MECH 4240 Design for Manufacturing Cr.Hrs.4 (Formerly 025.424) Identification of product opportunity, product development process, concurrent engineering concepts, design for assembly, design for injection molding, design for stamping, design for die casting and other processes, design of experiments (DOE), and optimization Systematic product design methods and tools will be taught along with real design practices. *Prerequisite:* MECH 2290 (or 025.229) Manufacturing Engineering.

MECH 4290 Internal Combustion Engines Cr.Hrs.3 (Formerly 025.429) Thermodynamics of internal combustion engine cycles; fuels and lubricants; supercharging; carburetion; valving; manifolding; combustion chamber ignition and fuel injection; engine performance and testing; free piston engines. *Prerequisite:* MECH 2200 (or 025.220).

MECH 4450 Aircraft and Spacecraft Performance and Dynamics Cr.Hrs.3 (Formerly 025.445) A study of the morphology of aerospace vehicles; basic components and their functions. Aircraft performance; drag, thrust, lift, basics of orbital mechanics. *Prerequisite:* MECH 3520 (or 025.352).

MECH 4550 Noise Control Cr.Hrs.4 (Lab Required) (Formerly 025.455) An elective course open to all branches of Engineering; a recommended course for students taking Air Conditioning. Wave propagation, transducers and measurement techniques, psycho-acoustic criteria, legislation, techniques of noise and vibration control.

MECH 4560 Selected Topics in Fluid Mechanics 4M Cr.Hrs.4 (Tutorial Required) (Formerly 025.456) Topics may include: wind tunnel design; experimental techniques; some exact solutions of the conservation equations; fundamentals of turbulence; secondary flows; fluidization; elementary meteorology; fluidics; other topics of current interest. *Prerequisites:* MATH 3100 (or 136.310) (not to be held with the former 006.360), and MECH 3490 (or 025.349).

MECH 4620 Corrosion of Metals and Alloys Cr.Hrs.4 (Lab Required) (Formerly 025.462) Electrochemical basis of corrosion, corrosion prevention by cathodic protection, inhibitors, alloying and heat treatment, passivation, stress corrosion cracking, corrosion fatigue; ionic and electronic conduction; oxidation of metals and alloys. *Prerequisite:* MECH 3540 (or 025.354).

MECH 4650 Machine Design 4M Cr.Hrs.4 (Tutorial Required) (Formerly 025.465) Stress analysis and the design of various machine elements; shafts and couplings, springs, threaded fasteners and power screws, clutches and power transmission components; spur, bevel, worm and helical gears; lubrication, journal and roller bearings. *Prerequisites:* MECH 2120 (or 025.212) and MECH 3500 (or 025.350).

MECH 4670 Applied Linkage Synthesis Cr.Hrs.3 (Formerly 025.467) Graphical, analytical and computer techniques for the analysis and design of mechanisms to produce a desired set of motion characteristics; design of linkages, double lever, slider and dwell mechanisms; cognate linkages. Kinetic synthesis tasks function generation, path generation and motion generation. *Prerequisite:* MECH 2120 (or 025.212).

MECH 4680 Energy Conservation and Utilization Cr.Hrs.4 (Tutorial Required) (Formerly 025.468) Energy supply and demand, advanced thermodynamic cycles, conventional energy sources, alternative energy, conservation of energy, environmental considerations. *Prerequisite:* MECH 2200 (or 025.220).

MECH 4690 Topics in Heat Transfer and Energy Cr.Hrs.3 (Formerly 025.469) Some combination of the following advanced topics: conduction heat transfer, radiation, heat-exchanger design, two-phase phenomena, fluidization, alternative energy, energy conservation. Other topics of current interest may also be included. *Prerequisite:* MECH 3470 (or 025.347).

MECH 4700 Thermal Systems Design Cr.Hrs.3 (Formerly 025.470) Modeling of thermal systems; system simulation; design applications of optimization methods: Lagrange multipliers, search methods, and dynamic geometric and linear programming. *Prerequisite:* MECH 2200 (or 025.220).

MECH 4710 Engineering Systems Simulation Cr.Hrs.4 (Lab Required) (Formerly 025.471) Fundamentals of modeling methods useful for industrial and production engineering problems. Financial, discrete and continuous as well as computer-animated modelling using selected simulation languages.

MECH 4750 Industrial Engineering Graduation Thesis Cr.Hrs.3 (Formerly 025.475) Each graduating student must submit a satisfactory thesis on an industrial engineering subject which will be designated or approved by the head of the department. These are to be submitted to the Department of Mechanical Engineering office by the designated deadline. *Pre-requisite:* ENG 2010 (or 130.201) and eligible to graduate.

MECH 4810 Automotive Engineering and Design Cr.Hrs.3 (Lab Required) (Formerly 025.481) Introduction to the design of passive suspension systems; control of active suspension systems; tire dynamics; ergonomics, safety and crash dynamics; automotive lighting and digital display trains. *Prerequisite:* MECH 3500 (or 025.350). *Corequisite:* MECH 3420 (or 025.342)

MECH 4820 Computational Methods for Thermofluids Cr.Hrs.3 (Lab/Tutorial Required) (Formerly 025.482) General conservation equations; specific forms of the conservation equations and energy equations; finite difference methods; one dimensional steady problems; one dimensional unsteady problems; two dimensional steady problems; two dimensional unsteady problems; convection, solution for the flow field. *Prerequisites:* MATH 3100 (or 136.310), MATH 2120 (or 136.212), MECH 3470 (or 025.347) and MECH 3490 (or 025.349).

MECH 4860 Engineering Design Cr.Hrs.5 (Tutorial Required) (Formerly 025.486) Design projects; teams of students prepare written and oral design reports on solutions to specific problems from Manitoba industries; series of seminars by invited speakers. *Prerequisite:* eligibility for graduation in the current academic year or registered in third year Industrial Co-operative Education Program, ENG 2010 (or 130.201) (not to be held with the former 024.101).

MECH 4870 Fracture and Failure of Engineering Materials Cr.Hrs.4 (Formerly 025.487) Criteria for crack initiation and propagation leading to structural failure. Fracture mechanics and fracture toughness phenomena. Effects of structure geometry, loading rate, environment, temperature, composition and microstructure on material integrity. *Prerequisite:* MECH 3540 (or 025.354).

MECH 4900 Mechatronics System Design Cr.Hrs.4 (Lab Required) (Formerly 025.490) The course covers topics in the analysis of control systems and components with the goal to provide students with tools and an understanding of issues related to integrating mechanical, electronic and software components towards building mechatronic devices. Hands-on-experience is provided in the laboratory sessions on simulation and actual computer control of various devices. Problems considered would include application to fluid power systems, systems integration and validation. The focus is placed on learning to work with real hardware. *Prerequisite:* MECH 3430 (or 025.343)

MECH 4910 Co-operative Education Assignment 3 Cr.Hrs.1 (Formerly 025.491) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only.)

MECH 4920 Industrial Co-operative Education Assignment 4 Cr.Hrs.1 (Formerly 025.492) Special work assignment in business, industry, or government for co-operative education students. Requires submission of a written report covering the work completed during the four-month professional assignment, and in-depth presentation of related engineering problems. (Pass/Fail grade only.)

MECH 4930 Mechanical Engineering Industry Internship (IIP) Cr.Hrs.0 (Formerly 025.493) Supervised work experience normally of 12-16 months duration, concluded by a work report. (Pass/Fail grade only.)

MECH 4960 Manufacturing Process 1 Cr.Hrs.4 (Tutorial Required) (Formerly 025.496) This course will introduce additional topics in the area of manufacturing processes that have not been covered in the introductory course "Manufacturing Engineering". Advanced topics in the area of metal cutting, joining processes and finishing systems will be dealt with. The lecture material will be supplemented by hands-on-experience using the facility at Red River College. *Prerequisite:* MECH 2290 (or 025.229).

MECH 4970 Manufacturing Process 2 Cr.Hrs.4 (Lab Required) (Formerly 025.497) Non-metals such as plastics, composites and ceramics will be covered in this course. Introductory material in wood processing, gluing and finishing systems will also be covered. Rapid prototyping and product development with hands-on-experience on related processes will be provided using the facility at Red River College/University of Manitoba. *Prerequisite:* MECH 4960 (or 025.496).

MECH 4980 Mechanical Engineering Laboratory Cr.Hrs.2 (Formerly 025.498) Advanced laboratory course on topics covering different disciplines within mechanical engineering. Comprehensive experiments followed by submission of laboratory reports will be required. One lecture/week will be provided on issues related to experimental techniques. *Prerequisites:* ENG 2010 (or 130.201) (not to be held with the former 024.101) and MECH 3430 (or 025.343).

MECH 4990 Mechanical Engineering Laboratory 2 Cr.Hrs.2 (Formerly 025.499) Advanced laboratory course on topics covering different disciplines within mechanical engineering. Comprehensive experiments followed by submission of laboratory reports will be required. One lecture/week will be provided on issues related to experimental techniques. *Prerequisite:* MECH 4980 (or 25.498).

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Chapter Contents

SECTION 1: History and Guiding Principles

SECTION 2: Admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources

- 2.1 Admission from University 1
- 2.2 External Transfer Students
- 2.3 Visiting Students
- 2.4 Second Degree Students
- 2.5 Special Students
- 2.6 Auditing Students

SECTION 3: Degree Regulations Applicable to all Programs in the Clayton H. Riddell Faculty of Environment, Earth, and Resources

- 3.1 Degrees Offered
- 3.2 Courses Offered in Other Faculties and Schools Acceptable for Credit in the Clayton H. Riddell Faculty of Environment, Earth, and Resources
- 3.3 Available Minors in Departments and Faculties
- 3.4 University Written English and Mathematics Requirements
- 3.5 University 1 Requirements of Arts and Science Courses
- 3.6 Changes in Program Requirements
- 3.7 Prerequisite, Corequisite, Recommended Courses and Course Availability: Definitions
- 3.8 Repeated Courses and Attempted Credit Hours
- 3.9 Voluntary Withdrawals
- 3.10 Authorized Withdrawals
- 3.11 Residence Requirement
- 3.12 Letter of Permission to Take Courses at Another University
- 3.13 Dean's Honour List and Graduating with Distinction or First Class Honours
- 3.14 Probation and Academic Suspension
- 3.15 Academic Dishonesty

- 3.16 Termwork and Debarment
- 3.17 Deferred Examinations
- 3.18 Challenge for Credit
- 3.19 Appeals Involving Academic Regulations
- 3.20 Incidental Fees

SECTION 4: Department of Environment and Geography

- 4.1 Academic Staff
- 4.2 Undergraduate Programming Available in the Department of Environment and Geography

SECTION 5: Bachelor of Arts in Geography Degree Regulations and Program Description

- 5.1 Program Information
- 5.2 Entrance Requirements
- 5.3 Minimum Performance Requirements
- 5.4 Dean's Honour List and Graduating with Distinction or First Class Honours
- 5.5 B.A Geography Program Chart
- 5.6 Systematic Courses (HS, PS, TS) and Area Studies (A)

Note: Geography course descriptions are found in Section 6.6 of this Chapter.

SECTION 6: Bachelor of Science in Physical Geography Degree Regulations and Program Description

- 6.1 Program Information
- 6.2 Entrance Requirements
- 6.3 Minimum Performance Requirements for Continuation and Graduation
- 6.4 Dean's Honour List and Graduating with Distinction or First Class Honours
- 6.5 B.Sc. Physical Geography Program Chart
- 6.6 Geography Course Descriptions

SECTION 7: Bachelor of Environmental Science and Environmental Studies Degree Regulations and Program Descriptions

- 7.1 Program Information
- 7.2 Entry Requirements
- 7.3 Minimum Performance Requirements for Continuation and Graduation
- 7.4 Dean's Honour List and Graduating with Distinction or First Class Honours
- 7.5 Bachelor of Environmental Science Program Chart
- 7.6 Bachelor of Environmental Studies Program Chart
- 7.7 Environmental Science and Environmental Studies Course Descriptions

SECTION 8: Department of Geological Sciences: Bachelor of Geological Sciences - Geology and Geophysics Degree Regulations and Program Descriptions

- 8.1 Academic Staff
- 8.2 Program Information
- 8.3 Degree Regulations
- 8.4 Bachelor of Science in Geological Sciences (Geology) Program Chart
- 8.5 Bachelor of Science in Geological Sciences (Geophysics) Program Chart
- 8.6 Geological Sciences Course Descriptions

SECTION 1: History and Guiding Principles

History

The Clayton H. Riddell Faculty of Environment, Earth, and Resources is the University of Manitoba's newest Faculty, the first to be created in many years, and only the third exclusively environmental faculty in Canada. In 2002, the University of Manitoba's Board of Governors approved implementation of a new Faculty to focus on "environmental issues and concerns". An interim Dean and Associate Dean were appointed and a Faculty Council was established with a committee structure to complete initial planning of the new Faculty. Committees worked on Faculty Bylaws, Faculty Structure, Research Planning and the Noble Purpose, Mission, and Vision. The Departments of Geography and Geological Sciences, the Natural Resources Institute, and the Environmental Science Program transferred into the new Faculty in April 2003. Early in 2003, the President appointed an Advisory Committee to search for a Founding Dean who was appointed as of September 1, 2003. Dr. Leslie King was the successful candidate. Also in September of 2003, Senate and the Board of Governors approved a structure for the Faculty consisting of three units: the existing Department of Geological Sciences, the Natural Resources Institute and a new Department of Environment and Geography. The new Dean and Associate Dean, Rick Baydack, established a Dean's Office and hired various personnel. Faculty, staff and students have been involved in establishing a range of Faculty-wide committees for strategic planning, curriculum review, development of promotion and tenure guidelines, research planning and others. The future of the new Faculty is bright as we attract outside interest, forge new partnerships, and find ways of reinforcing the shared interests and goals of the individuals and units that make up the Faculty. In April, 2003, the fledgling Faculty approved our first Guiding Statements of Purpose, Mission and Vision.

Noble Purpose

Our Noble Purpose is to contribute to understanding the changing Earth and human condition and to disseminate and apply this knowledge for the benefit of the present and future.

Mission

Our Mission is to create an intellectual environment conducive to becoming a premier teaching and research Faculty in the broad areas of Earth, environment, sustainable development, resources and human activities. We will accomplish this by using the unique synergies of our inter-dependent disciplines and developing academic programs that respond to the needs of students, changing societal conditions and worldviews and opportunities for research and outreach.

Vision

Our Vision is to be a Faculty of outstanding merit in teaching, research and outreach concerned with complexities of the Earth, environment, sustainable development, resources and human activities.

Our aim is to be a Faculty that:

- is recognized for graduates with the skills, competencies, and knowledge required by the needs of society;
- promotes individual excellence and collaboration in research, teaching, and outreach;
- is recognized for community engagement and leadership;
- promotes ethical principles and diversity and an understanding of cultural issues; and
- has the resources required to facilitate pursuit of our mission.

Values

The Clayton H. Riddell Faculty of Environment, Earth, and Resources recognizes that its strength is its people and that the most important measure of its success is the educational achievement of its students. The Faculty will strive to offer all students, staff and faculty a healthy, safe, open, friendly, supportive, consultative and stimulating environment conducive to individual intellectual growth, personal fulfilment and career progress. We embrace the principles of academic freedom and responsibility, education for its own sake, integrity, inclusion, respect for others, equity, fairness, and accountability. More specifically, the Clayton H. Riddell Faculty of Environment, Earth, and Resources holds, promotes, and demonstrates the following guiding values:

• **Learning** - at the centre of what we do, we promote learning as a lifelong process in our faculty, staff, students and communities - for individual enrichment and the sustainability and betterment of society and our Earth.

• **Discovery** - we promote the creation of new knowledge and its application to societal and environmental problems.

• **Leadership** - we aspire to intellectual, moral, and environmental leadership and to promote environmental responsibility in the university and our communities, local to global.

• **Diversity/Inclusiveness** - we promote and celebrate diversity and open access to education and knowledge and we embrace difference; we value the diverse contributions of the disciplines, cultures, fields and professions that comprise the Faculty; we actively seek participation of groups not well represented in the Faculty, especially the aboriginal people of Manitoba and Canada.

• **Ethical practice** - we promote ethical practice and integrity in all of our activities and respect for individuals, cultures and ecosystems.

• **Inter-disciplinarity** - to understand the complexities of human-environment interactions in all ecological, social, economic, cultural dimensions, we seek to integrate and synthesize knowledge across the disciplines - in the Faculty, University and beyond.

• **Excellence** - we are dedicated to promoting and rewarding excellence in teaching, research and service.

• **Service/Responsiveness** - we seek to identify, respond to, and serve the needs of our students, University, professions and communities - local to global.

• **Sustainability** - we strive to demonstrate our environmental values in all our activities and promote the sustainability of our communities, ecosystems and the Earth

• **Innovation** - as a new Faculty, we shall adopt responsive and innovative approaches, methods, and technologies in education, curricula, research and service.

Core Activities

The Clayton H. Riddell Faculty of Environment, Earth, and Resources includes the Department of Environment and Geography, the Department of Geological Sciences, and the Natural Resources Institute.

• The Faculty offers 6 undergraduate degrees (Bachelor of Arts in Geography, Bachelor of Science in Physical Geography, Bachelor of Environmental Science, Bachelor of Environmental Studies, Bachelor of Science in Geological Sciences - Geology, and Bachelor of Science in Geological Sciences - Geophysics);

• The Faculty offers 9 graduate degrees (Master of Arts in Geography, Ph.D. in Geography, Master of Environment, Master of Science in Environment and Geography, Master of Science in Geological Sciences - Geology, Master of Science in Geological Sciences - Geophysics, Ph.D. in Geological Sciences, Master of Natural Resources Management, and Ph.D. in Environment and Resource Management);

• Key areas of focus in teaching and research are under development, but include, *inter alia*:

- Applied Geography
- Earth Observations Science
- Ecotoxicology and Ecological Risk Assessment
- Arctic Systems Science
- Meteorological Atmospheric Science
- Integrated Environmental Management and Policy
- Ecosystem Management and Conservation of Biological Diversity
- Sustainability
- Management of Mining and Energy Extraction
- Common Property Resources
- Environmental Chemistry
- Environmental Analytical Chemistry
- Biogeochemistry
- Fate and Effects of Contaminants in the Environment
- Long-Range Transport of Contaminants to Polar and Alpine Regions
- Integrated Water Resources Management
- Natural Disasters and Risk Assessment
- Environmental Impact Assessment
- Crystallography and Mineralogy
- Petrology and Geochemical Evolution of Earth Materials
- Environmental Geochemistry

- Lithospheric Geophysics and Environmental Geophysics
- Sedimentology and Paleoenvironmental Reconstruction of Glacial Lake Agassiz and Saline Lakes
- Sedimentology and Invertebrate Paleontology of Paleozoic Successions
- Environmental and Natural Resources Policy
- Advanced Issues in Environmental Law
- Introductory Mineralogy with Essential of Mineral Optics
- Optics and Spectroscopy of Minerals

In February, 2005, the University of Manitoba named the Clayton H. Riddell Faculty of Environment, Earth, and Resources in honour of Dr. Clayton Riddell, a prominent University of Manitoba graduate, entrepreneur, and exploration geologist. In addition to being a distinguished graduate of the Department of Geological Sciences, an Honorary degree recipient in 2004, and a long-time friend and supporter of the University, Dr. Riddell made a \$10-million gift to the University of Manitoba to create an endowment fund to ensure the success of this Faculty. The \$10-million endowment fund will provide significant support for long-term planning, including funding to recruit and retain top quality faculty members; offer research grants to leverage funding from national granting bodies; develop new areas of curriculum and course delivery; and establish scholarships for outstanding undergraduate and graduate students.

The Clayton H. Riddell Faculty of Environment, Earth, and Resources provides students a diverse and challenging centre for learning by:

- offering excellence in undergraduate and graduate educational opportunities emphasizing integrated environmental perspectives while preparing students for environmental careers which are increasingly in demand in Canada;
- generating new and meaningful knowledge and applications through the development and implementation of relevant programs of research and scholarship. It promotes interdisciplinary research by drawing on the strengths of faculty members throughout the University (and within our local community);
- promoting ecological and environmental literacy and sound environmental practices; and
- providing service and advice to diverse constituents, including citizens and decision-makers, to help address environmental challenges and translate new knowledge into effective policy.

This Faculty is the choice for students who are concerned about the environment in all of its facets from learning about the history of the Earth, to the interaction of human and natural systems, to understanding and acting upon environmental problems, to communicating the importance of “Environment” to all members of our World. The Clayton H. Riddell Faculty of Environment, Earth, and Resources is a truly exciting, innovative and forward-thinking place, and is home to outstanding teachers, courses and cutting-edge research. Teaching, research, extension, and learning take place on- and off-campus, and may include activities in places like the High Arctic to Churchill to Delta Marsh to Star Lake, or from Vancouver Island to Thompson to Labrador, or from the United States to India to Dominica to New Zealand. We believe in practical, hands-on education, focusing on current issues and problems, and we immerse our students into the world of the working environmental professional through courses, cooperative education programs, fieldwork and extensive partnerships.

We invite you to join us to pursue both your academic and professional development. The Faculty offers students a breadth of support which include academic advising, environmental professional career counseling and opportunities to explore our physical and human environment through retreats, travel study and student research. Specific program details for the various degree options offered in the Clayton H. Riddell Faculty of Environment, Earth, and Resources are more fully described in the sections which follow. In particular, you will be able to see how you can develop a field of study and focus it to meet your own specialized interests and ideas. Check our website (www.umanitoba.ca/environment) for timely information and events. The Clayton H. Riddell Faculty of Environment, Earth, and Resources truly is.....At the Centre of It All!

SECTION 2: Admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources

2.1 Admission from University 1

Most students newly admitted from high school and those who have completed less than 24 credit hours at another post-secondary institution will complete the first year of their degree programs in University 1. In University 1 students will select courses from a wide variety of offerings in Arts, Science and other faculties including the Clayton H. Riddell Faculty of Environment, Earth, and Resources. For information about University 1, see the chapter on University 1 in this *Calendar*.

University 1 students are encouraged to apply for admission to a degree program in the Clayton H. Riddell Faculty of Environment, Earth, and Resources once they have completed 24 credit hours of course work and have met the minimum entrance requirements of their intended degree program. **Students must apply to be considered eligible for admission. Application information is available from the Admissions Office, Enrolment Services, 424 University Centre. This information is also available in the Faculty general office and is posted on the University’s website (www.umanitoba.ca/admissions).**

Faculty admission is determined on the basis of a 2.00 Grade Point Average on a minimum of 24 credit hours of course work from a recognized institution. Note: For students completing the Bachelor of Arts in Geography or the Bachelor of Science in Geological Sciences, entry is based on a Minimum Performance Table found in section 5.2.2 and section 8.3.3 in this *Chapter*, respectively.

Degree programs may define additional entrance requirements and students are referred to the appropriate section of this *Chapter* for further details as follows:

Section 5: Bachelor of Arts in Geography Degree Regulations and Program Description.

Section 6: Bachelor of Science in Physical Geography Degree Regulations and Program Description.

Section 7: Bachelor of Environmental Science and Bachelor of Environmental Studies Degree Regulations and Program Descriptions.

Section 8: Bachelor of Science in Geological Sciences (Geology and Geophysics) Degree Regulations and Program Descriptions.

2.2 External Transfer Students

Students applying for admission from other recognized universities or colleges are called “external transfers”. For the University of Manitoba’s general policy on external transfer students and advance standing, see the chapter on Admission to the University of Manitoba in this *Calendar*.

To be eligible for admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources, external transfer students must have completed no fewer than 24 credit hours of university level coursework and satisfied the minimum performance requirements of the intended degree program. External transfer students who have completed less than 24 credit hours must register in University 1 or Extended Education to complete the required credit hours of course work. Students with more than 24 credit hours who are not admissible to this Faculty should consider applying to the Faculties of Arts or Science or Extended Education as their alternative choice.

Students on academic suspension as a result of work completed at another post-secondary institution will not normally be considered for admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources until the suspension has been served.

Transfer of Credit

Internal: Refer to the General Academic Regulations and Policy, Transfer of Credit in this *Calendar* for further information.

External: See Admissions section of the *Calendar*. Courses completed at an external institution ten years prior to registration in the Clayton H. Riddell Faculty of Environment, Earth, and Resources are not considered for transfer credit. Students should contact a student advisor regarding transfer credit policies. All courses transferred will bear the grade and course classification of TX (transfer).

2.3 Visiting Students

Visiting students may apply for admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources on the basis of a Letter of Permission from the registrant or appropriate dean of his/her home institution. Certain restrictions may be placed on the kind and number of courses in which they will be allowed to register. Visiting students may wish to contact the Faculty student advisor in the Faculty general office for further information.

2.4 Second Degree Students

Students possessing a first degree from a recognized university program are eligible for admission as a Second Degree student provided they attained a minimum cumulative Grade Point Average of 2.00 on their first degree.

Second Degree requirements may be shortened by up to 60 credit hours and, once admitted, students will be expected to satisfy all continuation and graduation requirements in the degree program. Second Degree students are not required to satisfy the written English and mathematics requirement. Specific information on degree requirements following completion of the first degree is available in the Faculty general office.

2.5 Special Students

A Special Student is someone who is not a regular student proceeding towards a degree and is permitted by the Associate Dean (Academic) to take courses of interest.

After Degree Special Student

Students who have successfully completed a first degree from a recognized university program with a cumulative Grade Point Average of 2.00 or better are eligible for admission as Special Students.

Undergraduate Special Student

Undergraduate students in the Faculty may take extra courses as Special Students (course classification SS) but these courses do not count towards the degree or in the determination of the Grade Point Average. The marks will appear on the student's history and courses taken as a Special Student will count in the student's sessional load. Students may change their course classification from that of a *Regular Student* to a *Special Student* (and vice versa) only until the end of the registration revision period. Courses classified as special do not have to be courses that are acceptable for credit in the Faculty, however, registration in such courses cannot be authorized without the written permission of the department and Faculty offering the course. Students registering in SS courses must register for those courses after the initial access period.

2.6 Auditing Students

Students who wish to audit courses must have written permission from the instructor of the desired course before they can register. Auditing students must register in-person in the Faculty general office. The Clayton H. Riddell Faculty of Environment, Earth, and Resources prohibits auditors from registering in courses until after the initial access period.

SECTION 3: Degree Regulations Applicable to all Programs in the Clayton H. Riddell Faculty of Environment, Earth, and Resources

The Clayton H. Riddell Faculty of Environment, Earth, and Resources offers degree programs in Environmental Science, Environmental Studies, Geography, Physical Geography, Geology and Geophysics. All students are advised to examine their interests and future goals carefully to make appropriate program choices. Consultation with Faculty student advisors and/or department representatives is strongly encouraged.

Academic Regulations are under review. Please check the web Calendar after July 1, 2006 for updates.

3.1 Degrees Offered

Geography

Bachelor of Arts in Geography

Minimum time to graduation: Three years (University 1, plus two years). There is no time limit to complete the degree.

Bachelor of Arts in Geography (Advanced)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Arts in Geography (Honours)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Physical Geography

Bachelor of Science in Physical Geography (Major)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Science in Physical Geography (Major Coop)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Science in Physical Geography (Honours)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Science in Physical Geography (Honours Coop)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Environmental Science

Bachelor of Environmental Science

Minimum time to graduation: Three years (University 1, plus two years). This degree is also called the General program. There is no time limit to complete the degree.

Bachelor of Environmental Science (Major)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Environmental Science (Major Coop)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Environmental Science (Honours)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Environmental Science (Honours Coop)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Environmental Studies

Bachelor of Environmental Studies

Minimum time to graduation: Three years (University 1, plus two years). This degree is also called the General program. There is no time limit to complete the degree.

Bachelor of Environmental Studies (Major)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Environmental Studies (Major Coop)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Environmental Studies (Honours)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Environmental Studies (Honours Coop)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Geological Sciences - Geology

Bachelor of Science in Geological Sciences - Geology (Major)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Science in Geological Sciences - Geology (Honours)

Minimum time to graduation: Four years (University 1, plus three years). There is an eight-year time limit to complete the degree.

Geological Sciences - Geophysics

Bachelor of Science in Geological Sciences - Geophysics (Major)

Minimum time to graduation: Four years (University 1, plus three years). There is no time limit to complete the degree.

Bachelor of Science in Geological Sciences - Geophysics (Honours)

Minimum time to graduation: Four years (University 1, plus three years). There is an eight-year time limit to complete the degree.

Reminder

It is the student's responsibility to ensure that degree requirements are met. Faculty student advisors are available to clarify faculty and university regulations and degree requirements. A final and thorough program check is done after students have registered for their last year or course. The Clayton H. Riddell Faculty of Environment, Earth, and Resources is not responsible for those students who do not satisfy degree requirements.

The provision of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies in this *Calendar*, apply to all students. In addition, the Faculty has regulations and requirements, published below, that apply specifically to our students.

3.2 Courses Offered in Other Faculties and Schools Acceptable for Credit in the Clayton H. Riddell Faculty of Environment, Earth, and Resources

Students who are registered in the Clayton H. Riddell Faculty of Environment, Earth, and Resources may take any course offered by another faculty and school for credit towards their degree, subject to permission from the department head (or designate) and/or the Faculty student advisor.

3.3 Available Minors in Departments and Faculties

Students in the Major and Honours degree programs in the B.Env.Sc., B.Env.St., B.Sc. Geological Sciences and B.Sc. Physical Geography may, if they wish, declare and complete a Minor from departments and interdisciplinary programs in which a Minor is offered. Students may not, however, declare both their Major and Minor from the same department or interdisciplinary program. Completion of a Minor is entirely optional. It should be noted that for Honours students any consideration of completing a Minor should be made early due to restricted opportunities in later years in their programs. Completion of a Minor may, in fact, require that a student take more than the minimum number of credit hours for graduation.

A Minor will normally consist of at least 18 credit hours, with a minimum of 12 credit hours being at the 2000-, 3000-, and 4000-levels (although there are some exceptions). It should be noted that no course can be used as part of a prescribed Honours or Major program and also be part of a prescribed Minor. An alternate course will have to be selected to satisfy the Minor requirement. For example: if a course in Economics is part of the student's Major or Honours program in B.Env.Sc., then that course may not be used as part of a Minor in Economics.

3.4 University Written English and Mathematics Requirement

Students are required to complete the University written English and Mathematics requirement as outlined in the chapter, General Academic Regulations and Requirements of this *Calendar*. It is recommended that students complete these requirements while in University 1 or in Year 2 of their program. Students may wish to consider *GEOG 3480W Canadian Problems (3)*, *GEOG 3510W Agricultural Geography (6)*, *GEOG 3580W Landforms (6)* and/or *GEOG 3680M Research Methods in Geography (6)* to satisfy these requirements. In addition, the Department of Environment and Geography offers several courses annually through Distance Education which satisfy the "W" requirement.

A list of all courses which satisfy the written English and Mathematics requirements also appears in Appendix A of the chapter, General Academic Regulations and Requirements of this *Calendar*. Course numbers of designated written English courses are marked with a "W" and designated mathematics courses are marked with an "M".

3.5 University 1 Requirements of Arts and Science Courses

Students are required to take 6 credit hours from the Faculty of Arts and 6 credit hours from the Faculty of Science. Students must also complete an additional 12 credit hours from any faculty or school that are on the list of courses acceptable for credit at the University. See the *chapter* University 1 for further details.

3.6 Changes in Program Requirements

Once students have successfully completed any portion of a degree program, they will not be required to meet new course requirements subsequently stipulated for that portion of the program, whether the requirements be for the Faculty or for an individual degree program.

3.7 Prerequisite, Corequisite, Recommended Courses and Course Availability: Definitions

Prerequisite: If a course is prerequisite to a second course, the prerequisite must be met in order to continue in the second course. The department giving the second course may require a minimum grade of "C" in the first course to register in the second course. All courses offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources stipulate a grade of "C" in the prerequisite course(s), unless waived by the Instructor.

Corequisite: If a first course is a corequisite to a second course, the first course (unless previously completed) must be taken concurrently with the second course.

Recommended: If a course is strongly recommended relative to other courses in a program, a student is advised to take it. The final decision as to whether or not to take the course rests with the student. Students are advised to consult with their department head (or designate) or the Faculty student advisor in the general office for guidance.

NOTES: Students who are allowed to enroll in courses or programs provisionally pending satisfactory completion of pre- or corequisites must, if unsuccessful, withdraw or amend their registration accordingly within the stipulated course revision deadline. Those students who do not may be withdrawn automatically and may relinquish the opportunity to add appropriate courses.

Any prerequisite or corequisite may be waived with written consent of the instructor or designate.

Course Availability: All courses listed in this *Calendar* are not offered every year. The course(s) offered for the current academic session are published in the on-line undergraduate calendar (www.umanitoba.ca/calendar). The Department of Environment and Geography offer numerous courses under the following course numbers: *GEOG 3770 Special Topics in Geography (3)*, *GEOG 4670 Selected Issues (3)*, *GEOG 3740 Field Studies in Geography (6)*, *GEOG 3750 Field Studies in Geography (3)*, *ENVR 3000 Multidisciplinary Topics in Environmental Science (3)* and *ENVR 4000 Multidisciplinary Topics in Environmental Science (3)*. Students are referred to the Department of Environment and Geography and the on-line calendar for current information.

3.8 Repeated Courses and Attempted Credit Hours

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

Clayton H. Riddell Faculty of Environment, Earth, and Resources students are subject to the University of Manitoba General Academic Regulations and Policy, Repeating a Course as described in this *Calendar*. Each grade received for a repeated course will appear on the transcript with only the last attempt included in the calculation of the Grade Point Average, unless otherwise stipulated by the degree program.

There is no limit to the number of credit hours permitted in the degree programs in the Faculty provided a student does not exceed the credit hour limit of failed and/or repeated courses stated for specific programs.

Degree programs may define additional requirements regarding repeated courses and attempted credit hours and students are referred to the appropriate section of this *Chapter* for further details as follows:

Section 5: Bachelor of Arts in Geography Degree Regulations and Program Description.

Section 6: Bachelor of Science in Physical Geography Degree Regulations and Program Description.

Section 7: Bachelor of Environmental Science and Bachelor of Environmental Studies Degree Regulations and Program Descriptions.

Section 8: Bachelor of Science in Geological Sciences Degree Regulations and Program Descriptions

3.9 Voluntary Withdrawals

The responsibility for initiating withdrawals rests solely with the student. When eligible to do so, Voluntary Withdrawals must be done through Aurora Student, otherwise withdrawals must be authorized first by the Faculty general office and then through the Registrar's Office. No withdrawals will be permitted after the deadlines posted in the Academic Schedule.

3.10 Authorized Withdrawals

Subject to the provision of satisfactory documentation to the Faculty student advisor in the Faculty general office, Authorized Withdrawals (AWs) may be permitted on medical or compassionate grounds.

3.11 Residence Requirement

Students are required to complete a minimum number of credit hours at the University of Manitoba. Students should refer to their degree program in the appropriate section 5, 6, 7, or 8 of this *chapter* for further information. The courses used to satisfy the residence requirement must be acceptable for credit by the degree program in the Clayton H. Riddell Faculty of Environment, Earth, and Resources. Residence requirements apply to both first and second degree students.

3.12 Letter of Permission to Take Courses at Another University

Students wishing to complete courses at another institution for credit at this university must obtain written permission from the Registrar's Office prior to registering at the other institution or no credit will be permitted. Any grades earned are transferred in and form part of the cumulative Grade Point Average. Students who register for courses elsewhere without a Letter of Permission must reapply to the Faculty.

Students who are on academic suspension may not elect courses at another institution for credit toward an Environment, Earth, and Resources degree at this university.

Students in an Honours program may not normally complete courses at another institution for credit at this university. Individual exceptions must be referred both to the department offering the Honours degree program concerned and the Faculty general office for consideration.

Attendance at Other Institutions

Students who attend other post-secondary institutions without a Letter of Permission must reapply for admission to the Faculty before the application deadline and be academically competitive for admission. Similarly, students registered in Environment, Earth, and Resources here may not be registered at another academic institution at the same time unless they are registered elsewhere on a Letter of Permission. The penalty for unauthorized or undisclosed attendance may be disciplinary withdrawal or academic suspension.

3.13 Dean's Honour List and Graduating with Distinction or First Class Honours

Dean's Honour List

A student's eligibility for the Dean's Honour List designation is evaluated after the *April and August examination series* each year.

To qualify for the Dean's Honour List, a student must complete a minimum of 12 credit hours in a four-month academic term, 24 credit hours in an eight-month academic term, and achieve a sessional or cumulative Grade Point Average as specified by the degree program. Where the degree program specifies a number of credit hours in an academic term in excess of this, the assessment for Dean's Honour List shall be based on completion of at least 80 per cent of the workload. The Dean's Honour List designation will appear on the student's transcript of marks. Students should refer to their degree program in section 5, 6, 7, or 8 for further information.

With Distinction

To obtain a Degree with Distinction, a student must achieve a minimum cumulative Grade Point Average as specified by the degree program calculated on the basis of a minimum number of credit hours of course work. Students should refer to their degree program in section 5, 6, 7, or 8 of this *chapter* for further information.

Unless otherwise stipulated, all academic sessions will be considered in descending chronological order. When the last credit hours are found in a session containing more hours than are needed, the best grades from that session will be used for the calculation. The term Degree with Distinction will appear both on the parchment and on the student's transcript of marks.

First Class Honours

To graduate with First Class Honours, a student must achieve a minimum cumulative Grade Point Average as specified by the degree program calculated on the basis of a minimum number of credit hours of course work. Students should refer to their degree program in section 5, 6, 7, or 8 of this *chapter* for further information. The term First Class Honours will appear both on the parchment and on the student's transcript of marks.

3.14 Probation and Academic Suspension

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

A student in a General degree program in the B.A. Geography, B.Env.Sc., or B.Env.St. will be placed **on probation** if, at the point of assessment following the *April or August examination period*, he/she fails to achieve the required minimum performance level. The notation "On Probation" will be recorded on the student's transcript of marks. A student in the Major degree program in the B.Sc. Physical Geography, B.Sc. Geology, or B.Sc. Geophysics will be placed on probation if, at the point of assessment following the *April or August examination period*, he/she fails to achieve the required minimum performance level. The notation "On Probation" will be recorded on the student's transcript of marks.

While on probation, students are permitted to register for one additional session up to a maximum of 30 credit hours to attain the minimum performance requirements. Those who fail to meet this standard will be placed on **academic suspension for one calendar year**. The notation, "Academic Suspension for One Year", will be recorded on the student's transcript of marks. A student placed on academic suspension is not allowed to register in the Clayton H. Riddell Faculty of Environment, Earth, and Resources during the term of the suspension.

A student will be placed on **academic suspension for two calendar years** under the following circumstances:

Upon return from one year suspension, the student fails to attain a 2.00 grade point average at the next point of assessment (see the Faculty student advisor for information).

The Faculty calculates that it is mathematically impossible for the student to clear his/her probationary standing by the following assessment period.

The student exceeds the maximum number of credit hours of failed and/or repeated courses.

The notation, "Academic Suspension for Two Years", will be recorded on the student's transcript of marks. Those serving two-year suspensions are required to start the degree afresh should they choose to return to the Clayton H. Riddell Faculty of Environment, Earth, and Resources. Students may appeal for transfer credit of up to 30 credit hours in courses in which a minimum grade of "C" was achieved.

Students should consult with a Faculty student advisor for further assistance in clearing their probation or suspension.

3.15 Academic Dishonesty

Academic dishonesty is intentional cheating, fabrication, impersonation, or plagiarism. It is also knowingly helping or attempting to help others to be dishonest. Academic dishonesty lowers scholastic quality and defrauds others who will eventually depend on their own knowledge and integrity.

Plagiarism or any other form of cheating on examinations, term tests, or assignments is subject to academic penalty as serious as suspension or expulsion from the Faculty or University.

Students who are unsure of what constitutes academic dishonesty should refer to the regulations in the chapter, General Academic Regulations and Policy, Plagiarism and Cheating in this *Calendar* and consult with a faculty member.

3.16 Termwork and Debarment

A student is responsible for the completion of laboratory work, assignments, tests and other class work as prescribed by the course syllabus. A student who does not meet termwork requirements to the satisfaction of the Associate Dean (Academic) will receive a warning to this effect. If this warning is ignored, a student may be debarred from the course. Any student debarred from a course receives an automatic grade of "F" in that course.

3.17 Deferred Examinations

A student who is unable to write a final examination because of illness or other disability or compassionate reasons must file an application for deferred examination in the Clayton H. Riddell Faculty of Environment, Earth, and Resources general office. The application must be filed within seven days of the last examination that the student is scheduled to write in that series. Appropriate documentation must be provided that verifies that the incapacity existed at the time the examination was to be written.

A deferred examination is offered in a manner prescribed by the department concerned. This is normally written within 30 working days of the last examination in that series.

Students requesting deferred examinations on the grounds that the examinations conflict with vacation or holiday plans shall not be granted deferrals.

A deferred examination is not normally granted to a student who has written the final examination.

3.18 Challenge for Credit

Any student wishing to challenge a course for credit should contact the Clayton H. Riddell Faculty of Environment, Earth, and Resources general office.

3.19 Appeals Involving Academic Regulations

The Committee on Student Appeals and Discipline in the Faculty considers appeals from students who request special consideration with respect to the rules and regulations governing their degree program and qualifications for graduation.

Appeals should be addressed to: Student Affairs Coordinator, Secretary, Committee on Student Appeals and Discipline, General Office, Clayton H. Riddell Faculty of Environment, Earth, and Resources.

3.20 Incidental Fees

Incidental fees are assessed for some courses. This information is available in the department offices as well as the Clayton H. Riddell Faculty of Environment, Earth, and Resources general office, 440 Wallace Bldg.

SECTION 4: Department of Environment and Geography

Head: Mary Benbow

Email: benbow@cc.umanitoba.ca

General Office: 211 Isbister Building

Telephone: (204) 474-9667 or (204) 474-9081

Fax: (204) 474-7699

Website: www.umanitoba.ca/environment/envirogeog

Email: envirogeog@umanitoba.ca

4.1 Academic Staff

Distinguished Professor

Smil, V., M.S. (Prague), Ph.D. (Pennsylvania State), F.R.S.C.

Senior Scholars

Brown, W.J., B.Sc.(Hons.), Ph.D. (London); **Catchpole, A.J.W.**, B.Sc.(Hons.), Ph.D. (Durham); **Foster, R.H.**, B.A. (Berkley), M.A. (San Francisco State), Ph.D. (Berkeley); **Kaye, B.**, B.A. (London), M.A. (Manitoba),

Ph.D. (London); **Romanowski, J.I.**, B.A.(Hons.) (McGill), Ph.D. (Washington.); **Tiwari, R.C.**, M.A. (Agra), Ph.D. (Reading).

Professors

Barber, D.G., B.P.E., M.N.R.M. (Manitoba), Ph.D. (Waterloo), Canada Research Chair; **Baydack, R.K.**, B.Sc.(Hons.), M.N.R.M. (Manitoba), Ph.D. (Colorado State); **Brierley, J.S.**, B.A. (Victoria), Dip.Ed. (Oxford), M.A. (Alberta), Ph.D. (Edinburgh); **Gardner, J.S.**, B.Sc. (Hons.) (Alberta), M.Sc., Ph.D. (McGill); **King, L.A.**, B.A. (Hons.) (British Columbia), M.A. (Toronto), M.E.S. (York), Ph.D. (London School of Economics); **Norton, W.**, B.A.(Hons.), Dip.Ed.(Hull), M.A. (Queens), Ph.D. (McMaster); **Oakes, J.E.**, B.H.Ecol., M.Sc., Ph.D. (Manitoba); **Smith, G.C.**, B.A.(Hons.), M.A. (Reading), Ph.D. (McMaster); **Todd, D.**, B.A.(Hons.), Cert. Ed. (Leeds), M.A. (Queens), Ph.D. (London School of Economics).

Associate Professors

Benbow, S.M.P., B.A.(Hons.), Ph.D. (Liverpool); **Hallman, B.C.**, B.A., M.A., Ph.D. (Guelph); **McLachlan, S.M.**, B.Sc. (Hons.) (McMaster), M.Sc. (Guelph), Ph.D. (York); **Sawatzky, H.L.**, B.A.(Hons.) (Manitoba), M.A., Ph.D. (Berkley); **Wang, F.**, B.Sc. (Wuhan), Ph.D. (Peking).

Assistant Professors

DeVerteuil, G.P., B.A. (McGill), M.A. (British Columbia), Ph.D. (Southern California); **Hanesiak, J.M.**, B.Sc. (Winnipeg), M.Sc. (York), Ph.D. (Manitoba); **Hanson, M.L.**, B.Sc.(Hons), (Toronto), Ph.D. (Guelph); **Papakyriakou, T.N.**, B.Sc. (McMaster), M.Sc. (Queens), Ph.D. (Waterloo); **Walker, D.J.**, B.Sc.(Hons), M.Sc., Ph.D. (Manitoba).

Instructors

Boak, P.L., B.A., M.A. (Manitoba); **Dunlop, A.J.**, B.A. (Hons.), M.Sc. (Saskatchewan); **Hunter, K.**, B.Sc., M.Sc. (Manitoba) (Instructor II); **Iacozza, J.**, B.Sc. (McMaster), M.A. (Manitoba) (Instructor II).

4.2 Undergraduate Programming in the Department of Environment and Geography

The fields of study in this department can be divided into four overlapping areas: environmental sciences, environmental studies, human geography and physical geography. These areas are built on a diverse range of academic frameworks or foundations, including: natural, physical and social sciences, education, law, agriculture, management, medicine, humanities and architecture.

Environmental Science applies scientific knowledge from many disciplines to issues and questions relating to increasing human population, the sustainability of resource use, degradation caused by pollution and disturbance, and the endangerment and extinction of species and natural systems. Environmental Studies applies the theory and practice of group and organizational communication, understanding public policies and programs that underscore environmental concerns, and the need to integrate diverse social, institutional, political and legal considerations inherent in attaining environmental objectives. Students have the opportunity to focus advanced studies in one of several areas, defined through consultation with the Faculty student advisor.

"Human Geography examines how people have been influenced by the environment and how, in turn, they have left their mark on the environment," Dr. Daniel Todd, Human Geographer. Students may choose to focus their studies into one of several areas including *Human-Environment Relations, Urban and Rural Development, Social Cultural Geography, Population, Resources and Development, and Area Study*.

Areas of physical geography include the study of the environment through aspects of atmospheric science, geomorphology, biogeography, and hydrology. Streams are currently available in *Atmospheric and Hydrological Sciences, Geomatics* (an emerging subfield, referring to the techniques of spatial data acquisition, handling and analysis) and *Physical Geography*.

Potential careers for graduates of these programs include a diverse array of possibilities in the natural sciences, social sciences, or a combination of both. Graduates are poised to assume positions where they identify and analyze the local, regional, national, and global patterns that shape our lives. As well, the technical skills such as geographic information systems and remote sensing are demanded in several of the environmental sectors. Graduates of these programs can expect to enter the workforce in the private, government, research, or not-for-profit sectors.

Environmental Careers Organization (ECO) Canada is a useful website for review of current and forecasted trends in the environmental sectors. Students are encouraged to explore environmental careers, the skill-sets de-

manded to enter these employment sectors, and employment opportunities by visiting their website at www.eco.ca.

SECTION 5: Bachelor of Arts in Geography Degree Regulations and Program Description

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5.1 Program Information

There are four broad categories of courses in the discipline: **Physical** geography is concerned with physical features on and over the globe; **human** geography examines the products of human activity; **regional** geography attempts to achieve a synthesis of physical and human geography; and **techniques** in geography focus on analytical methods.

The attraction of Geography as a discipline lies in its diverse interests and approaches to knowledge building, while being centred on the fundamental concepts of human-environment relations, location/place and space/distance. Geographers see the world and want to know how physical processes and systems shape the land, air, water, flora and fauna around them, and how these are influenced by human activity. We want to know how human societies, cultures and economies work, and how these human systems are interdependent with each other and with natural systems. We work at a variety of geographic scales, from the micro-scale of local communities and regions, through the macro-scale of global human and physical systems. Geography embraces the study of topics as wide-ranging as: weather and climate, population distribution, agricultural systems, globalization, landforms or geomorphology, environmental perceptions, health and healthcare, and biogeography. Therefore, by selecting courses from within the department as well as complementary courses from other academic unit of the University, students can develop fascinating, focused and challenging degree programs that will prepare them for careers in a variety of areas.

The General degree in Geography provides students with a basic level of understanding of the discipline and its inter-relationships. **This degree is also a useful consideration for students planning to complete the After-Degree Bachelor of Education program (see Faculty of Education section of this Calendar).** The General degree program may be completed entirely by Distance Education (see the Distance Education Guide for further details). The Advanced degree program in Geography provides opportunities for students who desire a broad geographical education along with a reasonable degree of specialization in a particular field of Geography. Students planning a professional career or a high degree of specialization in Geography are strongly advised to enter the Honours degree program. The Honours degree demands the highest scholastic performance of all programs available. Students are strongly advised to enter an Honours degree program with their admission to the Bachelor of Arts in Geography. Consultation with the department head is also advised.

Structure of the B.A. Geography Degree Program

The structure of the B.A. Geography degree is summarized as follows:

A **Geography (Major)** component that varies in credit hour requirement depending on the degree program; 30 credit hours in General; 54 credit hours in the Advanced; and 72 credit hours in the Honours. Students are not permitted to declare a second major.

Advanced and General degree students must complete a **minor** of 18 credit hours from a department recognized by the Faculty. Students can declare only one minor and this can be chosen from one of the other programs in the Clayton H. Riddell Faculty of Environment, Earth, and Resources, a department in the Faculty of Arts, Faculty of Science, or the minor available through the Faculty of Human Ecology, School of Art, the Faculty of Music or the I.H. Asper School of Business [Management minor (119)]. *Entry to the Management minor consists of any 18 credit hours in courses offered by the Asper School of Business. Enrolment in this program is limited.*

Students in the General and Advanced programs are required to declare this minor by the time they have completed 51 credit hours of course work.

Students must attain a grade of “C” or better in the minor prerequisite course(s).

Students must complete 30 credit hours, with 6 credit hours in each of 5 subject fields. For example: 6 credit hours in Geography, plus 6 credit hours in Environmental Science, plus 6 credit hours in Geological Sciences, plus 6 credit hours in Anthropology, plus 6 credit hours in Native Studies. General degree students must complete all subject fields within their first 60 credit hours of courses.

6 credit hours in Humanities coursework and 6 credit hours in Sciences coursework. Note: Students can satisfy both a Humanity, (or Science) and one of the 5 subject fields required with the same 6 credit hours of courses.

Humanities

Course subjects taught by the Faculty of Arts that can be applied to the Humanities requirement include: Asian Studies, Canadian Studies, Catholic Studies, Classical Studies, Drama, English, Film Studies, French, German, Greek, History, Icelandic, Italian, Latin, Native Languages, Native Studies, Near Eastern and Judaic Studies, Philosophy, Polish, Religion, Russian, Spanish, Theatre, Ukrainian, and Yiddish. In addition the following courses may be used: Women’s Studies WOMN 1530, WOMN 2530, WOMN 3570, WOMN 3590, and Others ARTS 1140, ARTS 1150, ARTS 2640 and ARTS 2650. Music and History of Art may also be eligible courses. Students should see the Faculty student advisor for further information.

Sciences

Astronomy, Biology, Botany, Chemistry, Computer Science, Mathematics, Microbiology, Physics, Statistics, and Zoology.

The qualifications of the degree programs are summarized as follows:

General

To qualify for the degree Bachelor of Arts in Geography, students must complete 90 credit hours including all course requirements in their Geography general major; a chosen minor field; and the requirements in the five subject fields and areas of Humanities and Sciences. As well, students must satisfy the Faculty regulations outlined in section 3 of this *Chapter*. Minimum performance requirements include passing grades (“D” or better) in each course and a minimum cumulative Grade Point Average of 2.00 on Geography courses as well as the 90 credit hours which constitute the degree. Students cannot exceed 48 credit hours of failed and/or repeated courses.

Advanced

To qualify for the Bachelor of Arts in Geography with the Advanced degree, students must complete 120 credit hours including all courses and performance requirements in their Geography advanced major; a chosen minor field; and the requirements in the five subject fields and areas of Humanities and Sciences. As well, students must satisfy the Faculty regulations outlined in section 3 of this *Chapter*. Minimum performance requirements include passing grades (“D” or better) in each course and a minimum cumulative Grade Point Average of 2.00 on Geography courses and the 120 credit hours which constitute the degree. Students cannot exceed 18 credit hours of failed and/or repeated courses.

Honours

To qualify for the Bachelor of Arts in Geography with the Honours designation, students must complete 120 credit hours including all course and performance requirements, and satisfy the requirements in the 5 subject fields, and the areas of Humanities and Sciences. As well, students must satisfy the Faculty regulations outlined in section 3 of this *Chapter*. Minimum performance requirements include passing grades (“D” or better) in each course and a minimum cumulative Grade Point Average of 3.00 on Geography courses and the 120 credit hours which constitute the degree. Students cannot exceed 18 credit hours of failed and/or repeated courses.

5.2 Entrance Requirements

Students are required to attain a minimum cumulative Grade Point Average of 2.00 based on the Minimum Performance Table in Section 5.2.2 to be eligible for admission to the B.A. Geography. Students who are admitted will be placed in the General degree program. Students may be eligible for transfer to either the Advanced or Honours degree program provided they satisfy the entry requirements defined in 5.2.1. To enter the Advanced or Honours degree program, a student must complete an application form available in the Faculty general office and have it approved by the Faculty student advisor.

5.2.1 Entry Requirements

Degree Program in B.A. Geography	Minimum Number of Credit Hours	Minimum Cumulative Grade Point Average	Maximum Credit Hours of Repeated/Failed courses	Subject Fields (min 6 credit hours in each)	Additional Entrance Requirements
General	24	2.00 ¹	48	Geography	grade of "C" in GEOG 1200 ² (or in each of GEOG 1280 and GEOG 1290)
Advanced	24	2.00	18	Geography plus 3 other subject fields (see section 5.1 of this Chapter)	
Honours	24	3.00	18	Geography plus 3 other subject fields (see section 5.1 of this Chapter)	

¹Minimum Grade Point Average for entry into the General degree program is calculated using a Minimum Performance Table in 5.2.2.

²GEOG 1201 or both GEOG 1281 and GEOG 1291 may be used in lieu of GEOG 1200, or GEOG 1280 and GEOG 1290, respectively.

5.2.2 Grade Point Average Calculation for Entry and Continuation

Academic regulations are under review. Please check the web Calendar after July 1, 2006 for updates.

General degree students in the B.A. Geography must attain a minimum 2.00 Grade Point Average at each point of assessment. The Minimum Performance Table listed below is used to determine a student's eligibility for admission to the Faculty as well as evaluate a student's performance after the *April and/or August examination series*.

The Grade Point Average calculation is based on the number of credit hours a student has attempted. For example, a General degree student with 30 credit hours of completed courses must have a 2.00 ("C" average) based on 15 credit hours of their best grades; and a student with 78 credit hours of completed courses will have their best 48 credit hours used to calculate his/her Grade Point Average.

Minimum Performance Table

Number of Credit Hours Attempted	Number of Credit Hours Used to Calculate the Grade Point Average (only the best grades are included in the assessment)	Minimum Grade Point Average (GPA) Required
24	12	2.00
27	12	2.00
30	15	2.00
33	15	2.00
36	18	2.00
39	18	2.00
42	21	2.00
45	21	2.00
48	24	2.00
51	24	2.00
54	27	2.00
57	27	2.00
60	30	2.00
63	33	2.00
66	36	2.00
69	39	2.00
72	42	2.00
75	45	2.00
78	48	2.00
81	51	2.00
84	54	2.00
87	57	2.00
90	60	2.00
93	63	2.00
96	66	2.00
99	69	2.00
102	72	2.00
105	75	2.00
108	78	2.00
111	81	2.00
114	84	2.00
117	87	2.00

120	90	2.00
123	90	2.00
126	90	2.00
129	90	2.00
132	90	2.00
135	90	2.00
138	90	2.00
141	93	2.00
144	96	2.00
147	99	2.00
150	102	2.00
153	105	2.00
156	108	2.00
159	111	2.00
162	114	2.00
165	117	2.00
168	120	2.00

5.3 Minimum Performance Requirements

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

A student's academic performance is assessed first with his/her application for admission to the Faculty and then following each *April and/or August examination series* in which the student is registered. To be in **good standing** and permitted to continue in a degree program, a student must achieve the minimum standards outlined for his/her degree program at each point of assessment. For General degree students, this includes the Minimum Performance Table outlined above in 5.2.2 as well as the requirements outlined in 5.3.1. Students in the Advanced and Honours degrees are required to satisfy the requirements listed in 5.3.1. Minimum academic performance is based on the Grade Point Average and number of repeated and/or failed courses. Prior to each registration, Advanced and Honours degree students must have their course selections approved by the Faculty student advisor. Students cannot make any subsequent changes without receiving prior written permission.

To graduate with a B.A. Geography with the intended degree designation, a student must achieve the minimum standards and graduation requirements outlined in 5.3.1 following either their last *April or August examination series* and satisfy all faculty and degree requirements in Geography as defined in sections 5.3.1 and 5.5 of this Chapter.

Students in the Honours and Advanced degree programs who do not meet these minimum performance requirements will be withdrawn from their existing program and placed in the General degree. Students who do not meet the minimum performance requirements for the General degree program will be placed on probation or academic suspension as defined in section 3.14 Probation and Academic Suspension in this Chapter. Students withdrawn from the Honours degree program may be eligible to enter the Advanced program and are required to obtain permission from the Faculty student advisor.

Students withdrawn from the Honours degree program will have the notation, "Required to Transfer from the Honours Program", recorded on their

transcript of marks. Similarly, students withdrawn from the Advanced program will have the notation, "Required to Transfer from the Advanced Program", recorded on their transcript of marks.

5.3.1 Minimum Performance Requirements for Continuation and Graduation

Minimum Performance Requirements				Additional Graduation Requirements	
Degree Program (Cr.Hrs.)	Minimum Cumulative Grade Point Average (GPA)	Maximum Cr. Hrs. Failures/ Repeated Courses	Minimum Cumulative GPA in Geography Courses ⁴	Geography Courses Cr. Hr. Requirement (see 5.5 also)	Residence Requirement (Cr. Hrs.) (see section 3.10 also)
General ^{1,3} (90)	2.00; see 5.2.2 for continuation	48	2.00	30	48 cr. hrs. total or the final 30 cr. hrs.
Advanced ^{1,2} (120)	2.00	18	2.00	54	60
Honours ² (120)	3.00	18	3.00	72	60

¹General and Advanced degree students must declare a Minor by the time they have completed 51 credit hours of course work. The prerequisite grade(s) for the Minor is/ are "C".

²The courses required in this program will satisfy the university mathematics requirement.

³Within the first 60 credit hours of courses, General degree students must have completed 6 credit hours in each of 5 subject fields (totalling 30 credit hours). See section 5.1 for details.

⁴General and Advanced degree students are required to maintain a cumulative Grade Point Average of 2.00 on the courses defining their Geography Major.

Note: Students must complete all prerequisite courses with minimum "C" grades.

5.4 Dean's Honour List and Graduating with Distinction or First Class Honours

Dean's Honour List

Students enrolled in a minimum of 24 credit hours of coursework during the Regular term and who achieve a cumulative Grade Point Average of 3.50 or higher will be placed on the Dean's Honour List.

With Distinction

Students graduating with a B.A. Geography (General) degree will have their degree granted "With Distinction" if they have a minimum cumulative Grade Point Average of 3.80 on all coursework taken at the University

of Manitoba and provided a minimum of 60 credit hours of acceptable coursework is completed at the University of Manitoba.

Students graduating with a B.A. Geography (Advanced) degree will have their degree granted "With Distinction" if they have a minimum cumulative Grade Point Average of 3.80 on all coursework taken at the University of Manitoba and provided a minimum of 90 credit hours of acceptable coursework is completed at the University of Manitoba.

First Class Honours

Students in the Honours program will have their degree granted with "First Class Honours" if they have a minimum cumulative Grade Point Average of 3.80 based on a minimum of 90 credit hours of acceptable coursework at the University of Manitoba.

5.5 B.A. Geography⁶

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS¹ 120 CREDIT HOURS (72 credit hours in Geography)			
GEOG 1200 (or GEOG 1280 and GEOG 1290) Plus 6 credit hours from the Faculty of Arts Plus 6 credit hours from the Faculty of Science	GEOG 2200, GEOG 2250, GEOG 2530 9 credit hours in Geography courses numbered at the 2000- or 3000-level ⁴ 12 credit hours in ancillary options ³	GEOG 3680 Plus 18 credit hours in Geography courses numbered at the 2000- or 3000-level ⁴ 6 credit hours in ancillary options ³	GEOG 4660 18 credit hours in Geography courses numbered at the 4000- level ⁴ 6 credit hours in ancillary options ³
It is recommended that students complete the W course in University 1 or Year 2			
ADVANCED¹ 120 CREDIT HOURS (54 credit hours in Geography)			
GEOG 1200 (or GEOG 1280 and GEOG 1290) Plus 6 credit hours from the Faculty of Arts Plus 6 credit hours from the Faculty of Science	GEOG 2200, GEOG 2250, GEOG 2530 9 credit hours in Geography courses numbered at the 2000- or 3000-level ⁵	GEOG 3680 Plus 6 credit hours in Geography courses numbered at the 3000-level ⁵	12 credit hours in Geography courses numbered at the 4000- level ⁵ Plus 6 additional credit hours in Geography
It is recommended that students complete the W course in University 1 or Year 2			
GENERAL² 90 CREDIT HOURS (30 credit hours in Geography)			
GEOG 1200 (or GEOG 1280 and GEOG 1290) Plus 6 credit hours from the Faculty of Arts Plus 6 credit hours from the Faculty of Science	12 credit hours in Geography courses numbered at the 2000-level ⁵	12 credit hours in Geography courses numbered at the 3000- and/ or 4000- level ⁵	

continued on next page

It is recommended that students complete the W and M courses in University 1 or Year 2. Note: 30 credit hours, with 6 credit hours in each of 5 subject fields, must be completed in the first 60 credit hours.

MINOR 18 CREDIT HOURS

GEOG 1200 (or GEOG 1280 and GEOG 1290)	6 credit hours in Geography courses numbered at the 2000-level	6 credit hours in Geography courses numbered at the 3000-level
--	--	--

NOTES:

¹Entry into the Honours and Advanced degree programs is summarized in 5.2.1. The courses required in this program will satisfy mathematics requirement.

²Entry into the General degree program is summarized in 5.2.1 and 5.2.2.

³Ancillary options are chosen in consultation with the department head.

⁴Among the 2000- and 3000-level courses, at least 6 of the 18 credit hours must be systematic and at least 6 must be area studies. Systematic courses and area studies courses are listed in Section 5.6.

⁵Among the 2000- and 3000-level courses, at least 12 credit hours must be systematic and at least 6 must be area studies. Systematic courses and area studies courses are listed in Section 5.6. Students wishing to transfer from the General to the Advanced degree program are permitted to take either GEOG 2200 and GEOG 2250, or GEOG 2530 in either third or fourth year.

⁶Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Collège universitaire de Saint-Boniface courses end in the number "1" (e.g. GEOG 1201).

Note: Honours in Geography may be taken in combination with the program of Central and East European Studies (see the department head), Cross-disciplinary Minor programs are available using GEOG 3460 (Urban Studies program) and GEOG 3590 (Asian Studies program) and GEOG 2350 (Latin American Studies program). In addition, courses GEOG 2450, GEOG 2570, GEOG 3480 and GEOG 3700 may be used in combination with the Honours, Advanced, and Minor programs in Canadian Studies.

To fulfil prerequisite requirements, a grade of "C" must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

Students should review the current course topics available through *GEOG 3770* (3) and *GEOG 4670* (3). Also, all courses are not offered every year or every session. The course schedule for the current academic session is available from the online calendar at www.umanitoba.ca/calendar.

Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.

5.6 Systematic Courses (HS, PS, TS) and Area Studies (A)

Courses numbered at the 2000- and 3000-levels are arranged into Systematics (PS, HS and TS), and Area Studies (A). B.A. Geography students may specialize in the Physical Geography (designated by (PS) after the title in the descriptions below); Human Geography (HS); Techniques (TS); Area Studies (A) but it is not compulsory for them to do so. B.A. Geography students wishing to specialize in Physical Geography should take at least three options (18 credit hours) from courses designated 'PS'. B.A. Geography students wishing to specialize in Human Geography should take at least three options (18 credit hours) from courses designated 'HS'. Students should discuss these options with the Faculty student advisor.

B.A. Geography students wishing to specialize in Applied Geography should include 2000-level courses from GEOG 2200, GEOG 2210, GEOG 2250, GEOG 2310, GEOG 2410, GEOG 2440, GEOG 2480, GEOG 2510, GEOG 2520, GEOG 2530 and GEOG 2620; and 3000-level courses from GEOG 3200, GEOG 3320, GEOG 3460, GEOG 3480W, GEOG 3510, GEOG 3520, GEOG 3540, GEOG 3580W, GEOG 3680M, GEOG 3710, GEOG 3720 and GEOG 3800.

Physical Geography (PS)

GEOG 2300	Atmosphere, Thermodynamics, Clouds and Precipitation	3
GEOG 2310	Introduction to Process Hydrology	3
GEOG 2440	Geography of Natural Hazards	6
GEOG 2540	Weather and Climate	3
GEOG 2541	Météorologie et climatologie	3
GEOG 2550	Geomorphology	3
GEOG 2551	Géomorphologie	3
GEOG 2620	Geography of Environmental Changes	3
GEOG 3310	Atmospheric Dynamics, Storms and Radar	3
GEOG 3320	Introduction to Microclimates and Micrometeorology	3
GEOG 3411	Géographie de l'eau	3
GEOG 3580W	Landforms	6

Human Geography (HS)

GEOG 2211	Géographie économique	6
GEOG 2410	Geography of Tourism and Recreation	6
GEOG 2430	Political Geography	6
GEOG 2480	Population Geography	6
GEOG 2481	Géographie de la population	6
GEOG 2520	Geography of Natural Resources	3
GEOG 2630	Geography of Culture and Environment	3
GEOG 2640	Geography of Culture and Inequality	3
GEOG 2651	Géographie politique 1	3
GEOG 2661	Géographie politique 2	3
GEOG 3421	L'eau, enjeu géostratégique	3
GEOG 3460	Urban Geography	6
GEOG 3510W	Agricultural Geography	6

GEOG 3520	Energy and Society	6
GEOG 3530	An Introduction to Land-Resource Management	6
GEOG 3540	Regional Development Planning Theory and Practice	6
GEOG 3710	Population and the Third World	3
GEOG 3720	Refugees, Displacees, Exiles	3
GEOG 3800	Geography of Transportation Development	3
GEOG 3821	Les territoires de la francophonie mondiale	3
GEOG 3831	L'espace francophone panaméricain	3
GEOG 3841	Les espaces francophones de l'Afrique, de l'Asie et de l'Océanie	3

Techniques (TS)

GEOG 2200	Introduction to Thematic Cartography	3L
GEOG 2221	Introduction à la cartographie et analyse de la carte numérique	6
GEOG 2250	Introduction to Geographic Information Systems	3L
GEOG 2530	Introduction to Scientific Geographic Research	3
GEOG 3200	Introduction to Remote Sensing	3L
GEOG 3680M	Research Methods in Geography	6
GEOG 3730	Geographic Information Systems	3L
GEOG 3740	Field Studies in Geography	6
GEOG 3750	Field Studies in Geography	3

Area Studies (Regional) (A)

GEOG 2350	Latin America	6
★ GEOG 2450	The Making of the Prairie Landscape	6
GEOG 2460	Geography of Africa	6
GEOG 2490	Geography of Modern China	3
GEOG 2560	Geography of North America	6
★ GEOG 2570	Geography of Canada	3
GEOG 2580	Geography of the United States	3
★ GEOG 3431	Géographie du Canada	3
★ GEOG 3480W	Canadian Problems	3
★ GEOG 3481	Particularités de la géographie du Canada	3
GEOG 3500	Geography of Europe	6
GEOG 3501	Géographie de l'Europe	6
GEOG 3590	Geography of Developing Countries	6
GEOG 3591	Géographie des pays en voie de développement	6
GEOG 3600	Geography of Ukraine	3
★ GEOG 3700	Canada: The Making of the Human Landscape	6
★ GEOG 3701	Canada: évolution de l'écoumne	6
GEOG 3740	Field Studies in Geography	6
GEOG 3750	Field Studies in Geography	3
GEOG 3821	Les territoires de la francophonie mondiale	3
GEOG 3831	L'espace francophone panaméricain	3
GEOG 3841	Les espaces francophones de l'Afrique, de l'Asie et de l'Océanie	3

SECTION 6: Bachelor of Science in Physical Geography Degree Regulations and Program Description

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6.1 Program Information

Physical geography includes the study of the environment through aspects of atmospheric science, geomorphology, biogeography and hydrology, all of which draw upon the natural and applied sciences to understand the natural environment. Atmospheric sciences examine the physical and biophysical processes at and near the earth's surface shaping climate and determining the weather. These processes are examined over cascading scales, local to global. Hydrology studies the flow of water between the Earth's surface and the atmosphere, including the quantity and quality of water resources as well as the spatial variability in the hydrologic cycle. The examination of processes at the earth's surface and the associated landforms is called geomorphology. Various sub-disciplines include weathering and erosional processes, volcanoes, glacial and river systems. Biogeography studies the interrelationships between the biospheric environment and the physical environment. Formation of soils, ecosystem and biomes cycles and components, as well as human interaction with the physical environment are all topical areas of biogeography.

Geomatics is an emerging subfield, referring to the techniques of spatial data acquisition, handling and analysis. Included within this sub-field have been geographic applications of computer analysis and spatial modeling, spatial statistics, remote sensing technology, and Geographic Information Systems. Many of these techniques have their origins in the applied sciences, but both physical and human geographers have contributed greatly to their development and application. The application of such methodologies in geographic fields, such as resource management, urban geography, climate change, and applied geography, has also provided closer co-operation between human and physical geography, as well as promoting considerable interdisciplinary research with other University disciplines.

The Major and Honours B.Sc. degree programs in Physical Geography serve students who desire advanced study in the academic subject matter of various themes contained within Physical Geography. The Honours program in particular is intended for students interested in the opportunity for exposure to advanced geographic research. As such, the Honours program demands higher academic performance. Students who are ineligible to enter Honours in their second year may establish this in the following year on the basis of their improved scholastic performance. The degree programs may be pursued on a full or part-time basis.

Minor in Another Department

Students in the B.Sc. Physical Geography have the opportunity to complete a Minor of 18 credit hours from a department offering this option at the University of Manitoba. Students are not permitted, however, to complete this Minor in the B.A. Geography. Students can declare only one Minor. The Minor requirements are described in section 3.3 of this Chapter. Contact the Faculty student advisor in the Faculty general office for further information about eligible Minors.

Streams

Students are required to complete a stream approved by the Faculty student advisor. Students in the Major or Major (Coop) are required to complete a minimum of 30 credit hours of 2000- (or higher) level courses, of which at least 18 credit hours must be at or above the 3000-level. The B.Sc. Honours and Honours Coop programs require students to complete 39 credit hours in a Stream, of which at least 24 credit hours are defined at or above the 3000-level and must include *GEOG 4660 Honours Thesis* (6). Streams are currently available in *Atmospheric and Hydrological Sciences*, *Geomatics* and *Physical Geography*. See the department and/or Faculty student advisor for current information about these Streams.

Major

To qualify for the degree, Bachelor of Science in Physical Geography (Major), a student must complete 120 credit hours with passing grades ("D" or better) and a minimum cumulative grade point average of 2.00 on the courses that constitute the degree. Major (Coop) students must attain a minimum

cumulative Grade Point Average of 2.50. Students must complete all faculty requirements. There is no limit to the number of credit hours a student completes provided he/she does not exceed 18 credit hours of failed and/or repeated courses.

Honours

To qualify for the degree Bachelor of Science in Physical Geography (Honours), a student must complete 120 credit hours with passing grades ("D" or better) and a minimum cumulative grade point average of 3.00 in the courses that constitute the degree. Students must complete all faculty requirements. There is no limit to the number of credit hours a student completes provided he/she does not exceed 18 credit hours of failed and/or repeated courses.

Cooperative Education Option

A Cooperative Education Option is available to students registered in either the Major or Honours degree programs in Physical Geography. Coop is an arrangement whereby students spend alternating periods in university and employment. There are several advantages to a cooperative education program for students. One benefit is that students are able to acquire both theoretical knowledge and practical experience. This experience assists them in selecting areas of specialization for their senior courses in their chosen Stream. As well, Coop assists students in their professional development by enhancing networking opportunities, participation in conferences and workshops and provides the foundation of skills and strategies required in searching and acquiring employment after graduation. Students can also defray some of the costs of their university education through these work term placements. Further information about Cooperative Education and student eligibility is available from the Cooperative Education advisor available in the Faculty general office.

Students electing to participate in the Cooperative Education Option will be assessed a program fee with their formal admission into the program. Once a student has accepted a position with a Coop employer, no portion of the program fee will normally be refunded.

The Cooperative Education Option consists of two employment work terms over a minimum period of eight months and contributes 6 credit hours towards the four year degree program. Students complete ENVR 2900 Professional Development 1 (1.5), ENVR 3900 Professional Development 2 (1.5), work term placements ENVR 3980 Work Term 1 (0), ENVR 3990 Work Term 2 (0), and the work term report courses ENVR 3910 Work Term Report 1 (1.5) and ENVR 3920 Work Term Report 2 (1.5). Additional work terms are available to interested students. Each academic term and each employment term commence in January, May or September. While on an employment term, a Cooperative Education Option student is not permitted to take more than three additional credit hours of academic work outside of the requirements of the Coop placement without permission of the Faculty student advisor.

Students must register in the appropriate 1.5 credit hour Work Term Report concurrently with the work term placement. This is outlined as follows:

Placement Courses	Corequisite Report Courses
ENVR 3980	ENVR 3910
Coop Work Term 1 (0)	Coop Work Term Report 1 (1.5)
ENVR 3990	ENVR 3920
Coop Work Term 2 (0)	Coop Work Term Report 2 (1.5)
Optional	
ENVR 4980	ENVR 4910
Coop Work Term 3 (0)	Coop Work Term Report 3 (1.5)

Students are required to register in the appropriate Coop courses and pay course fees prior to beginning their placement.

6.2 Entrance Requirements

Students complete the first-year of their degree program in University 1 where they select courses from a wide variety of offerings including the Clayton H. Riddell Faculty of Environment, Earth, and Resources. Students admitted from University 1 are placed in the Major degree program until they have completed a minimum of 48 credit hours after which they may transfer to the Honours program or remain in the Major. To make a program transfer, students must complete an application form available in the Faculty general office and have this approved by the Faculty student advisor.

6.2.1 Entry Requirements

Degree Program in Physical Geography	Minimum Number of Credit Hours	Minimum Cumulative Grade Point Average	Additional Entrance Requirements
Honours	48	3.00	No failures on entry; a grade of "B" or better in GEOG 1290 ³ (or GEOG 1200 ³); a grade of "C+" or better in 12 credit hours from PHYS 1020 ³ (or PHYS 1050), MATH 1500 ^{2,3} (MATH 1510, MATH 1520, or MATH 1530), GEOL 1340, PHYS 1030 (or PHYS 1070), MATH 1300 ³ (or MATH 1310).
Honours (Coop) ¹	60	3.00	ENVR 2900; students must satisfy the requirements for entry/continuation in the regular program and (normally) have completed GEOG 2200 (or GEOG 2221), GEOG 2250 (or GEOG 2221), GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550, PHYS 1020 ³ (or PHYS 1050), PHYS 1030 ³ (or PHYS 1070), MATH 1300 ³ (or MATH 1310) and MATH 1500 ^{2,3} (or MATH 1510, MATH 1520, or MATH 1530)
Major	24	2.00	A grade of "C" or better in GEOG 1290 ³ (or GEOG 1200 ³); a grade of "C+" or better in 6 credit hours from PHYS 1020 ³ (or PHYS 1050), MATH 1500 ^{2,3} (MATH 1510, MATH 1520, or MATH 1530), GEOL 1340, PHYS 1030 ³ (or PHYS 1070), MATH 1300 ³ (or MATH 1310).
Major (Coop) ¹	60	2.50	ENVR 2900; students must satisfy the requirements for entry/continuation in the regular program and (normally) have completed GEOG 2200 (or GEOG 2221), GEOG 2250 (or GEOG 2221), GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550, PHYS 1020 (or PHYS 1050), PHYS 1030 ³ (or PHYS 1070), MATH 1300 ³ (or MATH 1310) and MATH 1500 ^{2,3} (or MATH 1510, MATH 1520, or MATH 1530)

¹Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information.

²MATH 1690 may be used in lieu of MATH 1500.

³Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Collège universitaire de Saint-Boniface courses end in the number 1 (e.g. GEOG 1201).

6.3 Minimum Performance Requirements for Continuation and Graduation

A student's academic performance will be assessed with his/her application for admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources and following each *April and/or August examination series* thereafter. The Faculty student advisor must approve a student's registration each Regular and Summer session. Any revisions in this schedule should also be approved prior to the end of the registration revision period.

To be in **good standing** and permitted to continue in a degree program, a student must achieve the minimum standards at each point of assessment. This assessment is based on the student's minimum cumulative Grade Point Average; the grades received in each of GEOG 1290 (or GEOG 1200, GEOG 1201, GEOG 1291), GEOG 2200 (or GEOG 2221), GEOG 2250 (or GEOG 2251), GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550, GEOG 3680; and the number of failures and/or repeated courses after admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources.

6.3.1 Minimum Performance Requirements

Minimum Performance Requirements				Graduation Requirements ¹	
Degree Program (Credit Hours)	Minimum Cumulative Grade Point Average (GPA)	Maximum Credit Hours of Failures/ Repeated Courses	Physical Geography Core: Minimum Grade Requirements in GEOG 1290 ² , GEOG 2200 ² , GEOG 2250 ² , GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550, GEOG 3680	Stream (2000-Level or Higher)	Coop Option Courses
Major (120)	2.00	18	"C"	30 credit hours of which at least 18 credit hours must be at the 3000-level or higher; with a minimum cumulative GPA of 2.00.	ENVR 2350, ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)
Major Coop (120)	2.50				
Honours (120)	3.00	18	"B" in GEOG 1290; "C+" grades in others	39 credit hours of which at least 24 credit hours must be at the 3000-level or higher; completion of GEOG 4660; minimum "C+" grade in each course.	ENVR 2350, ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)
Honours Coop (120)	3.00				

continued on next page

¹B.Sc. Physical Geography students must successfully complete a minimum of 60 credit hours at the University of Manitoba to satisfy the Residence Requirement. The courses used to satisfy the requirement must be acceptable for credit in the Clayton H. Riddell Faculty of Environment, Earth, and Resources.

²Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Collège universitaire de Saint-Boniface courses end in the number 1 (g. GEOG 1201).

To **graduate** from the Bachelor Science in Physical Geography with the intended degree designation, a student must achieve the minimum standards and graduation requirements outlined above in 6.3.1 following the final year *April or August examination series* and satisfy all degree course requirements in the foundation, physical geography core and Stream.

Students in the Honours program who do not meet these minimum performance requirements for continuation or graduation will be withdrawn from the degree program and placed in the Major provided they are eligible based on their performance. Students who do not meet the minimum performance requirements of the Major will be placed on probation or academic suspension as defined in section 3.14 Probation and Academic Suspension in this *Chapter*.

Students withdrawn from the Honours program as a result of their inability to meet minimum performance requirements will have the notation, "Required to Transfer from the Honours Program," recorded on their transcript of marks. Similarly, students withdrawn from the Major program will have the notation, "Required to Withdrawal from the Major Program," recorded on their transcript of marks.

6.4 Dean's Honour List and Graduating with Distinction or First Class Honours

Students enrolled in a minimum of 24 credit hours of course work during the Regular term and achieve a cumulative Grade Point Average of 3.50 or higher will be placed on the **Dean's Honour List**.

To obtain a **Degree with Distinction** a student must achieve a minimum 3.50 Grade Point Average on the last 60 credit hours of the program. All sessions, regular and summer, will be considered in descending chronological order. When the last 60 credit hours are found in a session containing more hours than are needed, the best grades from that session will be used for the Grade Point Average calculation.

The term Degree with Distinction will appear both on the parchment and on the student's transcript of marks.

To graduate with **First Class Honours**, a student must complete at least 24 credit hours in each eight-month academic term and achieve a cumulative Grade Point Average of 3.50, on all courses constituting his/her last two academic years of the Honours degree. The term First Class Honours will appear both on the parchment and on the student's transcript of marks.

6.5 B.Sc. Physical Geography^{1,2}

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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HONOURS 120 CREDIT HOURS

GEOG 1290 ⁸ (or GEOG 1200 ⁸) PHYS 1020 ³ , MATH 1500 ⁴ PHYS 1030 ³ , MATH 1300 ⁴ ; or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ Plus 6 credit hours from the Faculty of Arts	GEOG 2200 ⁹ , GEOG 2250 ⁹ , GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550 Whichever of PHYS 1020 ³ , PHYS 1030 ³ , MATH 1300 ⁴ , MATH 1500 ⁴ , or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken	GEOG 2620, GEOG 3680 9 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken	GEOG 4660
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A W course should be taken in University 1 or Year 2

Plus a **Stream**, approved by the Faculty student advisor. Honours Stream requirements are as follows: 39 credit hours of 2000- (or higher) level courses, of which 24 credit hours must be at the 3000- or 4000-level and include GEOG 4660.

HONOURS COOPERATIVE OPTION 120 CREDIT HOURS

GEOG 1290 ⁸ (or GEOG 1200 ⁸) PHYS 1020 ³ , MATH 1500 ⁴ PHYS 1030 ³ , MATH 1300 ⁴ ; or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ Plus 6 credit hours from the Faculty of Arts	GEOG 2200 ⁹ , GEOG 2250 ⁹ , GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550 Whichever of PHYS 1020 ³ , PHYS 1030 ³ , MATH 1300 ⁴ , MATH 1500 ⁴ , or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken ENVR 2350, ENVR 2900	GEOG 2620, GEOG 3680 9 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken ENVR 3900, ENVR 3980 ENVR 3910	GEOG 4660 ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
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A W course should be taken in University 1 or Year 2

Plus a **Stream**, approved by the Faculty student advisor. Honours Stream requirements are as follows: 39 credit hours of 2000- (or higher) level courses, of which 24 credit hours must be at the 3000- or 4000-level and include GEOG 4660.

MAJOR 120 CREDIT HOURS

GEOG 1290 ⁸ (or GEOG 1200 ⁸) PHYS 1020 ³ , MATH 1500 ⁴ PHYS 1030 ³ , MATH 1300 ⁴ ; or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ Plus 6 credit hours from the Faculty of Arts	GEOG 2200 ⁹ , GEOG 2250 ⁹ , GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550 Whichever of PHYS 1020 ³ , PHYS 1030 ³ , MATH 1300 ⁴ , MATH 1500 ⁴ , or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken	GEOG 2620, GEOG 3680 9 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken	
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A W course should be taken in University 1 or Year 2

Plus a **Stream**, approved by the Faculty student advisor. Major Stream requirements are as follows: 30 credit hours of 2000- (or higher) level courses, of which 18 credit hours must be at the 3000- or 4000-level.

MAJOR COOPERATIVE OPTION 120 CREDIT HOURS

GEOG 1290 ⁸ (or GEOG 1200) PHYS 1020 ³ , MATH 1500 ⁴ PHYS 1030 ³ , MATH 1300 ⁴ ; or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ Plus 6 credit hours from the Faculty of Arts	GEOG 2200 ⁹ , GEOG 2250 ⁹ , GEOG 2300, GEOG 2310, GEOG 2440, GEOG 2550 Whichever of PHYS 1020 ³ , PHYS 1030 ³ , MATH 1300 ⁴ , MATH 1500 ⁴ ; or 6 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken ENVR 2350, ENVR 2900	GEOG 2620, GEOG 3680 9 credit hours from GEOL 1340 ⁵ , COMP 1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020 ⁶ , BIOL 1030 ⁶ , MATH 1700 ⁷ not yet taken ENVR 3900, ENVR 3980 ENVR 3910	ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
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A W course should be taken in University 1 or Year 2

Plus a **Stream**, approved by the Faculty student advisor. Major Coop Stream requirements are as follows: 30 credit hours of 2000- (or higher) level courses, of which 18 credit hours must be at the 3000- or 4000-level

NOTE: Students in the Major Coop are required to maintain an overall cumulative Grade Point Average of 2.50.

MINOR 18 CREDIT HOURS

GEOG 1290 ⁸ (or GEOG 1200)	15 credit hours selected from 2000-, 3000-, or 4000-level courses designated as Physical Geography (PS) or Techniques (TS) courses in the Geography course descriptions defined in sections 5.6 in this <i>Chapter</i> .
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NOTES:

¹Entry into the degree programs is summarized in 6.2.1 in this *Chapter*.

²The courses required in this program will satisfy the university mathematics requirement.

³PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030, respectively.

⁴MATH 1510, MATH 1520, MATH 1530, or MATH 1690 may be used in lieu of MATH 1500. MATH 1310 may be used in lieu of MATH 1300.

⁵GEOL 1440 may be used in lieu of GEOL 1340.

⁶BIOL 1000 and BIOL 1010 may be used in lieu of BIOL 1020 and BIOL 1030.

⁷MATH 1710 and MATH 1730 can be used in lieu of MATH 1700.

⁸Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Collège universitaire de Saint-Boniface courses end in the number 1 (e.g. GEOG 1201).

·To fulfil prerequisite requirements, a grade of "C" must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

·Students should review the course topics available for *GEOG 3770 Special Topics in Geography (3)* and *GEOG 4670 Selected Issues (3)*. Also, all courses are not offered every year. The course schedule for the current academic session is available from the online calendar at www.umanitoba.ca/calendar.

·Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.

IMPORTANT: The Honours and Major programs need not be completed in the course order described in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

6.6 Geography Course Descriptions

All courses are not offered every year. The course schedule for the current academic terms are available from the on-line calendar at www.umanitoba.ca/calendar. **There are several course titles available under the topics courses including GEOG 3740, GEOG 3750, GEOG 3770 and GEOG 4670.**

Note: Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, refer to the on-line calendar (www.umanitoba.ca/calendar) and /or contact the Department of Environment and Geography general office.

U1 GEOG 1200 Introductory Geography Cr.Hrs.6 (Formerly 053.120) This course studies aspects of the human and physical worlds and their interrelationships. May not be held with, GEOG 1201, (or 053.120), GEOG 1290, GEOG 1291, (or 053.129), GEOG 1280, GEOG 1281, (or 053.128), 053.121, or 053.124, 053.125 or 053.127.

U1 GEOG 1280 Introduction to Human Geography Cr.Hrs.3 (Formerly 053.128) This course studies aspects of the human world: population, settlement and resources. May not be held with GEOG 1200, GEOG 1201, 053.120, GEOG 1281, 053.124, 053.125, or 053.127.

U1 GEOG 1290 Introduction to Physical Geography Cr.Hrs.3 (Formerly 053.129) This course studies aspects of our physical environment: climate, landforms, soils and vegetation. May not be held with GEOG 1291, (or 053.129), GEOG 1200, GEOG 1201, (or 053.120), or 053.121.

GEOG 2200 Introduction to Thematic Cartography (TS) Cr.Hrs.3 (Lab Required) (Formerly 053.220) An introduction to the principles of map compilation and reproduction, including analysis and cartographic display of spatially referenced data. Emphasis will be placed on cartographic data manipulation, generalization, and symbolization, map design, visualization and communication. Not to be held with the former 053.222. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 1000 level, or written consent of the department.

GEOG 2210 Economic Geography (HS) Cr.Hrs.6 (Formerly 053.221) An introduction to spatial aspects of economic activities. It includes consideration of natural resource extraction and development, industrial location theory, agriculture, and the basis of regional development. *Prerequisite:* a grade of "C" or better in GEOG 1200

or GEOG 1201 (or 053.120) or GEOG 1280 or GEOG 1281 (or 053.128), or consent of department head.

GEOG 2300 Atmospheric Thermodynamics, Clouds and Precipitation (PS) Cr.Hrs.3 (Formerly 053.230) Critical thermodynamic processes are discussed that are associated with the Earth's atmosphere including dry and moist processes, phases of water, stability, cloud development and precipitation processes. *Prerequisite:* A minimum grade of C in GEOG 1290 or GEOG 1291, (or 053.129), GEOG 1200 or GEOG 1201 (or 053.120); MATH 1500 or MATH 1501 (or 136.150) or MATH 1510 (or 136.151) or MATH 1520 (or 136.152), or MATH 1530 (or 136.153)).

GEOG 2310 Introduction to Process Hydrology (PS) Cr.Hrs.3 (Formerly 053.231) This course introduces students to the near-surface components of the hydrological cycle, including the processes of precipitation, evaporation, water-biosphere interactions, infiltration, overland and stream flow. Not to be held with the former 053.362. *Prerequisite:* A minimum grade of C in GEOG 1290 or GEOG 1921 or GEOG 1200 or GEOG 1201 (or 053.120) and one of PHYS 1020 or PHYS 1021 or PHYS 1050 or PHYS 1051 (or 016.102 or 016.105) or MATH 1500 or MATH 1501 (or 136.150) or (or MATH 1510 (or 136.151), MATH 1520 (or 136.152), or MATH 1530 (or 136.153)); or written consent of the Department.

GEOG 2350 Latin America (A) Cr.Hrs.6 (Formerly 053.235) A survey of the principal regions and countries of Latin America. Human occupations, settlement, communication, population problems, and economy will be surveyed. Special emphasis will be given to Mexico. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2410 Geography of Tourism and Recreation (HS) Cr.Hrs.6 (Formerly 053.241) This course treats the economic, social, and physical dimensions of tourism and recreation. It studies forecasting, planning and management, and recreation resources, in both spatial and environmental context. The course focuses on Canadian experience. *Prerequisite:* A minimum grade of C in GEOG 1200 (or GEOG 1201 or 053.120) or GEOG 1280 or GEOG 1281 (or 053.128) or written consent of department head.

GEOG 2430 Political Geography (HS) Cr.Hrs.6 (Formerly 053.243) A study of the relationships existing between land and the state - its location, boundaries, and regional differences; elements of strength in relation to space, resources, population, and ethnic groups at international, national and local levels. May not be held with GEOG 2650, (or 053.265), GEOG 2660 (or 053.266). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2440 Geography of Natural Hazards (PS) Cr.Hrs.6 (Formerly 053.244) Phys-

ical environmental hazards to human settlement and economy are examined with particular attention to meteorological, soil erosion, mass wasting, earthquake, and volcanic phenomena. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

★ **GEOG 2450 The Making of the Prairie Landscape (A) Cr.Hrs.6** (Formerly 053.245) Traces the evolution of the cultural landscape of Western Canada including Indian occupancy, environmental perception, urban and rural landscapes, and regional images in art and literature. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2460 Geography of Africa (A) Cr.Hrs.6 (Formerly 053.246) A systematic and regional survey of the contemporary political and economic geography of Africa. Emphasizes the variability and viability of the physical and human resource base, as well as political and social impacts on Africa's development. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2480 Population Geography (HS) Cr.Hrs.6 (Formerly 053.248) An examination of the factors controlling the number and distribution of human population. Variations in fertility, mortality, and mobility will be analyzed and the causes and consequences reviewed. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2490 Geography of Modern China (A) Cr.Hrs.3 (Formerly 053.249) Survey of the People's Republic of China. Discussion of China's population, food and energy production, industrial achievements, and internal politics will be preceded by a description of the country's environmental conditions and resources and concluded by an assessment of China's international position and future prospects. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2520 Geography of Natural Resources (HS) Cr.Hrs.3 (Formerly 053.252) An introduction to the basic concepts of the subject and the distribution of resources. Stress will be placed on Canadian resources and resource requirements but examples from other resource systems will also be used. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2530 Introduction to Scientific Geographic Research (TS) Cr.Hrs.3 (Formerly 053.253) An introduction to the use of scientific methodology in geography and the application of scientific explanatory frameworks to geographic research projects. Data collection procedures are discussed with particular emphasis on measurement, sampling designs, and interview surveying techniques. May not be held with the former 053.247. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2540 Weather and Climate (PS) Cr.Hrs.3 (Formerly 053.254) This half-course examines the nature, controls, and observations of weather and the variation of climate in time and space. May not be held with the former 053.228 or 053.251. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2550 Geomorphology (PS) Cr.Hrs.3 (Formerly 053.255) This half-course surveys a broad array of landforms in the world and the geomorphic processes responsible for their creation. Attention is strongly focused on those landform processes originating at the earth's surface. May not be held with the former 053.251. *Prerequisite:* A minimum grade of C in GEOG 1200 or GEOG 1201 (or 053.120) or GEOG 1290 or GEOG 1291 (or 053.129) or written consent of department head.

GEOG 2560 Geography of North America (A) Cr.Hrs.6 (Formerly 053.256) The major regions of Canada and the U.S.A. are studied with respect to geographical patterns of their physical environment, settlement, culture, economic activity, and land use. May not be held with GEOG 2580, (or 053.258), 053.330, 053.343, 053.364, or 053.365. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

★ **GEOG 2570 Geography of Canada (A) Cr.Hrs.3** (Formerly 053.257) A regional study of Canada. Lectures are the same as those given during one term of GEOG 2560 (or 053.256). May not be held with GEOG 2560, (or 053.256), 053.33, 053.343, or 053.365. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or written consent of department head.

GEOG 2580 Geography of the United States (A) Cr.Hrs.3 (Formerly 053.258) A regional study of the United States. Lectures are the same as those given in one term of GEOG 2560 (or 053.256). May not be held with GEOG 2560, 053.256, 053.330, 053.364, or 053.365. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or written consent of department head.

GEOG 2620 Geography of Environmental Changes (PS) Cr.Hrs.3 (Formerly 053.262) This course will introduce concepts of environmental change and examine in detail past, present and future environmental changes. The human response to, and the role of policy in dealing with environmental change will be discussed. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 2630 Geography of Culture and Environment (HS) Cr.Hrs.3 (Formerly 053.263) An introduction to the cultural geographic study of environment, focusing on the evolution of landscape, the creation of regions, and human relationships with nature. May not be held with the former 053.260. *Prerequisite:* A minimum grade of

C in one of GEOG 1200 or GEOG 1201 (or 053.120) or GEOG 1280 or GEOG 1281 (or 053.128), or written consent of department head.

GEOG 2640 Geography of Culture and Inequality (HS) Cr.Hrs.3 (Formerly 053.264) An introduction to the cultural geographic study of human and place inequalities, focusing on behaviour in landscape, group differences, and human identities. May not be held with the former 053.261. *Prerequisite:* A minimum grade of C in GEOG 1200 or GEOG 1201 (or 053.120) or GEOG 1280 or GEOG 1281 (or 053.128), or written consent of department head.

GEOG 3200 Introduction to Remote Sensing (TS) Cr.Hrs.3 (Formerly 053.320) The course is an introduction to the principles of optical, active and passive microwave remote sensing. A review of satellite and sensors and their geographic applications will be presented, along with digital image analysis techniques. Laboratory assignments will provide hands-on experience in dealing with remote sensing data. May not be held with the former 053.454. *Prerequisite:* A grade of "C" or better in GEOG 1200 or GEOG 1201 (or 053.120) or GEOG 1290 or GEOG 1291 (or 053.129) and three credit hours in PHYS 1020 or PHYS 1021 (or 016.102), PHYS 1030 or PHYS 1031 (or 016.103), MATH 1300 or MATH 1301 (or 136.130), MATH 1500 or MATH 1501 (or 136.150), or written consent of the department.

GEOG 3310 Atmospheric Dynamics, Storms and Radar (PS) Cr.Hrs.3 (Formerly 053.331) The course covers the critical dynamic processes that are associated with the Earth's atmosphere including forces that control wind, the kinematics of the wind field, general circulation, hodographs, thermal wind, laws of motion, mid-latitude circulations, convective storms and the utility of weather radar. *Prerequisite:* A minimum grade of C in GEOG 2300 (or 053.230); or written permission of the department.

GEOG 3320 Introduction to Microclimates and Micrometeorology (PS) Cr.Hrs.3 (Formerly 053.332) This course introduces the concept of energy balance climatology and examines relationships among climate, microclimate, and environments of the Earth's surface and human-made environments. Studies include bioclimates and hydroclimates. Not to be held for credit with 053.344. *Prerequisites:* A minimum grade of C in GEOG 2310 (or 053.231); GEOG 2300 (or 053.230) or written permission of the department.

GEOG 3460 Urban Geography (HS) Cr.Hrs.6 (Formerly 053.346) The course studies the processes and trends of urbanization; the classification of cities; central-place theory; cities as systems; land-use patterns; social forces and factorial ecology; and urban transport problems. *Prerequisite:* a grade of "C" or better in one of: GEOG 1200 or GEOG 1201 (or 053.120), GEOG 1280 or GEOG 1281 (or 053.128), or the former 053.124, or 053.125 or 053.127, or consent of department head.

W ★ **GEOG 3480 Canadian Problems (A) Cr.Hrs.3** (Formerly 053.348) The geographical basis of selected problems (e.g. regional, urban, rural, resource, land use). *Prerequisite:* a grade of "C" or better in one of: GEOG 2560 or GEOG 2561 (or 053.256), GEOG 2570 (or 053.257), (or 053.343), the former 053.330 or 053.365, or consent of department head.

GEOG 3500 A Geography of Europe (A) Cr.Hrs.6 (Formerly 053.350) A survey of the geography of Europe. Emphasis will be placed on the European Union. Several countries will be examined in more detail. *Prerequisite:* a grade of "C" or better in six credit hours from Geography courses numbered at the 100 level, or written consent of department head.

W **GEOG 3510 Agricultural Geography (HS) Cr.Hrs.6** (Formerly 053.351) The course introduces location factors which influence the nature and distribution of farming activity. Study is made of the basic types of farming systems, prior to a detailed study of agriculture of the Prairies. *Prerequisite:* a grade of "C" or better in one of: GEOG 1200 or GEOG 1201 (or 053.120), GEOG 1280 or GEOG 1281 (or 053.128), GEOG 2210 or GEOG 2211 (or 053.221), or the former 053.124, 053.125 or 053.127, or written consent of department head.

GEOG 3520 Energy and Society (HS) Cr.Hrs.6 (Formerly 053.352) The course reviews in detail the role of energy in modern society. Explanation of basic energy laws and flows in the biosphere precedes discussion of energy resources, technologies, uses, and impacts. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 3530 An Introduction to Land-Resource Management (HS) Cr.Hrs.6 (Formerly 053.353) A study of the geographical aspects of problems and conflicts arising from land-resource utilization; methods of classifying land resources; elementary physical planning of resource development. *Prerequisite:* a grade of "C" or better in one of: GEOG 1200 or GEOG 1201 (or 053.120), GEOG 1280 or GEOG 1281 (or 053.128), GEOG 2210 or GEOG 2211 (or 053.221), or the former 053.124, 053.125 or 053.127, or written consent of department head.

GEOG 3540 Regional Development Planning Theory and Practise (HS) Cr.Hrs.6 (Formerly 053.354) The course considers regional disparities in a range of Western economies including Canada. The regional problem is explored theoretically and in the application of policies to alleviate disparities. *Prerequisite:* a grade of "C" or better in one of: GEOG 1200 or GEOG 1201 (or 053.120), GEOG 1280 or GEOG 1281 (or 053.128), GEOG 2210 or GEOG 2211 (or 053.221), or 053.124, 053.125 or 053.127, or written consent of department head.

W **GEOG 3580 Landforms (PS) Cr.Hrs.6** (Formerly 053.358) Present-day and Pleistocene glacial processes and landforms are examined in one term; slope processes and forms as well as the activities of rivers comprise the other. Human modification of these systems is discussed. May not be held with 053.340 and GEOL 3490 (or 007.349). *Prerequisite:* A grade of "C" or better in one of: GEOG 1200, GEOG 1201 (or 053.120), GEOG 1290, GEOG 1291 (or 053.129), GEOG 2550, GEOG 2551 (or 053.255), or the former 053.121, 053.251, or written consent of department head.

GEOG 3590 Geography of Developing Countries (A) Cr.Hrs.6 (Formerly 053.359) The main theme is modernization; examples from South Asia and Africa south of the

Sahara. Historical development, population and social problems, land use and conservation, urbanization and industrialization. May not be held with the former 053.234. *Prerequisite:* a grade of "C" or better in six credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 3591 Géographie des pays en voie de développement (A) Cr.Hrs.6 (L'ancien 053.359) Le thème principal sera la modernisation des pays en voie de développement: exemples de l'Asie méridionale et de l'Afrique noire. Seront étudiés les aspects suivants: le développement historique, les problèmes démographiques et sociaux, l'utilisation du sol et la conservation des ressources, l'urbanisation et l'industrialisation. L'étudiant ne peut se faire créditer à la fois le GEOG 3590 (ou 053.359) et l'ancien 053.234. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 6 heures-crédits de géographie niveau 100 ou l'autorisation écrite du professeur.

GEOG 3600 Geography of Ukraine (A) Cr.Hrs.3 (Formerly 053.360) The systematic and regional geography of Ukraine, especially its physical environment, resource base, and population and economic geographies. *Prerequisite:* a grade of "C" or better in six credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 3610 Climatic Change (PS) Cr.Hrs.6 (Formerly 053.361) The course focuses upon the nature, evidence and causes of climatic change with special reference to historical and quaternary periods. *Prerequisite:* A minimum grade of C in One of GEOG 1200, GEOG 1201 (or 053.120), GEOG 1290, GEOG 1291 (or 053.129), GEOG 2540, GEOG 2541 (or 053.254), the former 053.121, 053.126, 053.251 or written consent of department head.

M GEOG 3680 Research Methods in Geography (TS) Cr.Hrs.6 (Formerly 053.368) A study of the process of model building in physical and human geography. The analysis and interpretation of data in testing geographic models. May not be held with the former 053.247. *Prerequisite:* a grade of "C" or better in GEOG 2530 (or 053.253) or STAT 1000 or STAT 1001 (or 005.100) or written consent of department head.

♣ **GEOG 3700 Canada: The Making of the Human Landscape (A) Cr.Hrs.6** (Formerly 053.370) Emphasis is on the European settlement of Canada from the early 17th century until Confederation and the impact of this settlement upon the land. May not be held with the former 053.357, GEOG 3670 (or 053.367). *Prerequisite:* a grade of "C" or better in six credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 3710 Population and the Third World (HS) Cr.Hrs.3 (Formerly 053.371) This course examines the policies and problems associated with population growth and redistribution in the Third World. *Prerequisite:* a grade of "C" or better in GEOG 2480 or GEOG 2481 (or 053.248) or SOC 2480 (or 077.248) or written consent of department head.

GEOG 3720 Refugees, Displacees, Exiles (HS) Cr.Hrs.3 (Formerly 053.372) This course surveys the geographic dimensions of the nature, causes and consequences of past and contemporary involuntary migrations. *Prerequisite:* a grade of "C" or better in one of: GEOG 1200 or GEOG 1201 (or 053.120), GEOG 1280 or GEOG 1281 (or 053.128), GEOG 2480 or GEOG 2481 (or 053.248), or the former 053.124, 053.125 or 053.127 or written consent of department head.

GEOG 3730 Geographic Information Systems (TS) Cr.Hrs.3 (Formerly 053.373) Weekly two-hour lab. An introduction to geographic information systems (GIS) input, processing, output and applications. *Prerequisite:* a grade of "C" or better in GEOG 2250 (or 053.225) or written consent of department head.

GEOG 3740 Field Studies in Geography (A,TS) Cr.Hrs.6 (Formerly 053.374) A field course designed to introduce students to either a detailed area study or to field techniques employed for specific geographic enquiry. *Prerequisite:* written consent of department head.

GEOG 3750 Field Studies in Geography (A,TS) Cr.Hrs.3 (Formerly 053.375) A field course designed to introduce students to either a detailed area study or to field techniques employed for specific geographic enquiry. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 3760 Special Topics in Geography Cr.Hrs.6 (Formerly 053.376) This course will vary from year to year depending on the needs of students and the interests of instructors. *Prerequisite:* written consent of department head.

GEOG 3761 Sujets particuliers en géographie Cr.Hrs.6 (L'ancien 053.376) Le contenu de ce cours variera d'année en année selon les besoins des étudiants et la spécialité du professeur. Donné au Collège universitaire de Saint-Boniface. *Préalable:* l'autorisation écrite du professeur.

GEOG 3770 Special Topics in Geography Cr.Hrs.3 (Formerly 053.377) This course will vary from year to year depending on the needs of students and the interests of instructors. *Prerequisite:* written consent of department head.

GEOG 3800 Geography of Transportation Development (HS) Cr.Hrs.3 (Formerly 053.380) This course examines the development of selected modes of transportation and their associated route and network development. Emphasis is on the place of transportation in the cultural, economic, and physical landscape of Canada and the United States since 1800. May not be held with the former 053.463. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.

GEOG 4200 Advanced Methods in Remote Sensing Cr.Hrs.3 (Lab Required) (Formerly 053.320) Provides instruction in the current theory and application of remote sensing technology to Earth system Science. Emphasis will be placed on the processing and interpretation of remote sensing imagery and the integration of remote sensing data with other spatial data. May not be held with the former 053.454. *Prerequisite:* a grade of "C" or better in GEOG 3200 (or 053.320) or written consent of the department.

GEOG 4260 Sacred Lands Cr.Hrs.3 (Formerly 053.426) Students will increase their understanding of the importance and significance of Sacred Lands and Sacred Spaces to International Indigenous Peoples. Experiential learning, seminars, and a field component may be included. This course is taught as NATV 4260 in the Department of Native Studies. Consult with either unit for details. May not be held with NATV 4260 (or 032.426). *Prerequisite:* written permission of the department.

GEOG 4290 Geographies of Health and Health Care Cr.Hrs.3 (Formerly 053.429) This course provides an introduction to and critical examination of the geographies of health and healthcare. Topics include perceptions and determinations of health and health care; health care delivery, focusing on spatial patterns and inequities; and the relationship between environment and health, particularly impacts of environmental contamination. *Prerequisite:* written permission of the department.

GEOG 4300 Synoptic Meteorology and Weather Analysis Cr.Hrs.3 (Formerly 053.430) Applied aspects of meteorology are described in terms of weather analysis and forecasting techniques for synoptic-scales and meso-scales using various meteorological tools. An introduction to severe weather forecasting techniques will also be described. *Prerequisite:* GEOG 3310 (or 053.331); or written permission of the department.

GEOG 4310 Boundary-Layer Climatology and Micrometeorology Cr.Hrs.3 (Formerly 053.431) A seminar course on advanced topics in microclimatology and micrometeorology. *Prerequisite:* GEOG 3320 (or 053.332), or written permission of the department.

GEOG 4320 Modeling the Physical Climate Cr.Hrs.3 (Formerly 053.432) Numerical modeling techniques and applications to the physical climate and atmosphere. Students learn aspects of basic FORTRAN programming and explore various models that demonstrate physical concepts and their associated errors. Offered in 2006-2007 and in alternate years thereafter. *Prerequisite:* A minimum grade of C in GEOG 3310 (or 053.331), GEOG 3320 (or 053.332); or written permission of the department.

GEOG 4390 Global Climate Change Cr.Hrs.3 (Formerly 053.439) General circulation models are described and their applications to the study of Global climate change are examined. Students are familiarized with contemporary research approaches in the field of climate change through team projects coordinated with external clients, working in the area of climate change. *Prerequisite:* written permission of the department.

GEOG 4410 Rural Land Use Cr.Hrs.3 (Formerly 053.441) This course focuses on the dynamics of change on the rural-urban fringe. It involves seminars and individual field research. *Prerequisite:* written consent of department head.

GEOG 4440 Advanced Cartography and Digital Map Analysis Cr.Hrs.3 (Formerly 053.444) The advanced study of the production and analysis of maps using computer mapping technology. The incorporation of remotely sensed data and the role of accurate statistical representation are emphasized. May not be held with the former 053.452. *Prerequisite:* written consent of department head.

GEOG 4550 Topics in Air Pollution: Climatology, Location, and Planning Cr.Hrs.3 (Formerly 053.455) An introduction to air pollution sources; meteorology of air pollution; calculation of ground concentrations; effects and controls; environmental planning and policy. *Prerequisite:* written consent of department head.

GEOG 4560 Techniques in Climatology Cr.Hrs.3 (Formerly 053.456) Instrumentation, the sources of climatic data, and the use of satellite photography, as well as methods of analysis and presentation are discussed. *Prerequisite:* A minimum grade of C in GEOG 3320 (or 053.332) or written consent of department head.

GEOG 4570 Techniques in Geomorphology Cr.Hrs.3 (Formerly 053.457) Weekly seminar session on review of field and laboratory research techniques and selected applications in aspects of geomorphology. *Prerequisites:* written consent of department head.

GEOG 4580 Concepts and Methods in Geography Cr.Hrs.6 (Formerly 053.458) This course surveys the historical development of the nature, scope, and methods of human and physical geography. *Prerequisite:* written consent of department head.

GEOG 4590 Spatial Analysis Cr.Hrs.3 (Formerly 053.459) A survey of the methodology of spatial pattern analysis through a critical review of the literature dealing with urban systems. Emphasis is placed upon the geographical techniques used to analyze networks, lattices, hierarchies, surfaces, and gradients. *Prerequisite:* A grade of "C" or better in GEOG 3680 (or 053.368) and MATH 1300 or MATH 1301 (or 136.130) or MATH 1500 or MATH 1501 (or 136.150) or written consent of department head.

GEOG 4600 Cognitive-Behavioural Geography Cr.Hrs.3 (Formerly 053.460) Theoretical and empirical approaches to geographic space cognition. People's spatial knowledge of urban areas, regions, and nations is investigated. Policy-making implications of these approaches are assessed. *Prerequisite:* written consent of department head.

GEOG 4610 Techniques in Historical Geography Cr.Hrs.3 (Formerly 053.461) The course examines the nature of historical geographical source materials and the research techniques employed in their exploitation. Students will be exposed to specific research problems in the historical geography of Western Canada. *Prerequisite:* written consent of department head.

GEOG 4640 Models in Urban Geography Cr.Hrs.3 (Formerly 053.464) The topics covered are: the reviews of land use modeling, the gravity and potential models, and the discrete and dynamic models. *Prerequisite:* written consent of department head.

GEOG 4650 Models in Regional Analysis Cr.Hrs.3 (Formerly 053.465) Emphasis is placed on the use of regression techniques in regional analysis including the classical ordinary least squares methods and two-stage least squares. Migration and industrial location models are developed and calibrated using these techniques. *Prerequisite:* written consent of department head.

GEOG 4660 Honours Thesis Cr.Hrs.6 (Formerly 053.466) This course involves the production of a thesis under the supervision of a department faculty member. *Prerequisite:*

uisite: written consent of department head.

GEOG 4670 Selected Issues Cr.Hrs.3 (Formerly 053.467) Intensive study of selected geographic issues. *Prerequisite:* prearranged written consent of an individual instructor and written consent of department head.

GEOG 4690 Natural Hazards and Disasters Cr.Hrs.3 (Lab Required) (Formerly 053.469) A conceptual and methodological survey of natural hazards. Characteristics and causes of geophysical disasters, human exacerbation of hazards, and human adjustments to and perceptions of natural threats will be studied. *Prerequisite:* A minimum grade of C in GEOG 2440 (or 053.244), GEOG 2550 or GEOG 2551 (or 053.255) and GEOG 3580 (or 053.358), or written consent of department head.

GEOG 4710 Geography of the Elderly and Aging Cr.Hrs.3 (Formerly 053.471) Geographic approaches to the study of the elderly and growing old. Spatial aspects of elderly population distributions, migration moves, housing, daily travel patterns, and service systems are examined. *Prerequisite:* written consent of department head.

GEOG 4720 Advanced Methods in Geographic Information Systems Cr.Hrs.3 (Lab Required) (Formerly 053.472) Weekly two-hour lab. This course focuses on the practical application of techniques used in Geographic Information Systems (GIS) and the development of techniques used in Geographic Information Systems (GIS) and the development of GIS models. The development, testing and presentation of GIS data, models and results are studied. May not be held with the former 053.468. *Prerequisite:* A minimum grade of C in GEOG 3730 (or 053.373) and GEOG 3680 (or 053.368) or written consent of department head.

Courses offered at the Collège universitaire de Sainte-Boniface

GEOG 1201 Introduction à la géographie Cr.Hrs.6 (L'ancien 053.120) Étude des aspects physique et humain du globe et de leur interdépendance. L'étudiant ne peut se faire créditer avec GEOG 1200, 053.120, GEOG 1290, GEOG 1291, 053.129, GEOG 1280, GEOG 1281, 053.128, 053.121, ou 053.124, 053.125 ou 053.127. Donné au Collège universitaire de Saint-Boniface.

GEOG 1281 Introduction à la géographie humaine Cr.Hrs.3 (L'ancien 053.128) Étude des divers aspects du milieu humain: la population, l'habitat et les ressources naturelles. L'étudiant ne peut se faire créditer avec le GEOG 1280 (ou 053.128), GEOG 1200, GEOG 1201, (ou 053.120), 053.124, 053.125, ou 053.127. Donné au Collège universitaire de Saint-Boniface.

GEOG 1291 Introduction à la géographie physique Cr.Hrs.3 (L'ancien 053.129) Étude des divers aspects de l'environnement physique: le climat, le relief, les sols et la végétation. L'étudiant ne peut se faire avec GEOG 1290, (ou 053.129), GEOG 1200, GEOG 1201, (ou 053.120), or 053.121. Donné au Collège universitaire de Saint-Boniface.

GEOG 2211 Géographie économique (HS) Cr.Hrs.6 (L'ancien 053.221) Introduction à l'expression spatiale des activités économiques. Le cours traite du concept de ressource, de la localisation et de l'utilisation des ressources naturelles, des théories sur les facteurs de localisation des activités industrielles, de l'agriculture et des fondements du développement régional. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 3 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

GEOG 2221 Introduction à la cartographie et analyse de la carte numérique (TS) Cr.Hrs.6 Deux heures de laboratoire par semaine. Une étude de la production et de l'analyse de cartes, en tenant compte de la cartographie assistée par ordinateur. Ce cours est une introduction aux techniques de l'expression cartographique et à l'utilisation des données de la télédétection il porte une attention spéciale à la représentation précise des statistiques.

GEOG 2481 Géographie de la population (HS) Cr.Hrs.6 (L'ancien 053.248) Une étude des facteurs exerçant un contrôle sur l'ampleur et la répartition des populations humaines; l'analyse des variations de fécondité, de mortalité et de mobilité ainsi que leurs causes et conséquences. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 3 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

GEOG 2541 Météorologie et climatologie (PS) Cr.Hrs.3 (L'ancien 053.254) Étude de la nature, des contrôles et des observations du temps et des variations spatio-temporelles du climat. L'étudiant ne peut se faire créditer avec les anciens 053.228 ou 053.251. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 3 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

GEOG 2551 Géomorphologie (PS) Cr.Hrs.3 (L'ancien 053.255) Vue d'ensemble des reliefs variés de la surface du globe et des processus géomorphologiques responsables de leur formation. L'étudiant ne peut se faire créditer avec l'ancien 053.251. (Laboratoire hebdomadaire). Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 3 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

GEOG 2651 Géographie politique I Cr.Hrs.3 (L'ancien 053.265) Étude des relations qui existent entre l'État et son territoire: sa localisation, ses frontières et ses disparités régionales. L'étudiant ne peut se faire créditer avec le GEOG 2430 (ou 053.243). Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 3 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

GEOG 2661 Géographie politique II Cr.Hrs.3 (L'ancien 053.266) Étude des rapports de force entre les États et leurs relations à l'espace, aux ressources, à la population et aux groupes ethniques. L'étudiant ne peut se faire créditer avec le GEOG 2430 (ou 053.243). Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans le GEOG 2651 (ou 053.265) ou l'autorisation écrite du professeur.

GEOG 3411 Géographie de l'eau Cr.Hrs.3 (L'ancien 053.341) L'eau, élément essentiel de la géographie physique: bilan d'eau, cycle hydrologique, infiltration, percolation et écoulement, eaux souterraines, hydrologie fluviale et marine: course d'eau, lacs et océans, environnement. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans le GEOG 1290 ou GEOG 1291 (ou 053.129) ou l'autorisation écrite du professeur.

GEOG 3421 L'eau, enjeu géostratégique Cr.Hrs.3 (L'ancien 053.342) L'eau, un enjeu stratégique d'importance: un survol historique des enjeux liés à l'eau et les enjeux actuels, la répartition inégale de la ressource.eau. et son partage équitable, les solutions techniques, économiques, institutionnelles et juridiques envisagées et le droit international. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans le GEOG 1280 ou GEOG 1281 (ou 053.128) et les deux GEOG 2651 (ou 053.265) et GEOG 2661 (ou 053.266) (ou le GEOG 2430 (ou 053.243)), ou l'autorisation écrite du professeur.

★ **GEOG 3431 Géographie de Canada (A) Cr.Hrs.3** Étude du Canada par régions. L'étudiant ne peut se faire créditer à la fois le 053.343, le 053.256 ou 053.257 et le 053.370, ainsi que les anciens 053.365 et 053.330. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 6 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

★ **GEOG 3481 Particularités de la géographie du Canada (A) Cr.Hrs.3** (L'ancien 053.348) Ce cours aborde des problèmes spécifiques la géographie canadienne: régions, urbanisme, milieu rural, ressources, utilisation du sol. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un des cours suivants: GEOG 2560 ou GEOG 2561 (ou 053.256), GEOG 2570 (ou 053.257) ou 053.343, les anciens 053.330 ou 053.365, ou l'autorisation écrite du professeur.

GEOG 3501 Géographie de l'Europe (A) Cr.Hrs.6 (L'ancien 053.350) Vue générale sur la géographie du continent européen et plus spécifiquement sur l'Union européenne. L'accent sera placé sur quelques pays. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 6 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

★ **GEOG 3701 Canada: Évolution de l'écoumène (A) Cr.Hrs.6** (L'ancien 053.370) Étude de l'impact qu'a eu l'arrivée des Européens, au début du XVIIe siècle, sur les différents aspects de l'environnement canadien; évolution de la nature de l'utilisation de l'espace canadien. L'étudiant ne peut se faire créditer avec GEOG 3700 (ou 053.370) et les anciens 053.357 ou GEOG 3670 (ou 053.367). Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans 6 heures-crédits de géographie de niveau 100 ou l'autorisation écrite du professeur.

GEOG 3821 Les territoires de la francophonie mondiale (A, HS) Cr.Hrs.3 (L'ancien 053.382) La mise en place des espaces francophones à travers le monde: le développement et l'éclatement des empires français et belge. La territorialité et l'identité au sein de la francophonie internationale. Répartition géographique et développement institutionnel. Ententes politiques et aspirations territoriales. Donné au Collège universitaire de Saint-Boniface. *Préalable:* Un note minimale de C dans un minimum de 6 heures-crédits dans un cours de géographie de niveau 100.

GEOG 3831 L'espace francophone panaméricain (A, HS) Cr.Hrs.3 (L'ancien 053.383) L'étude des communautés francophones des Amériques dans le temps et dans l'espace. La mise en place de la francophonie panaméricaine et les circonstances de son éclatement. Ses enjeux économiques, sociaux, politiques et culturels. Les infrastructures, les institutions et les réseaux francophones. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans le GEOG 3821 (ou 053.382).

GEOG 3841 Les espaces francophones de l'Afrique, de l'Asie et de l'Océanie (A, HS) Cr.Hrs.3 (L'ancien 053.384) L'étude des communautés francophones africaines, asiatiques et océaniques. Les étapes de la colonisation et de la décolonisation, l'évolution vers l'indépendance et l'accession au statut d'État souverain. La mise en place des infrastructures, des institutions et des réseaux francophones. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans GEOG 3821 (ou 053.382).

Service Course

GEOG 2250 Introduction to Geographic Information Systems (Lab Required) (TS) Cr.Hrs.3 (Formerly 053.225) An introduction to the fundamental theoretical concepts of geographic information systems including acquisition, processing and analyzing environmental and socio-economic data. Topics to be covered include georeferencing, spatial data structures, processing, output and applications. Not to be held with the former 053.222. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 100 level, or written consent of the department.

SECTION 7: Bachelor of Environmental Science and Environmental Studies Degree Regulations and Program Descriptions

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7.1 Program Information

The Clayton H. Riddell Faculty of Environment, Earth, and Resources offers General, Major, and Honours degree programs leading to a Bachelor of Environmental Science (B.Env.Sc.) and Bachelor of Environmental Studies (B.Env.St.). Through an interdisciplinary approach, environmental issues relating to human population, sustainable resource development, pollution and conservation, environmental health, and endangerment and preservation of species are explored in conjunction with alternative conditions that have the potential to reverse current trends and contribute to ecological sustainability. Students have access to undergraduate courses offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources as well as the Faculties of Agricultural and Food Sciences, Arts, Law and Science in order to complete their education. They are expected to take many courses outside the Faculty enabling them to obtain a truly interdisciplinary education.

The Major and Honours degree programs serve students who desire advanced study in an environmental field. The programs are intended for students interested in professional training and the opportunity for advanced research. Honours degree programs demand higher academic performance and lead most directly to graduate study. Students who are ineligible to enter the Honours degree program in their third year may establish this in the following year on the basis of their improved scholastic performance. See the Faculty student advisor in the Faculty general office for information. The degree programs may be pursued on a full or part-time basis.

Students are encouraged to refer to the Environmental Careers website at www.eco.ca for current topical information related to environmental careers, professional certification and job opportunities.

The degree programs share a general structure that includes 39 credit hours in a foundation of either introductory Sciences or Social Sciences/Humanities. Students complete an environmental core of 27 credit hours that is common to both degrees and a Focus Area that is defined through consultation with the Faculty student advisor in the Faculty general office. Students completing the General degree program are required to complete 9 credit hours; Major and Major Coop students complete 30 credit hours; and Honours and Honours Coop students complete 39 credit hours. Other Focus Area requirements are defined in the graduation requirements in section 7.3.1 in this *Chapter*.

General

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

To qualify for the degree Bachelor of Environmental Science (General) or Bachelor of Environmental Studies (General), students must complete 90 credit hours including all faculty and degree requirements (including the foundation, environmental core and 9 credit hours of minimum 2000-level courses in a Focus Area). Minimum performance requirements include passing grades ("D" or better) in each course and a minimum cumulative Grade Point Average of 2.00. There is no limit to the number of credit hours a student completes provided he/she does not exceed 48 credit hours of failed and/or repeated courses.

Major

To qualify for the degree Bachelor of Environmental Science (Major) or Bachelor of Environmental Studies (Major), a student must complete 120 credit hours with a minimum cumulative grade point average of 2.00. Students must complete all faculty and degree requirements including the foundation, environmental core and Focus Area. Focus Area requirements are as follows: 30 credit hours of which 18 credit hours must be completed at the 3000- or 4000-level; 2.00 cumulative Grade Point Average. Major (Coop) students must attain a minimum cumulative Grade Point Average of 2.50. There is no limit to the number of credit hours a student completes provided he/she does not exceed 18 credit hours of failed and/or repeated courses.

Honours

To qualify for the degree Bachelor of Environmental Science (Honours) or Bachelor of Environmental Studies (Honours), a student must complete 120 credit hours with a minimum cumulative grade point average of 3.25. Students must complete all faculty and degree requirements and Focus Area. Focus Area requirements are as follows: 39 credit hours of which 24 credit hours must be completed at the 3000- or 4000-level and must include either ENVR 3500 or ENVR 4500; 3.00 cumulative Grade Point Average and minimum "C+" grades. Honours (Coop) students must

complete 6 credit hours of Coop related courses. There is no limit to the number of credit hours a student completes provided he/she does not exceed 18 credit hours of failed and/or repeated courses.

Note: The Bachelor of Environmental Studies (B.Env.St.) foundation includes 15 credit hours of 1000- and 2000-level Social Science/Humanities courses from 3 subject areas chosen from Anthropology, Economics, History, Philosophy, Political Studies, Sociology, and Women's Studies or as approved by the Faculty student advisor.

Minor in Another Department

Students in the B.Env.Sc. and B.Env.St. have the opportunity to complete a Minor of 18 credit hours from a department offering this option at the University of Manitoba. Students are not permitted, however, to complete this Minor in a related "ENVR" interdisciplinary environmental program. Students can declare only one Minor. The Minor requirements are described in section 3.3 of this *Chapter*. Contact the Faculty student advisor in the Faculty general office for further information about eligible Minors.

Cooperative Education Option

A Cooperative Education Option is available to students registered in either the Major or Honours degree programs in Environmental Science and Environmental Studies. Coop is an arrangement whereby students spend alternating periods in university and employment. There are several advantages to a cooperative education program for students. One benefit is that students are able to acquire both theoretical knowledge and practical experience. This experience assists them in selecting areas of specialization for their senior courses in their chosen Stream. As well, Coop assists students in their professional development by enhancing networking opportunities, participation in conferences and workshops and provides the foundation of skills and strategies required in searching and acquiring employment after graduation. Students can also defray some of the costs of their university education through these work term placements. Further information about Cooperative Education and student eligibility is available from the Cooperative Education advisor available in the Faculty general office.

Students electing to participate in the Cooperative Education Option will be assessed a program fee with their formal admission into the program. Once a student has accepted a position with a Coop employer, no portion of the program fee will normally be refunded.

The Cooperative Education Option consists of two employment work terms over a minimum period of eight months and contributes 6 credit hours towards the four year degree program. Students complete ENVR 2900 Professional Development 1 (1.5), ENVR 3900 Professional Development 2 (1.5), work term placements ENVR 3980 Work Term 1 (0), ENVR 3990 Work Term 2 (0), and the work term report courses ENVR 3910 Work Term Report 1 (1.5) and ENVR 3920 Work Term Report 2 (1.5). Additional work terms are available to interested students. Each academic term and each employment term commence in January, May or September. While on an employment term, a Cooperative Education Option student is not permitted to take more than three additional credit hours of academic work outside of the requirements of the Coop placement without permission of the Faculty student advisor.

Students must register in the appropriate 1.5 credit hour Work Term Report concurrently with the work term placement. This is outlined as follows:

Placement Courses	Corequisite Report Courses
ENVR 3980	ENVR 3910
Coop Work Term 1 (0)	Coop Work Term Report 1 (1.5)
ENVR 3990	ENVR 3920
Coop Work Term 2 (0)	Coop Work Term Report 2 (1.5)
Optional	
ENVR 4980	ENVR 4910
Coop Work Term 3 (0)	Coop Work Term Report 3 (1.5)

Students are required to register in the appropriate Coop courses and pay course fees prior to beginning their placement.

7.2 Entry Requirements

Students admitted from University 1 are placed in the Major degree program in either the Bachelor of Environmental Science or Bachelor of Environmental Studies until they have completed a minimum of 48 credit hours after which they can transfer to the General or Honours program or remain in the Major. To make a program transfer, students must complete an ap-

plication form available in the Faculty general office and have this approved by the Faculty student advisor.

External transfer students, Second Degree students and those from the Environmental Science Program in the Faculty of Science may be eligible for

direct entry into the General or Honours programs. These students should consult with the Faculty student advisor in the general office.

7.2.1 and 7.2.2 define the entry requirements for the degree programs in the Bachelor of Environmental Science and Bachelor of Environmental Studies, respectively.

7.2.1 Bachelor of Environmental Science Entry Requirements

Degree Program in B.Env.Sc.	Minimum Number of Credit Hours	Minimum Cumulative Grade Point Average	Additional Entrance Requirements
Honours	48	3.25	No failures on entry; a grade of "B" or better in ENVR 1000 and ENVR 2000 as well as a minimum "C+" in BIOL 1020 and BIOL 1030 or CHEM 1310 and "C" in the other course.
Honours (Coop) ¹	60	3.25	ENVR 2900; students must satisfy the requirements for entry/continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2170, ENVR 2350, ENVR 2550 (CHEM 2550), STAT 1000, STAT 2000, BOTN 2370 (ZOO 2370 or AGEC 2370), GEOL 1340, ECON 2390 (ABIZ 2390), BIOL 1020 and BIOL 1030.
Major	24	2.00	12 credit hours in ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, MATH 1500 (or MATH 1200, MATH 1300, MATH 1310, MATH 1510, MATH 1520, MATH 1530), GEOL 1340, PHYS 1020 (or PHYS 1050), PHYS 1030 (or PHYS 1070), with a grade of "C+" or better in six of the 12 credit hours, and a grade of "C" or better in the remaining six credit hours.
Major (Coop) ¹	60	2.50	ENVR 2900; students must satisfy the requirements for continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2170, ENVR 2350, ENVR 2550 (CHEM 2550), STAT 1000, STAT 2000, BOTN 2370 (ZOO 2370 or AGEC 2370), GEOL 1340, ECON 2390 (ABIZ 2390), BIOL 1020, or BIOL 1030.
General	48	2.00	

¹Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information.

Equivalent courses offered through Collège universitaire de Sainte-Boniface may be used in lieu of the specified courses identified in the entry requirements chart. Collège universitaire de Sainte-Boniface courses end in the number '1' (e.g. CHEM 1301).

7.2.2 Bachelor of Environmental Studies Entry Requirements

Degree Program in B.Env.St.	Minimum Number of Credit Hours	Minimum Cumulative Grade Point Average	Additional Entrance Requirements
Honours	48	3.25	No failures on entry; a grade of "B" or better in ENVR 1000 and ENVR 2000; GEOG 1280 (GEOG 1200 or GEOG 1281) and GEOG 1290 (GEOG 1200 or GEOG 1291), NATV 1220 and NATV 1240 (or NATV 1200) with a grade of "C+" or better in six of the 12 credit hours, and a grade of "C" or better in the remaining six credit hours.
Honours (Coop) ¹	60	3.25	ENVR 2900; students must satisfy the requirements for entry/continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2350, GEOG 1280 (GEOG 1200 or GEOG 1281) and GEOG 1290 (GEOG 1200 or GEOG 1291), NATV 1220 and NATV 1240 (or NATV 1200), GEOL 1440, ECON 2390 (ABIZ 2390), STAT 1000, one of BOTN 2280 (ZOO 2290) or BOTN 2370 (ZOO 2370 or AGEC 2370), and one of BIOL 1010, BIOL 1020, or BIOL 1030.
Major	24	2.00	12 credit hours taken from ENVR 1000, ENVR 2000, BIOL 1010 (or BIOL 1020 or BIOL 1030), STAT 1000, and/or 1000- and 2000-level courses in Geography, Native Studies, Anthropology, Economics, History, Philosophy, Political Studies, Sociology, Women's Studies; with a grade of "C+" or better in six of the 12 credit hours, and a grade of "C" or better in the remaining six credit hours.
Major (Coop) ¹	60	2.50	ENVR 2900; students must satisfy the requirements for continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2350, GEOG 1280 (GEOG 1200 or GEOG 1281) and GEOG 1290 (GEOG 1200 or GEOG 1291); NATV 1220 and NATV 1240 (or NATV 1200), GEOL 1440, ECON 2390 (ABIZ 2390), STAT 1000, one of BOTN 2280 (ZOO 2290) or BOTN 2370 (ZOO 2370 or AGEC 2370), and one of BIOL 1010, BIOL 1020 or BIOL 1030.
General	48	2.00	

¹Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information.

Equivalent courses offered through Collège universitaire de Sainte-Boniface may be used in lieu of the specified courses identified in the entry requirements chart. Collège universitaire de Sainte-Boniface courses end in the number '1' (e.g. CHEM 1301).

7.3 Minimum Performance Requirements for Continuation and Graduation

All students are asked to note that some academic policies and regula-

tions are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

A student's academic performance will be assessed with his/her application for admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources and following each *April and/or August examination series* thereafter. The Faculty student advisor must approve a student's registration each Regular and Summer session. Any revisions to this schedule should also be approved prior to the end of the registration revision period.

To be in **good standing** and permitted to continue in a degree program, a student must achieve the minimum standards outlined in 7.3.1 at each point of assessment. This assessment is based on the student's minimum cumulative Grade Point Average; the grades received in each of ENVR 1000, ENVR 2000, ENVR 2350, ENVR 3110, ENVR 3150 and ENVR 4110; and the number of failures and/or repeated courses after admission to the Faculty.

7.3.1 Minimum Performance Requirements

Minimum Performance Requirements				Additional Graduation Requirements ^{1,2}	
Degree Program (Credit Hours)	Minimum Cumulative Grade Point Average (GPA)	Maximum Credit Hours of Failures/ Repeated Courses	Minimum Grade Requirements in ENVR 1000, ENVR 2000, ENVR 2350, ENVR 3110, ENVR 3150 and ENVR 4110	Focus Area (2000-Level or Higher)	Coop Option Courses
General (90)	2.00	48		9 credit hours	
Major (120)	2.00	18	"C"	30 credit hours of which 18 must be at the 3000- or 4000-level; minimum cumulative GPA of 2.00.	ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)
Major (Coop) (120)	2.50				
Honours (120)	3.25	18	"B" in ENVR 1000 and ENVR 2000; "C+" grades in others	39 credit hours of which 24 must be at the 3000- or 4000-level; completion of ENVR 3500 or ENVR 4500; minimum cumulative GPA of 3.00; minimum "C+" grade in each course.	ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)
Honours (Coop) (120)	3.25				

¹Students in the B.Env.St. must complete 15 credit hours of 1000- and 2000-level courses from 3 subject areas from Anthropology, Economics, History, Philosophy, Political Studies, Sociology and Women's Studies, or others as approved by the Faculty student advisor.

²Students must satisfy the residence requirement for the degree program in order to be eligible for graduation. This is defined as either a total of 48 or the last 24 credit hours at the University of Manitoba.

To graduate from either a Bachelor Environmental Science or the Bachelor of Environmental Studies with the intended degree designation, a student must achieve the minimum standards and graduation requirements outlined in 7.3.1 following the final year *April or August examination series* and satisfy all degree course requirements in the foundation, environmental core and Focus Area as defined in section 7.1 of this *Chapter*. In addition, students must satisfy the residence requirement by completing either a total of 48 credit hours or their last 24 credit hours at the University of Manitoba. These courses must be acceptable for credit in either the Bachelor Environmental of Science or the Bachelor of Environmental Studies.

Students who do not meet these minimum performance requirements for continuation or graduation will be required to transfer to the appropriate program based on their performance and eligibility as defined in 7.3.1. Students who do not meet the minimum performance requirements for the General degree program will be placed on probation or academic suspension as defined in section 3.14 Probation and Academic Suspension in this *Chapter*.

Students required to transfer out of the Honours degree program will have the statement "Required to Transfer from the Honours Program" recorded on their transcript of marks. Similarly, students required to transfer out of the Major degree program will have the statement "Required to Transfer from the Major Program" recorded on their transcript of marks.

7.4 Dean's Honour List and Graduating with Distinction or First Class Honours

Students enrolled in a minimum of 24 credit hours of course work during the Regular term and achieve a cumulative Grade Point Average of 3.50 or higher will be placed on the **Dean's Honour List**.

To obtain a **Degree with Distinction** a student must achieve a minimum 3.50 Grade Point Average on the last 60 credit hours of the program. All sessions, regular and summer, will be considered in descending chronological order. When the last 60 credit hours are found in a session containing more hours than are needed, the best grades from that session will be used for the Grade Point Average calculation.

The term Degree with Distinction will appear both on the parchment and on the student's transcript of marks.

To graduate with **First Class Honours**, a student must complete at least 24 credit hours in each eight-month academic term and achieve a cumulative Grade Point Average of 3.50, on all courses constituting his/her last two academic years of the Honours degree. The term First Class Honours will appear both on the parchment and on the student's transcript of marks.

7.5 Bachelor of Environmental Science^{1,2,6}

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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HONOURS 120 CREDIT HOURS

ENVR 1000, ENVR 2000, CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030 Plus 6 credit hours from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ Plus 6 credit hours from the Faculty of Arts	ENVR 2170, ENVR 2350, BOTN 2370 (ZOO 2370 or AGE 2370), ENVR 2550 (CHEM 2550), PHIL 2750, ECON 2390 (ABIZ 2390) Plus the remaining courses from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ not yet taken	ENVR 3110, ENVR 3150, ENVR 3250, ENVR 4110
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It is recommended that students complete the W course in University 1 or Year 2

Plus a Focus Area⁵ defined in consultation with the Faculty student advisor. Honours Focus Area requirements are as follows: 39 credit hours of 2000-level or higher courses of which 24 credit hours must be at the 3000- or 4000-level and include either ENVR 3500 or ENVR 4500.

HONOURS COOPERATIVE OPTION 120 CREDIT HOURS

ENVR 1000, ENVR 2000, CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030 Plus 6 credit hours from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ Plus 6 credit hours from the Faculty of Arts	ENVR 2170, ENVR 2350, BOTN 2370 (ZOO 2370 or AGE 2370), ENVR 2550 (CHEM 2550), PHIL 2750, ECON 2390 (ABIZ 2390), ENVR 2900 Plus the remaining courses from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ not yet taken	ENVR 3110, ENVR 3150, ENVR 3250, ENVR 4110 ENVR 3900, ENVR 3980, ENVR 3910, ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
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It is recommended that students complete the W course in University 1 or Year 2

Plus a Focus Area⁵ defined in consultation with the Faculty student advisor. Honours Focus Area requirements are as follows: 39 credit hours of 2000-level or higher courses of which 24 credit hours must be at the 3000- or 4000-level and include either ENVR 3500 or ENVR 4500.

MAJOR 120 CREDIT HOURS

ENVR 1000, ENVR 2000, CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030 Plus 6 credit hours from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ Plus 6 credit hours from the Faculty of Arts	ENVR 2170, ENVR 2350, BOTN 2370 (ZOO 2370 or AGE 2370), ENVR 2550 (CHEM 2550), PHIL 2750, ECON 2390, (ABIZ 2390) Plus the remaining courses from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ not yet taken	ENVR 3110, ENVR 3150, ENVR 3250, ENVR 4110
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It is recommended that students complete the W course in University 1 or Year 2

Plus a Focus Area⁵ defined in consultation with the Faculty student advisor. Major Focus Area requirements are as follows: 30 credit hours of 2000-level or higher courses of which 18 credit hours must be at the 3000- or 4000-level.

MAJOR COOPERATIVE OPTION 120 CREDIT HOURS

ENVR 1000, ENVR 2000, CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030 Plus 6 credit hours from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ Plus 6 credit hours from the Faculty of Arts	ENVR 2170, ENVR 2350, BOTN 2370 (ZOO 2370 or AGE 2370), ENVR 2550 (CHEM 2550), PHIL 2750, ECON 2390 (ABIZ 2390) ENVR 2900 Plus the remaining courses from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ not yet taken	ENVR 3110, ENVR 3150, ENVR 3250, ENVR 4110 ENVR 3900, ENVR 3980, ENVR 3910, ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
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It is recommended that students complete the W course in University 1 or Year 2

Plus a Focus Area⁵ defined in consultation with the Faculty student advisor. Major Focus Area requirements are as follows: 30 credit hours of 2000-level or higher courses of which 18 credit hours must be at the 3000- or 4000-level.

NOTE: Students in the Major Coop are required to maintain a cumulative Grade Point Average of 2.50.

GENERAL 90 CREDIT HOURS

ENVR 1000, ENVR 2000, CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030 Plus 6 credit hours from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ Plus 6 credit hours from the Faculty of Arts	ENVR 2170, ENVR 2350, BOTN 2370 (ZOO 2370 or AGE 2370), ENVR 2550 (CHEM 2550), PHIL 2750, ECON 2390 (ABIZ 2390) Plus the remaining courses from STAT 1000, STAT 2000, GEOL 1340, PHYS 1020 ³ , PHYS 1030 ³ , MATH 1500 ⁴ not yet taken	ENVR 3110, ENVR 3150, ENVR 3250, ENVR 4110
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It is recommended that students complete the W course in University 1 or Year 2

Plus 9 credit hours from a selected Focus Area⁵ at the 2000-level or higher as approved by the Faculty student advisor.

MINOR 18 CREDIT HOURS

ENVR 1000, ENVR 2000

Plus a minimum of 12 credit hours chosen from 2000-, 3000- or 4000-level courses in Environmental Science/Studies

Note: BOTN 2370 (ZOOL 2370, or AGECE 2370) is a prerequisite to ENVR 3250. BIOL 1020 and BIOL 1030 (C) and STAT 1000 are the prerequisites to BOTN 2370 (ZOOL 2370 or AGECE 2370). BOTN 2280 (ZOOL 2290) or BOTN 2370 (ZOOL 2370 or AGECE 2370) is pre-requisite to ENVR 3110.

NOTES:¹Entry into the degree programs is summarized in 7.2.1.²The courses required in this program will satisfy the university mathematics requirement.³PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030, respectively.⁴MATH 1200, MATH 1300, MATH 1310, MATH 1510, MATH 1520, or MATH 1530 may be taken in place of MATH 1500.⁵Focus Area performance requirements are defined in section 7.3 of this Chapter.

·To fulfil prerequisite requirements, a grade of "C" must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

·Students should review the current course topics available through ENVR 3000 (3), ENVR 3010 (1.5), ENVR 3020 (3), ENVR 4000 (3), ENVR 4010 (1.5), and ENVR 4020 (3) as well as those offered through GEOG 3770 (3) and GEOG 4670 (3). Also, all courses are not offered every year or every session. The course schedule for the current academic session is available from the online calendar at www.umanitoba.ca/calendar.

·Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.

·Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Collège universitaire de Saint-Boniface courses end in the number "1" (e.g. CHEM 1301).

⁶**IMPORTANT:** The Honours and Major programs need not be completed in the manner prescribed in the chart above.The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

7.6 Bachelor of Environmental Studies^{1,2,8}

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

HONOURS 120 CREDIT HOURS

ENVR 1000, ENVR 2000, GEOG 1280⁷ and GEOG 1290⁷ (or GEOG 1200⁷), NATV 1220 and NATV 1240 (or NATV 1200)Plus 6 credit hours from STAT 1000, GEOL 1440³ and BIOL 1010⁴Plus 6 credit hours chosen from the Social Sciences/Humanities list⁵ENVR 2350, GEOG 2620, PHIL 2750, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290)⁴Plus the remaining courses from STAT 1000, GEOL 1440³ and BIOL 1010⁴ not yet takenPlus the remaining credit hours in the Social Sciences/Humanities list⁵ not yet taken

ENVR 3110, ENVR 3150, ENVR 4110

Plus a Focus Area⁶ defined in consultation with the Faculty student advisor. Honours Focus Area requirements are as follows: 39 credit hours of 2000-level or higher courses of which 24 credit hours must be completed at the 3000- or 4000-level and include either ENVR 3500 or ENVR 4500.

HONOURS COOPERATIVE OPTION 120 CREDIT HOURS

ENVR 1000, ENVR 2000, GEOG 1280⁷ and GEOG 1290⁷ (or GEOG 1200⁷), NATV 1220 and NATV 1240 (or NATV 1200)Plus 6 credit hours from STAT 1000, GEOL 1440³ and BIOL 1010⁴Plus 6 credit hours chosen from the Social Sciences/Humanities list⁵ENVR 2350, GEOG 2620, PHIL 2750, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290)⁴, ENVR 2900Plus the remaining courses from STAT 1000, GEOL 1440³ and BIOL 1010⁴ not yet takenPlus the remaining credit hours in the Social Sciences/Humanities list⁵ not yet taken

ENVR 3110, ENVR 3150, ENVR 4110

ENVR 3900, ENVR 3980, ENVR 3910,

ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)

Plus a Focus Area⁶ defined in consultation with the Faculty student advisor. Honours Focus Area requirements are as follows: 39 credit hours of 2000-level or higher courses of which 24 credit hours must be completed at the 3000- or 4000-level and include either ENVR 3500 or ENVR 4500.

MAJOR 120 CREDIT HOURS

ENVR 1000, ENVR 2000, GEOG 1280⁷ and GEOG 1290⁷ (or GEOG 1200⁷), NATV 1220 and NATV 1240 (or NATV 1200)Plus 6 credit hours from STAT 1000, GEOL 1440³ and BIOL 1010⁴Plus 6 credit hours chosen from the Social Sciences/Humanities list⁵ENVR 2350, GEOG 2620, PHIL 2750, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290)⁴Plus the remaining courses from STAT 1000, GEOL 1440³ and BIOL 1010⁴ not yet takenPlus the remaining credit hours in the Social Sciences/Humanities list⁵ not yet taken

ENVR 3110, ENVR 3150, ENVR 4110

Plus a Focus Area⁶ defined in consultation with the Faculty student advisor. Major Focus Area requirements are as follows: 30 credit hours of 2000-level or higher courses of which 18 credit hours must be completed at the 3000- or 4000-level.

MAJOR COOPERATIVE OPTION 120 CREDIT HOURS

ENVR 1000, ENVR 2000, GEOG 1280 ⁷ and GEOG 1290 ⁷ (or GEOG 1200 ⁷), NATV 1220 and NATV 1240 (or NATV 1200)	ENVR 2350, GEOG 2620, PHIL 2750, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290) ⁴ , ENVR 2900	ENVR 3110, ENVR 3150, ENVR 4110 ENVR 3900, ENVR 3980, ENVR 3910, ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
Plus 6 credit hours from STAT 1000, GEOL 1440 ³ and BIOL 1010 ⁴	Plus the remaining courses from STAT 1000, GEOL 1440 ³ and BIOL 1010 ⁴ not yet taken	
Plus 6 credit hours chosen from the Social Sciences/Humanities list ⁵	Plus the remaining credit hours in the Social Sciences/Humanities list ⁵ not yet taken	

Plus a Focus Area⁶ defined in consultation with the Faculty student advisor. Major Focus Area requirements are as follows: 30 credit hours of 2000-level or higher courses of which 18 credit hours must be completed at the 3000- or 4000-level.

NOTE: Students are required to maintain an overall cumulative Grade Point Average of 2.50 in the Major Coop Program.

GENERAL 90 CREDIT HOURS

ENVR 1000, ENVR 2000, GEOG 1280 ⁷ and GEOG 1290 ⁷ (or GEOG 1200 ⁷), NATV 1220 and NATV 1240 (or NATV 1200)	ENVR 2350, GEOG 2620, PHIL 2750, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290) ⁴	ENVR 3110, ENVR 3150, ENVR 4110
Plus 6 credit hours from STAT 1000, GEOL 1440 ³ and BIOL 1010 ⁴	Plus the remaining courses from STAT 1000, GEOL 1440 ³ and BIOL 1010 ⁴ not yet taken	
Plus 6 credit hours chosen from the Social Sciences/Humanities list ⁵	Plus the remaining credit hours in the Social Sciences/Humanities list ⁵ not yet taken	

Plus 9 credit hours from a selected Focus Area⁶ at the 2000-level or higher approved by the Faculty student advisor.

MINOR 18 CREDIT HOURS

ENVR 1000, ENVR 2000	Plus a minimum of 12 credit hours chosen from 2000-, 3000- or 4000-level courses in Environmental Studies. Note: BOTN 2370 (ZOOL 2370, or AGECE 2370) is a prerequisite to ENVR 3250. BIOL 1020 and BIOL 1030 (C) and STAT 1000 are the prerequisites to BOTN 2370 (ZOOL 2370 or AGECE 2370). BOTN 2280 (ZOOL 2290) or BOTN 2370 (ZOOL 2370 or AGECE 2370) is a prerequisite to ENVR 3110 ⁷ .
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NOTES:

¹Entry into the degree programs is summarized in 7.2.2.

²The courses required in this program will satisfy the university mathematics and written English requirements.

³GEOL 1340 may be used in lieu of GEOL 1440.

⁴Students with an interest in the Conservation Focus Area are advised to complete both BIOL 1030 and BOTN 2370 (ZOOL 2370 or AGECE 2370) instead of BIOL 1010 and BOTN 2280 (ZOOL 2290).

⁵To complete the degree requirements, students must complete 15 credit hours of Social Sciences/Humanities courses chosen from 3 subject areas in Anthropology, Economics, History, Philosophy, Political Studies, Sociology, Women's Studies or others as approved by the Faculty student advisor.

⁶Focus Area performance requirements are defined in section 7.3.1 of this Chapter.

⁷Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Collège universitaire de Saint-Boniface courses end in the number "1" (e.g. CHEM 1301).

-To fulfil prerequisite requirements, a grade of "C" must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

-Students should review the current course topics available through ENVR 3000 (3), ENVR 3010 (1.5), ENVR 3020 (3), ENVR 4000 (3), ENVR 4010 (1.5), and ENVR 4020 (3) as well as those offered through GEOG 3770 (3) and GEOG 4670 (3). Also, all courses are not offered every year or every session. The course schedule for the current academic session is available from the online calendar at www.umanitoba.ca/calendar.

-Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.

⁸**IMPORTANT:** The Honours and Major programs need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

7.7 Environmental Science and Environmental Studies Course Descriptions

All courses are not offered every year. The course schedule for the current academic terms are available from the on-line calendar at www.umanitoba.ca/calendar. **There are several course titles available under the topics courses including ENVR 3010, ENVR 3020, ENVR 4010 and ENVR 4020 in Summer 1 and Summer 2 terms.**

Note: Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, refer to the on-line calendar (www.umanitoba.ca/calendar) and /or contact the Department of Environment and Geography general office.

U1 ENVR 1000 Environmental Science 1 - Concepts Cr.Hrs.3 (Formerly 128.100) This course will introduce students to the conceptual framework of the environment by examining its physical, biological, and social components. General topics to be considered will include ecological principles and the responses of natural and managed systems to disturbance; population growth; biodiversity and conservation; and environmental sustainability. Not to be held for credit with BIOL 1340 (or 071.134) or the former 001.337.

U1 ENVR 2000 Environmental Science 2 - Issues Cr.Hrs.3 (Formerly 128.200) This course will briefly review the major features of the structure and function of natural systems along with the degree to which these have been compromised. The main component of the course, however, will concentrate on the identification of the issues

that underlie environmental degradation, while exploring alternative conditions that have the potential to reverse current trends and ultimately contribute to ecological sustainability. *Prerequisite:* a minimum grade of C in ENVR 1000 (or 128.100).

ENVR 2170 Environmental Problem Solving Cr.Hrs.3 (Formerly 128.217) A survey of mathematical and scientific approaches to environmental problems. A multi-disciplinary approach will be taken, using current topical issues as examples. *Prerequisites:* A minimum grade of C in CHEM 1310 or CHEM 1311 (or 002.131 or the former 002.128), BIOL 1030 or BIOL 1031 (or the former 071.125) and one of PHYS 1020 or PHYS 1021 (or 016.102), MATH 1500 or MATH 1501 (or 136.150), MATH 1200 or MATH 1201 (or 136.120), MATH 1300 or MATH 1301 (or 136.130), MATH 1310 (or 136.131), MATH 1510 (or 136.151), MATH 1520 (or 136.152) or MATH 1530 (or 136.153).

ENVR 2180 Introductory Toxicology Cr.Hrs.3 (Formerly 128.218) A survey of general principles underlying the effects of toxic substances on biological systems, including consideration of the history, scope and applications of toxicology, the mechanisms of toxic action, and some major types of toxicants. Not to be held with ENVR 2190 (or 128.219), BOTN 2180 (or 001.218), BOTN 2190 (or 001.219), ZOOL 2180 (or 022.218), ZOOL 2190 (or 022.219), AGRI 2180 (or 065.218), AGRI 2190 (or 065.219) or the former 001.337. *Prerequisites:* A minimum grade of C in BIOL 1030 or BIOL 1031 (or the former 071.125), and A minimum grade of D in CHEM 1310 or CHEM 1311 (or 002.131 or 002.128) or CHEM 1320 (or 002.132).

ENVR 2190 Toxicological Principles Cr.Hrs.1.5 (Formerly 128.219) A survey of general principles underlying the effects of toxic substances on biological systems, including consideration of the history, scope and applications of toxicology, and the mechanisms of toxic action. Not to be held with ENVR 2180 (or 128.218), BOTN 2180 (or 001.218), BOTN 2190 (or 001.219), ZOOL 2180 (or 022.218), ZOOL 2190

(or 022.219), AGRI 2180 (or 065.218), AGRI 2190 (or 065.219) or the former 001.337. *Prerequisites:* A minimum grade of C in BIOL 1030 \ or BIOL 1031 (or the former 071.125), CHEM 1310 or CHEM 1311 (or 002.131 or the former 002.128) or CHEM 1320 (or 002.132).

ENVR 2350 Technical Communication In The Environmental Sectors Cr.Hrs.3 (Lab Required) (Formerly 128.235) An introduction to technical communication skills required for environmental practitioners in research, government, and industry. The course covers technical writing and literature search techniques, business writing including reports, memos and e-mails, professional presentation skills, and fundamental internet skills. Practical experience is gained through assignments and laboratory exercises. Not to be held for credit with the former 128.205. *Prerequisite:* Permission of the department head.

ENVR 2550 Environmental Chemistry Cr.Hrs.3 (Lab Required) (Formerly 128.255) An introduction to the chemistry of the environment. Emphasis will be on the composition of the natural environment and the processes of natural and human-introduced chemical species that take place within it. The course will provide students with the chemical basis for understanding the environment and environmental problems. Not to be held with CHEM 2550 (or 002.255). *Prerequisite:* A minimum grade of C in CHEM 1310 or CHEM 1311 (or 002.131 or the former 002.128).

ENVR 2900 Professional Development in the Environmental Sectors 1 Cr.Hrs.1.5 (Formerly 128.290) Through self directed learning students are introduced to the environmental sectors and issues including workplace health and safety, the respectful workplace, managing workloads and expectations, and professionalism. The course is a mandatory requirement to Cooperative Education Option admission. *Prerequisite:* A minimum grade of C in ENVR 2350 (or 128.235).

ENVR 3000 Multidisciplinary Topics in Environmental Science 1 Cr.Hrs.3 (Formerly 128.300) Selected topics of current interest in the Environmental Sciences and Studies. Course content to vary with each offering depending on the needs and interests of students and faculty. *Prerequisite:* Permission of the department head plus a minimum of 60 credit hours of university credit.

ENVR 3010 Field Topics in Environmental Science 1 Cr.Hrs.1.5 (Formerly 128.301) Field and practical experience in selected topics of current interest in the Environmental Sciences and Studies, with the content to vary depending on the needs and interests of students and faculty. *Prerequisite:* Permission of the department head.

ENVR 3020 Extended Field Topics in Environmental Science 1 Cr.Hrs.3 (Formerly 128.302) Field and practical experience in selected topics of current interest in the Environmental Sciences and Studies, with the content to vary depending on the needs and interests of students and faculty. *Prerequisite:* Permission of the department head.

ENVR 3110 Environmental Conservation and Restoration Cr.Hrs.3 (Lab Required) (Formerly 128.311) Environmental conservation and restoration are introduced and approaches based on science and traditional knowledge are contrasted. An emphasis is placed on systems thinking and both local and international case studies. Not to be held with the former 128.310 or 001.355. *Prerequisites:* A minimum grade of C in BOTN 2280 (or 001.228), or (ZOOL 2290 (or 022.229) or BOTN 2370 or BOTN 2371 (or 001.237) or (ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237)), or permission of the department head.

ENVR 3150 Environmental Responsibilities Cr.Hrs.3 (Formerly 128.315) Environmental responsibilities in terms of policies, legislation, standards and guidelines are covered through lectures, case study review and discussion. Environmental liability and due diligence are reviewed in relation to responsibilities of organizations and individuals. Strategies to manage environmental liabilities, including environmental assessment, risk assessment, audit, site assessment and management systems are also discussed. *Prerequisite:* 60 credit hours of university course work.

ENVR 3250 Environmental Assessment Cr.Hrs.3 (Lab Required) (Formerly 128.325) The theory, principles and practices of environmental assessment as a planning and decision-making process to identify and mitigate adverse effects of development projects. Environmental assessment is defined in the context of federal and provincial legislation, and applicable standards and guidelines. Laboratory assignments involve practical experiences, case study review and basic report preparation. Not to be held with the former 128.320 or 001.356. *Prerequisites:* A minimum grade of C in ABIZ 3550 (or 061.355) or ENVR 3150 (or 128.315), BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237)), or permission of the department head.

ENVR 3350 Environmental Management Systems Cr.Hrs.3 (Formerly 128.335) This course provides an introduction to environmental management systems and specific material on the ISO 14001 international EMS standard. Auditing principles and techniques are described with specific guidance on auditing an ISO 14001 EMS. *Prerequisite:* Permission of the department head.

ENVR 3400 Introduction to Environment and Health Cr.Hrs.3 (Formerly 128.340) An overview of the linkages between human health and environmental issues. The course discusses the nature of environmental hazards, human exposure and health outcomes. Major environmental and human health issues such as air pollution, hazardous substances, endocrine disruptors and products in the home are covered. Not to be held for credit with the former 128.421. *Prerequisite:* a minimum of 60 credit hours of university credit.

ENVR 3500 Project in Environmental Science Cr.Hrs.3 (Formerly 128.350) A research project in any aspect of environmental science, chosen in consultation with the department head and an appropriate supervising faculty member. Written reports and oral presentation on the results of the project will be required. The course is normally available only to final year students in the Environmental Science or Studies Program. *Prerequisite:* Permission of the department head.

ENVR 3550 Environmental Analysis Cr.Hrs.3 (Lab Required) (Formerly 128.355) An introduction to classical and modern techniques for sampling, sample pre-treatment, and analysis of chemical substances in aquatic atmospheric and terrestrial environ-

ments and the interpretation of data obtained from such analyses. Not to be held with CHEM 3590 or the former 002.347 or the former 002.355. *Prerequisite:* a grade of C in ENVR 2550 (or 128.255) (CHEM 2550 or 002.255) or CHEM 2470 (or 002.247) or permission of the department head.

ENVR 3650 Environmental and Natural Resources Policy Cr.Hrs.3 This course provides an introduction to legal and policy processes and an overview of Canadian law relating to the environment and natural resources. The course provides a general introduction to legal principles and the legal and policy processes related to the environment and natural resources; reviews important laws governing environmental protection and management; and provides an overview of the law governing the ownership and disposition of natural resources. *Prerequisite:* ENVR 2000 (or 128.200) or permission of department head.

ENVR 3900 Professional Development in the Environmental Sectors 2 Cr.Hrs.1.5 (Formerly 128.390) Attendance and participation in seminars, conferences and workshops to foster greater interaction between students and practitioners in the environmental sectors. Students improve professional skill sets through assignments. The normal sequence for participation is after completion of ENVR 3980 (or 128.398). *Prerequisites:* A minimum grade of C in ENVR 2900 (or 128.290); minimum of 60 hours of university credit.

ENVR 3910 Coop Work Term Report 1 Cr.Hrs.1.5 (Formerly 128.391) Work term report, completed in conjunction with the coop placement, designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. *Prerequisite:* A minimum grade of C in ENVR 2900 (or 128.290). *Corequisite:* ENVR 3980.

ENVR 3920 Coop Work Term Report 2 Cr.Hrs.1.5 (Formerly 128.392) Work term report, completed in conjunction with the coop placement, designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. *Prerequisite:* A minimum grade of C in ENVR 3980 (or 128.398). *Corequisites:* ENVR 3900 and ENVR 3990.

ENVR 3980 Coop Work Term 1 Cr.Hrs.1.5 (Formerly 128.398) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. *Prerequisite:* A minimum grade of C in ENVR 2900 (or 128.290). *Corequisite:* ENVR 3910.

ENVR 3990 Coop Work Term 2 Cr.Hrs.1.5 (Formerly 128.399) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. *Prerequisite:* ENVR 3980 (or 128.398); *Co-requisites:* ENVR 3900 and ENVR 3920.

ENVR 4000 Multidisciplinary Topics in Environmental Science 2 Cr.Hrs.3 (Formerly 128.400) Selected topics of current interest in the Environmental Sciences and Studies. Course content to vary with each offering depending on the needs and interests of students and faculty. *Prerequisite:* Permission of the department head plus a minimum of 60 credit hours of university.

ENVR 4010 Field Topics in Environmental Science 2 Cr.Hrs.1.5 (Formerly 128.401) Field and practical experience in selected topics of current interest in the Environmental Sciences and Studies, content to vary depending on the needs and interests of students and faculty. *Prerequisite:* Permission of the department head.

ENVR 4020 Extended Field Topics in Environmental Science 2 Cr.Hrs.3 (Formerly 128.402) Field and practical experience in selected topics of current interest in Environmental Sciences and Studies, with the content to vary depending on the needs and interests of students and faculty. *Prerequisite:* Permission of the department head.

ENVR 4110 Critical Thinking and the Environment Cr.Hrs.3 (Lab Required) (Formerly 128.411) Topical issues and responses regarding the environment including conservation, management, and policy making are critically evaluated at local, national, and global scales. Term projects emphasizing applied work with environmental organizations and researchers are presented. Not to be held with the former 128.410 or BOTN 4680 (or 001.468). *Prerequisite:* A minimum grade of C in ENVR 3110 (or 128.311), or consent of the department head.

ENVR 4180 Ecotoxicological Risk Characterization Cr.Hrs.3 A biologically based, advanced course that will give students working knowledge of current processes and techniques for ecotoxicological risk characterization. The course material will cover the topics of problem definition, dose response characterization, exposure characterization, risk assessment, and risk management decision making. *Prerequisite:* A minimum grade of C in one of ENVR 2180 (or 128.218), BOTN 2180 (or 001.218), ZOOL 2180 (or 022.218) or AGRI 2180 (or 065.218).

ENVR 4400 Advanced Issues in Environment and Health Cr.Hrs.3 (Formerly 128.440) An evaluation of global and local environmental health issues and the assessment and management tools used to manage these risks. Case studies of environmental issues and their human health effects are covered. Students have the opportunity to work on a substantial interdisciplinary environmental health project. Not to be held for credit with the former 128.422. *Prerequisite:* A minimum grade of C in ENVR 3400 (or 128.340).

ENVR 4500 Project in Environmental Science Cr.Hrs.6 (Formerly 128.450) A research project in any aspect of environmental science or environmental studies, chosen in consultation with the department head and an appropriate supervising faculty member. Written reports and oral presentation on the results of the project will be required. The course is normally available only to final year students in the Environmental Science or Science Program. *Prerequisite:* Permission of the department head.

ENVR 4550 Aquatic Chemistry Cr.Hrs.3 (Formerly 128.455) An examination of biogeochemical processes affecting the distribution, speciation and bioavailability of chemical substances in the aquatic environment. The theoretical basis for the chemical behaviour of natural water systems is discussed, as well as the description of the processes involved in wastewater treatment. Offered in 2006-2007 and in alternate

years thereafter. Not to be held with CHEM 4550 (or 002.455). *Prerequisite:* A minimum grade of C in one of ENVR 3550 (or 128.355) (or the former 002.355) or CHEM 3590 (or the former 002.347) or permission of the department head.

ENVR 4650 Advanced Issues in Environmental Law and Policy Cr.Hrs.3 This course provides an in-depth review of Canadian law and policy relating to environmental protection and management. In particular, the course describes the laws governing a variety of topics related to the environment, including constitutional responsibilities, federal and provincial environmental legislation, water law, parks and protected areas, wildlife and fisheries management, species at risk, and international law including climate change. *Prerequisite:* A minimum grade of C in ENVR 3650 or permission of the department head.

ENVR 4910 Coop Work Term Report 3 Cr.Hrs.1.5 (Formerly 128.491) Work term report, completed in conjunction with the coop placement, which is designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. *Prerequisite:* ENVR 3990 (or 128.399).

ENVR 4980 Work Term 3 Cr.Hrs.1.5 (Formerly 128.498) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. *Prerequisite:* ENVR 3990 (or 128.399); *Corequisite:* ENVR 4910.

SECTION 8: Department of Geological Sciences: Bachelor of Science in Geological Sciences - Geology and Geophysics Degree Regulations and Program Descriptions

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8.1 Academic Staff

Distinguished Professor

Hawthorne, F.C., B.Sc. (Spec.) (Imperial College), A.R.S.M. (Royal School of Mines), Ph.D. (McMaster), F.R.S.C., F.G.A.C., F.M.S.A., Killam Fellow, Canadian Research Chair.

Professors Emeriti

Brisbin, W.C., B.Sc. (Geol.Eng.) (Manitoba), Ph.D. (UCLA); **Cerný**, P., B.Sc., M.Sc. (Brno), Ph.D. (Czechoslovak Academy of Sciences), F.R.S.C.; **Ferguson**, R.B., B.A., M.A., Ph.D. (Toronto), F.R.S.C.; **Hall**, D.H., B.Sc. (Alberta), M.Sc. (Toronto), Ph.D. (UBC).

Senior Scholars

Ayres, L.D., B.A. (Saskatchewan), Ph.D. (Princeton); **Clark**, G.S., B.Sc., M.Sc. (New Brunswick), Ph.D. (Columbia); **Moon**, W., B.Sc. (Seoul), B.A.Sc. (Elec.Eng.) (Toronto), M.Sc. (Columbia), Ph.D. (UBC), F.R.A.S.; **Turnock**, A.C., B.Sc., M.Sc. (Manitoba), Ph.D. (Johns Hopkins).

Professors

Chow, N., B.Sc. (Calgary), Ph.D. (Memorial); **Elias**, R.J., B.Sc. (Manitoba), M.Sc., Ph.D. (Cincinnati); **Ferguson**, I.J., B.Sc., Ph.D. (Australian National); **Halden**, N.M., B.Sc., Ph.D. (Glasgow); **Last**, W.M., B.Sc. (Wisconsin), M.Sc., Ph.D. (Manitoba) F.G.S.A.A.; **Sherriff**, B.L., B.Sc. (Leicester), M.Sc. (Brock), Ph.D. (McMaster); **Teller**, J.T., B.Sc. (Cincinnati), M.Sc. (Ohio State), Ph.D. (Cincinnati).

Assistant Professors

Chakhmouradian, A., M.Sc., Ph.D. (St. Petersburg State University); **Fredriksen**, A., B.Sc.(McGill), M.Sc.; Ph.D.(UBC).

Instructors

Mandziuk, W., B.Sc., B.Ed., M.Sc. (Manitoba) (Instructor II), **Young**, J., B.Sc., M.Sc. (Manitoba) (Instructor II).

8.2 Program Information

The Geological Sciences deal with the history of the Earth and its life, especially that which is recorded in rocks. Different component parts of the Earth system, the *lithosphere*, *biosphere*, *atmosphere* and *hydrosphere*, operate at different length and time scales. During interactions between the spheres there is feedback between the component parts as energy and mass are exchanged, transferred and redistributed. In a geological context

the feedback can occur on a global scale, or on very small scales such as that which we see in minerals. More recently humans have become a major force in this Earth system because we have intervened in many of these exchanges.

Considering the Earth's past, geoscientists typically work with long time scales (in the order of millions to billions of years). We also use Hutton's original philosophy of *uniformitarianism*, stated as *the present is the key to the past*, to solve geological problems. However, as we see changes at the Earth's surface (our environment) occurring on very short time scales we need to learn to extract the signal of human activity from the Earth's pre-human past. Once we understand and quantify the nature and extent of the Earth's natural evolution as well as our more recent environmental impact, geological sciences can help predict future changes to the Earth.

Geology and Geophysics are the sciences that provide the quantitative data on the physical and chemical behaviour and characteristics of Earth materials - rocks, minerals, fluids and gases. These data are needed to model the behaviour of minerals in natural as well as many industrial systems. The theoretical and instrumental expertise needed to tackle many resource extraction, mineral processing and environmental problems is resident in geological science departments. From a broad Earth, environmental and resource perspective our collective future will depend on sustainable use of our Earth's resources and care of the environment.

Professional Registration

The professional practice of geoscience in certain provinces and territories in Canada is governed by provincial/territorial law and is regulated by professional geoscience associations. In Manitoba, the Association of Professional Engineers and Geoscientists (APEGM) regulates professional practice. The requirements for professional registration are acceptable academic preparation and a subsequent period of acceptable geoscience experience. Students considering professional registration should take the B.Sc. Geological Sciences Honours or Major degree **and** make appropriate course selections, particularly in the basic sciences. Students should consult with the Department of Geological Sciences. Graduates who do not meet the academic requirements may be required by the professional association to take additional courses or examinations. Current registration information for APEGM is available in the department or from the association's web site: www.apegm.mb.ca/register/index.html

Geological Sciences Prerequisite Information

To fulfil prerequisite requirements, a grade of "C" must be achieved in any course stipulated as a prerequisite to a further course in Geological Sciences.

8.3 Degree Regulations

8.3.1 B.Sc. in Geological Sciences (Major) Geology or Geophysics:

Academic regulations are under review. Please check the web Calendar after July 1, 2006 for updates.

The Major programs in Geology and Geophysics are designed for students interested in combining an in-depth study of Geology and Geophysics with broad coverage of another subject or subjects of their choice (Science or non-Science). Admission to graduate programs may be conditional upon completion of additional courses or require a period of pre-Master's study. Students intending to proceed to a Master's degree must consult with the department at the beginning of their second year of undergraduate study and in each subsequent year. The Major program may be pursued on a part-time basis, although it must be recognized that students may require additional sessions to complete degree requirements.

To qualify for the degree, a student must complete a minimum of 120 credit hours with passing grades ("D" or better) in each course and with a minimum cumulative average of 2.00 as calculated using the Minimum Performance Table (see section 8.3.3). Students must complete all Faculty requirements as well as the university written English and Mathematics requirement as described in the chapter, General Academic Regulations and Policy, in this *Calendar*.

Students admitted to the Major program will normally have completed University 1 requirements, which include six credit hours of courses from the Faculty of Arts, six credit hours of courses from the Faculty of Science and six credit hours from either Arts or Science. Students who do not meet this requirement while in University 1 must do so within the Major program.

Minor in Another Department

Students in the B.Sc. Geological Sciences have the opportunity to complete a Minor of 18 credit hours from a department offering this option at the University of Manitoba. Students are not permitted, however, to complete this Minor in the same department. Students can declare only one Minor. The Minor requirements are described in section 3.3 of this *Chapter*. Contact the department and/or Faculty student advisor in the Faculty general office for further information about eligible Minors.

Entrance to the Major

To enter a Major program in Geology or Geophysics, a student must have completed at least 24 credit hours with a minimum Grade Point Average of 2.00 as stipulated in the Minimum Performance Table (see section 8.3.3). In addition, the student must attain the minimum grade requirements specified for individual Year 1 courses according to the program tables for the Major in Geology (section 8.4) or the Major in Geophysics (see section 8.5). Students who do not obtain the entrance requirements for the Major program in their first year but who are interested in obtaining the Major degree should consult with the department.

Continuation in the Major

A student's academic performance is assessed first with his/her application for admission to the Faculty and then following each *April and/or August examination series* in which the student is registered. To be in **good standing** and permitted to continue in the degree program, a student must maintain a minimum Grade Point Average of 2.00 as stipulated in the Minimum Performance Table (section 8.3.3). Students are not limited in the number of repeated courses and failures so long as they meet the requirements of the Minimum Performance Table. Students who do not meet the minimum performance requirement will be placed on probation or academic suspension as outlined in section 3.14 Probation and Academic Suspension in this *chapter*.

Failed courses: A student is required to repeat those failed courses which are specified as required courses for the program.

Program approval

The department head (or designate) and Faculty student advisor must approve a student's Major program each session. Students must also obtain departmental approval for all revisions to their programs.

Graduation in the Major

In order to graduate from the Geology and Geophysics Major, students must complete all degree program and faculty requirements as stipulated in sections 3 and 8 of this *chapter*. Students must also achieve the minimum performance requirements as outlined in section 8.3.3. This is defined as a minimum Grade Point Average of 2.00 on 120 credit hours which constitute the degree.

Residence Requirement for Major Students

A student must successfully complete a minimum of 60 credit hours at the University of Manitoba. The courses used to satisfy the requirement must be acceptable for credit in the Faculty of Environment, Earth, and Resources.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in 24 credit hours or more who achieve a sessional Grade Point Average of 3.50 or higher during a regular session will be placed on the Dean's Honour List.

Degree with Distinction

To obtain a degree with distinction a student must achieve a minimum 3.50 Grade Point Average on the last 60 credit hours of the program. All sessions, regular and summer, will be considered in descending chronological order. When the last 60 credit hours are found in a session containing more hours than are needed, the best grades from that session will be used for the Grade Point Average calculation.

The term Degree with Distinction will appear both on the parchment and on the student's transcript of marks.

8.3.2 B.Sc. in Geological Sciences (Honours) Geology or Geophysics

The Honours programs are the most heavily concentrated programs offered and lead most directly to graduate studies. A student is required to achieve higher grade standards than in the Major degree program. The Honours degree may be pursued on a part-time basis, although it must be recognized

that students will require additional sessions to complete degree requirements. Students must complete the degree program within 8 years of gaining initial admission to the Honours program. Failure to complete the Honours degree within the 8-year time limit may require a student to transfer into the Major program.

A student will normally begin the Honours program in second year and must meet the entrance requirements set out below. Students in full-time study can expect to complete the prescribed courses in three years beyond the first year of University 1. Honours programs lead to either the B.Sc. Geological Sciences (Hons.) (Geology) or the B.Sc. Geological Sciences (Hons.)(Geophysics).

To be eligible for any award granted exclusively on the basis of academic performance, a student must normally be enrolled in a full program as defined by the department.

Students must complete the university written English and Mathematics requirement as described in the chapter, General Academic Regulations and Policy, of this *Calendar*.

Entrance to Honours

To enter the Honours program in Geology or Geophysics, a student must have completed at least 24 credit hours with the minimum Grade Point Average as stipulated in the Minimum Performance Table (section 8.3.3). In addition, the student must attain the minimum grade requirements specified for individual Year 1 courses according to the program tables for Honours Geology (section 8.4) or Honours Geophysics (section 8.5). Students who are ineligible to enter Honours with their admission to the Faculty may establish eligibility the following year on the basis of their second year of academic performance.

To enter the Honours degree program, a student must complete a program approval form available in the department general office and have it approved by the department head, or designate, and the Faculty student advisor in the Faculty general office.

Continuation in Honours

A student's academic performance is assessed first with his/her application for admission to the Faculty and then following each *April and/or August examination series* in which the student is registered. To be in **good standing** and permitted to continue in the degree program, a student must maintain the performance requirement as stipulated in the Minimum Performance Table (section 8.3.3). Students are not limited in the number of repeated courses and failures so long as they meet the requirements of the Minimum Performance Table. Students who do not maintain this minimum average will be required to withdraw from the Honours program and, if eligible, will be placed in the Major program. Students will have the notation "Required to Transfer from the Honours Program", recorded on their transcript of marks.

Program Approval

The department head (or designate) and Faculty student advisor in the Faculty general office must approve a student's Honours program each session. Students must also obtain departmental approval for all revisions made to their programs.

Residence Requirement for Honours Students

A student must successfully complete a minimum of 60 credit hours at the University of Manitoba. The courses used to satisfy the requirement must be acceptable for credit in the degree program. Residence requirements apply both to first and second-degree students.

Graduation from Honours

In order to graduate from the Honours Geology and Geophysics programs, students must complete all degree program and faculty requirements as stipulated in sections 3 and 8 of this *chapter*. Students must also achieve the minimum performance requirements as outlined in section 8.3.3. This is defined for the Honours Geology program as a minimum Grade Point Average of 3.00 on 120 credit hours which constitute the degree and for Honours Geophysics as a minimum Grade Point Average of 2.80 on the 126 credit hours which constitute the degree.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in 24 credit hours or more who achieve a sessional Grade Point Average of 3.50 or higher during a regular session will be placed on the Dean's Honour List.

First Class Honours

To graduate with **First Class Honours**, a student must complete at least 24 credit hours in each of their last two regular sessions with a cumulative Grade Point Average of 3.50. The term First Class Honours will appear both on the parchment and on the student's transcript of marks.

Honours Program Notes:

Double Honours Programs

Double Honours programs may be available. The program must be arranged in consultation with the departments concerned.

Honours Requirements and Options

Students who do not obtain the entrance requirements for the Honours program in their first year but who are interested in obtaining an Honours degree should consult with the department before registering for their second year.

Honours Geology Options

For students who wish to increase the focus of their knowledge, recommended electives are listed below:

Environmental Geoscience: BOTN 2370 (BOTN 2371, ZOOL 2370, ZOOL 2371, AGEC 2370 or AGEC 2371), CIVL 4250, SOIL 4060, SOIL 4090, SOIL 4120, SOIL 4130, SOIL 4500, GEOL 4290, GEOL 4370, GEOL 4630, GEOG 3610, ENVR 2180 (BOTN 2280, ZOOL 2180 or AGEC 2180), ENVR 3110, ENVR 3250, or others approved by the department. (Students are responsible for completion of prerequisites for these courses.)

Honours Geophysics Option

Students who wish to enter the Honours Geophysics Option and have not taken 6 credit hours of introductory Geological Sciences (eg., GEOL 1340 or GEOL 1440 and one of GEOL 1350, GEOL 1360, or GEOL 1370) may arrange with the department to make up this credit. Students must contact the department during the spring preceding entrance to the Honours program. All course choices in the Honours program should be made after consultation with the coordinator of the Geophysics program.

8.3.3 Geological Sciences Minimum Performance Table

Number of Credit Hours Attempted	Number of Credit Hours Used to Calculate the Minimum Performance Grade Point Average (only the best grades are included in the assessment)	Minimum Performance Grade Point Average Required for Continuation		
		Major Geology Major Geophysics	Honours Geology	Honours Geophysics
24 to 30	24	2.00	3.00	3.00
33	27	2.00	3.00	3.00
36	30	2.00	3.00	3.00
39 to 54	6 credit hours less than the credit hours attempted	2.00	3.00	2.80
57 to 90	9 credit hours less than the credit hours attempted	2.00	3.00	2.80
93 to 138	12 credit hours less than the credit hours attempted	2.00	3.00	2.80
141 to 162	15 credit hours less than the credit hours attempted	2.00	3.00	2.80
165 and above	18 credit hours less than the credit hours attempted	2.00	3.00	2.80
		Minimum Performance Grade Point Average Required for Graduation		
		Major Geology Major Geophysics	Honours Geology	Honours Geophysics
		2.00 on 120 credit hours constituting the degree	3.00 on 120 credit hours constituting the degree	2.80 on 126 credit hours constituting the degree

Students intending to proceed to further courses in Geological Sciences at the 2000-level or above should take GEOL 1340 as the lab component of these courses will ease the transition to higher level courses.

8.4 B.Sc. Geological Sciences (Geology)^{1,7}

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS GEOLOGY 120 CREDIT HOURS			
GEOL 1340 or GEOL 1440 and one of GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum average grade of "B" 6 credit hours from the Faculty of Arts	GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2600, GEOL 2770, GEOL 3910 ⁶	GEOL 2060, GEOL 3110, GEOL 3130, GEOL 3310, GEOL 3490, GEOL 3900, GEOL 4910 ⁶ 9 credit hours of Geological Sciences Electives from Lists A and B ⁵	GEOL 4670, GEOL 4870 18 credit hours of Geological Sciences Electives from Lists A and B ⁵ not yet taken.
CHEM 1300, PHYS 1020 ² , and one of MATH 1500 ³ or MATH 1300 ⁴ must be completed in University 1 or Year 2. It is recommended that students complete the W course in University 1 or Year 2.			
MAJOR GEOLOGY 120 CREDIT HOURS			
GEOL 1340 or GEOL 1440 and one of GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum average grade of "C+" 6 credit hours from the Faculty of Arts	GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2600, GEOL 2770, GEOL 3910 ⁶	GEOL 2060, GEOL 3110, GEOL 3130, GEOL 3310, GEOL 3490, GEOL 3900, GEOL 4910 ⁶ 3 credit hours of Geological Sciences Electives from Lists A and B ⁵	GEOL 4670, GEOL 4920 15 credit hours of Geological Sciences Electives from Lists A and B ⁵ not yet taken
CHEM 1300, PHYS 1020 ² , and one of MATH 1500 ³ or MATH 1300 ⁴ must be completed in University 1 or Year 2. It is recommended that students complete the W course in University 1 or Year 2.			

MINOR GEOLOGICAL SCIENCES 18 CREDIT HOURS

GEOL 1340 or GEOL 1440 and one Plus 12 credit hours chosen from 2000- and 3000-level courses
of: GEOL 1350, GEOL 1360, or
GEOL 1370

Notes:

¹The courses required in this program will satisfy the University mathematics requirement.

²PHYS 1050 may be used in lieu of PHYS 1020.

³MATH 1510, MATH 1520 or MATH 1530 may be used in lieu of MATH 1500.

⁴MATH 1310 may be used in lieu of MATH 1300.

⁵Among the Geological Sciences Electives, all students must complete at least 12 credit hours from List A. In addition, Honours students must complete at least 15 credit hours from List B; Major students must complete at least 6 credit hours from List B. NOTE: With departmental approval, students may substitute 6 credit hours of 2000-level or higher courses from other departments in order to satisfy professional registration requirements. See Other, Note 1 below.

⁶Students will register for GEOL 3910 and GEOL 4910 in Intersession or Summer Session. NOTE: Students who enter the program in Year 3 may be able to complete GEOL 4910 immediately following GEOL 3910. Students should be aware that they are expected to contribute to transportation and accommodation costs. See the departmental office at the beginning of each year for information.

·To fulfil prerequisite requirements, a grade of "C" must be achieved in any course stipulated as prerequisite to a further course in Geological Sciences.

·All courses are not offered every year. The course schedule for the current academic session is available from the online calendar at www.umanitoba.ca/calendar

·Students registering in certain courses may be required to pay a portion of the costs associated with field trips. For details, contact the department general office.

·Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart.

Collège universitaire de Saint-Boniface courses end in the number "1" (e.g. CHEM 1301).

⁷**IMPORTANT:** The Honours and Major programs need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. (Letters in brackets indicate the minimum prerequisite standing required for further study).

Other Note 1: Geological Sciences Electives Lists A and B

List A Electives: Honours and Major students must complete a minimum of 12 credit hours from the following courses:

GEOL 2390 Environmental Geology (3)
GEOL 3290 Metamorphic Structure and Tectonics (3)L
GEOL 4280 Instrumental Techniques in Geology (3)L
GEOL 4300 Mineral Deposits (3)L
GEOL 4520 Petroleum Geology (3)L
GEOL 4890 Basin Analysis (3)L

List B Electives: Honours students are required to complete a minimum of 15 credit hours; Major students must complete a minimum of 6 credit hours from the following courses:

GEOL 3140 Gemology (3)L
GEOL 3420 Engineering Geology (3)
GEOL 3740 Exploration Seismology (3)L

GEOL 3750 Geology and Geophysics of the Planets (3)L
GEOL 3810 Applied Geophysics (3)L
GEOL 4260 Applied Geophysics Field Course (3)
GEOL 4270 Advanced Studies in Earth Sciences (3)
GEOL 4290 Topics in Environmental Geosciences (3)L
GEOL 4310 Paleontologic Principles (3)L
GEOL 4370 Global Change (3)
GEOL 4630 Geolimnology (3)
GEOL 4660 Volcanology (3)L
GEOL 4740 Geophysics Field School (6)
GEOL 4830 Remote Sensing and Geological Information Systems (3)L

and/or up to 6 credit hours of additional courses not yet completed from List A.

NOTE: With departmental approval, up to 6 credit hours of 2000-level or higher courses from other departments may be substituted for courses in List B in order to satisfy professional registration (APEGM) requirements.

8.5 B.Sc. Geological Sciences (Geophysics)^{5,7}

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

HONOURS GEOPHYSICS 126 CREDIT HOURS

GEOL 1340(B) or GEOL 1440(B) and one of: GEOL 1350, GEOL 1360, or GEOL 1370(B)]

PHYS 1050(B) [or PHYS 1020(B+)], PHYS 1070(B), MATH 1510¹(B) and MATH 1710¹(B) [or MATH 1500(B) and MATH 1700(B)¹]

GEOL 2060, GEOL 2500, GEOL 2530

PHYS 2390, PHYS 2490, MATH 2100^{2,6}, MATH 2110^{2,6}

Plus 9 credit hours of electives, which could include COMP 1010 (as it must be taken by the end of Year 3)

GEOL 2440, GEOL 2520, GEOL 3130, GEOL 3740, GEOL 3810, GEOL 4250, GEOL 4320, GEOL 4330, GEOL 4670, GEOL 4740³, GEOL 4810, GEOL 4830, GEOL 4870

PHYS 2600, PHYS 2610, PHYS 2650, MATH 3100⁴, MATH 3110^{4,6}

Plus 3 credit hours of electives as approved by the department.

Plus 6 credit hours from the Faculty of Arts

COMP 1010 must be completed in Year 1 or Year 2.

It is recommended that students complete the W course in University 1 or Year 2.

30 Credit Hours

32 Credit Hours

64 Credit Hours for Year 3 and 4³

MAJOR GEOPHYSICS 120 CREDIT HOURS

GEOL 1340(C+) or GEOL 1440(C+) and one of: GEOL 1350, GEOL 1360, or GEOL 1370(C+)]	GEOL 2060, GEOL 2500, GEOL 2530	GEOL 2440, GEOL 2520, GEOL 3130, GEOL 3740, GEOL 3810, GEOL 4810, GEOL 4920
PHYS 1050(C+) [or PHYS 1020(B)], PHYS 1070(C), MATH 1510 ¹ (C+) and MATH 1710 ¹ (C) [or MATH 1500(C+) and MATH 1700(C) ¹]	PHYS 2390, PHYS 2490, MATH 2100 ^{2,6} , MATH 2110 ^{2,6}	PHYS 2600, PHYS 2610, MATH 3100 ⁴ , MATH 3110 ^{4,6}
6 credit hours from the Faculty of Arts		Plus 9 credit hours from: GEOL 4250, GEOL 4260, GEOL 4320, GEOL 4330, GEOL 4740 ³ , GEOL 4830 COMP 1010, which must be taken by the end of Year 3

It is recommended that students complete the W course in University 1 or Year 2.

NOTES:

¹MATH 1690 may be taken in place of MATH 1500 or MATH 1510 and MATH 1700 or MATH 1710.

²MATH 2720 and MATH 2730 may be taken in place of MATH 2100 and MATH 2110. Students should note that MATH 1300 is a prerequisite to MATH 2720 and a corequisite to MATH 2730.

³GEOL 4740 will normally be taken immediately following the spring examinations on or about May 1 and will continue for approximately three weeks. Registration will show as Summer Session.

⁴MATH 3810 may be taken in place of MATH 3100, and MATH 3700 may be taken in place of MATH 3110.

⁵The courses required in this program satisfy the university mathematics requirement.

⁶For the purposes of students in the Geophysics Honours and Major programs, this course will count as four credit hours.

·To fulfil prerequisite requirements, a grade of "C" must be achieved in any course stipulated as prerequisite to a further course in Geological Sciences.

·All courses are not offered every year. The course schedule for the current academic session is available from the online calendar at www.umanitoba.ca/calendar

·Students registering in certain courses may be required to pay a portion of the costs associated with field trips. For details, contact the department general office.

·Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Collège universitaire de Saint-Boniface courses end in the number "1" (e.g. PHYS 1051).

⁷**IMPORTANT:** The Honours and Major programs need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. (Letters in brackets indicate the minimum prerequisite standing required for further study).

8.6 Department of Geological Sciences Course Descriptions

All courses are not offered every year. The course schedule for the current academic terms are available from the on-line calendar at www.umanitoba.ca/calendar.

Note: Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, refer to the on-line calendar (www.umanitoba.ca/calendar) and /or contact the Department of Environment and Geography general office.

U1GEOL 1340 The Dynamic Earth Cr.Hrs.3 (Lab Required) (Formerly 007.134) An introduction to dynamics of the Earth's interior and surface that created the environment in which life evolved and that continue to change the world in which people now live. Taught with GEOL 2250. Not to be held with GEOL 1440 (or 007.144), GEOL 2250 (or 007.225) or the former 007.123, 007.124, 007.127, 007.132, or 007.133. Recommended for students intending to proceed in further courses in the Geological Sciences.

U1GEOL 1350 The Evolving Earth Cr.Hrs.3 (Formerly 007.135) An introduction to interpretation of the geologic record, with a survey of the Earth's origin and evolution, its life, and resources through time. Not to be held with the former 007.123, 007.126 or 007.133. *Prerequisite:* one of GEOL 1340 (or 007.134), GEOL 1440 (or 007.144), GEOL 2250 (or 007.225) (or the former 007.124, 007.127, or 007.132).

U1GEOL 1360 Environmental Earth Science Cr.Hrs.3 (Formerly 007.136) An integrated approach to environmental Earth Science. The effect of Earth's internal processes on the external processes in the atmosphere and hydrosphere. Topics include: the water cycle, weather, climate and climate development, and pollution. Not to be held with the former 007.132. *Prerequisite:* A minimum grade of C in one of GEOL 1340 (or 007.134), GEOL 1440 (or 007.144), or GEOL 2250 (or 007.225) (or the former 007.123, 007.124, 007.126, or 007.133).

U1GEOL 1370 The Earth in Space Cr.Hrs.3 (Formerly 007.137) An introduction to astronomy and its emphasis on the Planet Earth and its place in the solar system. The Earth's oceans and atmosphere are covered and compared to those of the Earth's nearest neighbours and to some moons of the outer planets. Not to be held with the former 007.124. *Prerequisite:* A minimum grade of C in one of GEOL 1340 (or 007.134), GEOL 1440 (or 007.144), or GEOL 2250 (or 007.225) (or the former 007.123, 007.125, 007.132, or 007.133).

U1GEOL 1440 Introduction to the Dynamic Earth Cr.Hrs.3 (Formerly 007.144) A non-laboratory introduction to dynamics of the Earth's interior and surface that created the environment in which life evolved and that continue to change the world in which people now live. Not to be held with GEOL 1340 (or 007.134), GEOL 2250 (or 007.225) (or the former 007.123, 007.124, 007.126, 007.127, 007.132, or 007.133).

GEOL 2060 Introductory Geophysics Cr.Hrs.3 (Lab Required) (Formerly 007.206) An introduction to geophysical exploration, Earth physics, satellite geophysics and re-

mote sensing. Emphasis will be on quantitative modeling and will include geophysical measurements and handling of data. *Prerequisites:* A minimum grade of C in GEOL 1340 (or 007.134) or GEOL 1440 (or 007.144) (or the former 007.123, 007.124, 007.132, or 007.133), three credit hours from MATH 1300 (or MATH 1301) (or 136.130), MATH 1310 (or 136.131), MATH 1500 (or MATH 1501) (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153), and three credit hours from PHYS 1020 (or PHYS 1021) (or 016.102) or PHYS 1050 (or PHYS 1051) (or 016.105); or consent of department.

GEOL 2250 Geology for Engineers Cr.Hrs.4 (Lab Required) (Formerly 007.225) Principles of physical geology; materials in processes in geology; classification of igneous, metamorphic, and sedimentary rocks; elementary geological and geophysical surveying techniques; geological hazards: volcanism, earthquakes, landsliding, processes of weathering, transportation and geomorphology. For Engineering students only. Not to be held with GEOL 1340 (or 007.134), GEOL 1440 (or 007.144), or the former 007.123, 007.124, 007.126, 007.127, 007.132, or 007.133.

GEOL 2390 Environmental Geology Cr.Hrs.3 (Formerly 007.239) Examination of geological processes and material as they interact with human activities, environmental planning, and management. Also available by correspondence. *Prerequisite:* A minimum grade of C in university geology or GEOG 1290 or GEOG 1291 (or 053.129) (or GEOG 1200 or GEOG 1201 (or 053.120)), or consent of instructor.

GEOL 2440 Structural Geology 1 Cr.Hrs.3 (Lab Required) (Formerly 007.244) Elementary mechanical principles of rock deformation, brittle and continuous deformation, geometry of faults, folds, joints, cleavage, lineations. Descriptive geometric and stereonet solution to structural geology problems, cross sections, structural contour maps. *Prerequisite:* A minimum grade of C in GEOL 1340 (or 007.134) or GEOL 1440 (or 007.144) (or the former 007.123, 007.124, 007.132, or 007.133).

GEOL 2500 Introduction to Mineralogy Cr.Hrs.3 (Lab Required) (Formerly 007.250) An introduction to the chemistry, physics and classification of minerals. Brief, systematic description of about 200 of the most important minerals. Laboratory: hand specimen identification. Not to be held with GEOL 2540 or the former 007.207 or 007.262. *Prerequisite:* 40S Chemistry or CHEM 0900 (or 002.090) and A minimum grade of C in one of GEOL 1340 (or 007.134) or GEOL 1440 (or 007.144) (or the former 007.123, 007.124, 007.132, or 007.133) or consent of department. CHEM 1300 (or 002.130) is highly recommended.

GEOL 2520 Igneous and Metamorphic Petrology Cr.Hrs.3 (Lab Required) (Formerly 007.252) The classification, occurrence and origin of igneous and metamorphic rocks. The study and identification of rocks using hand specimens and thin sections. Not to be held with the former 007.251. *Prerequisite:* A minimum grade of C in GEOL 2500 (or 007.250) (or the former 007.207 or 007.262) plus GEOL 2800 (or the former 007.260), or GEOL 2540.

GEOL 2530 Introductory Sedimentary Petrology and Stratigraphy Cr.Hrs.3 (Lab Required) (Formerly 007.253) An introduction to sedimentary deposits and principles of stratigraphic analysis. Occurrence, classification and origin of sedimentary deposits. Facies concept, stratigraphic classification and correlation. Not to be held with the former 007.251, 007.388 or 007.389. *Prerequisite:* A minimum grade of C in GEOL 2500 (or 007.250) (or the former 007.207 or 007.262) plus GEOL 2800 (or the former 007.260), or GEOL 2540.

GEOL 2540 Introductory Mineralogy with Essentials of Mineral Optics Cr.Hrs.3

(Lab Required) An introduction to the chemical composition, crystal structure, physical and optical properties of the most common minerals. Discussion of the occurrence of minerals in nature. Laboratory: Identification of minerals in hand specimens and thin sections. Not intended for students in Major or Honours Geology programs. Not to be held with GEOL 2500 (or 007.250). *Prerequisites:* 40S Chemistry or CHEM 0900 (or 002.090) or equivalent and A minimum grade of C in one of GEOL 1340 (or 007.134) or GEOL 1440 (or 007.144) (or the former 007.123, 007.124,) or consent of department. CHEM 1300 (or CHEM 1301) (or 002.130) is highly recommended.

GEOL 2570 Energy and Mineral Resources Cr.Hrs.3 (Formerly 007.257) An introduction to the geological factors and processes responsible for the origin, concentration and distribution of fuels, geothermal resources, metallic and nonmetallic minerals. Available by correspondence only. Not to be held with the former 007.255 or 007.256. Not for credit in a Major or Honours program in Geological Sciences. *Prerequisite:* A minimum grade of C in one of GEOL 1340 (or 007.134) or GEOL 1440 (or 007.144) (or the former 007.123, 007.124, 007.132, or 007.133).

GEOL 2770 Principles of Inorganic Geochemistry Cr.Hrs.3 (Lab Required) (Formerly 007.277) The cosmic abundance of the elements, nucleosynthesis, geological differentiation of the elements; chemical petrology of igneous, metamorphic and sedimentary rocks. An introduction to aqueous and low-temperature geochemistry. Not to be held with the former 007.276. *Prerequisite:* A minimum grade of C in GEOL 2500 (or 007.250) or GEOL 2540 (or the former 007.207, or 007.262). *Corequisite:* CHEM 1300 (or CHEM 1301) (or 002.130).

GEOL 2800 Optics and Spectroscopy of Minerals Cr.Hrs.3 (Lab Required) Use of the petrographic microscope; microscopic recognition of common rock-forming minerals; introduction to spectroscopic techniques in geosciences (including optical, vibrational and luminescence techniques). Not to be held with the former 007.260. *Prerequisite:* A minimum grade of C in GEOL 2500 (or 007.250) or GEOL 2540 or consent of department.

GEOL 3110 Petrogenesis of Igneous Rocks Cr.Hrs.3 (Lab Required) (Formerly 007.311) Crystallization processes in magma and resultant textures; physical, chemical, and kinetic processes of magmatic systems. Not to be held with the former 007.309 or 007.344. *Prerequisites:* A minimum grade of C in GEOL 2520 (or 007.252) (or the former 007.251) and GEOL 2770 (or 007.277) (or the former 007.276).

GEOL 3130 Communication Methods in the Geological Sciences Cr.Hrs.3 (Lab Required) (Formerly 007.313) Practice in oral and written description of geologic subjects; tools of library and database research; manuscript organization; abstract writing; computer-aided table, figure, and slide preparation. Pre- or corequisites: A minimum grade of C in GEOL 2500 (or 007.250) or (the former 007.207 or 007.262), and GEOL 2440 (or 007.244). This course is for students in the Honours and Major Geological Sciences programs only.

GEOL 3140 Gemology Cr.Hrs.3 (Lab Required) (Formerly 007.314) An introduction to the scientific study of natural and synthetic gem materials, methods of their identification and principles of gemstone appraisals. Laboratory: identification of gemstones using optical methods. Offered in 2006-2007 and alternate years thereafter. *Prerequisites:* A minimum grade of C in GEOL 2500 (or 007.250) plus GEOL 2800 (or the former 007.260), or GEOL 2540.

GEOL 3290 Metamorphism, Structure and Tectonics Cr.Hrs.3 (Lab Required) (Formerly 007.329) Deformation and metamorphism in orogenic terranes, crustal heat flow, and the application of pressure, temperature and time paths to study metamorphic equilibria. Offered in 2006-2007 and in alternate years thereafter. Not to be held with the former 007.312 and 007.373. *Prerequisite:* A minimum grade of C in GEOL 2440 (or 007.244), GEOL 2520 (or 007.252), and GEOL 2770 (or 007.277).

GEOL 3310 Paleontology Cr.Hrs.3 (Lab Required) (Formerly 007.331) The study of fossils: invertebrate paleontology, with an introduction to paleontologic principles, vertebrate paleontology, and paleobotany. *Prerequisite:* A minimum grade of C in GEOL 1340 (or 007.134) or GEOL 1440 (or 007.144) (or the former 007.123, 007.124, 007.132, or 007.133,) or consent of department.

GEOL 3420 Engineering Geology Cr.Hrs.3 (Formerly 007.342) Engineering properties of rocks, laboratory testing and site investigations in engineering geology. Rocks as construction materials, engineering geology of tunnels, bridges, dams, reservoirs, shorelines, sanitary landfills, landslides, seismic risk areas, etc. Offered in 2006-2007 and in alternate years thereafter. *Prerequisites:* A minimum grade of C in GEOL 2440 (or 007.244), GEOL 2520 (or 007.252) and GEOL 2530 (or 007.253) (or the former 007.251, 007.388 or 007.389).

GEOL 3490 Glacial Geology and Geomorphology Cr.Hrs.3 (Lab Required) (Formerly 007.349) Principles of landform development with emphasis on glacial deposition. Aerial photo and map interpretation in lab. Not to be held with GEOG 3580 (or 053.358). *Prerequisite:* A minimum grade of C in GEOL 2530 (or 007.253) (or the former 007.251, or 007.388 or 007.389).

GEOL 3740 Exploration Seismology Cr.Hrs.3 (Lab Required) (Formerly 007.374) Collection of seismic data (land and sea); simple elastic wave theory; geometry of refraction and reflection seismology; rock velocity determination; seismic noise and signal; data corrections; data enhancement techniques; representation of data; survey procedures. *Prerequisite:* A minimum grade of C in GEOL 2060 (or 007.206) and one of MATH 1500 (or MATH 1501) (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153) or MATH 1690 (or 136.169).

GEOL 3750 Geology and Geophysics of the Planets Cr.Hrs.3 (Lab Required) (Formerly 007.375) Physical and chemical nature of the inner and outer planets and their satellites, asteroids and meteorites. The application of geophysical, geochemical and petrological techniques to planetology; remote sensing study of geological features of planetary surfaces and atmospheres. Offered in 2007-2008 and in alternate years thereafter. *Prerequisite:* A minimum grade of C in GEOL 2060 (or 007.206) or consent of department.

GEOL 3810 Applied Geophysics Cr.Hrs.3 (Lab Required) (Formerly 007.381) The application of geophysical methods including gravity, magnetics, seismic reflection and refraction, electrical and electromagnetics methods in exploration, and environmental and engineering problems. Not to be held with the former 007.380. *Prerequisite:* A minimum grade of C in GEOL 2060 (or 007.206).

GEOL 3900 Sedimentology Cr.Hrs.3 (Lab Required) (Formerly 007.390) The study of depositional environments of sedimentary rocks. Facies analysis and modelling of sedimentary deposits. Not to be held with the former 007.388 or 007.389. *Prerequisite:* A minimum grade of C in GEOL 2530 (or 007.253) (or the former 007.251).

GEOL 3910 Introduction to Field Mapping Cr.Hrs.3 (Formerly 007.391) Twelve day course introducing field mapping techniques including field navigation and basic field interpretations. Students are responsible for costs of room and board during the field course. Offered in Summer 1 term. May not hold with the former 007.449. *Prerequisites:* A minimum grade of C in GEOL 2440 (or 007.244), GEOL 2520 (or 007.252) and GEOL 2530 (or 007.253).

GEOL 4250 Theory and Application of Geophysical Inversion Methods Cr.Hrs.3 (Lab Required) (Formerly 007.425) Introduction to generalized and linear/non-linear inversion theory. Inversion techniques for the potential field, electrical and seismic data will be discussed. Application to global problems will also be discussed. Offered in 2007-2008 and in alternate years thereafter. *Prerequisites:* A minimum grade of C in GEOL 2060 (or 007.206) and MATH 2100 (or 136.210) or MATH 1300 (MATH 1301) (or 136.130) or MATH 1310 (or 136.131).

GEOL 4260 Applied Geophysics Field Course Cr.Hrs.3 (Formerly 007.426) One and one-half weeks field instruction in the planning and execution of geophysical surveys and the use of portable geophysical instruments. Offered in 2007 Summer 2 term and alternate years thereafter. Taught with the first half of GEOL 4740 (or 007.474). Not to be held for credit with GEOL 4740 (or 007.474). *Prerequisite:* A minimum grade of C in GEOL 3810 (or 007.381) (or the former 007.380).

GEOL 4270 Advanced Studies in Earth Sciences Cr.Hrs.3 (Formerly 007.427) Advanced study in a selected subject in Earth sciences. *Prerequisite:* Consent of department.

GEOL 4280 Instrumental Techniques in Geology Cr.Hrs.3 (Lab Required) (Formerly 007.428) Lecture and laboratory course covering the application of microbeam, mass spectrometer, diffraction and wet geochemical analytical techniques in mineralogy and geochemistry. Includes coverage of ICP, PIXE, powder and single crystal diffraction and electron microprobe analysis. Offered in 2007-2008 and in alternate years thereafter. *Prerequisites:* A minimum grade of C in GEOL 2520 (or 007.252) (or the former 007.251), GEOL 2530 (or 007.253) (or the former 007.251, 007.388 or 007.389), and GEOL 2770 (or 007.277) (or the former 007.276).

GEOL 4290 Topics in Environmental Geoscience Cr.Hrs.3 (Lab Required) (Formerly 007.429) Advanced concepts and discussion of selected topics in the areas of human interaction with the geological environment and the influence of natural geological processes on human activities. Offered in 2007-2008 and in alternate years thereafter. *Corequisite:* GEOL 3900 (or 007.390).

GEOL 4300 Mineral Deposits Cr.Hrs.3 (Lab Required) (Formerly 007.430) The tectonic setting and deformational and structural nature of ore deposits. The physics and chemistry of ore deposition and ore bearing fluids. The mineralogical, textural and environmental constraints on resource exploitation. Not to be held with the former 007.424 or 007.434. *Prerequisites:* A minimum grade of C in GEOL 3110 (or 007.311) (or the former 007.309), and GEOL 3900 (or 007.390) (or the former 007.388 or 007.389).

GEOL 4310 Paleontologic Principles Cr.Hrs.3 (Lab Required) (Formerly 007.431) Interpretation of Earth history using fossils: topics in taxonomy, functional morphology, paleoecology, evolution, biostratigraphy, and biogeography. Offered in 2006-2007 and in alternate years thereafter. *Prerequisite:* A minimum grade of C in GEOL 3310 (or 007.331) or consent of instructor.

GEOL 4320 Physics of the Earth: Seismology and Heat Flow Cr.Hrs.3 (Formerly 007.432) Seismology and the structure, physical properties and equations of state of the Earth's interior; thermal constitution and the history of the Earth. Offered in 2006-2007 and in alternate years thereafter. *Prerequisites:* A minimum grade of C in GEOL 2060 (or 007.206) and (PHYS 2390 and PHYS 2490) (or the former 016.237).

GEOL 4330 Physics of the Earth: Geomagnetism and Gravity Cr.Hrs.3 (Formerly 007.433) Geomagnetism and geoelectricity; paleomagnetism; figure, rotation and gravity of the Earth. Offered in 2006-2007 and in alternate years thereafter. *Prerequisite:* A minimum grade of C in GEOL 2060 (or 007.206) and (PHYS 2390 and PHYS 2490) (or the former 016.237).

GEOL 4370 Global Change Cr.Hrs.3 (Formerly 007.437) Examination of the major processes controlling global change through time. The causes, magnitude, and periodicity of changes in the geological record resulting from the variability and interaction of continents, oceans, atmospheres, climate, Earth-sun relationships, and ice sheets, with an emphasis on paleoclimate. Offered in 2007-2008 and in alternate years thereafter. *Prerequisite:* A minimum grade of C in GEOL 3900 (or 007.390). *Corequisite:* GEOL 3490 (or 007.349).

GEOL 4520 Petroleum Geology Cr.Hrs.3 (Lab Required) (Formerly 007.452) A study of the physical properties, origins and maturation, migration, and accumulation of petroleum products. *Prerequisite:* A minimum grade of C in GEOL 3900 (or 007.390).

GEOL 4630 Geolimnology Cr.Hrs.3 (Formerly 007.463) The major physical, geochemical, sedimentological, and hydrogeological processes in lakes and their watersheds. A multidisciplinary course. Offered in 2006-2007 and in alternate years thereafter. *Prerequisites:* A minimum grade of C in GEOL 2770 (or 007.277) or university chemistry and geology or consent of instructor.

GEOL 4660 Volcanology Cr.Hrs.3 (Lab Required) (Formerly 007.466) Physical volcanology with special reference to Cenozoic and Precambrian volcanism. Petrography of Cenozoic volcanic rocks. Offered in 2007-2008 and in alternate years

thereafter. *Prerequisites:* A minimum grade of C in GEOL 3110 (or 007.311) (or the former 007.309) and GEOL 3900 (or 007.390) (or the former 007.388 or 007.389).

GEOL 4670 Global Tectonics Cr.Hrs.3 (Lab Required) (Formerly 007.467) The structure and properties of, and physical processes taking place within, the Earth's interior. Continental cratons and their margins, orogenic belts, structural and petrologic features of the ocean basins, modern diastrophism, global tectonic theories. *Prerequisites:* A minimum grade of C in GEOL 2440 (or 007.244), GEOL 2520 (or 007.252) and GEOL 2530 (or 007.253) (or the former 007.251, 007.388 or 007.389).

GEOL 4740 Geophysics Field Course Cr.Hrs.6 (Formerly 007.474) Three weeks of making geophysical surveys. Starts immediately following April examinations. Maps and reports to be submitted at the end of the three-week period. Students are responsible for costs of room and board during the field course. Offered in 2007 Summer 1 term and in alternate years thereafter. Not to be held with GEOL 4260 (or 007.426). *Prerequisite:* A minimum grade of C in GEOL 2060 (or 007.206).

GEOL 4810 Geophysical Data Analysis Cr.Hrs.3 (Lab Required) (Formerly 007.481) The theory and application of spectral methods in geophysics. The use of Fourier Transforms, convolution, power spectra, coherence, transfer functions, covariance, correlation and filtering. Offered in 2007-2008 and in alternate years thereafter. *Prerequisite:* A minimum grade of C in GEOL 2060 (or 007.206). *Corequisite:* MATH 3110 (or 136.311) or MATH 3700 (or 136.370).

GEOL 4830 Remote Sensing and Geological Information Systems Cr.Hrs.3 (Lab Required) (Formerly 007.483) The basic theory and application of remote sensing to geology and planetary studies. Data interpretation, analysis and presentation using geological

information systems. *Prerequisite:* A minimum grade of C in GEOL 2060 (or 007.206).

GEOL 4870 Honours Thesis Cr.Hrs.6 (Formerly 007.487) A thesis based on a research project conducted by a fourth-year Honours student in Geology or Geophysics. Selection of a project and supervisor to be arranged prior to September 30 and submitted in writing to the department head. Consult with the department for submission deadlines. Not to be held with the former 007.495 or 007.496.

GEOL 4890 Basin Analysis Cr.Hrs.3 (Lab Required) (Formerly 007.489) The study of major sedimentary basins. Qualitative and quantitative aspects of basin origin, classification, evolution, fluid content and diagenesis, and sedimentary facies architecture. Not to be held with the former 007.488. *Prerequisite:* A minimum grade of C in GEOL 4520 (or 007.452).

GEOL 4910 Advanced Field Mapping Cr.Hrs.3 (Formerly 007.491) Twelve day course developing field mapping techniques including independent mapping and interpretation and synthesis in complex geological terrains. Students are responsible for costs of room and board during the field course. May not hold with the former 007.449. Offered in Summer 1 term. *Prerequisite:* A minimum grade of C in GEOL 3910 (or 007.391).

GEOL 4920 Technical Report Cr.Hrs.3 (Formerly 007.492) A technical report based on a geoscience research project conducted by a fourth year Major student in Geology or Geophysics. Not to be held with GEOL 4870 (or 007.487). Normally this course is available after completion of Year 3 requirements in Geology or Geophysics Major program. *Prerequisite:* permission of the department.

Extended Education

General Office

188 Extended Education Complex

Telephone: (204) 474 9921

1 800 432 1960 ext. 9921 (Toll free in Manitoba)

1 888 216 7011 ext. 9921 (Toll free in Canada)

Request for Information Line: (204) 474-6742

FAX: (204) 474 7661

Website: umanitoba.ca/extended

Dean: Anne Percival

Associate Dean (Non-Degree Programs): Kathleen Matheos

Associate Dean (Degree Programs): Lori Wallace

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Extended Education

SECTION 3: Program Areas

- 3.1 Aboriginal Focus Programs
- 3.2 Access Programs
- 3.3 Continuing Education Programs
- 3.4 Distance and Online Education
- 3.5 English Language Studies
- 3.6 General Studies
- 3.7 Inter-Universities North
- 3.8 Military Support Office
- 3.9 Off Campus Study
- 3.10 Summer Session

SECTION 4: Certificate/Diploma Programs

- 4.1 Agriculture
- 4.2 Education
- 4.3 General Management
- 4.4 Health and Social Services
- 4.5 Human Ecology
- 4.6 Management/Professional Institute Affiliation

SECTION 1: Academic Staff

Professors

Kops, B., B.A., M.B.A. (Manitoba), Ed.D. (Toronto)

Percival, A., B.A., M.A., M.B.A. (Manitoba), Ed.D.(Columbia).

Associate Professors

Davidson, H., B.A. (California), M.A., Ed.D. (Toronto); Hartman, J. B., B.A., M.A. (Manitoba), Ph.D. (Northwestern); Sloane-Seale, A., B.A., M.Ed.(Manitoba), Ed.D. (British Columbia); Wallace, L., B.A. (Winnipeg), M.Ed. (Manitoba), Ph.D. (Minnesota).

Assistant Professors

Matheos, K., B.S.A. (Manitoba), M.Sc. (Guelph), Ph.D. (Kent); Nunoda, P., B.A. (Hons)(Western Ontario), M.A., (Windsor) Ph.D. (Manitoba).

Lecturers

Barr, W. C., B.A. (Winnipeg), M.Ed. (Manitoba);

Instructors

Burns, S., B.S.W. (Manitoba); Carriere, A., B.S.W., P.B.C.E. (Manitoba); Federkevic, S., B.Ed., B.A. (Winnipeg), M.Ed. (Manitoba); Gaywish, R., M.A. (Carleton); Hatcher, S., B.A., (Winnipeg), M.A. (Manitoba); La-

freniere, B., B.S.W. (Manitoba), M.M.F.T. (Winnipeg); Lavallee, B., B.S.W. (Regina), M.C.E. (Calgary); LeBlanc, A., B.A., M.A. (Wilfrid Laurier), C.R.E.D.I.F. (Laval), Ph.D. (Western Ontario); Luterbach, B., B.Ed. (Regina), B.A., M.Ed. (Manitoba); MacDonald, M., B.A., L.L.B. (Manitoba), M.B.A. (McGill); Maia, M., B.A., B.Ed. (Manitoba); McDermott, L., B.A. (Manitoba); McLean, C., B.Sc., M.Ed. (Manitoba) Ph.D (Florida); Miller, B., B.R.S. (Manitoba); Olson, L., B.A. (Hons.)(Winnipeg), B.Ed., (Western Ontario), M.A. (Western Ontario); Paisley, J., B.Sc. (Lakehead), M.B.A. (Manitoba); Roche, C., B.S.W., M.S.W. (Manitoba); Svenningsen, L., B.A., M.Sc. (Manitoba).

SECTION 2: Extended Education

Extended Education provides a central focus for adult, distance, mature and summer continuing education in the university and undertakes planning and general administration for these programs and services. Insofar as possible, the university accepts the principle of parity of accessibility to its services in all areas of the province regardless of economic, geographic, physical, or social disadvantage.

Extended Education coordinates a wide range of programs through which degree courses and non-degree or certificate courses are offered. Degree courses are drawn from the offerings of various faculties and schools. Students must apply to, be admitted to, and register in a particular faculty or school to receive credit towards a degree.

SECTION 3: Program Areas

3.1 Aboriginal Focus Programs

Director: Barbara Lavallee

General Office: The University of Manitoba-Downtown: Aboriginal Education Centre, 11 The Promenade

Telephone: 204-982-4224

The Aboriginal Focus Programs area of Extended Education offers a range of programs that are designed to respond to the continuing education needs and concerns of Aboriginal people. The mission of the area is to create paths of choice in post-secondary education that are based on Indigenous worldviews and developed through partnerships with Indigenous Peoples and communities.

AFP offers certificate and diploma programs as well as degree programs through cooperative arrangements with Aboriginal stakeholders and faculties of The University of Manitoba. Programs are offered in a central location, as in-house training to staff of an organization, or as community-based programs. Programs are offered as 'open enrolment' or as block-funded cohort programs through an arrangement with an employer or sponsor. Delivery methodology can be as part-time or full-time study, and can incorporate technology-based delivery where student access permits. Aboriginal organizations that identify a need for specific post-secondary or adult education not currently available may be interested in knowing that AFP has the capacity to develop new programs to meet their needs. The following are programs currently being offered:

Aboriginal Child and Family Services Diploma

This off-campus program will provide field staff of Aboriginal agencies in Manitoba the knowledge and skills they require to deliver child and family services as outlined by Manitoba's Child and Family Services Act, and as directed by the Aboriginal Child and Family Services agencies.

Aboriginal Counselling Skills Certificate

This foundation program gives individuals in the helping professions, who are employed by First Nation and/or Aboriginal social service agencies, knowledge and skills in how to provide culturally appropriate counselling services to individuals and families. *The Faculty of Social Work offers graduates three allocated and 6 unallocated hours of credit.

Child Sexual Abuse Intervention and Treatment Certificate

The disclosure of sexual abuse, as in the residential school experience, has highlighted the need for counsellors with specialised expertise. The CSAIT program builds on prior training and experience in counselling. Courses are offered in eleven six-day modules over a year.

First Nation Community Wellness Diploma

This 60 credit-hour program was developed as a professional development opportunity in community wellness for Aboriginal health and wellness service workers. The program is offered through a partnership between The University of Manitoba and the Manitoba Community Wellness Working Group. Each course in the program incorporates an indigenous wellness perspective.

4-Year Advanced B.A. Degree in Aboriginal Governance

The Advanced B.A. in Native Studies with a focus on Aboriginal Governance can be delivered as a cohort program. The objective of the program is to build capacity among its students in the areas of political and economic policy and management principles to facilitate the process of self-determination in First Nation communities. It is clear that to develop the constitutional structures necessary for self-government, highly knowledgeable Aboriginal people will be needed. The program exposes the students to a wide range of courses from Native Studies, Economics, Political Studies and Management so that they acquire the requisite expertise. Refer to the Faculty of Arts, Department of Native Studies Aboriginal Governance Stream for full program description.

Special Education Educational Assistant Certificate

This program provides culturally relevant accredited training for teacher assistants who work with special needs children under the direction of classroom and/or resource teachers.

Transition Year (18 to 30 credit hours)

This off-campus Transition Year is designed to facilitate the successful transition of students from their community to full-time post-secondary study. Emphasis is on building students' academic and personal skills through specific support to students such as expanded instruction, tutorial support and orientations to the expectations of post-secondary education programs. A minimum of 18 credit hours of university courses is offered in the Transition Year.

*For further details on the requirements of transfer credit, call Aboriginal Focus Programs at 982-4224.

3.2 Access Programs

Director: Peter Nunoda

General Office: 505 University Centre

Telephone: 204 474 8000

www.umanitoba.ca/extended/access

University of Manitoba Access Program (UMAP)

In cooperation with the Province of Manitoba, the University of Manitoba Access Program (UMAP) facilitates university studies at the degree level for persons who traditionally have not had the opportunity for such experience because of social, economic and cultural reasons, lack of formal education or residence in remote areas. Preference will be given to Aboriginal Manitobans (Status, Non-status, Metis or Inuit). Students in this program are provided with academic and personal supports. Financial assistance may be available. For information, call 474 8000 or, within Manitoba, 1 800 432 1960, extension 8000.

Health Careers Access Program (HCAP)

This program is designed to prepare Manitoban Aboriginal persons (Status, Non-Status, Metis, or Inuit) for entry to the health-related professions such as Medicine, Dentistry, Dental Hygiene, Pharmacy, Medical Rehabilitation (Physical and Respiratory Therapy) and Nursing. Through the cooperation of the Province of Manitoba and the University of Manitoba, students in this program are provided with academic and personal supports. Financial assistance may be available. For information call 474 8000 or, within Manitoba, 1 800 432 1960, extension 8000.

Professional Health Program (PHP)

This program is designed to support Aboriginal persons (Status, Non-Status, Metis, Inuit) in any of the professional health fields. Housed within the new Aboriginal Centre for Health Education at the Bannatyne Campus this program provides academic and personal supports. Limited financial assistance may be available. For information call 474 8000 or, within Manitoba, 1 800 432 1960, extension 8000.

Education Access Program (EAP)

The Education Access Program (EAP) is a joint partnership between the Faculty of Education and the Access Program. EAP provides students with supports to complete a Bachelor of Education (B.Ed.) degree at the University of Manitoba. Because the Bachelor of Education degree is an after-degree program, EAP students must complete their first degree with Access.

Students who identify teaching as their profession of choice must participate, in their second year of studies, in a workshop series ("Destination Education") that is designed to enrich their awareness of the teaching field and the B.Ed. program. All students identifying education as their career choice will be assigned to the designated Access Education Academic Advisor to better track teachable subjects and participation in the Destination Education Workshops. For information call 474-8000 or, within Manitoba, 1-800-432-1960 extension 8000.

3.3 Continuing Education Programs

Director: Maureen MacDonald

General Office: 188 Extended Education Complex

Telephone: 204 474 8024

A variety of certificate programs, seminars, and short courses are offered for professional and personal development in general management, health and social services, adult education and training, human ecology and horticulture.

Certificate Programs

Extended Education offers a range of professional continuing education certificate programs, in cooperation with agencies in the community and faculties and schools on campus. These programs vary in length, comprehensiveness, and level of certification. Most certificate programs are offered annually. See Section 4.0 below for a listing of certificate programs.

In addition to advising on existing programs, the staff of Extended Education will consult with individuals, groups, and organizations (profit and non-profit) who have an interest in or desire to develop learning experiences specific to their needs.

Copies of the current calendars of Continuing Education Programs are available by calling (204) 474 6742 or toll-free in Canada 1888 216 7011 (extension 6742) or visit websites: www.Umanitoba.ca/extended/ce

3.4 Distance and Online Education

Area Director: Lori Wallace

General Office: 188D Extended Education Complex

Telephone: 204 474 8012

Website: www.umanitoba.ca/distance

Each year, over 5000 university learners complete degree credit courses offered by Distance and Online Education. Our courses are open to all University of Manitoba students and provide an opportunity for students to complete courses without attending classes on campus. Students have many different circumstances that motivate them to enrol in distance education courses: they may be full-time students needing flexibility for work and study, work shifts or in part-time service jobs, have young families and enjoy the convenience of studying at home, live or work at a geographic distance from the U of M, or continue to study year round in order to more quickly complete their degrees.

Over 120 degree credit courses are offered in Fall, Winter, and Fall/Winter, and Dist Ed Winter/Summer 1, and Dist Ed Summer 1/Summer 2 from the following schools/faculties: Agricultural and Food Sciences, Arts, Education, Environment, Earth and Resources, Human Ecology, Nursing, Physical Education and Recreation Studies, School of Art, Science, and Social Work. Programs offered by distance include a Bachelor of Arts, Bachelor of Arts in Geography, Bachelor of Social Work, Post-Baccalaureate Diploma in Education, and Baccalaureate Program for Registered Nurses.

Students may choose from the following course delivery methods: Independent Study, Group Based Study, Online Study, Campus Manitoba and Flexible Study.

To request a copy of the 2006-07 Distance and Online Education Guide, call 474 8012, toll free in Canada at 1 888 216 7011, ext. 8012 or visit the website: www.umanitoba.ca/distance. Please also feel free to drop into the Distance and Online Education Office, located in 188D EE Complex.

3.5 English Language Studies

Director: Arthur LeBlanc

General Office: 188 Extended Education Complex

Telephone: 204 474 8738

Seven levels of Intensive English Program sessions ranging in length from four weeks to one year, consisting of 25 hours of classroom instruction per week are offered throughout the year. Academic instruction, oral language experiences, socio-cultural activities and organized contacts with Anglophone Winnipeggers constitute the basis of this program. Students are housed in residence on campus or in a homestay situation with a family depending upon their preference. Similar programs for Japanese nationals are also offered. At our U of M Tokyo Campus, several Intensive English Program instructors spend the month of March teaching English to students from Sagami Women's University.

In collaboration with the Faculty of Education, a Certificate in Teaching English as a Second Language (CTESL) consisting of five courses is now offered to meet the needs of teachers in Manitoba and those who teach abroad.

The area also offers a range of evening conversational courses in French, Japanese, and Spanish. Beginner Level 1 and Level 2 courses in French, Japanese, and Spanish are scheduled for mid-September to late November, and mid-January to early April. Higher levels will be scheduled as students progress. Courses at intermediate or higher levels in other major world languages are available given sufficient demand.

3.6 General Studies

Director: Bill Kops

General Office: 188 Extended Education Complex

Telephone: 204 474 8330 or 474 7154

Welcome to General Studies

A key component of the mission of Extended Education is to provide equality of opportunity and increased access to the educational resources of the university and the community. General Studies, originated in 1979, strives to fulfil this mission by allowing people who require a specific selection of courses to meet entrance requirements, or career development and personal goals to enrol at the University of Manitoba. It provides an opportunity for people who are not seeking a University of Manitoba degree to take degree credit courses in a variety of disciplines. As well, General Studies allows students to select courses from different areas in order to be able to make more informed decisions about their career direction. Courses may be taken in General Studies in the Regular Session, Summer Session or by Distance and Online Education.

Entrance Requirements to General Studies

Students may be admitted in one of the following categories: Auditing Student; Mature Student; Special Student; Visiting Student. Detailed information on the entrance requirements and a description of the student categories can be found in the Admissions chapter of this Calendar or by contacting the General Studies office.

Courses Available to General Studies Students

General Studies students may choose from courses in the faculties of Arts and Science, as well as other faculties and schools. Courses offered in the faculties of Architecture, Education, Engineering, Human Ecology, Nursing, Physical Education and Recreation Studies, Social Work, School of Art and Faculty of Music require teaching faculty approval prior to registration, with the exception of courses included in the University 1 list (See the University 1 chapter of this *Calendar*).

Students who have not been admitted to the Asper School of Business will be limited to an aggregate total of 36 credit hours offered by the Asper School of Business while registered in another faculty, school, or division. This aggregate total of 36 credit hours will include: failures, repeats of previously passed courses, and transfer credit received for business courses from external institutions.

Some introductory level courses require the completion of specific high school courses as prerequisites. Also, university prerequisites may be required for other courses. Prerequisites are given in the course descriptions found in the faculty or school chapters of this *Calendar*.

University of Manitoba Academic Performance

All students admitted to General Studies are required to comply with the rules, regulations and procedures of the University of Manitoba. See the

chapter, General Academic Regulations and Policy, or contact the General Studies office.

General Studies Academic Performance

Academic performance is the gauge of a student's success at university. The General Studies academic performance assessment, which occurs when a student has completed 45 credit hours of study, determines how a student is performing. Students may be contacted prior to the completion of the 45 credit hours to discuss their academic performance. First Level Assessment: after completing 45 credit hours of study, students will be assessed on the best half of the total credit hours completed. If a student achieves a 2.00 GPA, they may continue in General Studies. If their GPA is below 2.00, they proceed to the next level of assessment on probation. Second Level Assessment: the second level of assessment will occur when a student completes the credit hours registered for in the session following the first level assessment. If a student achieves a 2.00 GPA on the best half of the total number of credit hours, they can continue in General Studies. If their GPA is below 2.00 on the best half of the total number of credit hours, they will be suspended for two academic years. Following the suspension period, a student may reapply for admission to General Studies.

General Studies Credit Hour Policy

In an effort to assist students with academic decisions, students who have completed 45 credit hours in General Studies will be required to meet with the student advisor before being allowed further registration in General Studies. Until such time as the student meets with the advisor a block will be placed on his/her record to prevent further registration.

Transfer to Faculties and Schools

Entry to all faculties and schools requires a formal application to be submitted to Enrolment Services. Applications are available at Enrolment Services, 424 University Centre. Application deadline dates are available from Enrolment Services and are listed on the inside cover and in the Academic Schedule of the Undergraduate Calendar.

Student Services

A Student Advisor is available to assist students with course and program planning, and to provide admission and registration information on a drop-in basis or by appointment throughout the year in the General Studies office.

For information call (204) 474 8330 or 474 7154, or toll-free in Canada, 1 888 216 7011 (Extension 7154 or 8330) or visit our website at umanitoba.ca/extended/gen_studies.

3.7 Inter-Universities North Program

In cooperation with Brandon University and the University of Winnipeg, courses in Arts, Science and Education are offered in communities north of the 53rd parallel. Telephone: 1 800 442 0462.

3.8 Military Support Office

General Office: 188 Extended Education Complex

Telephone: 204 474 8006

The Military Support Office is designed to assist CF personnel and their immediate family members in the pursuit of a university education. The office replaces the long-standing former Canadian Forces University Program, but has retained experienced staff to assist in overcoming the problems which can result from the frequent moves and deployments experienced by members of the Defence family.

Through this unique office, the University of Manitoba takes into account the difficulty which extensive mobility can create in satisfying the residency requirement for graduation. Recognition is given for a wide range of military training, academic counselling services are provided by highly qualified student advisors, and provision is made for academic and financial relief when military duties interrupt studies.

Courses are available through Distance and Online Education or on campus, either part-time or full-time, and a Mature Student entry program is also offered.

Call toll-free within North America 1 800 850 6166, or e-mail military@umanitoba.ca. The MSO website is at www.umanitoba.ca/extended/military.

3.9 Off-Campus Study

Area Director: Bill Kops

General Office: 188 Extended Education Complex
Telephone: 204 474 8019

Off-Campus Study is designed to improve accessibility and success in university for students. A flexible and convenient alternative, Off-Campus Study allows students to take degree courses at sites within Winnipeg. Courses are taught by University of Manitoba instructors. The courses taught in high school allow Senior 4 students to take university courses while still in high school and receive university credit.

For information call (204) 474 8019, or toll-free in Canada 1 888 216 7011 (extension 8019) or e-mail aclaman@ms.umanitoba.ca, or visit our website at umanitoba.ca/extended/off-campus

3.10 Summer Session

Director: Bill Kops

General Office: 188 Extended Education Complex
Telephone: 204 474 6963

Summer Session offers a wide range of courses in the spring and summer, including feature programs, summer institutes, travel/study and off-campus courses. Summer Session provides an opportunity to accelerate degree completion, ease course loads in the regular session, or benefit from smaller classes. There are three academic periods to choose from:

Spring Intersession

Spring Intersession courses begin in early May and continue to late June. Most classes meet for two hours each day either in the morning or early afternoon.

Spring/Summer Evening

Spring/Summer Evening courses run from early May to early August. Classes are generally scheduled two evenings each week and meet for two and one-half hours.

Summer Day

Summer Day courses begin in early July and continue to late August. Most classes meet for two hours each day either in the morning or early afternoon.

For information about Summer Session, call (204) 474-7018 or (204) 474 6963, or toll-free in Canada 1 888 216 7011 (extension 6963) or e-mail summer@umanitoba.ca, or visit our website at umanitoba.ca/summer.

SECTION 4: Certificate and Diploma Programs

4.1 Agriculture

Prairie Horticulture

The purpose of this program is to focus on horticulture specific to the prairies, especially with respect to production and market conditions, climate, crop type, pests, disease, and other relevant prairie topics. Offered by independent study, part-time study.

4.2 Education

Adult and Continuing Education

To develop and enrich the knowledge and level of competence of those practicing in the field of adult education. Also offered by independent study. Part-time study.

Teaching English As a Second Language

The Certificate Program objectives are to meet local, national, as well as international needs of teacher development in ESL and EFL. The program provides a focused initial preparation for teaching ESL. Upon successful completion of the program, CTESL participants will be able to: Discuss the theoretical basis of second language instruction; demonstrate a variety of effective ESL teaching techniques; and explain, in pedagogically relevant ways, the linguistic structures of the English language.

4.3 General Management

Financial & Management Accounting

This certificate program is designed to provide general accounting education to anyone working with accounting information. The program pro-

vides a solid technical and conceptual foundation in accounting processes. Part-time study.

Applied Management

This certificate is designed to provide individuals in various work environments with the opportunity for combining management studies with applications relevant to their own careers. Registrants select a particular specialization appropriate to their own development interests. Specializations are available in: police service, records management, retail management, organizational effectiveness and utilities management. Part-time study over three years.

Human Resource Management

This program provides instruction in concepts and practices in human resource management. Part-time study over three years.

Intellectual Property and Technology Commercialization Management

In partnership with the University of Manitoba's Office of the Vice President (Research) Intellectual Property Advice and Technology Assessment Office, this program is designed to address many intellectual property and technology commercialization issues. Part-time study.

Interdisciplinary Studies

This program provides a certificate to students completing a minimum of 200 contact hours within the Continuing Education Program Area. Students must identify their learning objectives and develop a program to meet these objectives.

Quality Management

This program offers a management approach to the design and implementation of quality programs. Also offered by independent study. Part-time study over 1 year.

Municipal Administration

This program provides an essential body of knowledge required to assume administrative responsibilities within small to mid-size municipalities in Manitoba. Part-time study over four years.

4.4 Health and Social Services

Applied Behaviour Analysis

This program combines degree credit courses and supervised practicum courses to help individuals understand and practice the principles and techniques of applied behaviour analysis. Part-time study over three years.

Applied Counselling

To provide persons in health, education, private and government social service agencies with progressive skill development and theory in the practice of counselling. The four program areas are: general counselling, working with abused women and children, addictions studies, and child welfare practice. Part-time study over 1½-5 years.

General Case Management

This program is for individuals who want to prepare for future positions in Canada's rapidly changing health and social service sectors by gaining a general background in case management. Part-time study over 3 years.

Rehabilitation Case Management

This program prepares individuals to work in rehabilitation programs (e.g., medical, social and physical services, claims management, long term care, education). Participants learn varied case management models, principles of social and physical rehabilitation and functional and psychosocial theories in rehabilitation. Part-time study over 3 years.

Gerontology

This program provides a theoretical understanding of aging and practical applications for those working in a variety of professional and para professional fields and practice settings. Part-time study over three years.

4.5 Human Ecology

Apparel Design 1

A program for fashion designers, dressmakers, homemakers, and those working in the garment industry. Part-time study over 1 year.

Apparel Design 2

An advanced level program for fashion designers, dressmakers, homemakers, and those working in the garment industry. Part-time study over 1 year.

4.6 Management/Professional Institute Affiliation

Canadian Institute of Management Certificate Program in Management and Administration* (CIM)

To offer management training for managers and supervisors in industry, business, and government. 4 years part-time study.

Purchasing Management Association of Canada* (PMAC)

The University of Manitoba participates with the PMAC in the offering of four principles courses, plus a number of core and elective courses.

Real Estate Institute* (FRI)

Awarded by the Real Estate Institute of Canada (REIC) to individuals whose education, experience and ethical conduct have met the standards set by the Institute. The FRI designation signifies professional expertise in market analysis, property sales and leasing, real estate marketing and residential appraisal.

Credit Union Institute of Canada (CUIC)*

This program provides in-depth understanding of the key competency areas in credit union business management. Individual courses.

NOTE: * Certificate awarded by an external agency.

Faculty of Graduate Studies

General Office

500 University Centre

Telephone: (204) 474-9377

Fax: (204) 474-7553

E-mail: Graduate_Studies@umanitoba.ca

Website: www.umanitoba.ca/graduate_studies

Dean: John Doering, Ph.D.

Associate Dean: Karen Jensen, Ph.D.

Associate Dean: Kevin Coombs, Ph.D.

Associate Dean: Tom Hassard, Ph.D.

Graduate Education

The University of Manitoba was founded in 1877 and has become a well-established research-intensive institution. Two campuses make up the University of Manitoba. The Fort Garry campus is located near the south end of the city of Winnipeg and encompasses a spacious 274-hectare area along the bank of the Red River, while the Health Science campus is part of one of Western Canada's most modern health care complexes located in the city centre.

The Faculty of Graduate Studies was founded in 1949 and brings together a community of scholars comprising 3,300 students and 1,970 faculty members from over 140 graduate programs across the university. We have a long and proud tradition of achievement and innovation in graduate scholarship as part of the oldest University in Western Canada, but education lives and breathes in response to changing developments in society and the body of knowledge which informs it. Our focus is to continue the visionary development of new programs, community relationships, and administrative infrastructure which will contribute to promote excellence in graduate education, scholarship, creative activity and research.

The University of Manitoba offers a variety of financial support to its graduate students. In addition to the research support many students receive from their advisors, the University has millions of dollars available for University of Manitoba Graduate Scholarships (UMGFs), Manitoba Graduate Fellowships (MGFs), International Graduate Student Scholarships (IGSS) for students entering and continuing in their graduate programs, competitive top-up funds for national awards (i.e., NSERC, SSHRC, CIHR), as well as more than 600 other graduate scholarships and bursaries, which are administered by the various graduate programs.

Graduate work at the doctoral level is offered in the faculties of Agricultural and Food Sciences; Architecture; Arts; Dentistry; Education; Engineering; Clayton H. Riddell Faculty of Environment, Earth, and Resources; Graduate Studies (Mauro Centre for Peace and Justice, Interdisciplinary Programs); Human Ecology; Medicine; Pharmacy; Science; Social Work, and the I.H. Asper School of Business.

Graduate Programs

For a complete listing of graduate programs by Department, Faculty, or Institute, please consult the *Graduate Calendar* or the *Faculty of Graduate Studies website* (address given above).

The Faculty of Graduate Studies offers advanced courses of instruction and facilities for research leading to the following:

Master of Architecture (M.Arch.)
Master of Arts (M.A.)
Master of Arts (College Universitaire St. Boniface)
Master of Business Administration (M.B.A.)
Master of City Planning (M.C.P.)
Master of Dentistry (M.Dent.)
Master of Disability Studies (M.Disab)
Master of Education (M.Ed.)
Master of Education (Collège Universitaire St. Boniface)
Master of Engineering (M.Eng.)
Master of Environment (M.Env.)
Master of Interior Design (M.I.D.)
Master of Landscape Architecture (M.Land.Arch.)
Master of Laws (LL.M.)
Master of Mathematical, Computational and Statistical Sciences (M.M.C.S.S.)
Master of Music (M.Mus)
Master of Natural Resources Management (M.N.R.M.)
Master of Nursing (M.N.)
Master of Occupational Therapy (M.O.T.)
Master of Public Administration (M.P.A.)
Master of Science (M.Sc.)
Master of Social Work (M.S.W.)
Doctor of Philosophy (Ph.D.)
Diploma in Population Health

Application and Admission

Admission standards as well as criteria and procedures for admission vary from program to program.

See the *Graduate Calendar* (or the Faculty website) for admission procedures, program requirements and deadlines specific to each program.

Faculty of Human Ecology

General Office

209 Human Ecology Building

Telephone: (204) 474 8508

Fax: (204) 474-7592

E-mail: h_ecology@umanitoba.ca

Website: www.umanitoba.ca/faculties/human_ecology

Dean: Gustaaf P. Sevenhuysen

Administrative Assistant: Jean Read

Student Affairs Coordinator: Brigitte Wiebe

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Human Ecology and Professional Designations

SECTION 3: Admission to the Faculty of Human Ecology

- 3.1 Degrees Offered
- 3.2 Course Requirements for Admission

SECTION 4: Academic Regulations

- 4.1 General Academic Regulations
 - 4.1.1 Prerequisite, Corequisite, Course Availability: Definitions
- 4.2 Scholastic Standards
- 4.3 Part-time Students
- 4.4 Repeating Courses
- 4.5 Challenge for Credit
- 4.6 Transfer Credit
- 4.7 Appeals of Academic Regulations
- 4.8 Dean's Honour List
- 4.9 Degree With Distinction
- 4.10 Limited Access
- 4.11 Procedures Related to Student Academic Records
- 4.12 Work Permit for Study Purposes

SECTION 5: Program Requirements

- 5.1 Advisement
- 5.2 Faculty Program Requirements
 - Students Admitted in September 2002 or Later
- 5.3 Program Electives
- 5.4 Family Social Sciences Program
- 5.5 The Family Social Sciences Minor
- 5.6 Human Ecology Program
- 5.7 Human Ecology/Education Integrated Program
- 5.8 Human Nutritional Sciences Program
 - Students Admitted in September 1998 or Later
 - Students Admitted Prior to September 1998
 - Pre-Professional Preparation
- 5.8.1 Dietetics
- 5.8.2 Medicine or Dentistry
- 5.8.3 Law
- 5.9 Minor in Human Nutrition and Metabolism
- 5.10 Second Degree Program in Human Nutritional Sciences
- 5.11 Textile Sciences Program

- 5.11.1 Product Development Stream
- 5.11.2 Textile Development Stream
 - Engineering Sciences Option
 - Exercise and Sports Science Option
 - Microbiological Sciences Option
- 5.12 Interfaculty Option in Aging
- 5.13 The Minor in Management
- 5.14 The Voluntary Minor

SECTION 6: Course Descriptions

- 6.1 General Faculty
 - 6.2 Human Nutritional Sciences
 - 6.3 Family Social Sciences
 - 6.4 Textile Sciences
-

SECTION 1: Academic Staff

Dean Emeritus

Berry, R.E., B.H.E. (UBC), M.S. (Pennsylvania State), Ph.D. (Purdue).

Professor Emeritus and Senior Scholar

McDonald, B.E., B.Sc., M.Sc. (Alberta), Ph.D. (Wisconsin).

Senior Scholars

Brockman, L.M., B.A. (Saskatchewan), M.A. (Windsor), Ph.D. (Cornell); Higgitt, N., B.H.Ecol., M.Sc., Ph.D. (Manitoba).

Family Social Sciences

Professors

Berry, R.E., B.H.E. (UBC), M.S. (Pennsylvania State), Ph.D. (Purdue); Bond, J.B., B.Sc. (Illinois), M.S., Ph.D. (Purdue); Harvey, C.D.H., B.Sc. (H.Ec.) (Idaho), M.S., Ph.D. (Washington State).

Associate Professors

Brownridge, D.A., B.A. (Brandon), M.A., Ph.D., (Manitoba); Durrant, J.E., B.A., M.A., Ph.D. (Windsor); Duncan, K.A., B.S.H.Ec. (Saskatchewan), M.S., Ph.D. (Ohio State); Mills, R.S.L., B.A. (Concordia), M.A. (Memorial), Ph.D. (Toronto); Piotrowski, C.C., B.A., M.A. (Waterloo), Ph.D. (Pennsylvania State).

Assistant Professors

Brown, J., B.A. (King's College), B.S.W. (Calgary), M.Ed. (Alberta), Ph.D. (Alberta); Elgar, F., B.A., M.A. (Memorial), Ph.D. (Dalhousie); Mignone, J.J., Lic. Psic. (Salvador), M.H.S.A. (Alberta), Ph.D. (Manitoba).

Human Nutritional Sciences

Professors

Eskin, N.A.M., B.Sc., Ph.D. (Birmingham); Friel, J., B.Sc. (Loyola), M.Sc. (Saskatchewan), Ph.D. (Guelph); Jones, P.H., B.Sc., M.Sc., (British Columbia), Ph.D., (Toronto); Ogborn, M., MBBS (Adelaide), FRACP (Flinders), FRCPC (Dalhousie); Sevenhuysen, G.P., B.Sc., Ph.D. (London).

Associate Professors

Aukema, H., B.Sc., M.Sc., Ph.D. (Guelph); House, J.D., B.Sc., Ph.D. (Guelph); Taylor, C.G., B.H.Ecol. (Manitoba), Ph.D. (Guelph); Watts, B.M., B.Sc. (H.Ec.), M.Sc., Ph.D. (Manitoba).

Assistant Professors

Aluko, R., B.Sc., M.Sc. (Lagos), Ph.D. (Guelph); Lawlor, J.B., BAgr. Sc. (Dublin), M.Sc., Ph.D. (Cork); Lengyel, C.O., B.Sc. (Alberta), Ph.D. (Saskatchewan); Moghadasian, M., D.V.M. (Shiraz), M.Sc., Ph.D. (British Columbia); Suh, M., B.Sc., M.Sc. (Korea), Ph.D. (Alberta); Tappia, P.S., B.Sc. Pharmacology (Hons.) (Sunderland), Ph.D. (Wolverhampton).

Textile Sciences

Associate Professors

Clayton-Gouthro, C.M.M., B.F.A., M.Sc., Ph.D. (Manitoba); Feltham, T.S., B.S. (Montana), MBA (Montana), Ph.D. (Queen's); Horne, L., B.Sc.(H.Ec.), M.Sc. (Alberta), Ph.D. (Iowa State).

Assistant Professors

Zhong, W., B.E., Ph.D. (China Textile University).

Instructors

Campbell, L., B. H.Ecol., M.Sc. (Manitoba).

SECTION 2: Human Ecology and Professional Designations

Within an overall health promotion orientation, the mission of the Faculty of Human Ecology is to sustain, develop and transmit knowledge that supports individuals and their interactions in families and communities as they enhance their quality of life and improve their physical and social environments. Our teaching and research integrates both basic and applied sciences, incorporating innovative technologies and emergent areas of knowledge. The Faculty of Human Ecology contributes to the health of people in Manitoba, Canada and elsewhere by promoting good health. This health promotion contribution is distinct from the treatment of ill health. The Faculty uses the WHO (World Health Organization) definition of health as the framework for planning and activities: *A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*. The Faculty uses the Ottawa Charter definition of health promotion: *The process of enabling people to increase control over, and to improve, their health (Ottawa Charter for Health Promotion, 1986)*.

Programs in the Faculty of Human Ecology are specialized to meet the needs of students, employers and society. Scholarship, learning and research range from metabolic and clinical aspects to psychological, behavioural and community aspects. The Faculty's work extends along the continuum from cellular and biochemical aspects to health related products and policies. Study in the faculty in one of four undergraduate majors offers background that can lead to career opportunities in business and industry, dietetics and institutional administration, education, social services, government and research. We are one of the founding units of the University of Manitoba; our graduates have contributed to improving human health and well-being locally, nationally, and internationally for 95 years.

Professional Designations

Graduates of the Integrated Human Ecology and Education program are eligible to receive the professional certificate to teach at any level (K-12) in Manitoba providing all standards are met as established by the Province of Manitoba. The last intake of students for the Human Ecology/Education Integrated program will be for the 2006-2007 session, and the program will be terminated. See the Faculty of Education chapter for more details.

Graduates from the Human Nutritional Sciences program may apply for a dietetic internship following completion of a DC-accredited undergraduate degree with courses as stipulated by the DC. To practise as a dietitian in Manitoba, the membership body is the College of Dietitians of Manitoba (CDM).

Home economists in Manitoba, and other provinces, are regulated by legislation. Graduates may apply to the Manitoba Association of Home Economists (MAHE) for interim professional home economist (IPHE) status, and subsequently qualify as a professional home economist (PHEC).

SECTION 3: Admission to the Faculty of Human Ecology

3.1 Degrees offered

Bachelor of Human Ecology

Bachelor of Human Ecology (Family Social Sciences)

Bachelor of Science (Human Nutritional Sciences)

Bachelor of Science (Textile Sciences)

Minimum time to graduation: Four years (University 1 plus three years).

Bachelor of Human Ecology/Bachelor of Education

An integrated degree that combines Human Ecology with Education; minimum time to graduation: Five years (University 1 plus four years in Human Ecology and Education).

3.2 Course Requirements for Admission

The following is a summary of admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. Complete admission requirements are described in an applicant information bulletin that is available together with application deadline dates and forms from the Admissions Office, Enrolment Services, 424 University Centre. The detailed admission information is also posted on the university website.

General Entrance Requirements to the Faculty of Human Ecology: A minimum adjusted grade point average (AGPA) of 2.0 in at least 24 credit hours of University 1, including 6 credit hours from Arts and 6 credit hours from Science to total 12 credit hours, plus 12-18 credit hours of other University 1 courses, for a total of 24-30 credit hours. Students must complete at least 6 more credit hours of Arts or Science courses once admitted to the Faculty.

Other requirements for university study

High school prerequisites: Mathematics 40S (pre-calculus or applied) and Chemistry 40S are required for the science requirements in Human Nutritional Sciences, and textile courses in Textile Sciences. Students who consider subscribing to the Engineering Sciences option in Textile Sciences must have pre-calculus Mathematics 40S, Physics 40S, and Chemistry 40S.

Minimum GPA for consideration: 2.0.

The written English and mathematics requirements are satisfied by required courses HMEC 2030 and STAT 1000 within the Human Ecology program. HMEC 2030 will be available to students upon admission to the Faculty of Human Ecology.

For students wishing to choose the focused approach for entry to the Faculty of Human Ecology, the course requirements for each of the programs or areas of concentration offered by the Faculty of Human Ecology are described below:

Family Social Sciences

ECON 1200 or ECON 1210 or ECON 1220

PSYC 1200 or SOC 1200

6 credit hours from Science including STAT 1000 and one of STAT 2000 or COMP 1260 or any other 3 credit hour science course

9-12 credit hours of Family Social Sciences courses including FMLY 1010, FMLY 1020, FMLY 1420, and FMLY 1900

Human Ecology Program

ECON 1200 or ECON 1210 or ECON 1220

PSYC 1200 or SOC 1200

6 credit hours of science courses (as defined by the Faculty of Science) including STAT 1000

12 credit hours of Human Ecology courses from the following list: HNSC 1200, HNSC 1210, FMLY 1010, FMLY 1020, FMLY 1420, FMLY 1900, TXSC 1600 or TXSC 1610

Human Nutritional Sciences

CHEM 1300 and CHEM 1320

HNSC 1200 and HNSC 1210

PSYC 1200 or SOC 1200

ZOOL 1320 and ZOOL 1330

Textile Sciences – Product Development Stream

ECON 1210 and ECON 1220 or ECON 1200

PHED 1200

PSYC 1200

STAT 1000 and either CHEM 1000 or CHEM 1300

TXSC 1600 and TXSC 1610

3 credit hours of free electives

Textile Sciences – Textile Development Stream, Engineering Sciences Option

CHEM 1300 and CHEM 1310

ENG 1350 or ENG 1400

PSYC 1200

STAT 1000 and STAT 2000

TXSC 1600 and TXSC 1610

3 credit hours of free electives

Textile Sciences – Textile Development Stream, Exercise and Sports Science Option

BIOL 1020 and BIOL 1030

CHEM 1300 and CHEM 1310

PHED 1200

PSYC 1200

TXSC 1600 and TXSC 1610

3 credit hours of free electives

Textile Sciences – Textile Development Stream, Microbiological Sciences Option

BIOL 1020 and BIOL 1030

CHEM 1300 and CHEM 1310

PHED 1200

PSYC 1200

TXSC 1600 and TXSC 1610

3 credit hours of free electives

SECTION 4: Academic Regulations

4.1 General Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Human Ecology has regulations and requirements, published below, that apply specifically to its students.

4.1.1 Prerequisite, Corequisite, and Course Availability: Definitions

Prerequisite: If a course is prerequisite to a second course, the prerequisite must be met in order to continue in the second course. The department giving the second course may require a minimum grade of 'C' in the first course to register in the second course.

Corequisite: If a first course is a corequisite to a second course, the first course (unless previously completed) must be taken in the same term as the second course.

Course Availability: Not all courses listed in this Calendar are offered every year. Students are referred to the on-line calendar for courses offered in the year.

4.2 Scholastic Standards

Graduation and Grade Point Average

To graduate, a student must have passed 120 credit hours and have obtained a minimum of 240 weighted grade points. This is equivalent to a Degree Grade Point Average of 2.0. A pass indicates a grade of 'D' or better. A student's Degree Grade Point Average (GPA) will be determined from the number of effective courses which apply at a particular stage. The effective courses consist of all courses passed, in addition to all failures which have not been cleared, or substituted for, in the student's record. A maximum of 150 credit hours (25 courses or the equivalent) may be attempted in order to obtain the 120 credit hours.

Assessment

The status of each student will be assessed in May of each year in which a student is registered.

Academic Standards: Probationary Standing

Students must achieve or exceed the following standards at the specified stages in their academic careers. Failure to obtain the standard results in probation. Once placed on probation, students who fail to meet the appropriate performance level at the next assessment following the next registration will be academically suspended. A student is not permitted to be on probation for two consecutive years.

Probationary Standards

Effective Credit hours	Minimum GPA
24-30 hours	1.80
33-60 hours	1.85
63-90 hours	1.90
93-117 hours	1.95
120+ hours	2.00

Academic Standards: Suspension

Suspended students must remain out of the Faculty of Human Ecology for one academic year from the date of suspension and must apply for reinstatement at the Admissions Office no later than May 1.

Where mathematically possible for a suspended student to complete the degree by repeating failed courses, a suspended student shall be automatically reinstated after remaining out of the faculty for one calendar year, or by achieving a cumulative GPA above the probationary standard.

Academic Standards: Suspension (All Attempts Used)

Where it is mathematically impossible for a student to complete the degree by repeating failed courses, a suspended student, after remaining out of the faculty for one calendar year, may attempt reinstatement. By completing at least 12 credit hours in one term with a minimum 'D' grade in all courses and a grade point average of at least 2.0, the student will be reinstated. The student will start the program afresh, with previous grades of 'C' or better applicable to the program.

4.3 Part-time Students

The maximum time allowed for completion of the degree is 10 years. After completion of 24 credit hours, part-time students will be evaluated each May and must conform to the minimum performance levels.

4.4 Repeating Courses

A student may repeat any course for the purpose of attaining a better grade. The latest registration of a repeated course will count in GPA calculations. Students must contact the student advisor. There are no supplemental examinations for students who have failed final or deferred examinations.

4.5 Challenge for Credit

A student wishing to challenge a course for credit should contact the student advisor. Letter grades are granted upon completion of the course that is challenged for credit. A list of courses for challenge is available in the General Office. An application is required.

4.6 Transfer of Credit

See the chapters on Admissions and Academic Regulations and Requirements at the beginning of this *Calendar*. Students from faculties other than University 1 or from other institutions must make an appointment with the student advisor by the end of their first academic year to arrange for transfer of credit.

4.7 Appeals of Academic Regulations

The Faculty Committee on Student Standing considers petitions from students who request special consideration with respect to rules and regulations governing their programs of study and qualification for graduation.

4.8 Dean's Honour List

Eligible students who achieve term Grade Point Averages of 3.5 or higher in at least 12 credit hours will be included in the Dean's Honour List.

4.9 Degree With Distinction

Students who graduate with a degree GPA of 3.75 and higher will receive a degree with distinction.

4.10 Limited Access

Some Human Ecology courses are designated as "limited access" courses. Students who have registered in such a course and who have voluntarily withdrawn (following the registration revision period), received a grade in the course (pass or fail), or have had their registration cancelled due to non-payment of fees will not be allowed to re-register in the course until after the initial registration access period. These dates are published in the *Registration Guide* section of this publication which also contains the list of Human Ecology courses designated Limited Access.

4.11 Procedures Relating to Student Academic Records

See Section 5 of the chapter, University Policies.

4.12 Work Permit for Study Purposes

International students who are registering for courses or programs that require work placement must obtain a valid **Work Permit**, in addition to maintaining a valid Study Permit. Work placement includes, but is not limited to, any **paid or unpaid** practicum, internships, work experience, field placement, and co-op programs that are a required component for the completion of their degree, diploma or certificate. Please contact your program advisor or the International Centre for Students for further information.

SECTION 5: Human Ecology Program Requirements

Students entering the Faculty will select one of the following four programs:

- Family Social Sciences Program
- Human Ecology Program
- Human Nutritional Sciences Program
- Textile Sciences Program

Upon completion of the first year of the Human Ecology program following University 1, students may apply to enter the Human Ecology/ Education Integrated degree program.

In order to qualify for a degree, students must complete the 120 credit hours (124 for TS, Eng. Sci. option) specified for the selected program. Elective choices provided in each program will permit students to transfer between them; however, this opportunity decreases as students progress. Students who transfer to another program must meet the full requirements of that program.

5.1 Advisement

The Faculty will provide entering students with orientation information and will assign each student a program advisor. The advisor will be a faculty member from the student's department or program. Individual programs of study will be planned in consultation with departmental representatives at sessions scheduled in March of each year. Students in Human Nutritional Sciences and the Human Ecology program must submit a program plan for the succeeding year before the end of the second term.

5.2 Faculty Program Requirements

The following are the guidelines for the program requirements in the faculty. The courses outlined for each program in the sections which follow, meets these basic requirements.

Admitted in September 2005 or Later:

- A faculty core of 9 credit hours consisting of:

Course No.		Credit Hours
HMEC 2030	Human Ecology: Perspectives and Communication	3
HMEC 2050	Introduction to Research in Human Ecology	3
HMEC 3100	Communication for Professional Practice	3

- Plus a minimum of 51 additional credit hours within the faculty;
- Plus a minimum of 30 additional credit hours outside the faculty of which at least 6 credit hours must be from the Faculty of Science and six from the social sciences;
- Plus a minimum of 12 additional credit hours of free electives leading to a degree requirement of 120 (124) credit hours.

Note: Students admitted before September, 2005 and graduating after May, 2005, will make the following program adjustments because of the deletion of the former 028.408 (HMEC 4080) as a degree requirement.

- Family Social Sciences students must complete an additional 3 credit hours of Faculty electives at the 300 or 400 level.
- Human Ecology program students must complete an additional 3 credit hours of Faculty electives.
- Human Nutritional Sciences students must complete an additional 3 credit hours of free electives.
- Textile Sciences students must complete an additional 3 credit hours of free electives.

5.3 Program Electives

Courses within each program fall into one of three categories:

- Department electives must be chosen from within the program department.
- Outside electives must be chosen from a faculty other than Human Ecology.
- Free electives may be chosen from within or outside the Faculty of Human Ecology.

5.4 Family Social Sciences

Head: Karen Duncan

Applying knowledge from the social and physical sciences, students in Family Social Sciences examine factors affecting human psychosocial health and well-being. They study human development from infancy to old age within the context of the family, the community, and the culture.

Students are required to choose at least one area, or option, in which to focus their studies. The name of their option will appear as a "comment" on their transcripts. They may select from the following options: 1) Aging; 2) Child and Adolescent Development; 3) Family, Housing and Community Studies; 4) Family Resource Management; 5) Family Violence and Conflict Resolution.

The Family Social Sciences program can provide students with academic preparation or complementary courses for programs such as Law, Social Work, Education or Graduate Studies.

In March of each year, program planning sessions are provided to assist students in their selection of courses for subsequent years of study.

Students Admitted in September 2002 or Later

Courses to be taken by all Family Social Sciences students:

Course No.		Credit Hours
STAT 1000	Basic Statistical Analysis	3
One of:	Basic Statistical Analysis 2,	3
STAT 2000 or COMP 1260	Introductory Computer Usage 1, or any other Science course	
One of:	Principles of Economics,	3-6
ECON 1200, ECON 1210 or ECON 1220	Introduction to Canadian Economic Issues, or Introduction to Global and Environmental Economic Issues and Policies	
HMEC 2030	Human Ecology: Perspectives and Communication	3
HMEC 2050	Introduction to Research in Human Ecology	3
HMEC 3100	Communications for Professional Practice	3
FMLY 1010	Human Development in the Family	3
FMLY 1020	Family Issues across the Lifespan	3
FMLY 1420	Family Management Principles	3
FMLY 1900	Families, Housing, and Community: An Introductory Perspective	3
FMLY 2070	Family Financial Management	3
FMLY 2350	Multicultural Family Issues	3
FMLY 3780	Introduction to the Development of Programs for Children and Families	3
FMLY 3790	Introduction to the Evaluation of Programs for Children and Families	3
PSYCH 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology	6
	Department Electives	24
	Faculty electives (300 or 400 level)	3

Outside Electives 12-15
Free electives 30

NOTES:

- 1) If students choose ECON 1200, 12 credit hours of outside electives are required.
- 2) Students admitted between 1994 and September 2001 can choose to complete the current program or transfer into the new curriculum. Please advise the Faculty Student Advisor in writing if the new program is selected.
- 3) All courses listed in the general Family Social Sciences section (above) are required. In addition, students must choose at least one area, or option, in which to focus their studies. In the following section, the courses required to fulfill each option are listed. They will partially meet department, outside and free elective requirements. More courses will be required to complete the 120 credit hour degree. Students may take more than one option. Each option must consist of 18 non-overlapping credit hours; that is, no course can satisfy the requirements of more than one option.

Aging Option

This option is the Interfaculty Option in Aging, which can fulfill the requirement for an option within the Family Social Sciences major.

HMEC or SWRK or REC 2650	Social Aspects of Aging	3
FMLY 4300	Field Experience	6
NURS or PHED 2610	Health and Physical Aspects of Aging	3
	At least 3 credit hours from:	3
FMLY 3220	Death and the Family	
FMLY 3240	Families in the Later Years	
	At least 3 credit hours from:	3
NURS 2200	Selected Topics in Aging and Health	
PSYC 2370	Developmental Psychology from Adolescence to Old Age	
PSYC 3460	Abnormal Psychology	
PSYC 3490	Individual Differences	
PSYC 3610	Memory	
PHED 4500	Aging Adult Development, Health and Fitness	
REC 4130	Leisure Services for the Aging	
RLGN 2470	Death and Concepts of the Future	
SOC 2490	Sociology of Health and Illness	
SOC 2620	The Sociology of Aging	
SOC 3510	Population Dynamics and Change	
SOC 3540	The Sociology of Health Care Systems	

Child and Adolescent Development Option

FMLY 2600	Foundations of Childhood Developmental Health	3
FMLY 3600	Adolescents in Families and Societies	3
FMLY 4600	Risk and Resilience in Behavioural and Social Development	3
	At least nine credit hours from:	9
FMLY 2800	Family Violence	
FMLY 3610	Developmental Health of Children and Youth	
FMLY 3800	Conflict Resolution in the Family	
FMLY 3330	Parenting and Developmental Health	
FMLY 4330	Management of Family Stress	
FMLY 4480	Work and Family Issues	
HNSC 1210	Nutrition for Health and Changing Lifestyles	
HNSC 2130	Nutrition through the Life Cycle	
PSYC 2440	Behaviour Modification Principles	
PSYC 2450	Behaviour Modification Applications	

Family, Housing and Community Studies Option

Course No.		Credit Hours
FMLY 2900	Families, Housing and Community: A Development Perspective	3
FMLY 3900	Families, Housing and Community: A Policy Perspective	3
FMLY 4900	Families, Housing and Community: An Action Perspective	3
	At least 3 credit hours from:	3

HMEC or SWRK or REC 2650	Social Aspects of Aging	
FMLY 2800	Family Violence	
FMLY 3240	Families in the Later Years	
FMLY 3450	Consumer Problems and Influences	
FMLY 3800	Conflict Resolution in the Family	
FMLY 4330	Management of Family Stress	
FMLY 4450	Family Economic Resources and Functions	
FMLY 4600	Risk and Resilience in Behavioural and Social Development	
FMLY 4480	Work and Family Issues	
	At least 6 credit hours from:	6
ANTH 1220	Cultural Anthropology	
ANTH 2390	Social Organization in Cross-cultural Perspective	
ANTH 2570	Urban Anthropology	
ANTH 3380	Anthropology and Contemporary Social Issues	
EVCP 3340	History of the City	
EVCP 3350	Planning and Design for Shelter	
GEOG 2640	Geography of Culture and Inequality	
GEOG 3460	Urban Geography	
SOC 2320	Canadian Society and Culture	
SOC 2390	Social Organization	
SOC 2610	Theory of Design	
SWRK 2050	Community and Organizational Theory	
	OR at least 6 credit hours from:	6
NATV 1200	The Native Peoples of Canada	
NATV 1220	The Native Peoples of Canada, Part 1	
NATV 1240	The Native Peoples of Canada, Part 2	
NATV 2100	Aboriginal Spirituality	
NATV 3240	Native Medicine and Health	
NATV 4230	Traditional Knowledge and Native Studies Research	
	OR at least 6 credit hours from:	6
POLS 2070	Introduction to Canadian Government	
POLS 2510	Great Political Thinkers	
POLS 3160	Human Rights and Civil Liberties	
POLS 3600	Political Concepts	
POLS 3670	Canadian Political Parties	
WOMN 1540	Introduction to Women's studies in Social Sciences	
WOMN 2500	Race, Class and Sexuality	
WOMN 2520	Introduction to Feminist Theory	

Family Resource Management Option

	At least 9 credit hours from:	9
FMLY 3450	Consumer Problems and Influences	
FMLY 4330	Management of Family Stress	
FMLY 4450	Family Economic Resources and Functions	
FMLY 4460	Family Financial Counselling	
FMLY 4480	Work and Family Issues	
	At least 9 credit hours from (at least 3 credit hours must be selected from Courses numbered 300 or 400):	9
ACC 1100	Introductory Financial Accounting	
ACC 1110	Introductory Managerial Accounting	
ANTH 2550	Culture and the Individual	
ANTH 2430	Ecology, Technology and Society	
ECON 2280	Social Welfare and Human Resources	
ECON 2310	Canadian Economic Problems	
ECON 2350	Community Economic Development	
ECON 2360	Women in the Canadian Economy	
ECON 2390	Introduction to Environmental Economics	
ECON 2400	Introduction to Energy Economics	
ECON 2500	Labour and Technology	
ECON 2540	Political Economy1: Production and Distribution	
ECON 2550	Political Economy 2: Economic Growth and Fluctuations in a Global Economic Environment	
ECON 3390	Development Economics	
ECON 3720	Urban and Regional Economics and Policies	
FIN 2200	Corporation Finance	

FIN 3420 Security Analysis
 GEOG 1280 Introduction to Human Geography
 GEOG 2210 Economic Geography
 GMGT 2030 Administrative Theory
 GMGT 2440 Human Resource Management
 HNSC 1210 Nutrition for Health and Changing Lifestyles
 HNSC 2130 Nutrition through the Life Cycle
 IDM 3000 Aboriginal Business Context: Influences and Impacts
 MKTG 2210 Fundamentals of Marketing
 MKTG 3230 Consumer Behaviour
 NATV 1200 The Native Peoples of Canada
 NATV 1220 The Native Peoples of Canada, Part 1
 NATV 1240 Native Peoples of Canada, Part 2
 SOC 3370 Sociology of Work
 SOC 3510 Population Dynamics and Change
 SOC 3470 Political Sociology
 SOC 3870 Social Inequality
 TXSC 1600 Textiles for Living
 TXSC 1610 Textiles, Product and Consumers
 TXSC 2600 Textiles for Apparel End Uses
 TXSC 2610 Textiles for Non Apparel End Uses
 TXSC 2620 Consumer and Organizational Behaviour Toward Textile Products
 TXSC 3600 Global Apparel and Textiles Trade

Family Violence and Conflict Resolution Option

FMLY 2800	Family Violence	3
FMLY 3800	Conflict Resolution in the Family	3
FMLY 4800	Senior Seminar in Family Violence and Conflict Resolution	3
	At least 9 credit hours (with at least 3 credit hours at the 300 or 400 level) from:	9
ANTH 3380	Anthropology and Contemporary Social Issues	
FMLY 3610	Developmental Health of Children and Youth	
FMLY 4330	Management of Family Stress	
FMLY 4600	Risk and Resilience in Behavioural and Social Development	
NATV 1240	The Native Peoples of Canada, Part 2	
PSYC 2460	Dyadic Relationships	
SOC 2370	Ethnic Relations	
SOC 2510	Criminology	
SOC 3700	Sociology of Law	
SOC 3790	Women, Crime and Social Justice	
SOC 3830	Youth, Crime, and Society	
SWRK 3130	Contemporary Canadian Social Welfare	
WOMN 3560	Feminist Perspectives on Violence Against Women	

5.5 The Family Social Sciences Minor

A minor in Family Social Sciences is offered by the Department of Family Social Sciences. Students must complete 18 credit hours, distributed as follows: Six (6) credit hours in Family Social Sciences at the 100 level, and a least three (3) credit hours in Family Social Sciences at the 200 level, and a least three (3) credit hours in Family Social Sciences at the 300 and/or 400 level, with no more than 6 credit hours at the 100 level.

Students must check with their home Faculties to see if the Family Social Sciences minor is available in their programs.

5.6 Human Ecology Program

Chair: Jason Brown

The Human Ecology program is one of four degree choices in the Faculty of Human Ecology and is designed for students who have career goals that require basic preparation in each of the major subject areas of the faculty. The program provides course work in Human Nutritional Sciences, Textile Sciences and Family Social Sciences as well as the requirement of an 18 hour Minor in a related field – the minor designation will also appear on the student’s transcript. The program has a large elective course component to permit students to select courses to meet individual interests and career options. Persons who intend to select this program are advised that high school Chemistry 40S and Mathematics 40S are prerequisites to

CHEM 1300 University 1: Structure and Modeling in Chemistry, which is highly recommended as an elective course.

Students pursuing the Bachelor of Human Ecology/Bachelor of Education Program enter this program following 24-30 credit hours in Human Ecology (which follows one year in University 1). These students must apply to the Faculty of Education following these two years (at least 66 credit hours with a minimum cgpa of 2.0). A grade of ‘C’ or better is required in all courses which apply to the major or minor. Information about the Integrated program is given in the Faculty of Education chapter of this Calendar. Students in the Integrated program must have all their Human Ecology course requirements completed prior to entering the final Education year. The last intake for the Human Ecology/Education Integrated program will be for the 2006-2007 academic session and the program will be terminated.

Before entering continuing years in the Faculty of Human Ecology, the overall program must be planned in consultation with the Chair or committee member. Course planning sessions are held in March of each year.

Students Admitted in September 2005 or Later

Course No.		Credit Hours
ECON 1200	or ECON 1210 and ECON 1220 Economics	6
	Six credit hours from ECON 2280, ECON 2310, ECON 2390, ECON 2400, ECON 2540, ECON 2550	6
FMLY 1020	Family Issues across the Lifespan	3
	Six credit hours from FMLY 1010, FMLY 1420 or FMLY 1900	6
FMLY 2350	Multicultural Family Issues	3
HMEC 2030	Human Ecology: Perspectives and Communication	3
HMEC 2050	Introduction to Research in Human Ecology	3
HMEC 3100	Communication for Professional Practice	3
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HNSC 2130	Nutrition through the Life Cycle	3
NATV 1200	The Native Peoples of Canada, or	6
NATV 1220 and	The Native Peoples of Canada Part 1 and	
NATV 1240	The Native Peoples of Canada Part 2	
STAT 1000	Basic Statistical Analysis 1	3
PSYC 1200	Introduction to Psychology	6
Or	Or	
SOC 1200	Introduction to Sociology	
TXSC 1600	Textiles for Living	3
TXSC 1610	Textiles, Product and Consumers	3
	Science course as defined by Faculty of Science	3
	Faculty Electives (at least 9 credit hours at 300 or 400 level; HMEC 4090, Practicum, highly recommended)	24
	Minor/option	18

Recommended Minors/Options:

Canadian Studies
 Family Social Sciences
 Human Nutrition and Metabolism
 Labour and Workplace Studies
 Management
 Native Studies
 Option in Aging
 Political Studies
 Sociology
 Urban Studies
 Women’s Studies
 Free electives

12

5.7 Human Ecology/Education Integrated Program

Students planning to take the joint Human Ecology/Education program must have grades of ‘C’ or higher in all courses that apply to the major and minor teachable subjects. Refer to the Faculty of Education chapter of this Calendar for the list of courses for teachable subjects. Admission to the Human Ecology/Education Integrated program follows one year (30-33 credit hours) in Human Ecology (after admission from University 1) to at least 66 credit hours of work. The last intake for the Human Ecology/Education In-

egrated program will be for the 2006-2007 academic session and the program will be terminated.

5.8 Human Nutritional Sciences

Acting Head: Harold Aukema

Students majoring in Human Nutritional Sciences will choose either the Nutrition Option or the Foods Option, or will select the second degree in Human Nutritional Sciences. The educational requirements to qualify for a dietetic internship and membership with the College of Dietitians of Manitoba (CDM) or dietetic colleges in other Canadian provinces may be met within the Nutrition Option with the recommended selection of courses. Students can apply for a dietetic internship in the final year of their degree or after completion of their degree. Internships are awarded competitively by external institutions. Those who plan to enter Human Nutritional Sciences are advised that high school Chemistry 40S and Mathematics 40S are prerequisites to CHEM 1300 University 1: Structure and Modeling in Chemistry. Before entering continuing years in the Faculty of Human Ecology, the overall program must be planned with departmental advice. Sessions are held in March of each year.

Students Admitted in September 2002 or Later

Course No.	Course Name	Credit Hours
Courses to be taken by all Human Nutritional Sciences students		
CHEM 1300	University 1: Structure and Modeling in Chemistry	3
CHEM 1320	University 1: Introduction to Organic Chemistry (See Note 1)	3
CHEM 2770	Elements of Biochemistry 1 (See Note 2)	3
CHEM 2780	Elements of Biochemistry 2 (See Note 3)	3
FOOD 4150	Food Microbiology	3
HMEC 2030	Human Ecology: Perspectives and Communication	3
HMEC 2050	Introduction to Research in Human Ecology	3
HMEC 3100	Communication for Professional Practice	3
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HNSC 2130	Nutrition through the Life Cycle	3
HNSC 2140	Basic Principles of Human Nutrition	3
HNSC 2150	Composition, Functional and Nutritional Properties of Foods	3
HNSC 2160	Food Preparation and Preservation	3
HNSC 3330	Ingredient Technology for Designed Foods	3
HNSC 4160	Seminar in Foods and Nutrition	3
HNSC 4290	Food, Nutrition and Health Policies	3
PSYC 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology or Combination of the two areas	6
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
ZOOL 1320	Anatomy of the Human Body	3 - 6
	Or	
BIOL 1020 and BIOL 1030	Biology 1 and 2 (If Biology 1 and 2 are taken, the additional 3 credit hours are considered to be free electives)	
ZOOL 1330	Physiology of the Human Body (See Note 4)	3
Nutrition Option		
HNSC 3300	Vitamins and Minerals in Human Health	3
HNSC 3310	Macronutrients and Human Health	3
HNSC 3320	Nutrition Education and Dietary Change	3
HNSC 4320	Nutritional Management of Disease States	3
	Department Electives	15
	Free Electives	21
	Restricted Faculty Electives (see Note 6)	
Foods Option		
HNSC 3300	Vitamins and Minerals in Human Health	3
	Or	
HNSC 3310	Macronutrients and Human Health	3
HNSC 3260	Food Quality Evaluation	3
HNSC 3290	Cultural and Psychological Influences in Food Patterns	3
HNSC 4270	Sensory Evaluation of Food	3

HNSC 4280	Food Product Development	3
MKTG 2210	Fundamentals of Marketing	3
	Program Electives (See Note 7)	9
	Free Electives	24
	Restricted Faculty Electives (see Note 6)	

Pre-Professional Preparation

Students in the Human Nutritional Sciences program can complete the entrance requirements for several professional programs as part of the degree.

5.8.1 Dietetics: Academic requirements for eligibility to enter a dietetic internship.

Courses required in addition to the Human Nutritional Sciences program:

Course No.	Course Name	Credit Hours	Placement in Program
GMGT 2030	Administrative Theory (or GMGT 2070 or GMG 2080)	3	Free Elective
HNSC 3340	Food Service Management	3	Department Elective
HNSC 4140	Quantity Food Production and Management	3	Department Elective
HNSC 4XX0	One of HNSC 4300, HNSC 4310, HNSC 4330, or HNSC 4340	3-6	Department Elective

Entry into a dietetic internship is competitive. It is strongly recommended that students seek advice from the Department during the second and third years of the program on all aspects of preparing an application to an internship.

5.8.2 Medicine or Dentistry: Eligibility for entry into the program Doctor of Medicine, or the program Doctor of Dental Medicine, at the University of Manitoba.

A. Courses required in addition to the Human Nutritional Sciences program (can be taken as electives in the program):

Course No.	Course Name	Credit Hours	Placement in Program
CHEM 2210*	Introduction to Organic Chemistry 1: Structure and Function (see Note 5)	3	Free Elective
CHEM 2220	Introduction to Organic Chemistry 2: Reactivity and Synthesis (See Note 5)	3	Free Elective
CHEM 2360**	Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy	3	Free Elective
CHEM 2370**	Biochemistry 2: Catabolism, Synthesis and Information Pathways	3	Free Elective
ENGL 1200	Representative Literary Works	6	Free Elective
PHYS 1020	General Physics 1	3	Free Elective
PHYS 1030	General Physics 2	3	Free Elective

* Cannot be held with CHEM 1320 in the same program. Prerequisite is CHEM 1310 (University 1: Introduction to Physical Chemistry).

** These courses replace the biochemistry courses in the Human Nutritional Sciences program.

5.8.3 Law: Eligibility for entry into the program Bachelor of Laws at the University of Manitoba.

A. The Human Nutritional Sciences program meets the entrance requirements of the Faculty of Law.

B. It is necessary to apply to the Faculty of Human Ecology to take HMEC 2030 (Human Ecology: Perspectives and Communication) in University 1, as it is not normally available to students in University 1.

NOTES:

1. Under required courses, students can take either CHEM 1320 (University 1: Introduction to Organic Chemistry) or CHEM 1310 (University 1: Introduction to Physical Chemistry).

2. Under required courses, students can take either CHEM/MBIO 2770 (Elements of Biochemistry 1) or CHEM/MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

3. Under required courses, students can take either CHEM/MBIO 2780 (Elements of Biochemistry 2) or CHEM/MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).

4. Under required courses, students can take either ZOOL 1330 (Physiology of the Human Body) or ZOOL 2530 (Human Physiology 1) and ZOOL 2540 (Human Physiology 2).

5. For students who do not take CHEM 2210 and CHEM 2220, CHEM 1320 is preferred.
6. Students admitted between 1994 and September 2001 may choose to eliminate the requirement for 9 credit hours of Restricted Faculty Electives from their programs. Please advise the Faculty Student Advisor using the elective change form available in the General Office.
7. Nine credit hours of courses from either the Asper School of Business and/or from 3rd and 4th year courses in the Department of Food Science.

5.9 Minor in Human Nutrition and Metabolism

The Minor in Human Nutrition and Metabolism (18 credit hours) requires the following courses:

Course No.	Course Name	Credit Hours
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HNSC 2140	Basic Principles of Human Nutrition	3
HNSC 3300	Vitamins and Minerals in Human Health	3
HNSC 3310	Macronutrients and Human Health	3
HNSC 4120	Senior Thesis <i>or</i>	3
<i>or</i>	Functional Foods and Nutraceuticals	
HNSC 4540		

5.10 Second Degree Program in Human Nutritional Sciences

For those intending to apply for a Dietetic internship, the second degree's Dietetics Preparation program meets the course requirements in Human Nutritional Sciences, but not all the other supporting course requirements (for example, psychology/sociology, humanities or social sciences, microbiology, research methods, communication arts, basic principles of management).

Required Courses – 45 Credit Hours (See Note 1):

Course No.	Course Name	Credit Hours
CHEM 1300	University 1: Structure and Modeling in Chemistry (see note 2)	3
CHEM 1320	University 1: Introduction to Organic Chemistry (see note 2)	3
CHEM 2770	Elements of Biochemistry 1 (see note 3)	3
CHEM 2780	Elements of Biochemistry 2 (see note 4)	3
HNSC 2140	Basic Principles of Human Nutrition	3
HNSC 2160	Principles of Food Preparation and Preservation	3
HNSC 3300	Vitamins and Minerals in Human Health	3
HNSC 3310	Macronutrients and Human Health	3
HNSC 3320	Nutrition Education and Dietary Change	3
HNSC 3330	Ingredient Technology for Designed Foods	3
HNSC 4290	Food, Nutrition and Health Policies	3
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
ZOOL 1320	Anatomy of the Human Body <i>or</i>	3-6
<i>or</i>	Biology 1 and Biology 2 (see note 6)	
BIOL 1020	and	
BIOL 1030		
ZOOL 1330	Physiology of the Human Body (see note 5)	3

Free Elective Courses - 6 credit hours. If additional courses are required as prerequisites, they will be considered free electives.

Elective Courses – 9 credit hours from Human Nutritional Sciences (choose one of three options):

Course No.	Course Name	Credit Hours
A. Dietetics Preparation		
HNSC 3340	Food Service Management Systems	3
HNSC 4140	Quantity Food Production and Management	3
HNSC 4320	Nutrition Management of Disease States	3
B. Human Nutrition		
HNSC 4320	Nutrition Management of Disease States	3
	Choose 6 credit hours from:	6

HNSC 4300, Community Nutrition Intervention, Nutrition	
HNSC 4310, and the Elderly, Maternal and Child Nutrition,	
HNSC 4340 or Nutrition in Exercise and Sport	
<i>or</i>	
HNSC 4350	
C. Foods	
HNSC 2150 Composition, Functional and Nutritional	3
Properties of Foods	
HNSC 3260 Food Quality Evaluation	3
HNSC 4540 Functional Foods and Nutraceuticals	3

NOTES:

- Students must complete 60 credit hours while enrolled in the second degree program. If any of the required courses have been completed in the previous degree, free electives must be chosen to meet the 60 credit hour requirement. Students are not required to satisfy the Written English requirement.
- Under required courses, students can take either CHEM 1320 (University 1: An Introduction to Organic Chemistry), or CHEM 1310 (University 1: An Introduction to Physical Chemistry). Students can take CHEM 2210 (Introduction to Organic Chemistry 1: Structure and Function) and CHEM 2220 (Introduction to Organic Chemistry 2: Reactivity and Synthesis) instead of CHEM 1300 and CHEM 1310 or CHEM 1320. For students who do not take CHEM 2210 and CHEM 2220, CHEM 1320 is preferred.
- Under required courses, students can take either CHEM/MBIO 2770 (Elements of Biochemistry 1) or CHEM/MBIO 2360 (Biochemistry 1: Bio-molecules and in Introduction to Metabolic Energy).
- Under required courses, students can take either CHEM/MBIO 2780 (Elements of Biochemistry 2) or CHEM/ MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).
- Under required courses, students can take either ZOOL 1330 (Physiology of the Human Body) or ZOOL 2530 (Human Physiology 1) and ZOOL 2540 (Human Physiology 2).
- If BIOL 1020 and BIOL 1030 are taken, the additional 3 credit hours are considered to be free electives.

5.11 Textile Sciences

Acting Head: Tammi Feltham

The Textile Sciences undergraduate program imparts knowledge and skills which meet the demands of work and research environments driven by scientific, technological, and logistical innovations in textiles. It comprises two streams – product development and textile development. The product development stream is structured to help students develop problem solving abilities systematically through the application and integration of knowledge in textile science, human and organizational behaviour, environmental forces, and methods of quantifying and interpreting observations. The textile development stream is a response to the emerging significance of textiles in health and health promotion. Within the textile development stream, three options will be offered – Exercise and Sports Science, Engineering Sciences, and Microbiological Sciences. These options capitalize on the strengths of other academic disciplines within the University of Manitoba which are relevant to the study of textiles for health and health promotion. Students who choose the textile development stream must have pre-calculus Mathematics 40S or the former Mathematics 40S and Chemistry 40S. Students who consider subscribing to the Engineering Sciences Option must have pre-calculus Mathematics 40S, or the former Mathematics 40S, Physics 40S, and Chemistry 40S. Students must choose either the Textile Development or Product Development choice upon first registration in the Faculty.

In March of each year program planning sessions are provided to assist students in their selection of courses for subsequent years of study.

Students Admitted in September 2005 or Later

5.11.1 Product Development Stream

Course No.	Course Name	Credit Hours
CHEM 1000	Understanding the World through Chemistry	3
<i>Or</i>	<i>Or</i>	
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	
ECON 1210	Introduction to Canadian Economic Issues and Policies	3
ECON 1220	Introduction to Global and Environmental Economic Issues and Policies	3
FMLY 1010	Human Development in the Family	3

HMEC 2030 Human Ecology: Perspectives and Communication	3
HMEC 2050 Introduction to Research in Human Ecology	3
HMEC 3100 Communication for Professional Practice	3
HNSC 1210 Nutrition for Health and Changing Lifestyles	3
PHED 1200 Physical Activity, Health and Wellness	3
PSYC 1200 Introduction to Psychology	6
STAT 1000 Basic Statistical Analysis 1	3
TXSC 1600 Textiles for Living	3
TXSC 1610 Textiles, Product, and Consumers	3
TXSC 2600 Textiles for Apparel End Uses	3
TXSC 2610 Textiles for Non Apparel End Uses	3
TXSC 2620 Consumer and Organizational Behaviour toward Textile Products	3
TXSC 2630 Pattern Development in an Industrial Environment	3
TXSC 3600 Global Apparel and Textiles Trade	3
TXSC 3610 Product Standards and Specifications	3
TXSC 3620 Evaluation of Textile Performance	3
TXSC 3630 Line Planning and Visual Communication	3
TXSC 3640 Pattern Development in a Computer Aided Design Environment	3
TXSC 3650 Production of Textile Products	3
TXSC 4600 Information Age and the Textiles Supply Chain	3
TXSC 4610 Integrative Project	6
TXSC 4620 Colour Management	3
TXSC 4630 Quality Assurance Systems	3
Department Electives	9
Free Electives	24

5.11.2 Textile Development Stream

Course No.	Credit Hours
CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 University 1 Chemistry: An Introduction to Physical Chemistry	3
CHEM 2210 Introductory Organic Chemistry 1: Structure and Function	3
CHEM 2220 Introductory Organic Chemistry 2: Reactivity and Synthesis	3
FMLY 1010 Human Development in the Family	3
HMEC 2030 Human Ecology: Perspectives and Communication	3
HMEC 2050 Introduction to Research in Human Ecology	3
HMEC 3100 Communication for Professional Practice	3
HNSC 1210 Nutrition for Health and Changing Lifestyles	3
PHED 1200 Physical Activity, Health and Wellness	3
PSYC 1200 Introduction to Psychology	6
STAT 1000 Basic Statistical Analysis 1	3
STAT 2000 Basic Statistical Analysis 2	3
TXSC 1600 Textiles for Living	3
TXSC 1610 Textiles, Product, and Consumers	3
TXSC 2600 Textiles for Apparel end Uses	3
TXSC 2610 Textiles for Non Apparel End Uses	3
TXSC 2620 Consumer and Organizational Behaviour toward Textile Products	3
TXSC 3500 Textiles for the Healthcare Sector	3
TXSC 3610 Product Standards and Specifications	3
TXSC 3620 Evaluation of Textile Performance	3
TXSC 4500 Advanced Textiles for the Healthcare Sector	3
TXSC 4610 Integrative Project	6
TXSC 4620 Colour Management	3
TXSC 4630 Quality Assurance Systems	3

Engineering Sciences Option

ENG 1350 Engineering Statics	4
Or	Or
ENG 1400 Engineering Design	4
Choose 24 credit hours from the following list of Engineering courses:	24

BIOE 2580 Biosystems Engineering Design Trilogy 1	4
BIOE 3590 Mechanics of Materials in Biosystems	4
CIVL 2800 Solid Mechanics	4
ENG 1350 Engineering Statics	4
ENG 1400 Engineering Design	4
MECH 2270 Principles of Engineering Materials	4
MECH 2290 Manufacturing Engineering	3
MECH 2300 Introduction to Production and Manufacturing	3
MECH 3540 Modern Engineering Materials	4
Department Electives	3
Free electives	12

Microbiological Sciences Option

BIOL 1020 Biology 1 and Biology 2	3
BIOL 1030	3
MBIO 2100 General Microbiology A	3
MBIO 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy	3
MBIO 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways	3
MBIO 3010 Mechanism of Microbial Disease	3
Department Electives	3
Free electives	15

Exercise and Sports Science Option

BIOL 1020 Biology 1 and Biology 2	3
BIOL 1030	3
PHED 2310 Kinesiology	3
PHED 2320 Human Anatomy	3
PHED 3430 Exercise Physiology 1	3
ZOOL 1330 Physiology of the Human Body	3
Department Electives	3
Free electives	18

5.12 Interfaculty Option in Aging

An Option in Aging is offered by and in the following faculties: Architecture (Interior Design), Arts, Human Ecology, Nursing, Physical Education and Recreation Studies, and Social Work.

To complete the option, students in Human Ecology must complete each of the following requirements:

- HMEC 2650 or REC 2650 or SWRK 2650, The Social Aspects of Aging;
 - NURS 2610 or PHED 2610, Health and Physical Aspects of Aging;
 - At least three credit hours of professional/discipline specific applied work on aging within the student's department of registration (a list of courses is available in the general office); and,
 - An additional nine credit hours of aging-related courses from the participating units; a list is available in the General Office. Upon completion of these requirements, a "comment" will be added to the student's transcript.
- Further information is available from the General Office of Human Ecology.

5.13 The Minor in Management

A Management Minor is offered by the Asper School of Business. Human Ecology students may complete this Minor as part of the electives portion of their programs. The Minor will consist of any 18 credit hours of Management courses. Students must meet prerequisites for all courses. Further information is available from the Human Ecology general office.

5.14 The Voluntary Minor

Students in the Faculty of Human Ecology (B.H.Ecol. and B.Sc. programs) may, if they wish, declare and complete a Minor from departments and interdisciplinary programs in which a Minor is offered. The Family Social Sciences Minor and Human Nutrition and Metabolism are available

through the Faculty of Human Ecology. Information about Minors in programs other than Human Ecology is found in the appropriate description of departmental/school/faculty program offerings in the Undergraduate Calendar.

Completion of the Minor is entirely optional. Students may not, however, declare both their Major and Minor from the same department/interdisciplinary program. No course may be used as part of a prescribed program in the Faculty of Human Ecology and also be part of a prescribed Minor. For example, if a course in Chemistry is part of a student's degree requirements in the Faculty of Human Ecology, it cannot be used as part of a Minor in another program. Completion of a Minor may require that a student take more than the minimum number of credit hours for graduation.

SECTION 6: Course Descriptions

6.1 General Faculty

WHMEC 2030 Human Ecology: Perspectives and Communication Cr.Hrs.3 (Lab Required) (Formerly 028.203) Theory and practice of written and oral communication set within the context of the subject matter of areas of human ecology. Students may not hold credit for HMEC 2030 (or 028.203)W and the former 028.103 and the former 028.204 and the former 028.103W.

HMEC 2050 Introduction to Research in Human Ecology Cr.Hrs.3 (Formerly 028.205) A general introduction to research issues in natural and social sciences and their application in the various subject areas in human ecology. *Prerequisites:* HMEC 2030 (or 028.203)W or 028.103W (or 028.101 and the former 028.204), and STAT 1000 (or 005.100)M (or 005.220).

Interfaculty Option on Aging

HMEC 2650 The Social Aspects of Aging Cr.Hrs.3 (Formerly 028.265) An examination of the social aspects of aging. Emphasis on understanding the aging process as a life transition involving adaptation through interaction with social and physical environments. Students may not hold credit for HMEC 2650 (or 028.265) and IDES 2650 (or 051.265) or SWRK 2650 (or 047.265) or REC 2650 (or 123.265).

HMEC 3100 Communication for Professional Practice Cr.Hrs.3 (Lab Required) (Formerly 028.310) Advanced communication skills as applied to professional practice in the fields of human ecology. Students may not hold credit for HMEC 3100 (or 028.310) and the former 028.204. *Prerequisites:* 54 credit hours in the Human Ecology program and HMEC 2030 (or 028.203)W or 028.103W.

HMEC 4090 Practicum in Human Ecology Cr.Hrs.6 (Formerly 028.409) This is a partnership among the university, field supervisor, and the student. It provides an opportunity for students to work in a supervised setting (e.g., health, social services or business) in which home economists have a professional role and responsibility. Students also have in-class experiences and assignments with an academic instructor. *Prerequisite:* 84 credit hours in the Comprehensive program and consent of instructor.

6.2 Human Nutritional Sciences

U1HNSC 1200 Food: Facts and Fallacies Cr.Hrs.3 (Formerly 030.120) This course will present facts and fallacies about food from harvest to market forms. Emphasis will be placed on technological development, consumer concerns and factors affecting nutritional quality. Current issues related to food safety and nutritional trends will also be discussed. Not to be held with the former 030.119.

U1HNSC 1210 Nutrition for Health and Changing Lifestyles Cr.Hrs.3 (Formerly 030.121) This course addresses the relationship between nutrition and health. The focus is on healthy eating and on strategies for modifying food patterns within the context of lifestyle and culture. Not to be held with the former 030.117 or 030.323.

HNSC 2130 Nutrition Through the Life Cycle Cr.Hrs.3 (Formerly 030.213) Examination of nutritional needs throughout the life cycle,

the nutritional concerns of different age groups and the development of healthy eating practices. Not to be held with the former 030.304. *Prerequisite:* HNSC 1210 (or 030.121).

HNSC 2140 Basic Principles of Human Nutrition Cr.Hrs.3 (Formerly 030.214) The scientific principles underlying nutrient function and dietary requirements. *Prerequisites:* CHEM 2770 (or 002.277) (or CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236)) and HNSC 1210 (or 030.121) and HNSC 1200 (or 030.120); or CHEM 2770 (or 002.277) (or CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236)) and FOOD 2500 (or 078.250); with a grade of C or higher in CHEM 2770 (or 002.277) (CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236)). Not to be held with the former 030.325.

HNSC 2150 Composition, Functional and Nutritional Properties of Foods Cr.Hrs.3 (Formerly 030.215) Food composition, food market forms, food composition data for nutritional assessment and labelling. *Prerequisites:* HNSC 1200 (or 030.120) and HNSC 1210 (or 030.121) and CHEM 1320 (or 002.132 or 002.131). Not to be held with the former 030.327.

HNSC 2160 Principles of Food Preparation and Preservation Cr.Hrs.3 (Lab Required) (Formerly 030.216) Food preparation, preservation, handling and storage;

quality and safety implications; scientific basis for culinary practice; use and application of equipment. *Prerequisite:* HNSC 1200 (or 030.120) and either CHEM 1320 (or 002.132) or CHEM 1310 (or 002.131). Not to be held with the former 030.211 or 030.324.

HNSC 3260 Food Quality Evaluation Cr.Hrs.3 (Lab Required) (Formerly 030.326) Discussion of quality concepts and quality assurance principles for food applications, and of methods for evaluation of sensory, chemical and physical aspects of quality. The course will include food industry visits and demonstrations of food testing techniques. *Prerequisites:* HNSC 2160 (or 030.216) or FOOD 3010 (or 078.301) and STAT 2000 (or 005.200) or equivalent.

HNSC 3290 Cultural and Psychological Influences in Food Patterns Cr.Hrs.3 (Formerly 030.329) A study of the sociological, psychological, and cultural aspects of food patterns and behaviour. *Prerequisites:* PSYC 1200 (or 017.120) or SOC 1200 (or 077.120) and HNSC 1200 (or 030.120) and HNSC 1210 (or 030.121).

HNSC 3300 Vitamins and Minerals in Human Health Cr.Hrs.3 (Formerly 030.330) The physiological importance of vitamins and minerals in the human body, including factors affecting dietary requirements, metabolism and roles in disease progression and prevention. *Prerequisites:* CHEM 2780 (or 002.278) (or CHEM 2370 (or 002.237) or MBIO 2370 (or 060.237)) and HNSC 2140 (or 030.214) and ZOOL 1330 (or 022.133 or 022.254). Not to be held with the former 030.426.

HNSC 3310 Macronutrients and Human Health Cr.Hrs.3 (Formerly 030.331) Macronutrient functions and metabolic roles in human health, including the prevention and pathogenesis of various diseases. *Prerequisites:* CHEM 2780 (or 002.278) (or CHEM 2370 (or 002.237) or MBIO 2370 (or 060.237)) and HNSC 2140 (or 030.214) and ZOOL 1330 (or 022.133 or 022.254). Not to be held with former 030.325.

HNSC 3320 Nutrition Education and Dietary Change Cr.Hrs.3 (Formerly 030.332) Theoretical and practical aspects influencing dietary change at the individual and population level, with emphasis on nutrition education. *Prerequisites:* PSYC 1200 (or 017.120), HNSC 2130 (or 030.213), HNSC 2140 (or 030.214) and HNSC 2160 (or 030.216).

HNSC 3330 Ingredient Technology for Designed Foods Cr.Hrs.3 (Formerly 030.333) Chemical and functional properties of ingredients and their application in designed foods: low fat, low calorie, high fibre, high energy and innovative food products. *Prerequisites:* CHEM 2780 (or 002.278) (or CHEM 2370 (or 002.237) or MBIO 2370 (or 060.237)) and HNSC 2150 (or 030.215) or CHEM 2220 (or 002.222 or 002.220) and FOOD 2500 (or 078.250)

HNSC 3340 Food Service Management Systems Cr.Hrs.3 (Formerly 030.334) Cost control principles and techniques as applied to food service management, including basic accounting principles, interpretation of financial statements and human resource management. *Prerequisites:* HNSC 1200 (or 030.120) and GMGT 2030 (or 027.203) (or GMGT 2070 (or 027.207) or GMGT 2080 (or 027.208)). Not to be held with the former 030.318.

HNSC 4120 Senior Thesis Cr.Hrs.3 (Formerly 030.412) The preparation and presentation of a report based on a survey of the literature or on a laboratory investigation of an approved topic. *Prerequisite:* 84 credit hours in the Human Nutritional Sciences program or the Minor in Human Nutrition and Metabolism. Application required. Enrollment limited.

HNSC 4140 Quantity Food Production and Management Cr.Hrs.3 (Lab Required) (Formerly 030.414) Menu planning. Food costing. Experience in standard methods of institutional food production and service. *Prerequisites:* HNSC 3340 (or 030.334) and HNSC 2160 (or 030.216) or consent of instructor.

HNSC 4160 Seminar in Foods and Nutrition Cr.Hrs.3 (Formerly 030.416) A critical study of research in the field of foods and nutrition; oral and written reports required. Restricted to 4th year majors in the Department. *Prerequisites:* completion of 84 credit hours in the HNS program and HMEC 3100 (or 028.310).

HNSC 4250 Selected Topics in Foods Cr.Hrs.3 (Formerly 030.425) Recent developments in food research, both basic and applied. *Prerequisite:* consent of instructor.

HNSC 4260 Selected Topics in Human Nutrition Cr.Hrs.3 (Formerly 030.426) Recent developments in human nutrition research. *Prerequisite:* consent of instructor.

HNSC 4270 Sensory Evaluation of Food Cr.Hrs.3 (Lab Required) (Lab Required) (Formerly 030.427) Sensory perception, principles of the sensory analysis of food, requirements for sensory testing, test methods, selection and training of panelists, statistical analysis and interpretation of data. *Prerequisites:* HNSC 2160 (or 030.216) or 78.301 or ENTM 3240 (or 038.324) and STAT 2000 (or 005.200) or equivalent.

HNSC 4280 Food Product Development Cr.Hrs.3 (Formerly 030.428) This course focuses on food industry product development procedures. Emphasis will be on application of basic knowledge of foods and food processing in designing a new product. *Prerequisites:* MKT 2210 (or 118.221), STAT 2000 (or 005.200) or equivalent, and one of FOOD 3010 (or 078.301) or HNSC 3330 (or 030.333). Not to be held with FOOD 4510 (or 078.451).

HNSC 4290 Food, Nutrition and Health Policies Cr.Hrs.3 (Formerly 030.429) Principles and applications of policies, regulations and legislation in the areas of food and health that address nutrition and health problems of populations. Not to be held with the former 030.328. *Prerequisites:* HMEC 2050 (or 028.205), HNSC 2130 (or 030.213), HNSC 2150 (or 030.215) and STAT 2000 (or 005.200).

HNSC 4300 Community Nutrition Intervention Cr.Hrs.3 (Formerly 030.430) Principles of planning and evaluating nutrition related interventions. Examples of commu-

nity needs assessments, program planning strategies and types of program evaluation will be examined. Not to be held with the former 030.411. *Prerequisite:* HNSC 3320 (or 030.332).

HNSC 4310 Nutrition and the Elderly Cr.Hrs.3 (Formerly 030.431) The role of nutrition in health promotion and disease prevention during aging. *Prerequisites:* HNSC 3300 (or 030.330), HNSC 3310 (or 030.331) and HNSC 3320 (or 030.332). Offered in alternate years, opposite HNSC 4340 (or 030.434).

HNSC 4320 Nutrition Management of Disease States Cr.Hrs.3 (Lab Required) (Formerly 030.432) Nutritional assessment and dietary management of acute and chronic disease states. *Prerequisites* or *corequisites:* HNSC 3300 (or 030.330), HNSC 3310 (or 030.331) and HNSC 3320 (or 030.332). Not to be held with the former 030.423 and HNSC 4240 (or 030.424).

HNSC 4330 Practicum in Foods and Nutrition Cr.Hrs.6 (Formerly 030.433) Practical applications of nutrition and food science principles in a variety of public service, commercial and research applications. *Prerequisites:* completion of 84 credit hours in the Foods and Nutrition program with two of the following courses: HNSC 3300 (or 030.330), HNSC 3310 (or 030.331), HNSC 3320 (or 030.332), and HNSC 3330 (or 030.333). Application required. Limited enrolment.

HNSC 4340 Maternal and Child Nutrition Cr.Hrs.3 (Formerly 030.434) The role of nutrition in normal human development from conception through childhood. *Prerequisites:* HNSC 3300 (or 030.330), HNSC 3310 (or 030.331) and HNSC 3320 (or 030.332). Offered in alternate years opposite HNSC 4310 (or 030.431).

HNSC 4350 Nutrition in Exercise and Sport Cr.Hrs.3 (Formerly 030.435) The application of nutritional regimens to meet exercise requirements and improve athletic performance. Current practices and recommendations for different types of sports will be examined. *Prerequisites:* 030.121 and PHED 3430 (or 057.343)

HNSC 4360 Foods Option Practicum Cr.Hrs.6 This course involves supervised application of food quality, safety, and management principles in a commercial or government setting. Requirements include 360 hours of work related to the field experience. *Prerequisites:* Completion of 84 credit hours in Human Nutritional Sciences Foods Option including HNSC 3260, HNSC 3330, FOOD 4150 and one of GMGT 2030, GMGT 2070 and GMGT 2080. Application required. Limited enrolment.

HNSC 4540 Functional Foods and Nutraceuticals Cr.Hrs.3 (Formerly 030.454) This course will examine the bioactive components of functional foods and nutraceuticals, their sources, chemistry, process technology, efficacy, safety and regulation. *Prerequisite:* CHEM 2770 (or 002.277) (or CHEM 2360 (or 002.236) or MBI0 2360 (or 060.236)). Not to be held with FOOD 4540 (or 078.454).

6.3 Family Social Sciences

U1FMLY 1010 Human Development in the Family Cr.Hrs.3 (Formerly 062.101) Introductory survey of key aspects of human development processes within the family context from a life span perspective. Not to be held with NURS 1260 (or 049.126).

U1FMLY 1020 Family Issues across the Lifespan Cr.Hrs.3 (Formerly 062.102) Introduction to contemporary issues involving families across the lifespan. Topics include mate selection, marriage, parenthood, divorce, lone-parent families, work-family balance, family violence, families and older persons, and poverty in families. Not to be held with the former 062.114.

U1FMLY 1420 Family Management Principles Cr.Hrs.3 (Formerly 062.142) Managerial principles including planning, resource allocation, decision making, goal setting and evaluation. Effects of decisions made outside families and interaction with environment.

U1FMLY 1900 Families, Housing and Community: An Introductory Perspective Cr.Hrs.3 (Formerly 062.190) An introduction to understanding housing and community for individuals and families; shelter outside mainstream; neighbourhoods and communities; links between well being and poverty, housing, and community; some policy and program issues; various approaches used in studying this topic. Opportunity for some field experience. Not to be held with the former 062.172.

FMLY 2070 Family Financial Management Cr.Hrs.3 (Formerly 062.207) Application of management principles in the use of family resources with emphasis on family financial management. *Prerequisite:* FMLY 1420 (or 062.142).

FMLY 2350 Multicultural Family Issues Cr.Hrs.3 (Formerly 062.235) A focus on multicultural issues that affect family interaction in Canada, which is designed to prepare students for professional practice. Emphasizes dominant/minority family relationships, internal family dynamics of minority families, social policies directed toward creating and maintaining multiculturalism and diversity education for future professionals. Manitoba Aboriginal family life is accentuated. *Prerequisite:* FMLY 1140 (or 062.114) or FMLY 1020 (or 062.102) or equivalent.

FMLY 2600 Foundations of Childhood Developmental Health Cr.Hrs.3 (Lab Required) (Formerly 062.260) This course examines implications of theory and research in child development for promoting developmental health. Laboratory component focuses on working with children and evaluating developmental progress. *Prerequisite:* Minimum grade of C in FMLY 1010 (or 062.101). Limited enrolment.

FMLY 2800 Family Violence Cr.Hrs.3 (Formerly 062.280) A survey of the extent and nature of various forms of family violence across the life course. Topics include physical and sexual child abuse, sibling violence, partner violence, and elder abuse. Emphasis is on prevalence, incidence, causes, consequences and solutions. *Prerequisite:*

FMLY 1010 (or 062.101) or FMLY 1140 (or 062.114) or FMLY 1020 (or 062.102) or PSYC 1200 (or 017.120) or SOC 1200 (or 077.120).

FMLY 2900 Families, Housing and Community: A Development Perspective Cr.Hrs.3 (Formerly 062.290) Focus is on developmental issues for individuals, families and communities. Of particular interest is the interrelationship between facilitating community development and the developmental well being of residents. Social, psychological, cultural and political components are considered. *Prerequisite:* FMLY 1900 (or 062.190) or FMLY 1720 (or 062.172) or consent of instructor.

FMLY 3190 Survey of Critical Issues in Human Development I Cr.Hrs.3 (Formerly 062.319) An intensive study of the biological, psychological, and sociological factors involved in the growth and aging process from conception to senescence. An interdisciplinary view will be emphasized. *Prerequisite:* the former 062.209.

FMLY 3200 Survey of Critical Issues in Human Development II Cr.Hrs.3 (Formerly 062.320) A detailed examination of specific issues related to human development, either within or across stages of the life span. *Prerequisite:* FMLY 1010 (or 062.101) or PSYC 1200 (or 017.120) or SOC 1200 (or 077.120).

FMLY 3220 Death and the Family Cr.Hrs.3 (Formerly 062.322) An examination of dying and death of family members throughout the family life cycle. Specific topics included are the meaning of death, the process of dying, caring relationships, grief and bereavement. *Prerequisite:* FMLY 1020 (or 062.102) or 062.114 or PSYC 1200 (or 017.120) or SOC 1200 (or 077.120).

FMLY 3240 Families in Later Years Cr.Hrs.3 (Formerly 062.324) An investigation of family issues in the later years of life, such as housing, intergenerational relations, adjustment to retirement, sibling relations, grandparenting, death. Students may not hold credit for FMLY 3240 (or 062.324) and the former 062.321. *Prerequisites:* FMLY 1010 (or 062.101) and FMLY 1020 (or 062.102) or 062.114; or PSYC 1200 (or 017.120); or SOC 1200 (or 077.120).

FMLY 3330 Parenting and Developmental Health Cr.Hrs.3 (Formerly 062.333) Examines parenting and its influence on developmental health, with consideration of change across time, the context in which parenting occurs, and the effect of the parent-child relationship on developmental health. *Prerequisites:* FMLY 1020 (or 062.102) or 062.114 and completion of 54 credit hours. Not to be held with the former 062.435.

FMLY 3450 Consumer Problems and Influences Cr.Hrs.3 (Formerly 062.345) A study of factors which influence individuals and households as consumers; theories of consumer behaviour, consumer education; current consumer issues. *Prerequisite:* FMLY 2070 (or 062.207) and one of ECON 1200 (or 018.120) or ECON 1210 (or 018.121) or ECON 1220 (or 018.122).

FMLY 3470 Selected Studies in the Family I Cr.Hrs.3 (Formerly 062.347) The opportunity to carry out an individual study in the area of the family of particular interest to the student. When enrolment warrants, the department may offer selected topics in a regular course format. *Prerequisite:* consent of instructor.

FMLY 3600 Adolescents in Families and Society Cr.Hrs.3 (Formerly 062.360) This course is designed to help students understand the nature of adolescent relationships with their families in communities. The application of theory and research on adolescent relationships to professional practice with families and communities is emphasized. *Prerequisite:* FMLY 2600 (or 062.260) or FMLY 2090 (or 062.209) or FMLY 2100 (or 062.210) or FMLY 3300 (or 062.330).

FMLY 3610 Developmental Health of Children and Youth Cr.Hrs.3 (Formerly 062.361) Population health gradients are largely set early in life and are affected by the environments in which children live. This course examines current knowledge of the social determinants of child and adolescent health. Consideration is given to policy implications, including directions for program development and evaluation. *Prerequisite:* FMLY 2600 (or 062.260) or FMLY 2090 (or 062.209) or FMLY 2100 (or 062.210) or FMLY 3300 (or 062.330). Not to be held with the former 062.450.

FMLY 3780 Introduction to the Development of Programs for Children and Families Cr.Hrs.3 (Formerly 062.378) An introduction to the theory and practice of program development with special emphasis on programs for children and families. The course will cover techniques for conducting need assessments, as well as the process of planning and implementing programs to address community need. *Prerequisite:* HMEC 2050 (or 028.205).

FMLY 3790 Introduction to the Evaluation of Programs for Children and Families Cr.Hrs.3 (Formerly 062.379) An introduction to the theory and practice of program evaluation with special emphasis on child and family programs. Considers the purpose of evaluation, types of evaluation, evaluation design and analysis, and the evaluation process. *Prerequisite:* HMEC 2050 (or 028.205).

FMLY 3800 Conflict Resolution in the Family Cr.Hrs.3 (Formerly 062.380) Students will examine the nature and development of conflict in family relationships throughout the life span. Implications of conflict for the quality of family relationships and individual development will be addressed. *Prerequisite:* FMLY 1020 (or 062.102) or 062.114 or FMLY 2800 (or 062.280).

FMLY 3900 Families, Housing and Community: A Policy Perspective Cr.Hrs.3 (Formerly 062.390) Examines policy relative to families, housing and community. Primer on public policy process and links to families. Examines housing policies at federal, provincial, and municipal levels and their impact on individuals and families. Opportunity for some field experience. *Prerequisite:* FMLY 1900 (or 062.190) or 062.172 or consent of instructor. Not to be held with the former 062.473.

FMLY 4300 Field Experience Cr.Hrs.6 (Formerly 062.430) Provide students with field experience in a supervised setting. The course consists of 120 hours of supervised work in an assigned setting and seminar time with peers and field experience coordinator. Grade is pass/fail. *Prerequisite:* 84 credit hours and consent of instructor. Not to be held with the former 062.436 or FMLY 4550 (or 062.455) or FMLY 4560 (or 062.456) or FMLY 4570 (or 062.457).

FMLY 4330 Management of Family Stress Cr.Hrs.3 (Formerly 062.433) Theories which influence family behaviour during stress are discussed, and coping/managerial skills to mitigate the effects of the stressors are examined. Stress management advice from agencies and in educational settings is analyzed. *Prerequisite:* FMLY 1020 (or 062.102) or 062.114 .

FMLY 4450 Family Economic Resources and Functions Cr.Hrs.3 (Formerly 062.445) Principles, major problems, and trends concerning the family economic situation in relation to the Canadian economy. *Prerequisites:* FMLY 2070 (or 062.207) and ECON 1200 (or 018.120) or ECON 1210 (or 018.121) or ECON 1220 (or 018.122).

FMLY 4460 Family Financial Counselling Cr.Hrs.3 (Formerly 062.446) Theory and practice of financial counselling of debt-burdened families. Debt analysis. Appraisal of alternate solutions and of legal and psycho-social factors in terms of family well-being and financial capacity. *Prerequisite:* FMLY 3450 (or 062.345).

FMLY 4470 Selected Studies in the Family II Cr.Hrs.3 (Formerly 062.447) The opportunity to carry out advanced study in the area of the family of particular interest to the student. When enrolment warrants, the department may offer selected topics in a regular course format. *Prerequisite:* consent of instructor.

FMLY 4480 Work and Family Issues Cr.Hrs.3 (Formerly 062.448) An exploration of the interface between paid work and unpaid work and families in the Canadian and international contexts. Topics include demographic trends; parenting, child and elder care; management of work-family conflict; development of workplace solutions; and social policy implications. *Prerequisite:* FMLY 2070 (or 062.207) and 84 credit hours.

FMLY 4600 Risk and Resilience in Behavioural and Social Development Cr.Hrs.3 (Formerly 062.460) The development of behavioural and social difficulties are examined from a risk and resilience perspective. The interaction of factors at all levels of the human ecological system are considered in terms of their impact on increasing risk and/or building resilience in children and youth. *Prerequisite:* FMLY 2600 (or 062.260) or FMLY 2090 (or 062.209) or 062.210 or FMLY 3300 (or 062.330). Not to be held with the former 062.437.

FMLY 4800 Senior Seminar in Family Violence and Conflict Resolution Cr.Hrs.3 (Formerly 062.480) Advanced study in the areas of family violence and/or conflict resolution. Special emphasis is placed upon current research and/or practice. *Prerequisite:* at least one of FMLY 2800 (or 062.280) or FMLY 3800 (or 062.380) or consent of instructor.

FMLY 4900 Families, Housing and Community: An Action Perspective Cr.Hrs.3 (Formerly 062.490) Examines relationships between families, housing and community; impact of communities on children; best practices for enhancing quality of life in communities; participatory processes for working with communities. Significant on-site learning. Emphasis on inner-city. *Prerequisite:* FMLY 2900 (or 062.290) or FMLY 3900 (or 062.390) or consent of instructor.

6.4 Textile Sciences

U1TXSC 1600 Textiles for Living Cr.Hrs.3 (Lab Required) (Lab Required) (Formerly 064.160) This course covers the fundamental knowledge of textiles in a product development context. It includes properties of fibres, yarns and fabrics; characteristics of natural and manufactured fibres; chemical structures of the most commonly used natural and manufactured fibres for apparel and non-apparel end uses; woven, knitted, and non-woven structures; and dyeing and printing. Not to be held with the former 064.102. This will be waived for students who will be admitted to Textile Sciences in 2005-2006 only.

U1TXSC 1610 Textiles, Product, and Consumers Cr.Hrs.3 (Formerly 064.161) This course covers the structure and characteristics of the natural and manufactured fibre sectors; downstream industries which transform natural or manufactured fibres into intermediate goods; the manufacturing industry which transforms intermediate supplies to final products; and the retailing industry which distributes final textile products to consumers or organizations. Not to be held with the former 064.122.

TXSC 2200 Fabric Performance Cr.Hrs.3 (Lab Required) (Formerly 064.220) Physical, aesthetic, and physiological properties of woven, knitted, and nonwoven fabrics. Measurements of structural parameters and assessment of selected performance characteristics and performance standards. *Prerequisite:* TXSC 1020 (or 064.102).

TXSC 2210 Textile Management Cr.Hrs.3 (Lab Required) (Formerly 064.221) Management of textile products during use and refurbishing. Influence of hostile environments including radiation, air pollutants, and various cleaning systems in the life expectancy of textiles. *Prerequisite:* TXSC 1020 (or 064.102).

TXSC 2230 Textile Product Development: Foundations Cr.Hrs.3 (Lab Required) (Formerly 064.223) Introduction to principles and processes involved in developing a range of textile products, including apparel. *Prerequisite* or corequisite: TXSC.122 (or 064.122) or the former 064.222. Priority will be given to students enrolled in Clothing and Textiles. Students may not hold credit for TXSC 2230 (or 064.223) and the former 064.101.

TXSC 2240 Textile Product Development: Construction Basics Cr.Hrs.3 (Lab Required) (Formerly 064.224) This course incorporates theoretical and practical ap-

proaches to the study of apparel construction. Domestic and industrial processes are addressed. *Prerequisite:* TXSC 2230 (or 064.223). Students may not hold credit for TXSC 2240 (or 064.224) and the former 064.215.

TXSC 2250 Textile Product Development: Visual Communication Cr.Hrs.3 (Lab Required) (Formerly 064.225) Communicating textile product design through sketching. *Prerequisites:* TXSC 1020 (or 064.102) and TXSC.223 (or 064.223). Students may not hold credit for TXSC 2250 (or 064.225) and the former 064.345.

TXSC 2420 History of Textiles Cr.Hrs.3 (Formerly 064.242) Development and diffusion of textile fibres, fabrics, and finishes from prehistoric times to present. May not hold with TXSC 3320 (or 064.332).

TXSC 2600 Textiles for Apparel End Uses Cr.Hrs.3 (Formerly 064.260) Theories of product development and their applications to creating textile products for apparel end uses including fashion apparel; apparel for consumers throughout the lifespan, including childhood, young adults, older adults; apparel for consumers with disabilities; apparel for professional sports and recreation; and apparel for the healthcare sector. *Prerequisites:* TXSC 1020 (or 064.102) or a minimum grade of C in TXSC 1600 (or 064.160); TXSC 1610 (or 064.161); 3 credit hours of 100-level chemistry.

TXSC 2610 Textiles for Non Apparel End Uses Cr.Hrs.3 (Lab Required) (Formerly 064.261) Product development theories from engineering and management perspectives to illustrate the development of textile fibres, fabrics, and products for the industrial and healthcare sectors. Industrial uses of textiles include the automotive and the aerospace industries. End uses for the healthcare sector include textiles or textile products for rehabilitation, protection from bacteria, healing of wounds, and implantable textiles. Assessment of selected fabric properties such as strength, flammability, colourfastness and air permeability will be introduced. *Prerequisites:* TXSC 1020 (or 064.102) or a minimum grade of C in TXSC 1600 (or 064.160); TXSC 1610 (or 064.161); 3 credit hours of 100-level chemistry.

TXSC 2620 Consumer and Organizational Behaviour Toward Textile Products Cr.Hrs.3 (Formerly 064.262) Theories and practices of consumer and organizational decision making with respect to textile products. *Prerequisites:* TXSC 2600 (or 064.260) and TXSC 2610 (or 064.261). Not to be held with the former 064.322 or MKT 3230 (or 118.323).

TXSC 2630 Pattern Development in an Industrial Environment Cr.Hrs.3 (Lab Required) (Lab Required) (Formerly 064.263) This course covers the process of communicating product design through pattern development. Students will learn the terminologies of pattern development, techniques of pattern development and manipulation, and the importance of anthropometry in creating apparel to suit its end uses. *Prerequisite:* TXSC 2600 (or 064.260). Not to be held with the former 064.348.

TXSC 3220 Sociopsychological Aspects of Clothing Cr.Hrs.3 (Formerly 064.322) Clothing behaviour of individuals and social groups. *Prerequisite:* PSYC 1200 (or 017.120) or SOC 1200 (or 077.120).

TXSC 3370 Textile Evaluation Cr.Hrs.3 (Lab Required) (Formerly 064.337) Sensory and physical test methods; evaluation of performance and quality; principles of quality control of textile and apparel products. *Prerequisites:* TXSC 2200 (or 064.220) and STAT 1000 (or 005.100) or the former 005.220 or STAT 2210 (or 005.221).

TXSC 3390 Fibre and Colour Science Cr.Hrs.3 (Lab Required) (Formerly 064.339) The chemistry of fibre-forming polymers, dyestuffs, and finishes. Physical and chemical methods for evaluating selected fibre, colour and finish characteristics. *Prerequisites:* TXSC 2210 (or 064.221); and CHEM.132 (or 002.132) or the former 002.123 or CHEM 1280 (or 002.128).

TXSC 3400 The Application of Colour in Textile Design Cr.Hrs.3 (Lab Required) (Formerly 064.340) Economic analysis of the textile and apparel industries - development, structure, technology and performance. *Prerequisites:* TXSC 1220 (or 064.122) or the former 064.222 and ECON 1200 (or 018.120).

TXSC 3420 Apparel Manufacture Cr.Hrs.3 (Lab Required) (Formerly 064.342) Design and production in the apparel industry. *Prerequisite:* TXSC 1220 (or 064.122) or the former 064.222.

TXSC 3430 Structural Textile Design: Weaving Cr.Hrs.3 (Lab Required) (Formerly 064.343) Design and analysis of woven textile structures. The focus of the course is an understanding of the theoretical principles inherent in the production and analysis of woven textiles as well as the application of these principles. Current historical and/or cultural research in the area of woven textile design is an important aspect of the course. *Prerequisites:* TXSC 1020 (or 064.102) and TXSC 2230 (or 064.223) or the former 064.101. Offered in alternate years, opposite TXSC 3440. Priority will be given to department majors.

TXSC 3440 The Application of Textile Design Cr.Hrs.3 (Lab Required) (Formerly 064.344) The study of principles of applied textile design; examination of aesthetic aspects of colour and the creative use of colour in the design of textiles. *Prerequisites:* TXSC 1020 (or 064.102) and TXSC 2230 (or 064.223) or the former 064.101. Offered in alternate years, opposite TXSC 3430. Priority will be given to department majors.

TXSC 3460 Textile and Apparel Policy Cr.Hrs.3 (Formerly 064.346) Critical examination of government policies as a factor influencing the kind, price and quality of textiles and apparel available to Canadian consumers. *Prerequisites:* TXSC 1020 (or 064.102) and TXSC 3400 (or 064.340). Students may not hold credit for TXSC 3460 (or 064.346) and the former 064.341.

TXSC 3470 Selected Topics in Clothing and Textiles Cr.Hrs.3 (Formerly 064.347) Directed study in a specific area of clothing and/or textiles. *Prerequisite:* consent of instructor and 60 credit hours in the Clothing and Textiles program.

TXSC 3480 Textile Product Development: Pattern Development Cr.Hrs.3 (Lab Required) (Formerly 064.348) Theory and application of methods used to develop patterns for apparel. *Prerequisites:* TXSC 1020 (or 064.102) and TXSC 2240 (or 064.224). Students may not hold credit for TXSC 3480 (or 064.348) and the former 064.219.

TXSC 3490 Textile Product Development: Computerized Pattern Development Cr.Hrs.3 (Lab Required) (Formerly 064.349) Exploration of the use of computer technology for pattern development, grading, and marker making. *Prerequisite:* TXSC 3480 (or 064.348).

TXSC 3500 Textiles for the Healthcare Sector Cr.Hrs.3 (Lab Required) (Formerly 064.350) This course covers the recent developments of a range of technical textiles for the healthcare sector, including implantable textiles, barrier fabrics, and smart textiles. *Prerequisite:* TXSC 2610 (or 064.261); HMEC 2050 (or 028.205) or any 2000-level or 3000-level research method course; and CHEM 2220 (or 002.222).

TXSC 3600 Global Apparel and Textiles Trade Cr.Hrs.3 (Formerly 064.360) Covers the role of apparel and textiles trade in economic growth and development of industrialized, transitional, and developing nations. It will take into account the evolution of trade relations among apparel and textile producing countries and regions. *Prerequisite:* TXSC 2620 (or 064.262); ECON 1200 (or 018.120) or ECON 1210 (or 018.121) and ECON 1220 (or 018.122); HMEC 2050 (or 028.205). Not to be held with the former 064.340.

TXSC 3610 Product Standards and Specifications Cr.Hrs.3 (Lab Required) (Formerly 064.361) Challenge students to apply their knowledge and skills gained in TXSC 2600 (or 064.260), TXSC 2610 (or 064.261), and TXSC 2620 (or 064.262) to develop textiles and textile product standards and specifications for various forms of product development (e.g., private label, national brands, licensed goods) where there are no known precedents. Students will learn the process of developing product standards by working on case studies. Textile products will include apparel and non-apparel end uses. *Prerequisites:* TXSC 3620 (or 064.362) and HMEC 2050 (or 028.205). Not to be held with the former 064.220, TXSC 2210 (or 064.221), and TXSC 3370 (or 064.337).

TXSC 3620 Evaluation of Textile Performance Cr.Hrs.3 (Lab Required) (Formerly 064.362) Covers the serviceability of textile products for apparel and non apparel end uses. Students will learn to carry out commonly used textile testing methods for assessing durability, comfort, aesthetic properties and safety. *Prerequisites:* TXSC 2600 (or 064.260) and TXSC 2610 (or 064.261). Not to be held with the former 064.220, TXSC 2210 (or 064.221), and TXSC 3370 (or 064.337).

TXSC 3630 Line Planning and Visual Communication Cr.Hrs.3 (Lab Required) (Formerly 064.363) Covers the steps in developing a line of textile products for apparel and home furnishings end uses and the techniques of communicating product information to relevant members of the supply chain. Students will learn manual methods and computer aided design solutions to communicate product concepts. *Prerequisite:* TXSC 2630 (or 064.263). Not to be held with the former 064.225.

TXSC 3640 Pattern Development in a Computer Aided Design Environment Cr.Hrs.3 (Lab Required) (Formerly 064.364) This course is a continuation of TXSC 2630 (or 064.263). It covers advanced pattern manipulations using an industrial computer aided design system. *Prerequisite:* TXSC 2630 (or 064.263). Not to be held with the former 064.349.

TXSC 3650 Production of Textile Products Cr.Hrs.3 (Lab Required) (Formerly 064.365) Covers the role of production in the product development process. Students will learn the terminology which meets industrial standards, the most commonly used production techniques for apparel and non apparel products, time studies, costing, development of specifications, manufacturing systems, and selected test methods for quality management. *Prerequisites:* TXSC 3640 (or 064.364); HMEC 2050 (or 028.205). Not to be held with the former 064.224 and TXSC 3420 (or 064.342).

TXSC 4210 Seminar in Clothing and Textiles Cr.Hrs.3 (Formerly 064.421) Critical study of literature and other information sources in the field of clothing and textiles. Oral and written reports required. Restricted to fourth year majors in the department.

TXSC 4260 Textile and Apparel Marketing Cr.Hrs.3 (Formerly 064.426) Application of marketing in the textile industries. *Prerequisites:* TXSC 3400 (or 064.340) and MKT 2210 (or 118.221)

TXSC 4300 Textile Investigation Cr.Hrs.3 (Lab Required) (Formerly 064.430) Qualitative and quantitative analysis of chemical, physical and microscopic characteristics of textiles. Study of selected research techniques used to investigate fibres, yarns, and fabrics. *Prerequisite:* TXSC 3390 (or 064.339) or TXSC 3370 (or 064.337).

TXSC 4310 Practicum in Clothing and Textiles Cr.Hrs.3 (Formerly 064.431) Supervised practical experience in the clothing and textile field in an appropriate off-cam-

pus setting. *Prerequisite:* completed 84 credit hours in the Clothing and Textiles program. GPA is considered; limited enrolment.

TXSC 4320 Selected Topics in Clothing and Textiles I Cr.Hrs.3 (Formerly 064.432) Directed study in a specific area of clothing and/or textiles. *Prerequisite:* Consent of instructor and 84 credit hours in the Clothing and Textiles program.

TXSC 4330 Selected Topics in Clothing and Textiles Cr.Hrs.3 (Formerly 064.433) Directed studies in a specific area of clothing and/or textiles. *Prerequisite:* consent of instructor and 84 credits in the Clothing and Textiles program.

TXSC 4340 Senior Project Cr.Hrs.3 (Formerly 064.434) Independent study on an approved topic in a) marketing, production or design of apparel, b) history of costume and textiles, c) sociopsychological aspects of clothing, or d) textile performance, preservation and use. A detailed proposal for the study must be submitted in order to register. *Prerequisite:* completed 84 credit hours in the Clothing and Textile program and consent of department head.

TXSC 4360 History of Canadian Dress Cr.Hrs.3 (Lab Required) (Formerly 064.436) History and significance of the forms of dress and adornment that have developed in Canada. *Prerequisites:* TXSC 3290 (or 064.329) or TXSC 3320 (or 064.332). Students may not hold credit for TXSC 4360 (or 064.436) and the former 064.334.

TXSC 4370 Textile Product Development: Advanced Applications Cr.Hrs.3 (Lab Required) Theory and application of methods used to develop patterns for men's, women's and children's apparel. *Prerequisites:* TXSC 2250 (or 064.225) and TXSC 3490 (or 064.349).

TXSC 4380 Textile Product Development: Studio Cr.Hrs.3 (Lab Required) (Formerly 064.438) Course for senior students specializing in textile product development. Integrates textile product development skills and evaluation standards to solve problems creatively and effectively. *Prerequisites:* Minimum C+ average over 12 hours of completed courses in Textile Product Development and six hours of completed courses in Textile Science. Limited enrolment.

TXSC 4500 Advanced Textiles for the Healthcare Sector Cr.Hrs.3 (Lab Required) (Formerly 064.450) Covers the latest developments in technical textiles for the healthcare sector and the measurement of attributes which are essential to the performance of textiles for medical or healthcare end uses. *Prerequisites:* 57 credit hours including TXSC 2600 (or 064.260), TXSC 2610 (or 064.261), TXSC 3620 (or 064.362), and TXSC 3500 (or 064.350) (minimum grade of C); CHEM 2220 (or 002.222); HMEC 2050 (or 028.205).

TXSC 4600 The Information Age and the Textiles Supply Chain Cr.Hrs.3 (Formerly 064.460) Covers the evolution of the textile complex from a production orientation to a logistics orientation; the role of information technology in creating or enhancing competitive advantage; the range of technologies used by the textile complex to communicate design, production, and management information throughout the supply chain; decision making process executives go through to decide which types of technology to purchase, how to implement them within the firm, the financial implications, the effects on business-to-business communication, and the effects on business-to-consumer communication. *Prerequisite:* TXSC 3600 (or 064.360). Not to be held with the former 064.347 offered from September 2004 to September 2007/2008.

TXSC 4610 Integrative Project Cr.Hrs.6 (Formerly 064.461) This is a required course in which students are required to demonstrate their ability to integrate the skills and knowledge accumulated in the program. Specifically, students will solve a specific textile or product development problem which may originate from the students' interests, developed in collaboration with academic staff, or community-based. *Prerequisite:* 84 credit hours in the Textile Sciences program. Not to be held with the former 064.430, TXSC 4340 (or 064.434).

TXSC 4620 Colour Management Cr.Hrs.3 (Lab Required) (Formerly 064.462) Covers the basic concepts and principles of colour science, the process of determining seasonal colour palette, colour specification systems, colour notation systems, commercial colour identification systems, the colour approval process in industrial, institutional, and consumer goods settings, colour measurement, and interpretation of colour data. Students will learn the process of preserving colour integrity throughout the supply chain. *Prerequisites:* TXSC 3610 (or 064.361); HMEC 2050 (or 028.205). Not to be held with the former 064.339, TXSC 4300 (or 064.430).

TXSC 4630 Quality Assurance Systems Cr.Hrs.3 (Lab Required) (Formerly 064.463) Covers the concept of total quality management; the role of total quality management in apparel and textiles; the role of standard setting agencies in developing standards of product and service quality; management systems such as ISO 9000 and case studies of textiles and apparel firms which have adopted these systems. Students will learn by solving a series of problems presented to them in the format of case studies. *Prerequisites:* TXSC 3650 (or 064.365) and TXSC 4620 (or 064.462). Not to be held with the former 064.220, TXSC 2210 (or 064.221), and TXSC 3370 (or 064.337).

Faculty of Law

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Dean: Harvey Sexter

Associate Dean: Lorna A. Turnbull

Associate Dean (Research and Graduate Studies): Michelle Gallant

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Administrative Assistant (Student Affairs): Linda Skoropata

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: The Profession and the Faculty of Law

- 2.1 The Study of Law
- 2.2 Clinical Learning
- 2.3 Research and Publications
- 2.4 Faculty of Law Centres of Excellence
- 2.5 Student Organizations

SECTION 3: Admission to the Faculty of Law

- 3.1 Degrees Offered
- 3.2 Course Requirements for Admission

SECTION 4: Academic Regulations

- 4.1 Residence Requirements for LL.B. Degree
- 4.2 Licence to Practise Law
- 4.3 Regulations of the Faculty of Law
- 4.4 Miscellaneous Registration Matters
- 4.5 Curriculum Requirements

SECTION 5: Program Requirements

- 5.1 First Year
- 5.2 Second Year
- 5.3 Second Year or Third Year

SECTION 6: Course Descriptions

SECTION 1: Academic Staff

Dean Emeritus

Edwards, C.H.C., Q.C., LL.B.(Hons.) (London).

Senior Scholars

Braid, E.A., C.M., Q.C., LL.B. (Manitoba), LL.M. (London).

Professors

Anderson, D.T., Q.C., B.A. (Manitoba), B.A., B.C.L. (Oxford); **Busby, K., LL.B.** (Manitoba), LL.M. (Columbia); **Deutscher, D.B., B.A., LL.B.** (Manitoba), LL.M. (Harvard); **Esau, A.J., B.A., LL.B.** (Alberta), LL.M. (Harvard); **Guth, D.J., B.A., M.A.** (Creighton), B.A. Status (Clare College, Cambridge), Ph.D. (Pittsburgh); **Harvey, D.A.C., Q.C., B.A.** (Toronto), LL.B., LL.M. (Osgoode); **Irvine, J.C., B.A., M.A., B.C.L.** (Oxford); **McGillivray, A., B.A., LL.B.** (Saskatchewan), LL.M. (Toronto); **Nemiroff, G., B.Sc.** (McGill), B.A. (Sir George Williams), B.C.L. (McGill), LL.B., LL.M. (Dalhousie); **Osborne,**

P.H., LL.B.(Hons.) (Auckland), LL.M. (McGill); **Penner, R., C.M., Q.C., B.A., LL.B.** (Manitoba); **Schwartz, B.P., LL.B.** (Queen's), LL.M., J.S.D. (Yale); **Sexter, H.L., B.Comm., LL.B.** (Manitoba), LL.M. (Harvard), LL.D. (Hon.) (Winnipeg); **Sneiderman, B., B.A., LL.B.** (Connecticut), LL.M. (NYU); **Stuesser, L., B.A.**(Hons.) (Winnipeg), B.Ed. (Brock), M.A. (Guelph), LL.B. (Manitoba), LL.M. (Harvard).

Associate Professors

Gallant, M.M., B.A. (Prince Edward Island), LL.B. (New Brunswick), LL.M. (British Columbia), Ph.D. (London); **Turnbull, L.A., B.A.** (Hons.) (Queen's), LL.B. (Ottawa), LL.M., J.S.D. (Columbia).

Assistant Professors

MacPherson, D.L., LL.B. (Dalhousie), LL.M. (Cambridge); **Oshionebo, E.A., LL.B.** (Ife, Nigeria), LL.M. (Lagos, Nigeria), LL.M. (Alberta), Ph.D. Candidate (Osgoode); **Parkes, D.L., B.A.** (Trinity Western), LL.B. (British Columbia), LL.M. (Columbia); **Schulz, J. L., B.A.** (Gold Medal) and LL.B. (Manitoba), M. Phil. (Cambridge), S.J.D. (Toronto).

Instructor II

Fainstein, L., B.A., LL.B. (Manitoba).

Director of Academic Support Program

Whitecloud, W., B.A., LL.B. (Queens).

SECTION 2: The Profession and the Faculty of Law

The Faculty of Law is a professional faculty within the university. As the only faculty of law in Manitoba, it is the principal "gatekeeper" to professional practise in this province. However, it is more than merely a trade school for future practitioners. The Faculty of Law is also a university faculty and, as such, it views the study of principles, concepts and the relationship of law with other aspects of our social system to be as integral to a legal education as are the practical training of techniques and mechanics. Accordingly, our program emphasizes a balance between doctrinal, clinical and perspective courses, each of which contributes to an understanding of the law, its application, and its proper role within a civil society.

The University of Manitoba first became involved in legal education in 1884 when it established a three-year program of studies leading to an LL.B. degree. It was a reading program which articulated students could follow concurrently with the course prescribed by the Law Society of Manitoba. In 1914, the university and the Law Society entered into an agreement to jointly sponsor the Manitoba Law School, which offered a three-year program combining lectures with apprenticeship. Upon completion of the program, a successful student received both an LL.B. degree and a call to the Bar. This arrangement lasted until 1966 when the Law School became the Faculty of Law of the University of Manitoba.

The Faculty of Law is located in Robson Hall, which contains the E.K. Williams Law Library, the Moot Court, state of the art computer classrooms, and a remarkable collection of art. The Law library is a resource not only to law students and faculty but also the legal profession of Manitoba, and the general public.

There are truly countless Manitobans who have contributed to legal education in Manitoba over the years. Two names stand out, namely H.A. Robson and E.K. Williams, who were the only two chairs of the Board of Trustees of the Manitoba Law School. Their contribution has been commemorated in the names of the faculty's building and library.

2.1 The Study of Law

Legal education in Canada is divided into two phases: the academic study of law at one of the university law schools and practical training under the auspices of a provincial law society for those who wish to be admitted to practise and called to a Bar. As there is a reciprocal recognition of univer-

sity law degrees between the common law provinces (all provinces except Quebec), the academic study can be taken in any one of these provinces.

A sound education in law provides a good foundation for a great variety of careers. In the past most law graduates have entered the private practise of law to concentrate on various types of legal work: real estate transactions, commercial contracts, company law, family law, taxation, etc. Contrary to popular belief only a few lawyers concentrate on court work and even fewer specialize in criminal cases. While the tendency to specialize in the practise of law is becoming more prevalent, most lawyers continue to be general practitioners prepared to perform most types of legal work according to the needs of their clients.

Besides the private practice of law, law graduates can join the legal departments which many corporations find it expedient to maintain; others enter the employ of various government departments to serve in a variety of capacities. A few pursue nonlegal vocations in, business, journalism, social work, and law enforcement. At the University of Manitoba consideration is given to the fact that while most students take law to become practising lawyers, some are taking law as an additional discipline to enhance their opportunities in fields other than the practise of law; thus, while the emphasis is on the academic study of substantive law, the study is carried on in a practical context.

2.2 Clinical Learning

The curriculum invites critical assessment of the role of law in society as well as the development of skills relevant to the practice of law. In addition to lectures and seminars, students are given an opportunity to develop, under supervision, some of the research, writing, and forensic skills which will prove useful in the practise of law. In first year, students are acquainted with the various resource materials available in a law library, and they follow a program designed to develop legal research and writing techniques. In second and third years, students participate in moot courts, fictitious trials and appeals, which provide practise in research, examination of witnesses, and courtroom argument. This advocacy training is just one element of the program at Robson Hall that contributes to the excellent reputation of our graduates. In third year students may choose from a range of Clinical Courses or may participate in national competitive moot competitions.

Throughout their legal studies students may serve actual legal clients through volunteer work with the University Law Centre or Pro Bono Students. The University of Manitoba Law Centre commenced operation in 1970 with the two-fold purpose of furthering clinical education by exposing law students to actual legal problems and aiding persons who are unable financially to hire a lawyer or receive legal service through the existing Legal Aid Service Society of Manitoba. The centre, as presently constituted, is the official adjunct of the Legal Aid Service Society of Manitoba and supervised by practising lawyers and members of the Faculty of Law. Second and third year Law students can work at the centre. Pro Bono Students Canada at Robson Hall is part of a national network that facilitates placing law students with not-for-profit organizations in their community to provide free or "pro bono" legal information. Each project is supervised by a practicing lawyer and offers the opportunity for students to apply the skills they learn in classes while at the same time providing a valuable service to traditionally underrepresented groups and not for profit organizations. Students can participate in "pro bono" projects in any year of their program.

2.3 Research and Publications

Research and scholarly writing are integral elements of the mission of the University and the law school. Professors research, write and consult with the larger legal community in their particular area of expertise and students have similar opportunities. Each year students must take a perspective course which provides an opportunity to explore a particular area of law in depth. Perspective courses have limited enrolment and students must research and write a major paper.

Students may also devise a self directed research project under the supervision of an individual faculty member. Other opportunities to participate in scholarly work exist. The Legal Research Institute, created in 1968, coordinates legal research projects initiated within the Faculty of Law and works also on specific problems referred to it by public and private parties. Under the auspices of the Institute students may work as research assistants to professors during the summer or term. Students also have the opportunity to work as editors of Robson Hall's scholarly publications, including the *Manitoba Law Journal*, the *Asper Review of International Business and Trade Law* and *Underneath the Golden Boy*. It is a great honour to be se-

lected for the editorial boards of these publications and provides academically oriented students with excellent hands-on experience working with renowned scholars.

2.4 Faculty of Law Centres of Excellence

Robson Hall is home to two named research chairs. The Marcel Desautels Chair in Private Enterprise and the Law has a mandate to conduct research and provide education on issues of specific interest to the privately held or family owned businesses that are the engine of the Canadian economy. Whereas many business oriented programs in Law schools are directed towards the needs of larger, publicly traded national or transnational corporations, the Desautel Centre's focus is on the very different needs of smaller more closely held businesses. The Faculty of Law also operates a Small Business Law Clinic which is headed by a director who is assisted by volunteer mentors from the practising bar. The purpose of the clinic is to provide experience to second and third year Law students in assessing and analyzing the legal needs of small business owners and in preparing legal information useful to them. This gives the students hands-on experience in this important area of law practice. It also provides "clients" with background material informing them as to their legal needs which helps them in their dealings with their own lawyers. In 1999, the Faculty of Law established the Asper Chair of International Business and Trade Law. The Asper Chair sponsors a variety of research including bi-annual academic conferences in international business and trade law. An internship program allows up to four students a year to work with the Asper Chair and creates opportunities for students to advance their education, while gaining skills necessary to pursue careers in law or business with an international focus. Additionally, students involved in the Asper program have the opportunity to participate in international commercial dispute resolution competitions.

2.5 Student Organizations

All Law students are members of the Manitoba Law Students' Association (MLSA), the student government. Student participation in Faculty governance takes place through the representation of elected members of the MLSA. The association also organizes many extracurricular activities. All Aboriginal Law students and other interested Law students are members of the Aboriginal Law Students' Association through which they address issues of concern to them. In addition students may participate in a variety of other student run extracurricular activities ranging from sports (hockey, curling) to academic (Canadian Lawyers for International Human Rights, Manitoba Association of Women and the Law, Business Law Group, Internet Law Group).

SECTION 3: Admission to Law

3.1 Degrees Offered

Bachelor of Laws

Minimum time to graduation: Five years (University 1, plus one year in any faculty, plus three years in Law).

Under the following heading is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

Master of Laws

The Master of Laws is a thesis-based program designed for completion in one year. The program consists of participation in the Graduate Legal Theory Seminar, two additional courses and completion of a substantial thesis. Further details are available through the LL.M. website: www.umanitoba.ca/law/newsite/research.php. Applicants should also consult the Faculty of Graduate Studies website: umanitoba.ca/graduate_studies/.

3.2 Course Requirements for Admission to LL.B. Program

Applicants must complete 60 credit hours, 30 credit hours in University 1 and 30 credit hours in any degree program. Because many students complete an undergraduate degree before applying to Law, it is recommend that students consider these degree requirements when choosing courses.

Other Requirements

The mathematics requirement must be completed in the first 60 credit hours, that is during the two pre-Law years. The LL.B. program fulfils the University's English requirement.

All applicants must write the Law School Admission Test (LSAT).

Minimum GPA for consideration: Very competitive, see applicant information bulletin at the Faculty's website (www.umanitoba.ca/faculties/law/).

Selection criteria: 50% on grades and 50% on the LSAT score.

SECTION 4: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Law has regulations and requirements, published below, that apply specifically to its students.

4.1 Residence requirements for the LL.B. Degree

To obtain the LL.B. degree, ordinarily a student must successfully complete two of the three years of the LL.B. program at the University of Manitoba.

4.2 Licence to Practise Law

Upon graduation from the LL.B. program, all graduates who wish to be admitted to practise and called to the Bar must apply to the Law Society of the province in which they wish to practise. Most, if not all, of the law societies require applicants to complete satisfactorily a bar admission course usually comprising a period of articles of clerkship and, in addition, seminars and courses. It should be noted that although an LL.B. degree qualifies graduates to apply for a licence to practise, it does not entitle them to such a licence, the granting of which is entirely within the purview of the law societies. The Law Society must be satisfied as to the good character and repute of its applicants, as well as their academic competence and qualifications. Inquiries with regard to the Province of Manitoba should be made to the Secretary, or the Director of Education, Law Society of Manitoba, 201 - 219 Kennedy Street, Winnipeg, Manitoba, R3C 1S8.

4.3 Regulations of the Faculty of Law

Regulations of the Faculty of Law, as amended from time to time governing attendance, evaluation, prizes, and progression may be consulted at the Faculty's website (www.umanitoba.ca/faculties/law/).

4.4 Miscellaneous Registration Matters

The dean's office, with the recommendation of a special faculty-based committee if so requested, shall, subject to appeal to the Faculty Council, consider and determine all applications from students admitted to the faculty: 1) for a letter of permission, with conditions, to take part of their law studies for credit at the University of Manitoba, at another university, including the Civil Law/Common Law Exchange Term Program; 2) for permission, with conditions, to defer their law studies for a period of one or more academic years after successfully completing first or second year, and to permit such students to re-register following such an absence; 3) for permission to withdraw before completing the academic year for which they are then registered and to permit, in the case of a student who withdraws from first year under exceptional circumstances, that student to re-register for a subsequent academic year as a supernumerary student, and in the case of a second or third year student, to permit such student to re-register for a subsequent academic year; in all cases with or without conditions; 4) for permission to switch from the full-time program to the half-time program and vice versa.

4.5 Curriculum Requirements

In the event that a student fails to properly select courses and to register within the normal registration period, the dean's office may reject the courses selected by the student and assign courses to that student and such assignments shall ordinarily be final.

In addition to the regular classroom hours, there are seminars and workshops involved in some of the courses. The faculty may limit the enrolment in any optional course.

SECTION 5: Program Requirements

This Section describes the program requirements that are in effect for the 2005-2006 academic year. However, prospective students should be aware that the Faculty of Law regularly reviews its curriculum to ensure that it continues to meet the current needs of our students. As part of that process, courses may be added to, or deleted from, the required program, and the number of credit hours assigned to individual courses may change. Additionally, the number of credit hours required in each year of the program is also subject to change.

5.1 First Year

Each full-time student is required to take all of the following courses:

Course No.	Doctrinal Courses (Compulsory)	Credit Hours
LAW 1100	Contracts	6
LAW 1140	Criminal Law and Procedure	5
LAW 1460	Constitutional Law	5
LAW 1480	Torts and Compensation Systems	5
LAW 1500	Property	5
	<u>Clinical Course (Compulsory)</u>	
LAW 1540	Legal Methods	5
	<u>Perspective Course (Compulsory)</u>	
LAW 1530	Legal System	2
	Total credit hours	33

5.2 Second Year Only

In **Second Year** each student must take:

	Doctrinal Courses (Compulsory)	
LAW 2600	Evidence	4
LAW 3530	Administrative Law	3
LAW 2670	Civil Procedure	2
LAW 2690	Corporations I	3
	<u>Clinical Courses (Compulsory)</u>	
LAW 2650	Introduction to Advocacy	3
LAW 2680	Legal Negotiation	3
	Total Credit Hours	18

5.3 Second Year or Third Year

In **either Second Year or Third Year** each student must take:

	Doctrinal Courses (Compulsory)	
LAW 2490	Trusts	3
LAW 2640	Family Law	3
LAW 2700	Income Tax Law and Policy	3
	Total Credit Hours	9
	<u>Perspective Courses (One Compulsory for each of Second and Third Years; more can be taken)</u>	
LAW 3070	Gender and the Law	3
LAW 3090	Children and the Law	3
LAW 3190	Law and Literature	3
LAW 3230	Aboriginal Peoples and Land Claims	3
LAW 3280	Limits of Law	3
LAW 3310	Aboriginal Peoples and the Law	3
LAW 3370	The Legislative Process	3
LAW 3380	Issues in Law and Bio Ethics	3
LAW 3410	Canadian Legal History	3
LAW 3490	Research Paper	2
LAW 3550	Crime, Law and Society	3
LAW 3620	Comparative Law	3
LAW 3740	International Law	3
LAW 3760	Jurisprudence	2
LAW 3940	Canadian Charter of Rights and Freedoms	3
LAW 3980	L01 International Business Law	3
LAW 3980	L02 International Trade Law	3
LAW 3980	L07 Human Rights Law	3
	<u>Doctrinal Courses (Optional)</u>	
LAW 2400	Wills and Succession	3
LAW 2510	Problems in Contract and Tort	2
LAW 2530	Debtors' and Creditors' Rights	2

LAW 3010	Agency	2
LAW 3040	Sales and Consumer Law	2
LAW 3050	Commercial Law	3
LAW 3060	Transportation Law	3
LAW 3160	Dispute Resolution: Theory & Practice	2
LAW 3200	Immigration and Refugee Law	2
LAW 3210	Competitions A *	2
LAW 3220	Competitions B *	3
LAW 3260	Insurance Law	4
LAW 3330	Employment Law	3
LAW 3390	Securities Law	2
LAW 3480	Restitution	2
LAW 3500	Intellectual Property	4
LAW 3590	Charter Issues in Criminal Law	3
LAW 3600	Environmental Law	3
LAW 3610	Landlord and Tenant	2
LAW 3680	Land Titles	3
LAW 3690	Real Estate Transactions	3
LAW 3770	Labour-Management Relations	3
LAW 3820	Manitoba Law Journal *	2
LAW 3830	Legal Aid Clinic *	2
LAW 3850	Conflict of Laws	3
LAW 3860	Business Planning and Finance Law	2
LAW 3880	Municipal and Planning Law	3
LAW 3970	L01 Advanced Issues in Intellectual Property	2
LAW 3970	L02 Trade Marks and Patents	2
LAW 3980	L04 Corporations II	3
LAW 3980	L05 Copyright	3
LAW 3980	L06 Law of Homicide	3

Each student in **Second Year** must take a minimum of 32 credit hours of courses, comprising (i) the courses required to be taken in Second Year Only, above, (ii) any of the courses which may be taken in either Second or Third Years, above, including at least one Perspective Course, subject to pre-requisites and co-requisites. The Third Year Clinical and Doctrinal Courses, below, are not available to Second Year students. The choice of courses is subject to faculty approval.

Each student in **Third Year** is required to take whichever of LAW 2490 Trusts, LAW 2640 Family Law, and LAW 2700 Income Tax Law and Policy was not taken in Second Year, plus a Perspective Course, above, excluding LAW 3490 Research Paper if it was taken in Second Year, plus

Compulsory Course

LAW 3930	The Legal Profession and Professional Responsibility	3
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The rest of a Third Year student's credit hours, comprising a minimum of 32 credit hours, shall be selected from additional Second or Third Year Courses, above, including at least one Perspective Course, plus any of the Doctrinal, and Clinical Courses, below:

Clinical Courses (Optional)

LAW 3140	Clinical Administrative Law	4
LAW 3250	L01 Clinical Family Law	3
LAW 3270	Clinical Family Law	6
LAW 3300	Clinical Criminal Law	8
LAW 3340	Advanced Advocacy	3
LAW 3890	Solicitors' Transactions	3

Doctrinal Courses (Optional)

LAW 3160	Dispute Resolution: Theory Practice	2
LAW 3240	L01 Court of Appeal Clerkship*	2
LAW 3360	Advanced Legal Research	3
LAW 3450	Remedies	3
LAW 3510	Corporate Tax	3
LAW 3520	Estate & Trusts Tax	3
LAW 3980	L03 Advanced Family Law	3
xxx.xxx	Non-Law University Elective	3

* No more than three of the electives marked with an asterisk can be selected for credit over the course of the second and third year program of studies. Students may elect to take more than three of these electives but no credit will be awarded.

Third Year students may take LAW 3890 Solicitors Transactions plus either LAW 3340 Advanced Advocacy, LAW 3140 Clinical Administrative Law, or LAW 3250 Clinical Family Law. No student can take two of LAW 3340 Advanced Advocacy, LAW 3140 Clinical Administrative Law, LAW 3250 Clinical Family Law. No student can take a second Clinical Elective with either LAW 3270 Clinical Family Law or LAW 3300 Clinical Criminal Law.

Section 6: Course Descriptions

LAW 1100 Contracts Cr.Hrs.6 (Formerly 045.110) This course explores the basic principles of contract law. How is a contract formed? What is an offer? What constitutes acceptance? Are all promises enforceable as a contract? When should parties be allowed to avoid obligations? What happens if one party misrepresents the quality of subject matter of the contract? What if a party makes a mistake about what they buy or sell? What should happen if one party takes advantage of another for a better deal for themselves?

LAW 1140 Criminal Law and Procedure Cr.Hrs.5 (Formerly 045.114) A general introduction to criminal law and procedure dealing with principles of criminal liability, common defenses to criminal charges, selected specific offences, and the basic procedures to be followed in the administration of criminal justice in Canada.

LAW 1460 Constitutional Law Cr.Hrs.5 (Formerly 045.146) An examination of the legal problems arising from the nature of the Canadian political structure and, in particular, the distribution of legislative powers between the federal parliament and the provincial legislatures and an introduction to the impact of the Canadian Charter of Rights and Freedoms.

LAW 1480 Torts and Compensation Systems Cr.Hrs.5 (Formerly 045.148) A general introduction to the law of torts and other compensation systems such as the Workers' Compensation and Criminal Injuries Compensation schemes.

LAW 1500 Property Cr.Hrs.5 (Formerly 045.150) A general introduction to the principles of property with special emphasis on the principles of real property, their historical development and modern application.

LAW 1530 Legal System Cr.Hrs.2 (Formerly 045.153) An introduction to the study of law including initial analysis of various aspects of legal history, the structure of the legal system, legal reasoning, statutory interpretation, dispute resolution and the role of the judiciary.

LAW 1540 Legal Methods Cr.Hrs.5 (Formerly 045.154) An introduction to legal research and writing skills and oral advocacy. Grading: Pass/Fail

LAW 2400 Wills and Succession Cr.Hrs.3 (Formerly 045.240) The law of testate and intestate succession, Part IV of The Marital Property Act, and The Dependents' Relief Act.

LAW 2490 Trusts Cr.Hrs.3 (Formerly 045.249) The nature and functions of modern inter vivos and testamentary trusts. The creation of express, private trusts, charitable trusts, resulting trusts, and constructive trusts. The administration of trusts, and real and personal remedies of beneficiaries under trusts.

LAW 2510 Problems in Contract and Tort Cr.Hrs.2 (Formerly 045.251) A detailed study of significant topics in the area of tort and contract at an advanced level. Special attention will be paid to the inter-relationship of the two subject areas.

LAW 2530 Debtors' and Creditors' Rights Cr.Hrs.2 (Formerly 045.253) Remedies of the unsecured creditor, enforcement of judgments, fraudulent conveyances and preferences, general assignments and bankruptcy. Mechanics' liens and special rights arising out of builders' and workers' legislation relating to real estate transactions.

LAW 2600 Evidence Cr.Hrs.4 (Formerly 045.260) A study of the rules relating to the admissibility and weight of evidence in judicial proceedings.

LAW 2640 Family Law Cr.Hrs.3 (Formerly 045.264) An overview of key legal issues regarding familial relationships and family breakdown in Canadian society. Topics include cohabitation, marriage, separation, divorce, child custody and access, spousal and child support and property division.

LAW 2650 Introduction to Advocacy Cr.Hrs.3 (Formerly 045.265) A detailed study of the conduct of a case from its inception through to trial. The course requires that students prepare and conduct a trial. Grading: Pass/Fail.

LAW 2670 Civil Procedure Cr.Hrs.2 (Formerly 045.267) An introduction to the rules of civil procedure.

LAW 2680 Legal Negotiation Cr.Hrs.3 (Formerly 045.268) Most legal disputes settle before trial. This course examines how lawyers assist their clients through effective interviewing, counseling, strategic planning and negotiation as well as some of the mechanisms, both judicial and non-judicial, that facilitate pre-trial dispute settlement.

LAW 2690 Corporations I Cr.Hrs.3 (Formerly 045.269) A study of the major legal, practical and policy issues arising out of the formation and operation of business organizations in Canada, with a particular focus on business corporations. Students will examine major principles of Canadian corporate law, including corporate personality, management power, majority rule and minority protection.

LAW 2700 Income Tax Law and Policy Cr.Hrs.3 (Formerly 045.270) The object of this course is to develop a working knowledge of the basic principles and rules of the income tax system as these apply to individuals. A parallel objective is the discovery of the major policy positions that inform the personal income tax system and the development of the ability to use tax policy analysis to evaluate advantages of, and problems with, the current system.

LAW 3010 Agency Cr.Hrs.2 (Formerly 045.301) The Course will cover the entire landscape of the law of agency, including the various kinds of authority, the duties of principals and agents, and the legal ramifications for each person when one person acts (purportedly) on behalf of another person.

LAW 3040 Sales and Consumer Law Cr.Hrs.2 (Formerly 045.304) The Sale of Goods Act and related statutes including a study of the duties and remedies of the parties and questions of title. Manitoba Consumer Protection Law in the area of sales and credit.

LAW 3050 Commercial Law Cr.Hrs.3 (Formerly 045.305) A study of secured transactions and negotiable instruments.

LAW 3060 Transportation Law Cr.Hrs.3 (Formerly 045.306) The law applicable to various methods of transportation, various constitutional problems involved, rights and liabilities of transportation authorities and procedure before the appropriate trans-

portation boards.

LAW 3070 Gender and the Law Cr.Hrs.3 (Formerly 045.307) An exploration of ideas about gender differentiation in law, the legal system, legal education and the legal profession. It will offer an introduction to the feminist critique of law and feminist theories about sexual equality and discrimination.

LAW 3090 Children and the Law Cr.Hrs.3 (Formerly 045.309) Relationships between child, family, state and law are examined within an interdisciplinary context, focusing on such issues as rights theories and the public/private distinction; regulation of young offenders, child protection and state intervention; and child victims in the courts.

LAW 3140 Clinical Administrative Law Cr.Hrs.4 (Formerly 045.314) The primary purpose of this course is to train students in lawyering skills. Students will be required to engage in classroom work and participate in simulated exercises. Emphasis will be given to the difference between board and court advocacy. Grading: Pass/Fail.

LAW 3160 Dispute Resolution: Theory and Practice Cr.Hrs.2 (Formerly 045.316) This course offers a detailed exploration of the theory and practice of dispute resolution focusing on the various approaches, private and court-connected, currently used to resolve conflict. In critically examining selected alternative dispute resolution mechanisms, the course exposes students to issues such as rights-based and interest-based dispute resolution, power, gender and culture in ADR processes and the functions, and skills required of, third party interveners.

LAW 3190 Law and Literature Cr.Hrs.3 (Formerly 045.319) Law and Literature is the legal analysis of literary texts and the literary analysis of legal texts. By introducing images of law and social control found in literature and popular culture, and exploring legal language and the construction of narrative, the course invites speculation about the nature and impact of law.

LAW 3200 Immigration and Refugee Law Cr.Hrs.2 (Formerly 045.320) An explanation of immigration and refugee law through a study of a representative section of problems.

LAW 3210 Competitions A Cr.Hrs.2 (Formerly 045.321) Credit for selected students who satisfactorily participate in those academic competitions approved by Faculty Council. Grading: Pass/Fail.

LAW 3220 Competitions B Cr.Hrs.3 (Formerly 045.322) Credit for selected students who satisfactorily participate in those academic competitions approved by Faculty Council. Grading: Pass/Fail.

LAW 3230 Aboriginal Peoples and Land Claims Cr.Hrs.3 (Formerly 045.323) The course shall provide an overview of land claims and treaty land entitlement policies in Canada and their impact upon land claims by Aboriginal communities.

LAW 3240 L01 Court of Appeal Clerkship Cr.Hrs.2 (Formerly 045.324) Students will be selected for the program by a committee composed of no fewer than three Faculty members chosen by the Dean's Office. The Faculty of Law provides an opportunity for a total of two students to clerk for the Justices of the Manitoba Court of Appeal for 2 hours of credit in the Winter Term. Students are expected to spend the equivalent of one full working day per week (in either one or two blocks) at the Court. Students will be expected to provide research assistance to the Justices, and students will be asked to provide written memoranda to help the Justices prepare for hearings. Discussions of legal issues may follow from the other work that students do. Finally, in many instances, students are invited to hear the argument of an appeal on which they have previously done work.

LAW 3250 L01 Clinical Family Law Cr.Hrs.3 (Formerly 045.325) The primary purpose of this offering is to train students in the skills necessary to effectively practice Family Law. Students will be required to attend class and participate in simulated exercises. Particular emphasis will be given to procedure and practical resolution of family law issues. The course is spread over both terms but the total number of hours of instruction accords with its designation as a three credit course. Grading: Pass/Fail

LAW 3260 Insurance Law Cr.Hrs.4 (Formerly 045.326) A general introduction to the basic principles of insurance law. The fundamental elements common to most types of policies will be examined with particular emphasis on property and liability insurance. The terms and provisions of specific insurance policies and coverages such as automobile, property, liability policies will also be covered.

LAW 3270 Clinical Family Law Cr.Hrs.6 (Formerly 045.327) The primary purpose of this offering is to train students in lawyering skills in the Family Law area. To this end instruction is given on an intensive basis in small groups. Students may be required to engage in classroom work; to participate in various forms of simulation exercises and to conduct actual client based cases under the supervision of the instructor. Particular emphasis will be given to questions of professional responsibility and ethics. Grading: Pass/Fail.

LAW 3280 Limits of Law Cr.Hrs.3 (Formerly 045.328) An examination of the role of law as a social control mechanism and discussion of particular ethical and instrumental constraints on law making and enforcement. Topics dealt with include: law and the enforcement of sexual morality, legal paternalism, hate propaganda, and medico-legal topics including mercy killing, surrogate motherhood and maternal-fetal conflict.

LAW 3300 Clinical Criminal Law Cr.Hrs.8 (Formerly 045.330) The primary purpose of this offering is to train students in lawyering skills in the criminal law area. To this end instruction is given on an intensive basis in small groups. Students may be required to engage in classroom work; to participate in various forms of simulation exercises and to conduct actual client based cases under the supervision of the instructor. Particular emphasis will be given to questions of professional responsibility and ethics. Grading: Pass/Fail.

LAW 3310 Aboriginal Peoples and the Law Cr.Hrs.3 (Formerly 045.331) A study of the laws relating to Aboriginal Peoples in North America from the colonial period to the present. Special emphasis will be given to aboriginal rights, hunting and fishing

rights, the legal aspects of Indian Treaties and the Indian Act. A more general treatment will be given to a study of Aboriginal Peoples' relationship to civil and criminal law in modern Canadian society.

LAW 3330 Employment Law Cr.Hrs.3 (Formerly 045.333) A detailed study of employment law including employment principles, constructive and wrongful dismissal, just cause, human rights and remedies.

LAW 3340 Advanced Advocacy Cr.Hrs.3 (Formerly 045.334) Advanced topics in trial presentation, procedure and evidence with concentration on jury trials.

LAW 3360 Advanced Legal Research Cr.Hrs.3 (Formerly 045.336) This course will provide students with the wherewithal to conduct legal research across a number of jurisdictions using both print and digital formats. Students are evaluated on a number of research exercises, a midterm examination, a major research pathfinder and a presentation of research results.

LAW 3370 The Legislative Process Cr.Hrs.3 (Formerly 045.337) A study of how statutes and regulations are made in the Province of Manitoba, and how lawyers can effectively represent their clients in the context of lawmaking by politicians, civil servants and regulators.

LAW 3380 Issues in Law and Bio Ethics Cr.Hrs.3 (Formerly 045.338) The course deals with the legal aspects of prevention, creation, alteration, maintenance and termination of life through medical and other scientific means.

LAW 3390 Securities Law Cr.Hrs.2 (Formerly 045.339) A study of the basic concepts and application of the securities regulatory system in Canada.

LAW 3410 Canadian Legal History Cr.Hrs.3 (Formerly 045.341) The historical background of the Canadian legal system.

LAW 3450 Remedies Cr.Hrs.3 (Formerly 045.345) A study of the law relating to damages, specific performance, injunctions, and other equitable remedies.

LAW 3480 Restitution Cr.Hrs.2 (Formerly 045.348) Principles and remedies of the common law and equity capable of preventing unjust enrichment; quasi-contract and constructive trusts.

LAW 3490 Research Paper Cr.Hrs.2 (Formerly 045.349) Details in each case to be worked out with the associate dean.

LAW 3500 Intellectual Property Cr.Hrs.4 (Formerly 045.350) A study of the law of, and issues related to, the major areas of intellectual property, including trademarks, copyright and patent, as well as ancillary doctrines including some or all of industrial design, trade secrets, appropriation of personality and plant breeders' rights.

LAW 3510 Corporate Taxation Cr.Hrs.3 (Formerly 045.351) A study of federal tax laws as they affect corporation income, as well as a discussion of the effects of income tax laws on corporate and other commercial planning.

LAW 3520 Taxation of Trusts and Estates Cr.Hrs.3 (Formerly 045.352) A study of taxation principles as they relate to partnership and trust income and estate planning.

LAW 3530 Administrative Law Cr.Hrs.3 (Formerly 045.353) An introduction to administrative law generally, with concentration on the judicial review of the exercise of statutory authority by administrative entities.

LAW 3550 Crime, Law and Society Cr.Hrs.3 (Formerly 045.355) A study of various social problems in legal and sociological perspectives with emphasis on criminal law and the administration of criminal justice. Topics may include police discretion, preventive detention, plea bargaining, sentencing theory and practise in correction, drug abuse and the mentally ill.

LAW 3590 Charter Issues in Criminal Law Cr.Hrs.3 (Formerly 045.359) The rules of Criminal Procedure and principles underlying and unifying such rules with a particular emphasis on the effect of the Charter of Rights and Freedoms on those rules.

LAW 3600 Environmental Law Cr.Hrs.3 (Formerly 045.360) The balance between technical development and the life-support capacity of the environment. The acquisition and nature of private rights in natural resources and their control by legislation and common law. Remedies for environmental degradation. Constitutional and international legal issues.

LAW 3610 Landlord and Tenant Cr.Hrs.2 (Formerly 045.361) The law relating to tenancies, residential and commercial, with special attention to remedies, recent legislation, and proposed reforms.

LAW 3620 Comparative Law Cr.Hrs.3 (Formerly 045.362) An introduction to civil law; a brief historical survey, codification, judicial philosophy, detailed study of selected comparative law topics in tort and contract with special reference to the Civil Code of the Province of Quebec. An introduction to Soviet law, detailed study of selected topics in Soviet law.

LAW 3680 Land Titles Cr.Hrs.3 (Formerly 045.368) The law relating to the registration of assurances and titles.

LAW 3690 Real Estate Transactions Cr.Hrs.3 (Formerly 045.369) The law relating to vendors and purchasers of land and to mortgages and other security on land.

LAW 3740 International Law Cr.Hrs.3 (Formerly 045.374) An introduction to the nature, sources, and some of the fundamental concepts of international law.

LAW 3760 Jurisprudence Cr.Hrs.2 (Formerly 045.376) This seminar will cover all the major "schools" of jurisprudential theory, with attention paid to particular areas of legal theory and debate, to the nature and function of law, its relation to morality, and to the analysis of rights and other legal relationships. Efforts will be made to relate these areas of debate to legal issues of current interest and practicality.

LAW 3770 Labour-Management Relations Cr.Hrs.3 (Formerly 045.377) A survey of the development of trade unions; their present status under both federal and provincial legislation regarding the right of association, collective bargaining, and the settlement of disputes.

LAW 3820 Manitoba Law Journal Cr.Hrs.2 (Formerly 045.382) The editor of the Manitoba Law Journal who successfully completes his/her term of office, and all other

editors and journal staff who in addition to successfully completing their terms of office satisfactorily complete a written requirement, may opt for the Manitoba Law Journal credit. Grading: Pass/Fail.

LAW 3830 Legal Aid Clinic Cr.Hrs.2 (Formerly 045.383) Students who are selected to act as student supervisors at the University Law Centre during the summer and who continue to actively serve the University Law Centre during their third year may, by successfully completing a written assignment approved by a faculty supervisor, opt for the Legal Aid Clinic. Grading: Pass/Fail.

LAW 3850 Conflict of Laws Cr.Hrs.3 (Formerly 045.385) Sometimes called private international law, it has to do with choosing what place to sue, what law applies when the law of more than one place might apply, and with the enforceability of judgments through foreign courts.

LAW 3860 Business Planning and Finance Law Cr.Hrs.2 (Formerly 045.386) An analysis of selected concepts arising in planning for the business enterprise including corporate securities and finance, securities regulation, share-control arrangements, and acquisitions and sales.

LAW 3880 Municipal and Planning Law Cr.Hrs.3 (Formerly 045.388) A general course in municipal law, including important aspects of land-use control and planning law. Although the course deals generally with the nature, structure, functions, and powers of the various units comprising the local level of government, the focus is primarily on municipal corporations. Topics covered include assessment and taxation, land-use planning and control, tort liability, judicial review of bylaws, qualification and accountability of councillors, and the law relating to expropriation, as well as some discussion of contemporary urban problems.

LAW 3890 Solicitors' Transactions Cr.Hrs.3 (Formerly 045.389) A study, involving practical exercises, of certain aspects of solicitors' work, including drafting. Particular emphasis on questions of professional responsibility and ethics. Grading: Pass/Fail.

LAW 3930 The Legal Profession and Professional Responsibility Cr.Hrs.3 (Formerly 045.393) A general introduction to the problems of professional responsibility and the ethics of lawyers individually, as well as the legal profession collectively. Topics dealt with will include ethical problems of the lawyer in the role of advocate and in the role of counsellor (confidentiality, conflict of interest, etc.); professional responsibility in the delivery of legal service (competency, fee determination, specialization regulation, etc.) and the legal profession and the public interest (government of profession, discipline, professional liability, etc.). These problems are to be studied by the critical examination of case law, codes and canons, and other published materials; by classroom discussion and debate on problems; and by workshops and panels which involve practising lawyers.

LAW 3940 Canadian Charter of Rights and Freedoms Cr.Hrs.3 (Formerly 045.394) An in-depth study of the legal, philosophical and historical foundations of the Canadian Charter of Rights and Freedoms. Included is a study of both the American and European experience with Charters of Rights as well as Canadian case law.

LAW 3970 L01 - Advanced Issues in Intellectual Property Cr.Hrs.2 (Formerly 045.397) Not currently offered in 2006-07.

LAW 3970 L02 - Trade Marks and Patents Cr.Hrs.2 (Formerly 045.397) The course covers Canada's law of trade marks which consists of the law of unregistered trade marks i.e. the tort of Passing Off, and the statutory regime under the Trademarks Act. The protection of trading goodwill in the marketplace. The actions for Injurious Falsehood and Misappropriation of Personality will also be covered briefly. About one-third of the course will be devoted to Canada's law of protection for innovative products and processes: the Patent Act and the common law action for Breach of Confidence, the means of protecting trade secrets. The concept of property and its role in the protection of Symbols and Information which have commercial or industrial value are the key concepts in this course.

LAW 3980 L01 International Business Law Cr.Hrs.3 (Formerly 045.398) This course will allow the students to explore the legal, practical and social realities of international business transactions. We will look at some of the legal doctrines and treaties connected with international transactions, and explore how theory meets hard realities in areas such as the international regulation of corrupt business practices. The emphasis

will be on dealing with cross-cultural aspects of international business, including different methods of communicating, emphasis on written agreements versus trust-based relationships, negotiating styles etc.

LAW 3980 L02 International Trade Law Cr.Hrs.3 (Formerly 045.398) The course will deal with the doctrine, practice and policy issues in international trade and business including a consideration of NAFTA, a new World Trade Organization Agreement, a new General Agreement on Trade in Services, a proposed Multilateral Agreement on Investment, the creation of the World Trade Organization and the Canadian Agreement on Internal Trade. The course will also consider the economic theory behind trade liberalization, the long term effect of trade liberalization on the exchange of goods and services without allowing the free movement of labour and how trade links may be linked to labour and environmental concerns and to human rights. There will also be a segment on international business transactions.

LAW 3980 L03 Advanced Family Law Cr.Hrs.3 (Formerly 045.398) Not offered in 2006-07.

LAW 3980 L04 Corporations II Cr.Hrs.3 (Formerly 045.398) An advanced study of corporate law from various theoretical and practical perspectives. The course will examine issues affecting both the privately-held and the publicly-held corporation, considering such matters as corporate mergers, acquisitions and amalgamations; takeover bids and responses; share rights and share construction; and advanced issues in corporate governance and directors' liability. The course will also consider topics in corporate finance and the interaction of corporate and securities law.

LAW 3980 L05 Copyright Cr.Hrs.3 (Formerly 045.398) How well do traditional copyright principles, developed in the heyday of the printing press, apply in the Digital Millennium? This course will consider the nature and extent of copyright protection for literary, dramatic, musical, and artistic works, as well as related works such as performers' performances, sound recordings and communication signals, in both traditional and digital media. While the primary focus of the course will be the scheme of the Canadian Copyright Act, U.S. legislation and international treaties will also be examined, as will ongoing law reform initiatives in Canada and beyond.

LAW 3980 L06 Law of Homicide Cr.Hrs.3 (Formerly 045.398) This is a doctrinal course focusing on the law and policy surrounding homicide in Canada. The course will be taught almost entirely in a web environment (meaning there will be few face-to-face meetings) and, as such, students must be comfortable accessing materials on the web and participating in web-based discussions, etc. Studying homicide offers an opportunity to study and understand further the principles of criminal law learned in first year (mens rea, causation, defences). It also raises interesting policy questions around almost every topic covered. This course will be offered jointly to University of Manitoba Law students and University of British Columbia Law students. Professor Isabel Grant (UBC) and Professor Debra Parkes (Manitoba) will co-teach the course over the internet. Collaboration and discussion between Manitoba and UBC students will be a significant part of the course.

LAW 3980 L07 Human Rights Law Cr.Hrs.3 (Formerly 045.398) The purpose of this course is to convey an understanding of the current situation concerning human rights in Canada and globally, and to facilitate a chance to think about what the future may bring. Toward that end, this course will explore the sources and content of human rights norms, including questions of cultural relativism, and the incorporation of international human rights norms into domestic legal settings. Canada has ratified over thirty international instruments relating to human rights. This course will examine the nature and extent of domestic human rights protection with reference to these international commitments. Canadian federal and provincial statutory protections as well as the constitutional protections of the Charter will be considered.

LAW 7110 Graduate Legal Research and Theory Cr.Hrs.2 (Formerly 045.711) Begins with visits to the Law Library and to the Provincial Archives of Manitoba, Government Records Centre, then epistemological problems are studied to define each student's research questions for the thesis; and thereafter weekly seminars explore doctrinal, interdisciplinary, comparative, and theoretical research perspectives (natural law to legal positivism, critical legal studies and post-modernism).

I.H. Asper School of Business

Faculty of Management

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Undergraduate Program Manager: Laura Bean

Administrative Assistant/Advisor: Jennifer Jones

Student Advisors: Jenn Mitchell, Tara Cleve

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Business Education

SECTION 3: Admission to the Asper School of Business

3.1 Degree Offered

3.2 Course Requirements for Admission

SECTION 4: Asper School of Business Student Services

4.1 Career Services Centre

4.2 International Study

4.3 Student Organizations

4.4 Professional Affiliations

SECTION 5: Academic Regulations

5.1 Changes in Program Requirements

5.2 Evening Program

5.3 Program Regulations

5.4 Prerequisite Requirements

5.5 Cumulative GPA Requirement for Graduation

5.6 Calculation of the Cumulative GPA

5.7 Residence Requirement

5.8 Time Limit for Completion of the Degree

5.9 Maximum Number of Failures and Repeats Permitted

5.10 Failure to Meet Requirements

5.11 Withdrawal from the Bachelor of Commerce (Honours) Program

5.12 Withdrawal from Individual Courses

5.13 Repeating or Substituting Courses

5.14 Maximum Course Load

5.15 Course Selection and Requirements

5.16 Eligibility Requirements for Awards

5.17 Examination Regulations

5.18 Letter of Permission to Take Courses at Another University

5.19 Plagiarism, Cheating and Personation

5.20 Student Appeals of Academic Regulations

5.21 Security of Academic Records

5.22 Course Limitations for Non-Business Students

SECTION 6: Program Requirements for the Bachelor of Commerce (Honours) Program – Track 1 And Track 2

6.1 Requirements Applicable to Students Admitted in 2000 and Thereafter

6.2 Requirements Applicable to Students Admitted Prior to 2000

6.3 General Structure of the Program

6.4 Course Requirements

6.5 Codes for Majors

6.6 Requirements for Majors

SECTION 7: Program Requirements for the Asper School of Business/Red River College Joint Program

7.1 General Structure of the Program

7.2 Course Requirements

7.3 Requirements for Majors

SECTION 8: Program Requirements for the Asper School of Business /Assiniboine Community College Joint Program

8.1 General Structure of the Program

8.2 Course Requirements

8.3 Requirements for Majors

SECTION 9: Program Requirements for the Asper School of Business /University College of the North Joint Program

9.1 General Structure of the Program

9.2 Course Requirements

9.3 Requirements for Majors

SECTION 10: Program Requirements for the Asper School of Business /Ecole technique et professionnelle joint program

10.1 General Structure of the Program

10.2 Course Requirements

10.3 Requirements for Majors

SECTION 11: Course Requirements for Majors for Students in the Asper School of Business Joint Programs with Red River College, Assiniboine Community College, University College of the North, or Ecole technique et professionnelle

SECTION 12: Course Descriptions

12.1 Accounting and Finance

12.2 Warren Centre for Actuarial Studies and Research

12.3 Business Administration

12.4 Interdepartmental Courses

12.5 Marketing

12.6 Supply Chain Management

SECTION 1: Academic Staff

Deans Emeriti

R. Grandpre, J. Gray, J. Mundie.

Accounting and Finance

Senior Scholar

Hilton, M.W., B.Comm. (Saskatchewan), M.B.A. (Oregon State), F.C.A.

Professors

Abeysekera, S., B.A. (Simon Fraser), M.B.A. (Jackson State), Ph.D. (Texas A and M); Feltham, G., B.A. (Alberta), B.S., M.B.A. (Montana), L.L.B. (Queen's), Ph.D. (Waterloo), CMA, FCMA; Gould, L.I., B.S. (Pennsylvania), M.B.A. (New York), Ph.D. (Toronto); McCallum, J.S., B.Sc., B.A. (Montreal), M.B.A. (Queen's), Ph.D. (Toronto); Mittoo, U.R., B.A., M.A. (Panjab), M.B.A. (Manitoba), Ph.D. (UBC).

Associate Professors

Brabston, M., B.A. (Vanderbilt), M.B.A. (Alabama, Birmingham), Ph.D. (Florida State); **Jacoby**, G., B.A., M.A. (Hebrew), Ph.D. (York); **Morrill**, C.K.J., B.A., Ph.D. (Alberta); **Mossman**, C.E., B.A.(Hons.) (Royal Military College), M.B.A. (Queen's), Ph.D. (Western Ontario), FCGA; **Stangeland**, D.A., B.Comm., Ph.D. (Alberta), CMA.

Assistant Professors

Bhattacharyya, N., B.Sc. (North Eastern Hill), M.B.A. (Indian Institute of Management), Ph.D. (UBC); **Biscontri**, R., B.Comm. (Australia), M.M., Ph.D. (Macquarie), FCPA; **Chen**, F., B.A., M.A. (China), M.S. (Utah), Ph.D. (Arizona); **Morrill**, J.B., B.Comm., Ph.D. (Alberta), C.A.; **Paseka**, A., M.Sc. (Moscow), M.Sc. (N. Iowa), Ph.D. (Arizona); **Street**, C., B.Sc. (Brandon), MBA (Manitoba), Ph.D. (pending, Queen's) **Travica**, B., B. A. (Belgrade), M. A. (State University of New York), Ph.D. (Syracuse); **Zheng**, X., B.A. (China), M.B.A. (China), Ph.D. (SUNY).

Business Administration

Professor Emeritus

Bector, C.R., B.A. (Punjab), M.A. (Agra), Ph.D. (Kanpur), F.I.M.A.

Senior Scholars

Atwell, J.F., B.Comm.(Hons.), M.A. (Manitoba); **Hall**, R.I., B.Sc. (Birmingham), D.I.C. (London), Ph.D. (Washington), C.I.T. (Harvard); **Henderson**, R., B.Sc. (M.E.) (Manitoba), M.B.A. (Harvard), Ph.D. (Western Ontario), P.Eng.; **Hercus**, T.F., B.A. (Manitoba), M.B.A. (Toronto); **Mundie**, J.D., B.Comm. (Manitoba), M.B.A. (Ohio State), Ph.D. (Stanford); **Willborn**, W., B.Ed., M.A. (Manitoba), Dip.rer.pol. (Hamburg), Dr.rer.soc.oec. (Innsbruck).

Professors

Bartell, M., B.A.(Hons.) (McGill), M.B.A. (Chicago), Ph.D. (Northwestern); **Bruning**, N.S., B.A., M.A. (Arkansas), Ph.D. (Alabama); **Dyck**, B., B.Comm.(Hons.) (Manitoba), Ph.D. (Alberta); **Frohlich**, N., B.Sc.(Hons.) (Manitoba), M.S. (Rutgers), Ph.D. (Princeton); **Godard**, J.H., B.Comm.(Hons.), M.B.A. (Manitoba), Ph.D. (Cornell); **Notz**, W.W., B.S.(Hons.) (Colorado), M.B.A. (Denver), Ph.D. (Northwestern); **Starke**, F.A., B.A., M.B.A. (Southern Illinois), Ph.D. (Ohio State).

Associate Professor

Dass, P., B.Sc., M.B.A. (Punjab), Ph.D. (Michigan State); **Lee**, R.T., B.A., M.S. (San Francisco), Ph.D. (Wayne State).

Assistant Professors

Bayyavarapu, H., BE (Osmania University), MBA (Calcutta), Ph.D. (Western Ontario); **Bowring**, M., B.A. (Queen's), M.B.A. (York), Ph.D. Candidate (Leicester); **Fassina**, N., B.Sc. (Calgary), Ph.D. (Toronto); **Uggerslev**, K., B.Sc., M.Sc., Ph.D. (Calgary); **Wang**, X., B.Ed., M.Ed. (Northeast Normal), Ph.D. (McGill).

Marketing

Professors

Bruning, E.R., B.S. (Arkansas), M.A., Ph.D. (Alabama); **Good**, W.S., B.Sc.F. (Toronto), M.S., M.B.A., Ph.D. (Michigan State); **Litz**, R.A., B.Comm.(Hons.) (Manitoba), M.B.A. (Minnesota), Ph.D. (Pittsburgh);

Associate Professors

Manchanda, R.V., B.Comm., M.B.A. (India), M.Sc. (Illinois), Ph.D. (Illinois); **Smith**, M.C., B.Sc.(Hons.), M.B.A. (Queen's), Ph.D. (Oregon).

Assistant Professors

Bhatnagar, N., M.Sc.Mgmt.Studies, M.Sc.(Hons) (India), Ph.D. (North Carolina at Chapel Hill); **Carvalho**, S., B.B.A. (Brazil), MBA (Northeastern), Ph.D. (Baruch CUNY); **Samu**, S., B.Sc., M.B.A. (India), Ph.D. (Indiana); **Sivaramakrishnan**, S., B.Sc. (Madras), M.B.A. (Bharathiar), Ph.D. (Pennsylvania State); **Wan**, F., B.A. (Wuhan, China), M.A. (Chinese University of Hong Kong), Ph.D. (Minnesota).

Warren Centre for Actuarial Studies and Research

Associate Professor

Pai, J.S., B.Comm. (Feng Chai), M.S., Ph.D. (Connecticut).

Assistant Professors

Pedersen, H., B.Sc. (Manitoba), M.Sc. (Stanford), Ph.D. (Washington); **Shand**, K.J., B.Comm.(Hons.) (Manitoba), Ph.D. Candidate (Heriot-Watt), F.S.A., F.C.I.A.

Supply Chain Management

Professors

Bhatt, S.K., B.Sc., M.Sc. (Agra), Ph.D. (Kanpur); **Larson**, P., B.S.B., M.B.A. (Minnesota), Ph.D. (Oklahoma); **Prentice**, B.E., B.A. (Western), M.Sc. (Guelph), Ph.D. (Manitoba); **Rosenbloom**, E.S., B.Sc. (Hons.), M.Sc. (Math), M.Sc. (Statistics) (Manitoba), Ph.D. (Waterloo); **Tyrchniewicz**, E.W., B.S.A. (Hon) (Manitoba), M.Sc., Ph.D. (Purdue).

Associate Professors

McLachlin, R.D., B.Sc. (Eng.), M.B.A. (Alberta), Ph.D. (Western Ontario).

Assistant Professors

Earl, P.D., B.A.Sc., M.A.Sc. (Toronto), Ph.D. (Manitoba); **Foroopon**, C., M.Sc., Ph.D. Candidate (Paris); **Morris**, M., B.A. (Old Dominion), Ph.D. (Maryland).

SECTION 2: Business Education

The undergraduate degree of the I.H. Asper School of Business, the Bachelor of Commerce (Honours), is designed to provide a broad-based general business education with an opportunity to specialize in one or two of the 13 majors available to undergraduate students.

Education for business had its origin at the University of Manitoba during the First World War when a series of short courses were offered in the evening for business people. By 1937, the Department of Commerce was created in the Faculty of Arts and Science, and the first graduates received their Bachelor of Commerce degree in 1940. Since then, the unit has undergone many transitions, changing its status to the School of Commerce in 1950, to the Faculty of Commerce in 1970, to the Faculty of Administrative Studies in 1972, to the Faculty of Management in 1986, and to its current name, the I.H. Asper School of Business in 2000.

In 1999, the Asper School of Business received accreditation from AACSB International - The Association to Advance Collegiate Schools of Business. This prestigious recognition affirms the faculty's commitment to the continuous improvement of its courses and programs. The mission of the Asper School of Business is to provide management education in Manitoba by creating and disseminating leading edge knowledge and developing skills relevant to current and future managers in organizations operating in a global environment.

SECTION 3: Admission to the Asper School of Business

3.1 Degree Offered

Bachelor of Commerce (Honours)

Minimum time to graduation: Four years (University 1 plus three years in the Asper School of Business).

3.2 Course Requirements for Admission

The following is a summary of the admission requirements for the Bachelor of Commerce (Hons.). Equivalent academic courses completed elsewhere at recognized universities will be considered. All admission requirements, as well as application deadline dates and forms, are included in the Applicant Information Bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre. This information is also posted on the University of Manitoba's website.

Track 1

Economics ECON 1200
Mathematics MATH 1520 or MATH 1500 and Mathematics MATH 1310 or MATH 1300
Psychology PSYC 1200 or Sociology SOC 1200
A 3 or 6 credit hour course that satisfies the Written English requirement
6-9 credit hours of electives for a total of 30 credit hours
(Students must achieve a minimum grade of "C" on each course listed above.)

Track 2

Applicants who are missing one or more of the Track 1 course requirements may apply under Track 2 provided they have met the following criteria: completed a minimum of 30 credit hours; achieved a minimum admission GPA of 3.1; and achieved a minimum grade of "C" on each

course comprising the 30 credit hours. Track 2 applicants are required to complete all outstanding Track 1 required courses during their first year after admission to the Asper School of Business.

Priority for Admission

Admission to the Asper School of Business is limited to an annual quota. The quota will be filled by selecting students from a rank-ordered list of applicants in the following order:

For September 2006:

First Priority - Track 1 applicants with an admission Grade Point Average (AGPA) of 2.60 or greater in descending order of their AGPA with 30 spaces reserved for the Track 2 applicants with the highest AGPAs.

Second Priority - Track 2 applicants with an AGPA of 3.10 or greater in descending order of their AGPA.

Third Priority - Track 1 applicants with an AGPA of 2.00 to 2.59 in descending order of their AGPA

Applicants in both Tracks may require an AGPA well in excess of the minimum to be successful in the annual competition for admission.

Other requirements

High school prerequisite: Mathematics 40S (pre-calculus, with a minimum 60 per cent)

The Written English and Mathematics requirements are satisfied by Track 1 courses.

Minimum GPA for consideration: 2.0 for Track 1 applicants; 3.1 for Track 2 applicants.

Admission to the Asper School of Business is limited to an annual quota and is competitive.

Mature students are not admitted directly to the Bachelor of Commerce (Honours) program. Mature students seeking admission to the Bachelor of Commerce (Honours) program must first complete the Qualifying Year requirements. All students planning to enter the Bachelor of Commerce (Honours) program must obtain a minimum of 60 per cent in Senior 4, Mathematics 40S, or equivalent.

Advance Standing: Transfer and Second Degree Students

Students who do not meet the eligibility requirements for admission after their first year of University can spend another year (or more) in another faculty, complete the eligibility requirements, and then apply (or re-apply) for admission. Students who complete additional course credits beyond the qualifying year requirements are eligible to receive applicable advance standing upon admission to the Asper School of Business.

The following regulations apply to students who must (or choose to) take more than one year to qualify for admission to the Asper School of Business.

All transfer and second degree students will be required to:

- Meet the admission requirements of Track 1 or Track 2 in the year of application.
- Complete all 126 credit hours required in the B. Comm. (Hons) program, including the 30 credit hours that comprise the specific qualifying year requirements, the Core requirements, the course requirements for one Major, Business Options, and Elective courses. After admission to the Asper School, students in Track 2 must complete all outstanding courses listed in the Track 1 requirements and achieve a minimum grade of "C" in each course.

Students who are admitted to the Asper School of Business who have completed more than the minimum 30 credit hours required in the Qualifying Year may be eligible to receive transfer credit for the additional work completed, provided the additional course work is creditable toward the degree requirements of the Bachelor of Commerce (Honours).

Students who are admitted to the Asper School of Business following the completion of another degree program are eligible to receive a maximum of 60 hours of transfer credit for applicable courses completed as part of their first degree. Students who, within their first degree, have more than 60 hours of transferable credits would be required to take substitute courses for credits in excess of the 60 hour limit on transfer.

Students who have a degree and in addition have completed further courses at the University of Manitoba which are applicable to the

B.Comm.(Hons.) program that were not used for credit toward their first degree may receive additional transfer credit for that work.

Students are encouraged to contact a Student Advisor in the Program Office for information on how to optimize their transfer credit and advance standing.

Admission Requirements: Joint Programs with Manitoba Colleges

The Asper School of Business has established Joint Programs with Red River College, Assiniboine Community College, University College of the North, and Ecole technique et professionnelle. Graduates of the Business Administration Diploma (University Stream) from these four colleges are eligible to apply directly to the Asper School of Business. Successful applicants will receive block transfer credit for their courses completed in the Business Administration Diploma and are required to complete specified courses at the University of Manitoba in order to receive the Bachelor of Commerce (Honours) degree. Requirements for the Joint Programs are listed in Section 7 for Red River College, in Section 8 for Assiniboine Community College, in Section 9 for University College of the North, and in Section 10 for Ecole technique et professionnelle.

Admission to each Joint Program is limited to an annual quota and is competitive. Students must achieve a minimum grade point average of 3.00 on their Business Administration Diploma (University Stream) to be eligible for admission. Applicants are ranked in descending order of their grade point average and are admitted until the annual quota is met.

SECTION 4: Asper School of Business Student Services

4.1 Career Services Centre

The Career Services Centre assists current business students and graduates with job placement and career search skills development. The Centre also provides assistance and support to local, national, and international employers who recruit business students for full-time, part-time, summer, and casual employment. For information contact: Asper School of Business Career Services Centre, 144 Drake Centre, University of Manitoba, Winnipeg, Manitoba R3T 5V4; Telephone: (204) 474 6596, Fax: (204) 474 8301.

4.2 International Study

Students who have reached the third year of the four-year B. Comm. (Hons.) program have an opportunity to participate in International Exchange Programs at several universities. Exchanges are currently available in Argentina, Brazil, Chile, China, Denmark, England, France, Germany, Iceland, India, Mexico, Minnesota, the Netherlands, South Korea, and Spain. Other International Programs may be established throughout the year. Language proficiency is required for some programs.

Interested students are encouraged to contact the Undergraduate Program Office for applications and information.

4.3 Student Organizations

Commerce Students' Association

The Commerce Students' Association (CSA) is comprised of all students in the Asper School of Business. It is regarded as an integral part of the educational activities of Business students. The purpose of the organization is to enhance the quality of student life through social, educational, and informative events; to protect the academic rights of all students in the faculty; and to bring prominent business and government executives into contact with students. Telephone: (204) 474 7364.

The Asper School of Business also has student groups whose activities center on the different majors or other areas of interest. For further information on these organizations, contact the following groups directly or the CSA offices at 254 Drake Centre; Telephone (204) 474 7364.

AIESEC: International Association for Commerce, Science, and Economics Students; 266 Drake Centre; (204) 275 5539.

AIMS: Association of International Management Students; 262 Drake Centre; (204) 275 1431.

ASBAA: Asper School of Business Accounting Association; 260 Drake Centre; (204) 269 1490.

CEO: Collegiate Entrepreneurs' Organization; 526C Drake Centre; (204) 474 6531.

MIMC: Manitoba International Marketing Competition; 359 Drake Centre; (204) 474 6598.

MISA: Management Information Systems Association; 264 Drake Centre; (204) 269 5488

Toastmasters: Talking Bison Toastmasters; 264 Drake Centre; (204) 269 1490.

UMAC: University of Manitoba Actuarial Club; 266 Drake Centre; (204) 275 5539.

UMFO: University of Manitoba Finance Organization; 264 Drake Centre; (204) 261 7806.

UMHRA: University of Manitoba Human Resource Association; 262 Drake Centre; (204) 275 1431.

UMIG: University of Manitoba Investment Group; 264 Drake Centre; (204) 261 7800.

UMMA: University of Manitoba Marketing Association; 262 Drake Centre; (204) 275 1431.

Beta Gamma Sigma

Beta Gamma Sigma is an international honour society recognizing the outstanding academic achievements of students enrolled in collegiate business programs accredited by AACSB – The Association to Advance Collegiate Schools of Business. Students who meet membership requirements are invited to join the University of Manitoba chapter. Selection recognizes academic achievement and expresses confidence in the student's ability and promise in becoming an outstanding business leader of the future.

4.4 Professional Affiliations

Professional Actuarial Associations

Students in the Actuarial program are encouraged to write professional actuarial examinations related to their program of studies. These professional examinations enable students to meet some of the membership requirements of the Canadian Institute of Actuaries and the Society of Actuaries.

The Society of Management Accountants of Manitoba

Graduates who wish to qualify for the professional designation of CMA (Certified Management Accountant) must meet the requirements established by the society. These requirements include courses of study, practical accounting experience, and examinations. Students should obtain the requirements of the society by contacting the Society of Management Accountants of Manitoba, 815-240 Graham Avenue, Winnipeg, Manitoba R3C 0J7.

The Institute of Chartered Accountants of Manitoba

Graduates who wish to qualify for the professional designation of CA (Chartered Accountant) must meet the requirements established by the institute. These requirements include courses of study, a period of practical experience, and satisfactory performance on examinations set by the institute. Students should obtain the current requirements of the institute by contacting the Institute of Chartered Accountants of Manitoba, 500 – 161 Portage Avenue East, Winnipeg, Manitoba R3B 0Y4.

The Certified General Accountants' Association of Manitoba

Graduates wishing to qualify for the professional designation of CGA (Certified General Accountant) must complete the requirements established by the association. These requirements include courses of study, a period of practical experience, and satisfactory performance on examinations set by the association. Students should obtain the current requirements of the association by contacting the Certified General Accountants' Association of Manitoba, 4 Donald Street, Winnipeg, Manitoba R3L 2T7.

Banff School of Advanced Management

The Asper School of Business is one of five western university programs that jointly sponsor the Banff School of Advanced Management. The BSAM program is a six-week executive development program designed to improve the managerial skills of middle and senior level managers in both public and private organizations. Additional information is available from the Banff School of Advanced Management, Box 1020, Station 5, Banff, Alberta, T0L 0C0.

SECTION 5: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Asper School of Business has regulations and requirements, published below, that apply specifically to its students and to non-business students taking business courses.

5.1 Changes in Program Requirements

Once students are admitted to the Asper School and have successfully completed any portion of the program, they will not be required to meet new course requirements subsequently stipulated for that portion of the program, whether the requirements be for the faculty or for an individual major.

5.2 Evening Program

The Asper School of Business does not offer an evening program. Although a limited number of business courses may be offered in evening time slots during both the Regular and Summer Sessions, it is not possible to complete all the course requirements of the Bachelor of Commerce (Honours) program without recourse to daytime attendance.

5.3 Program Regulations

The Bachelor of Commerce (Honours) program undergoes changes from time to time. As a result, some changes in program structure, content and regulations may be made for the 2006-07 Regular Session. Specific program information may be obtained from the Program Office.

Student's Responsibility

It is the responsibility of all students to ensure that they follow the program of study as outlined in their chosen Major and that they meet all the requirements as specified by the University of Manitoba and the Asper School of Business.

5.4 Prerequisite Requirements

Prerequisite requirements must be met for entry into and continuance in the faculty.

Students must also meet all individual course prerequisites for further study in the program.

A passing grade is acceptable for prerequisite purposes unless a higher grade is called for in the course description.

5.5 Cumulative GPA Requirement for Graduation

Students Admitted in 2000 and Thereafter

Students admitted to the Asper School of Business in 2000 and thereafter must achieve a minimum cumulative GPA of 2.00 on all 126 credit hours required in the B. Comm. (Hons.) degree program. Students must also achieve a passing grade of "D" or better in each course except for the individual courses required in the Track 1 requirements which require a grade of "C" or better in each course.

All qualifying year courses, Core courses, Major courses, Options, and Electives applicable to the B. Comm. (Hons.) degree requirements, as well as the grades achieved in each course, are transferred into the Asper School of Business and are included in the cumulative GPA.

Students Admitted Prior to 2000

The cumulative GPA of students admitted prior to 2000 will be based only on the 96 credit hours required in the B. Comm. (Hons.) program and excludes the qualifying year courses listed in the Track 1 requirements. Students must achieve a minimum cumulative GPA of 2.00 on the 96 credit hours and achieve a passing grade of "D" or better in each course.

5.6 Calculation of The Cumulative GPA

The computation of the cumulative GPA is the same as that described in the chapter, General Academic Regulations and Requirements.

5.7 Residence Requirement

All Business students must complete a minimum of 66 credit hours at the University of Manitoba in order to satisfy the residence requirement of the B. Comm. (Hons.) degree. Students participating in approved International Exchange Programs may be exempt from the 66 credit hour requirement. Students considering course work at another university are referred to the chapter, General Academic Regulations and Policy, and the section on Letter of Permission.

5.8 Time Limit for Completion of the Degree

A student may take up to a maximum of six years to complete all degree requirements. The six years (i.e., six consecutive 12-month periods) begin with the student's initial registration in the Asper School of Business. This time limit applies to all students, whether full-time or part-time.

The maximum period of six years for completion of degree requirements will be reduced by one year for each block of 15 credit hours of advance standing received at the point of admission.

A student who does not complete all degree requirements within the time limit permitted will be required to withdraw from the faculty.

5.9 Maximum Number of Failures and Repeats Permitted

Each student in the Asper School of Business is permitted a maximum of 15 credit hours of failures. Students who exceed their limit of failures will be placed on Academic Suspension. Such students may enter the Reinstatement Program and should contact a Student Advisor in the Program Office for details.

Each student will be permitted to repeat or substitute a maximum of 12 credit hours of previously passed courses, with a maximum of six credit hours per course.

5.10 Failure to Meet Requirements

Failure to meet the requirements for graduation within the limits specified above will result in the student being placed on Academic Suspension. Such students may enter the Reinstatement Program and should contact a Student Advisor in the Program Office for details.

Students will be placed on Academic Suspension as soon as it becomes evident that they will be unable to meet the requirements for the degree. Therefore, students in jeopardy should carefully monitor their first term results since they will be withdrawn from all second term Business courses if suspended, regardless of the date of official notification of the suspension.

Students who have been placed on Academic Suspension will only be considered for reinstatement into the Asper School of Business after the specific conditions of reinstatement have been met. Details concerning reinstatement are available from the Program Office.

5.11 Withdrawal from the Bachelor of Commerce (Honours) Program

- A student who does not register for any courses in the first academic year after admission will cease to be a student in the Asper School of Business. Such students must re-apply for admission if that is desired and will have to meet the requirements for admission at the time of the new application.
- A student who registers for course work in the first academic year after admission but subsequently voluntarily withdraws from all course work will be permitted to re-register at any time thereafter, subject to all faculty policies and requirements as they existed at the time of first admission. Such students should be aware of the time limit for completion of the degree.
- A student who applies for transfer to another university program and subsequently registers for courses will cease to be a student in the Asper School of Business. Such a student must re-apply for admission if that is desired and will have to meet the requirements for admission at the time of the new application.

5.12 Withdrawal from Individual Courses

Required Courses

Students in the Asper School of Business may withdraw without academic penalty from a required Core course provided they have not previously

failed or withdrawn from that course and that they have met the Voluntary Withdrawal deadlines established by the university (see Deadline for Withdrawals in the Academic Schedule).

Electives and Options

Students may withdraw without academic penalty from an Elective or Option provided they do so before the final date for withdrawal (see Deadline for Withdrawals in the Academic Schedule).

Authorized Withdrawals

Authorized Withdrawals from courses after the registration revision period in each term may be granted on the basis of medical and compassionate grounds. A medical certificate signed by a physician or other appropriate professional must document medical grounds. Compassionate reasons may include unavoidable financial hardships and family or personal circumstances supported by appropriate documentation. Students requesting Authorized Withdrawals should contact the Program Office.

5.13 Repeating or Substituting Courses

Required Courses

A student who withdraws from a Core course or who obtains a grade of "F" in such a course must repeat that course during the following Fall/Winter Session. However, the student may take the course in either fall or winter term. If a student repeats a course for which a grade was recorded, only the last of the grades achieved will be included in the computation of the cumulative GPA.

Students may not substitute another course for a Core course.

Students may not subsequently withdraw from a Core course in which they have a previous withdrawal or failure except for those courses taken during Summer Session. If, on repeating the course, the student does not complete the course successfully, a grade of "F" will be recorded for that course on the student's history.

Major Courses

Students who achieve a grade of "F" in a Major course must either repeat that course or substitute another Major course if the Major requirements permit an alternate choice. Upon successful completion of the Major course, only the higher of the grades achieved will be included in the computation of the cumulative GPA. When a course is to be substituted, the student must advise the Program Office in writing prior to enrolling in the new course.

Electives and Options

Students who achieve a grade of "F" in an Elective or Option may either repeat that course or substitute another course in its place. Upon successful completion of the course, only the higher of the grades achieved will be included in the computation of the cumulative GPA. When a course is substituted for a failed Elective or Option, a student must advise the Program Office in writing prior to enrolling in the new course.

Voluntary Repeats

In order to improve their GPA, or to meet a prerequisite requirement, students may voluntarily repeat any course in which a passing grade has been received, subject to any restrictions which may be published in the faculty registration guide and subject to the limits imposed at the point of admission. In such a case, only the last of the grades achieved will be included in the computation of the cumulative GPA.

5.14 Maximum Course Load

Students are not permitted to take more than 18 credit hours during an academic term without permission from the Head of the department of the student's Major.

5.15 Course Selection and Requirements

All students are limited to a maximum of six credit hours of IDM 4050 Readings, IDM 4070 Research, and IDM 4080 Research. These courses are considered general Options, rather than as part of any Major.

ACC 3050 Taxation Accounting, ACC 3070 Tax Planning, FIN 3270 Personal Financial Planning, FIN 3420 Security Analysis and FIN 3440 Real Estate Investments are also considered general Options. They are not part of any Major.

Students will not be permitted to take any previously passed course that applies to the B. Comm. (Hons.) as a special student.

5.16 Eligibility Requirements for Awards

To be eligible for the Dean's Honour List or for bursary awards, a student must complete a minimum of 24 credit hours of courses at the University of Manitoba during an academic year consisting of consecutive fall and winter terms. For the Dean's Honour List, the student must also achieve a sessional GPA of at least 3.50. Students participating in approved International Exchange Programs may be eligible for the Dean's Honour List.

The degree "With Distinction" will be awarded to all students graduating with the B. Comm. (Hons.) Degree who attain a cumulative awards GPA of 3.80 or better on the following criteria.

- For students admitted to the Asper School of Business in 2000 and thereafter: The cumulative awards GPA will be determined on the basis of all courses which form a part of the 126 credit hours required in the four-year degree program.
- For students admitted to the Asper School of Business prior to 2000: The cumulative awards GPA excludes the qualifying year courses listed in the Track 1 requirements. The GPA will be determined on the basis of all courses which form part of the remaining 96 credit hours of the degree requirements for the B. Comm. (Hons.) Program.

The University Gold Medal in Business shall be awarded to the graduating student who has achieved the highest cumulative grade point average (minimum 3.80) based on the last four Regular Session terms of their program. The student must be registered in a minimum 80% course load during the last four Regular Session terms. An 80% course load is considered to be 24 credit hours over a Regular Session consisting of consecutive fall and winter terms. When a student has not taken consecutive fall and winter terms, an 80% course load will be considered to be 12 credit hours in a term.

Summer Session courses will not be included in this credit calculation. All courses (including Letter of Permission courses, repeats, substitutions, and special student status courses) are to be used to determine the credit load requirement, but the grade point average will be calculated on University of Manitoba courses only. Students graduating in October, February and May are eligible for the Gold Medal which shall be awarded annually at the May Convocation.

Students interested in bursaries, awards and scholarships should contact the Program Office and Financial Aid and Awards for information.

5.17 Examination Regulations

For the particular examination regulations, including deferred examinations, pertinent to the Faculty, students are referred to the pamphlet, Examination Regulations for the Asper School of Business, available from the Program Office. The faculty does not offer supplemental examinations. Contact the Program Office for information on Challenge for Credit.

5.18 Letter of Permission to Take Courses at Another University

Students wishing to complete courses at another institution for credit at the University of Manitoba must obtain written permission from the Registrar's Office prior to registering at the other institution. To be eligible to take courses on a Letter of Permission, a Business student must have completed a minimum of 24 credit hours in the Asper School of Business in addition to any transfer credits received upon admission.

Effective September 1999 grades achieved in courses taken on a Letter of Permission shall be transferred to the student's academic record and shall be included in the sessional and cumulative GPA.

5.19 Plagiarism, Cheating and Personation

The Asper School of Business has adopted the Senate definition and policy on plagiarism, cheating and personation as described in the chapter, General Regulations and Requirements. A student found guilty of participating in any of these activities is subject to serious academic penalty and possible prosecution under the Canadian Criminal Code.

5.20 Student Appeals of Academic Regulations

Except as otherwise noted, student appeals should be directed to the Secretary of the Undergraduate Program Committee in the Program Office. The Committee considers appeals from students who request special con-

sideration in respect to rules and regulations governing their programs of study.

A certificate from an appropriate professional agency such as the University Counselling Service or a licensed medical practitioner should support appeals based on emotional or medical problems.

5.21 Security of Academic Records

The Asper School of Business has adopted supplementary criteria and procedures on access to student academic records to supplement the university policy on Disclosure and Security of Student Academic Records. Copies of these policies are available in the Program Office.

5.22 Course Limitations for Non-Business Students

Students who have not been admitted to the Asper School of Business are limited to an aggregate total of 36 credit hours of courses offered by the Asper School of Business while registered in another faculty, school, or division. This aggregate total of 36 hours of Business courses includes failures, repeats of previously passed courses, and transfer credit received for Business courses from external institutions. Once the aggregate total of 36 credit hours of Business courses is reached, students will be restricted from registering for any more courses offered by the Asper School of Business. Faculty of Science students with a major in Actuarial Mathematics are exempt from this restriction.

SECTION 6: Program Requirements for the Asper School of Business Bachelor of Commerce (Honours) Program – Track 1 And Track 2

6.1 Requirements Applicable to Students Admitted in 2000 and Thereafter

Effective September 2000 all courses, including qualifying year courses, applicable to the 126 credit hours required in the B. Comm. (Hons.) degree program shall be transferred into each student's academic record in the Asper School of Business. Grades achieved on these applicable courses will be transferred as well. Cumulative GPA calculations will be based on the entire 126 credit hours.

6.2 Requirements Applicable to Students Admitted Prior to 2000

For students admitted prior to September 2000, the courses comprising the qualifying year requirements will not be transferred into their academic records in the Asper School of Business. Cumulative GPA calculations will be based only on the remaining 96 credit hours required in the B. Comm. (Hons.) Degree program. Track 2 students will be required to take outstanding qualifying year courses as a special student, and grades earned in these courses will not be included in the student's cumulative GPA.

6.3 General Structure of the Program

The Bachelor of Commerce (Honours) degree is comprised of 126 credit hours and can be divided into the following components:

- The Qualifying Year (Track 1) Course Requirements (30 credit hours)
- The Core (57 credit hours)
- The Major (12 credit hours)
- Business Options (15-18 credit hours)
- Electives (9-12 credit hours)

These components and their associated limits are defined below.

Qualifying Year Course Requirements

All students must complete the specified Qualifying Year course requirements. Track 1 students complete these requirements prior to their admission to the Asper School of Business. Track 2 students have completed 30 credit hours of university course work but are missing one or more of the specific Qualifying Year courses. Track 2 students must complete all outstanding Qualifying Year (Track 1) courses during their first year after admission to the Asper School of Business and achieve a minimum grade of "C" in each outstanding Qualifying Year course.

The Core

The CORE consists of 57 credit hours of specified mandatory courses from all four departments in this faculty as well as courses taught by the departments of Computer Science, Statistics, Philosophy and Religion. All students are required to complete the Core. The Core presents the essence of a business degree program. The majority of the Core courses are taken in the first two years after admission to the Asper School of Business.

The Major

Each student must complete the course requirements of one MAJOR. Each department and the Dean's Office have developed one or more Majors. Each Major consists of a 12 credit hour unit of course work specified by the department. Subject to demand and faculty resources, specialized Majors are available in Aboriginal Business Studies, Accounting, Actuarial Mathematics, Entrepreneurship/Small Business, Finance, Generalist, Human Resources Management/Industrial Relations, International Business, Logistics and Supply Chain Management, Management Information Systems, Management of Organizations, Marketing, and Operational Research/Operations Management. A list of the Departments and the Majors they oversee is outlined below.

Students will normally choose a Major at the beginning of the third year of the program, following completion of many of the Core courses, which introduce the areas. Students have an opportunity to transfer from one Major to another, but this opportunity decreases as the student progresses in the program.

Business Options

The third component of the program consists of a required number of Business courses freely selected by the student. These courses are referred to as Business OPTIONS. Students must complete at least 15 and not more than 18 hours of Options. Some students may want to take Options which will supplement their Major, whereas other students may prefer to broaden their educational base by selecting Business courses in another or several other Majors. Students who want to supplement their Majors may take up to 12 hours of their Options from that area. Students may complete a second Major as part of their Options requirements. Such students should consult with staff in the Program Office.

Electives

The fourth component of the program is the ELECTIVE requirement. An Elective is any three or six credit hour course freely chosen by the student from courses taught in the degree programs of other faculties and schools, excluding the Asper School of Business. Students must complete at least nine and not more than 12 credit hours of Electives.

The total of Major/Option/Elective courses is 39 credit hours. Therefore each student may choose a 12/15/12 credit hour combination or 12/18/9 credit hour combination.

6.4 Course Requirements

The tables below list the Core courses that all Business students must complete. The courses are listed by year in a suggested sequence. Students normally complete the Core courses in the sequence shown.

To determine which additional courses to take each year (i.e., non-Core courses) students should consult the listing of course requirements for each year of their chosen Major.

YEAR 2 of the 4-Year Program

STAT 1000	3
STAT 2000	3
ACC 1100	3
ACC 1110	3
FIN 2200	3

GMGT 2000	3
GMGT 2080	3
COMP 1260	3
MKT 2210	3
MSCI 2150	3
Total credit hours	30

YEAR 3 of the 4-Year Program

MIS 2000	3
GMGT 2070	3
GMGT 2120	3
HRIR 2440	3
GMGT 3300	3
OPM 2600	3
Critical Thinking (see Note 1)	3-6
Electives, Options & Major Courses (see Note 2)	9-6
Total credit hours	30
YEAR 4 of the 4-Year Program	
GMGT 4010	3
Ethics (see Note 3)	3-6
Electives, Options and Major Courses (see Note 2)	24-21
Total credit hours	30

YEARS 2, 3, or 4.

Electives, Options and Major Courses (see Notes 2 and 4)	6
Total Credit Hours Required	96

NOTES:

- 1) Critical Thinking requirement: One of the following courses: PHIL 1200, PHIL 1290, PHIL 1320, or PHIL 2850. If a six credit hour course is chosen, three credit hours will count as Electives.
- 2) In addition to 57 credit hours of Core courses all students must take 12 credit hours in one Major, 15 or 18 credit hours of Business Options and nine or 12 credit hours of Electives.
- 3) Ethics requirement: One of the following courses: PHIL 2290, PHIL 2740, PHIL 2750, PHIL 2790, PHIL 2830, PHIL 2840, RLG 1420, or GMGT 3581. If a six credit hour course is chosen, three credit hours will count as Electives.
- 4) An additional six credit hours are flexible and must also be completed.
- 5) Students may register for Electives in any year. Registration in Options and Major courses normally begins in Year 3 of the 4-Year program.

Course Key

All Core courses are taught by the Asper School of Business except the following:

Statistics		
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
Philosophy		
PHIL 1200	Introduction to Philosophy	6
PHIL 1290	Critical Thinking	3
PHIL 1320	Introductory Logic	6
PHIL 2290	Ethics and Society	6
PHIL 274	Ethics and Biomedicine	3
PHIL 2750	Ethics and the Environment	3
PHIL 2790	Moral Philosophy	6
PHIL 2830	Business Ethics	3
PHIL 2840	The Ethics of War and Peace	3
PHIL 2850	Philosophy of Social Science	3
Religion		
RLGN 1420	Religious Ethics	3
Computer Science:		
COMP 1260	Introductory Computer Usage 1	3
Collège universitaire de Saint-Boniface		
RLGN 3581	Ethique et responsabilité sociale	3

6.5 Codes for Majors

Department	Major	Code
Accounting and Finance	Accounting	009A
	Finance	009F
	Management Information Systems	009M
Business Administration	Human Resources Management/Industrial Relations	027R
	Management of Organizations	027G
	Aboriginal Business Studies	098A
Dean's Office	Generalist	098G
	International Business	098N
	Logistics and Supply Chain Management	164L
Supply Chain Management	Operational Research/Operations Management	027L
	Entrepreneurship/Small Business	118E
	Marketing	118
Warren Centre for Actuarial Studies and Research	Actuarial Mathematics	010A

6.6 Asper School of Business Requirements for Majors, B. Comm. (Hons.)

All students must complete the Core, one of the Majors listed below, as well as the Option and Elective course components (15-18 hours of Options and 9-12 hours of Electives). Students who intend to complete a second major should note that when a course is applicable to two different majors, that course may be used to satisfy only one set of major requirements.

Aboriginal Business Studies

The Major consists of NATV 4220, IDM 3000 plus six credit hours from FIN 3250, FIN 3470, GMGT 4150, NATV 3000 (topic: Aboriginal Wisdom and Spirituality), NATV 3320, IDM 4090, ENTR 3100, or ENTR 4100.

Accounting

The Major consists of: ACC 2010, ACC 2020, ACC 3040 and ACC 4030. The prerequisite for ACC 2010 is "C+" in ACC 1100 and for ACC 3040 is "C+" in ACC 1110.

Actuarial Mathematics

The Major consists of any 12 hours from ACT 2020, ACT 2120, ACT 2210, ACT 3130, ACT 3230, ACT 3330, ACT 3530, ACT 4140, ACT 4240, and ACT 4340.

Prior to registration, all students enrolled in Actuarial Mathematics should consult the Director or a Student Advisor for program planning advice.

To facilitate entry into and understanding of material covered in some advanced Actuarial courses, students entering the second year of the four-year program are advised to take the following courses: MATH 2720 plus MATH 2730 or MATH 2750 (which satisfies the elective requirement). Students declaring Actuarial Mathematics as their first major may take these courses as either Business Options or non-Business Electives.

Business/Government Relations

This Major was deleted January 2002. Students who enrolled in the Business/Government Relations Major prior to January 2002 should consult the Program Office for course requirements for the major.

Entrepreneurship/Small Business

The Major consists of: ENTR 3100, ENTR 4100, FIN 3470 and one of: ACC 3050, FIN 3250, ACC 3530, ACT 4050, GMGT 3050, GMGT 3080, MKT 3220, MKT 3310 or MKT 4270.

Finance

The Major consists of: FIN 3410, FIN 3460, FIN 3480, and FIN 4400.

Finance Options are: FIN 3450, FIN 4230, FIN 4260, and FIN 4270. Students in the Finance Major may take all of these courses.

The prerequisite for FIN 3410, FIN 3460 and FIN 3480 is a "C+" in FIN 2220.

Generalist

The Major consists of one course from the list of courses from four different Majors (i.e., Options that are not part of a Major's requirements are not eligible for the Generalist Major).

Human Resources Management/Industrial Relations

Effective September 2005 the Major consists of: HRIR 3450 plus three of the following: HRIR 4410, HRIR 4420, HRIR 4480, HRIR 4520 **OR** HRIR 3450 plus two of the following: HRIR 4410, HRIR 4420, HRIR 4480, HRIR 4520, plus one of the following: HRIR 3430, LABR 3010, LABR 3060, LABR 3070, LABR 3130, and LABR 3140.

Students admitted prior to September 2005 may complete the following requirements: HRIR 3450 plus any three of the following: HRIR 3430, HRIR 4410, HRIR 4420, HRIR 4480 or HRIR 4520.

Students entering the second year of the four-year program are advised to take HRIR 2440 since it is a prerequisite to advanced courses in the area.

International Business

Effective September 2000 the Major consists of: FIN 3450, INTB 2200, HRIR 4520, and MKT 3300.

Students admitted prior to September 2000 may complete the following requirements: INTB 2200; one of either FIN 3450 or MKT 3300; plus two of ACC 3060*, FIN 3450 (if not already chosen), FIN 3460, GMGT 3020*, GMGT 4120, HRIR 4520, MKT 3240*, or MKTG 3300 (if not already chosen). (*Selected topics must be an approved international topic.)

Students majoring in International Business are permitted to take 12 credit hours of a foreign language and/or courses with an international focus from an approved list and have these non-business courses count as Business Options. The list is available in the Program Office.

Logistics and Supply Chain Management

Effective September 2005 the Major consists of: SCM 2210, SCM 2230, SCM 3360 plus one of the following: SCM 2220, SCM 3230, SCM 4240, OPM 4630.

Students admitted prior to September 2005 may complete the following requirements: SCM 2210, SCM 2220, SCM 3360, OPM 4630.

Recommended Options/Electives in this area include: MIS 3500, MIS 3510, INTB 2200, HRIR 3450, GMGT 3120, GMGT 3160, GMGT 4160, MSCI 3400, IDM 4050, IDM 4070, IDM 4080, MKT 3220, MKT 3320, MKT 3340, MKT 4410, GEOG 3800, ECON 2450, ECON 2460.

Management Information Systems

Effective September 2004 the Major consists of MIS 3500, MIS 3510, MIS 3520, and MIS 4500.

Students admitted prior to September 2004 may complete the following requirements: COMP 1010, MIS 3500, MIS 3510, and MIS 4500.

Options available in this area are ACC 3530 and MIS 4250.

Students interested in pursuing the Management Information Systems Major are encouraged to take MIS 2000 in the second year of the four-year program since it is a prerequisite to advanced courses in the area.

Management of Organizations

The Major consists of any 12 hours from: GMGT 3010, GMGT 3020, GMGT 3040, GMGT 3160, GMGT 4040, GMGT 4140 and GMGT 4150. Students entering the second year of the four-year program are advised to take GMGT 2070 and GMGT 2080 since they are prerequisites to advanced courses in the area.

Marketing

The Major consists of MKT 3220, MKT 3230, MKT 4210 and 3 hours from MKT 324, MKT 3250, MKT 3300, MKT 3310, MKT 3320, MKT 3340, MKT 3390, MKTG 4240, MKTG 4270 or MKTG 4410. In addition to the 12 credit hours required for the major, Marketing students may take up to an additional 12 credit hours from the above list.

Operational Research

This Major is not currently offered.

Operational Research/Operations Management

The Major consists of any 12 hours from MSCI 3400, OPM 3650, OPM 3660, OPM 367, MSCI 4220, MSCI 4230, OPM 4620, and OPM 4630.

Prior to registration, all students enrolled in Operational Research/Operations Management should consult the Department Head or a Student Advisor for program planning advice.

Production/Operations Management

This Major is not currently offered.

SECTION 7: Program Requirements for the Asper School of Business/Red River College Joint Program

7.1 General Structure of the Program

Prior to admission to the Asper School of Business/Red River College Joint Program, students must complete the Business Administration Diploma (University Stream) at Red River College with a minimum cumulative grade point average of 3.00. Admission is limited and competitive. Following admission to the Asper School of Business, students in the Joint Program will be required to complete 72 credit hours to earn the Bachelor of Commerce (Honours) degree. The 72 credit hours can be divided into the following components: the Core, the Major, Business Options, and Electives. These components and their associated limits are defined below.

The Core

The CORE comprises 33 credit hours of the 72 required in the Joint Program. It consists of specified mandatory courses from Accounting and Finance, Business Administration, Mathematics, Philosophy and/or Religion, and any department that offers a Written English course. The Qualifying Core courses (12 credit hours) should be taken in the first year at the Asper School. Students must achieve a minimum "C" grade in each Qualifying Core course. The Program Core courses (21 credit hours) may be taken at any point in the program, but the course GMGT 4010 must be taken in the student's final term. Core courses are listed in Section 7.2.

The Major

Each student must complete the course requirements of one MAJOR. Each Major will consist of a 12 credit hour unit of course work. The Majors are listed in Section 11.

Students may begin taking courses for their major as soon as prerequisites are met. Students have an opportunity to transfer from one Major to another, but this opportunity decreases as the student progresses in the program.

Business Options

The third component of the program consists of a required number of Business courses freely selected by the student. These courses are referred to as Business OPTIONS. Students must take at least 15 and not more than 18 credit hours of Options. Some students may want to take Options which will supplement their Major, whereas other students may prefer to broaden their educational base by selecting Business courses in another or several other Majors. Students who want to supplement their Majors may take up to 12 credit hours of their Options from that area. Students may complete a second Major as part of their Options requirements. Such students should consult with staff in the Program Office.

Electives

The fourth component of the program is the ELECTIVE requirement. An elective is any three or six credit hour course freely chosen by the student from courses taught in the degree programs of other faculties and schools, excluding the Asper School of Business. Students must take at least nine and not more than 12 credit hours of electives.

The total of Major/Option/Elective courses is 39 credit hours. Therefore each student may choose a 12/15/12 credit hour combination or 12/18/9 credit hour combination.

7.2 Course Requirements

The course requirements for the Asper School of Business/Red River College Joint Program are as follows.

Qualifying Core Courses (12 credit hours)

(Students should register for the qualifying Core courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.)

MATH 1310 or MATH 1300 (see note 1)	3 credit hours
MATH 1520 or MATH 1500 (see note 1)	3 credit hours
Written English Course/Elective (see note 2)	6 credit hours

Program Core Requirements (21 credit hours)

ACC 1110	3 credit hours
MIS 2000	3 credit hours
GMGT 2120	3 credit hours
OPM 2600	3 credit hours

GMGT 4010 (must be taken in final term)	3 credit hours
Critical Thinking (see note 3)	3-6 credit hours
Ethics (see note 4)	3-6 credit hours

NOTES:

1) The prerequisite for MATH 1310, MATH 1300, MATH 1520, and MATH 1500 is a 60 per cent in Mathematics 40S (300) or equivalent or a grade of "C" in the Mathematical Skills course taught by Extended Education. Students who have been admitted into the Asper School of Business/Red River College Joint Program and who successfully complete the Mathematical Skills course are entitled to an additional three credit hour Elective from their Business Administration diploma.

2) Students may select a six credit hour or a three credit hour course to satisfy the Written English requirement. Students who select a three credit hour Written English course must complete a three credit hour Elective to complete the six credit hour requirement. Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

3) All Business students must complete three credit hours of Critical Thinking. Students may fulfil this requirement by completing one of the following courses: PHIL 1200 (6), PHIL 1290 (3), PHIL 1320 (6), or PHIL 2850 (3). If a six credit hour course is chosen, three credit hours will count toward the core Critical Thinking requirement and three credit hours will count as Electives.

4) All Management students must complete three credit hours of Ethics. Students may fulfil this requirement by completing one of the following courses: PHIL 2290 (6), PHIL 2740(3), PHIL 2750 (3), PHIL 2790 (6), PHIL 2830 (3), PHIL 2840(3), RLG 2450 (3), or GMGT 3581 (3). If a six credit hour course is chosen, three credit hours will count toward the core Ethics requirement and three credit hours will count as Electives.

Program Requirements

Qualifying Core Courses	12 credit hours
Program Core Courses	21 credit hours
Major Courses	12 credit hours
Business Options	15 - 18 credit hours
Electives	9 - 12 credit hours
Total Credit Hours	72

7.3 Requirements for Majors

In addition to the Core requirements, the Options and the Electives, all students must complete the requirements of one of the Majors listed in Section 11.

NOTE: Students in the Asper School of Business/Red River College Joint Program who want to major in Finance will be required to take FIN 2200 as one of their Business Options. Likewise, students who want to major in Management of Organizations must take GMGT 2080 as one of their Business Options.

SECTION 8: Program Requirements for the Asper School of Business/ Assiniboine Community College Joint Program

8.1 General Structure of the Program

Prior to admission to the Asper School of Business/Assiniboine Community College Joint Program students must complete the Business Administration Diploma (University Stream) at Assiniboine Community College with a minimum cumulative grade point average of 3.00. Admission is limited and competitive. Following admission to the Asper School of Business, students in the Joint Program will be required to complete 72 credit hours to earn the Bachelor of Commerce (Honours) degree. The 72 credit hours can be divided into the following components: the Core, the Major, Business Options, and Elective courses. These components and their associated limits are defined below.

The Core

The CORE comprises 42 credit hours of the 72 required in the Joint Program. It consists of specified mandatory courses from Accounting and Finance, Business Administration, Mathematics, Philosophy and/or Religion, Psychology or Sociology, and any department that offers a Written English course. The Qualifying Core courses (18 credit hours) should be taken in the first year in the Asper School. Students must achieve a minimum "C" grade in each Qualifying Core course. The Program Core courses (24 credit hours) may be taken at any point in the program, but the course GMGT 4010 must be taken in the student's final term. Core courses are listed in Section 8.2.

The Major

Each student must complete the course requirements of one MAJOR. Each Major will consist of a 12 credit hour unit of course work. The Majors are listed in Section 11.

Students may begin taking courses for their major as soon as prerequisites are met. Students have an opportunity to transfer from one Major to another, but this opportunity decreases as the student progresses in the program.

Business Options

The third component of the program consists of a required number of Business courses freely selected by the student. These courses are referred to as Business OPTIONS. Students must take at least nine and not more than 12 hours of Options. Some students may want to take Options which will supplement their Major, whereas other students may prefer to broaden their educational base by selecting Business courses in other Majors. Students who want to supplement their Majors may take up to 12 hours of their Options from that area. Students may complete a second Major as part of their Options requirements. Such students should consult with staff in the Program Office.

Electives

The fourth component of the program is the ELECTIVE requirement. An Elective is any three or six credit hour course freely chosen by the student from courses taught in the degree programs of other faculties and schools, excluding the Asper School of Business. Students must take at least six and not more than nine credit hours of Electives.

The total of Major/Option/Elective courses is 30 credit hours. Therefore each student may choose a 12/9/9 credit hour combination or 12/12/6 credit hour combination.

8.2 Course Requirements

The course requirements for the Asper School of Business/Assiniboine Community College Joint Program are as follows.

Qualifying Core Courses (18 credit hours)

(Students should register for the qualifying Core courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.)

MATH 1310 or MATH 1300 (see note 1)	3 credit hours
MATH 1520 or MATH 1500 (see note 1)	3 credit hours
PSYC 1200 or SOC 1200	6 credit hours
Written English Course/Elective (see Note 2)	6 credit hours

Program Core Requirements (24 credit hours)

MIS 2000	3 credit hours
GMGT 2080	3 credit hours
GMGT 2120	3 credit hours
MSCI 2150	3 credit hours
OPM 2600	3 credit hours
GMGT 4010 (must be taken in final term)	3 credit hours
Critical Thinking (see Note 3)	3-6 credit hours
Ethics (see Note 4)	3-6 credit hours

NOTES:

1) The prerequisite for MATH 1310, MATH 1300, MATH 1520, and MATH 1500 is 60 per cent in Mathematics 40S (300) or equivalent or a grade of "C" in the Mathematical Skills course taught by Extended Education. Students who have been admitted into the Asper School of Business/ Assiniboine Community College Joint Program and who successfully complete the Mathematical Skills course are entitled to an additional three credit hour Elective from their Business Administration diploma.

2) Students may select a six credit hour or a three credit hour course to satisfy the Written English requirement. Students who select a three credit hour Written English course must complete a three credit hour Elective to complete the six credit hour requirement. Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

3) All Business students must complete three credit hours of Critical Thinking. Students may fulfil this requirement by completing one of the following courses: PHIL 1200 (6), PHIL 1290 (3), PHIL 1320 (6), or PHIL 2850 (3). If a six credit hour course is chosen, three credit hours will count toward the core Critical Thinking requirement and three credit hours will count as Electives.

4) All Business students must complete three credit hours of Ethics. Students may fulfil this requirement by completing one of the following courses: PHIL 2290 (6), PHIL 2740(3), PHIL 2750 (3), PHIL 2790 (6), PHIL 2830 (3), PHIL 2840(3), RLG 2450 (3), or GMGT 3581 (3). If a six credit hour course is chosen, three credit hours will count toward the core Ethics requirement and three credit hours will count as Electives.

Program Requirements

Qualifying Core Courses	18 credit hours
Program Core Courses	24 credit hours
Major Courses	12 credit hours
Business Options	9 - 12 credit hours
Electives	6 - 9 credit hours
Total credit hours	72 credit hours

8.3 Requirements for Majors

In addition to the Core requirements, the Options and the Electives, all students must complete the requirements for one of the Majors listed in Section 11.

NOTE: Students in the Asper School of Business/Assiniboine Community College Joint Program who want to major in Finance will be required to take FIN 2200 as one of their Business options. Likewise, students who want to major in Marketing must take MKT 2210 as one of their Business Options.

SECTION 9: Program Requirements for the Asper School of Business/ University College of the North Joint Program

9.1 General Structure of the Program

Prior to admission to the Asper School of Business/Keewatin Community College Joint Program students must complete the Business Administration Diploma (University Stream) at Keewatin Community College with a minimum cumulative grade point average of 3.00. Admission is limited and competitive. Following admission to the Asper School of Business, students in the Joint Program will be required to complete 87 credit hours to earn the Bachelor of Commerce (Honours) degree. The 87 credit hours can be divided into the following components: the Core, the Major, Business Options, and Electives. These components and their associated limits are defined below.

The Core

The CORE comprises 48 credit hours of the 87 required in the Joint Program. It consists of specified mandatory courses from Accounting and Finance, Business Administration, Computer Science, Mathematics, Philosophy and/or Religion, Psychology or Sociology, Statistics and any department that offers a Written English course. The Qualifying Core courses (18 credit hours) should be taken in the first year in the Asper School. Students must achieve a minimum "C" grade in each Qualifying Core course. The Program Core courses (30 credit hours) may be taken at any point in the program, but the course GMGT 4010 must be taken in the student's final term. Core courses are listed in Section 9.2.

The Major

Each student must complete the course requirements of one MAJOR. Each Major will consist of a 12 credit hour unit of course work. The Majors are listed in Section 11.

Students may begin taking courses for their major as soon as prerequisites are met. Students have an opportunity to transfer from one Major to another, but this opportunity decreases as the student progresses in the program.

Business Options

The third component of the program consists of a required number of Business courses freely selected by the student. These courses are referred to as Business OPTIONS. Students must take at least 15 and not more than 18 hours of Options. Some students may want to take Options which will supplement their Major, whereas other students may prefer to broaden their educational base by selecting Business courses in other Majors. Students who want to supplement their Majors may take up to 12 hours of their Options from that area. Students may complete a second Major as part of their Options requirements. Such students should consult with staff in the Program Office.

Electives

The fourth component of the program is the ELECTIVE requirement. An Elective is any three or six credit hour course freely chosen by the student from courses taught in the degree programs of other faculties and schools, excluding the Asper School of Business. Students must take at least nine and not more than 12 credit hours of Electives.

The total of Major/Option/Elective courses is 39 credit hours. Therefore each student may choose a 12/15/12 credit hour combination or 12/18/9 credit hour combination.

9.2 Course Requirements

The course requirements for the Asper School of Business/University College of the North Joint Program are as follows.

Qualifying Core Courses (18 credit hours)

(Students should register for the Qualifying Core courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.)

MATH 1310 or MATH 1300 (see Note 1)	3 credit hours
MATH 1520 or MATH 1500 (see Note 1)	3 credit hours
PSYC 1200 or SOC 1200	6 credit hours
Written English Course/Elective (see note 2)	6 credit hours

Program Core Requirements (30 credit hours)

STAT 1000	3 credit hours
STAT 2000	3 credit hours
MIS 2000	3 credit hours
GMGT 2120	3 credit hours
MSCI 2150	3 credit hours
OPM 2600	3 credit hours
GMGT 4010 (must be taken in final term)	3 credit hours
COMP 1260	3 credit hours
Critical Thinking (see note 3)	3-6 credit hours
Ethics (see note 4)	3-6 credit hours

NOTES:

1) The prerequisite for MATH 1310, MATH 1300, MATH 1520, and MATH 1500 is a 60 per cent in Mathematics 40S (300) or equivalent or a grade of "C" in the Mathematical Skills course taught by Extended Education. Students who have been admitted into the Asper School of Business/University College of the North Joint Program and who successfully complete the Mathematical Skills course are entitled to an additional three credit hour Elective from their Business Administration diploma.

2) Students may select a six credit hour or a three credit hour course to satisfy the Written English requirement. Students who select a three credit hour Written English course must complete a three credit hour Elective to complete the six credit hour requirement. Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

3) All Business students must complete three credit hours of Critical Thinking. Students may fulfil this requirement by completing one of the following courses: PHIL 1200 (6), PHIL 1290 (3), PHIL 1320 (6), or PHIL 2850 (3). If a six credit hour course is chosen, three credit hours will count toward the core Critical Thinking requirement and three credit hours will count as Electives.

4) All Business students must complete three credit hours of Ethics. Students may fulfil this requirement by completing one of the following courses: PHIL 2290 (6), PHIL 2740(3), PHIL 2750 (3), PHIL 2790 (6), PHIL 2830 (3), PHIL 2840(3), RLG 2450 (3), or GMGT 3581 (3). If a six credit hour course is chosen, three credit hours will count toward the core Ethics requirement and three credit hours will count as Electives.

Program Requirements	
Qualifying Core Courses	18 credit hours
Program Core Courses	30 credit hours
Major Courses	12 credit hours
Business Options	15 - 18 credit hours
Electives	9 - 12 credit hours
Total Credit Hours	87

9.3 Requirements for Majors

In addition to the Core requirements, the Options, and the Electives, all students must complete the requirements of one of the majors listed in Section 11.

NOTE: Students in the Asper School of Business/University College of the North Joint Program who want to major in Finance will be required to take FIN 2200 as one of their Business Options. Likewise, students who want to major in Marketing must take MKT 2210 as one of their Business Options.

SECTION 10: Program Requirements for the Asper School of Business/

Ecole technique et professionnelle Joint Program

10.1 General Structure of the Program

Prior to admission to the Asper School of Business/Ecole technique et professionnelle Joint Program students must complete the Business Administration Diploma (University Stream) at Ecole technique et professionnelle with a minimum cumulative grade point average of 3.00. Admission is limited and competitive. Following admission to the Asper School of Business, students in the Joint Program will be required to complete 72 credit hours to earn the Bachelor of Commerce (Honours) degree. The 72 credit hours can be divided into the following components: the Core, the Major, Business Options, and Electives. These components and their associated limits are defined below.

The Core

The CORE comprises 42 credit hours of the 72 required in the Joint Program. It consists of specified mandatory courses from Accounting and Finance, Business Administration, Mathematics, Philosophy and/or Religion, Psychology or Sociology, Statistics, and any department that offers a Written English course. The Qualifying Core courses (18 credit hours) should be taken in the first year in the Asper School. Students must achieve a minimum "C" grade in each Qualifying Core course. The Program Core courses (24 credit hours) may be taken at any point in the program, but the course GMGT 4010 must be taken in the student's final term. Core courses are listed in Section 10.2.

The Major

Each student must complete the course requirements of one MAJOR. Each Major will consist of a 12 credit hour unit of course work. The Majors are listed in Section 11.

Students may begin taking courses for their major as soon as prerequisites are met. Students have an opportunity to transfer from one Major to another, but this opportunity decreases as the student progresses in the program.

Business Options

The third component of the program consists of a required number of Business courses freely selected by the student. These courses are referred to as Business OPTIONS. Students must take at least nine and not more than 12 hours of Options. Some students may want to take Options which will supplement their Major, whereas other students may prefer to broaden their educational base by selecting Business courses in other Majors. Students who want to supplement their Majors may take up to 12 hours of their Options from that area. Students may complete a second Major as part of their Options requirements. Such students should consult with staff in the Program Office.

Electives

The fourth component of the program is the ELECTIVE requirement. An Elective is any three or six credit hour course freely chosen by the student from courses taught in the degree programs of other faculties and schools, excluding the Asper School of Business. Students must take at least six and not more than nine credit hours of Electives.

The total of Major/Option/Elective courses is 30 credit hours. Therefore each student may choose a 12/9/9 credit hour combination or 12/12/6 credit hour combination.

10.2 Course Requirements

The course requirements for the Asper School of Business/Ecole technique et professionnelle Joint Program are as follows.

Qualifying Core Courses (18 credit hours)

(Students should register for the Qualifying Core courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.)

MATH 1310 or MATH 1300 (see note 1)	3 credit hours
MATH 1520 or MATH 1500 (see note 1)	3 credit hours
PSYC 1200 or SOC 1200	6 credit hours
Written English Course/Elective (see note 2)	6 credit hours
Program Core Requirements (24 credit hours)	
STAT 2000	3 credit hours
MIS 2000	3 credit hours

GMGT 2120	3 credit hours
MSCI 2150	3 credit hours
OPM 2600	3 credit hours
GMGT 4001 (must be taken in final term)	3 credit hours
Critical Thinking (see note 3)	3-6 credit hours
Ethics (see note 4)	3-6 credit hours

NOTES:

1) The prerequisite for MATH 1310, MATH 1300, MATH 1520, and MATH 1500 is a 60 per cent in Mathematics 40S (300) or equivalent or a grade of "C" in the Mathematical Skills course taught by Extended Education. Students who have been admitted into the Asper School of Business/Ecole technique et professionnelle Joint Program and who successfully complete the Mathematical Skills course are entitled to an additional three credit hour Elective from their Business Administration diploma.

2) Students may select a six credit hour or a three credit hour course to satisfy the Written English requirement. Students who select a three credit hour Written English course must complete a three credit hour Elective to complete the six credit hour requirement. Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

3) All Business students must complete three credit hours of Critical Thinking. Students may fulfil this requirement by completing one of the following courses: PHIL 1200 (6), PHIL 1290 (3), PHIL 1320 (6), or PHIL 2850 (3). If a six credit hour course is chosen, three credit hours will count toward the core Critical Thinking requirement and three credit hours will count as Electives.

4) All Business students must complete three credit hours of Ethics. Students may fulfil this requirement by completing one of the following courses: PHIL 2290 (6), PHIL 2740(3), PHIL 2750 (3), PHIL 2790 (6), PHIL 2830 (3), PHIL 2840(3), RLGN 2450 (3), or GMGT 3581 (3). If a six credit hour course is chosen, three credit hours will count toward the core Ethics requirement and three credit hours will count as Electives.

Program Requirements

Qualifying Core Courses	18 credit hours
Program Core Courses	24 credit hours
Major Courses	12 credit hours
Business Options	9 - 12 credit hours
Electives	6 - 9 credit hours
Total Credit Hours	72

10.3 Requirements for Majors

In addition to the Core requirements, the Options, and the Elective course components, all students must complete the requirements of one of the Majors in Section 11.

NOTE: Students in the Asper School of Business/Ecole technique et professionnelle joint program who want to major in Finance will be required to take FIN 2200 as one of their Business Options. Likewise, students who want to major in Management Information Systems must take MIS 2000 as one of their Business Options.

SECTION 11: Course Requirements for Majors for Students in the Asper School of Business Joint Programs with Red River College, Assiniboine Community College, University College of the North, or Ecole technique et professionnelle

All students in one of the Joint Programs listed above must complete the requirements of one of the Majors listed below. Students who intend to complete a second major should note that when a course is applicable to two different majors, that course may be used to satisfy only one set of major requirements.

Aboriginal Business Studies

The Major consists of NATV 4220, IDM 3000 plus six credit hours from FIN 3250, FIN 3470, GMGT 4150, NATV 3000 (topic: Aboriginal Wisdom and Spirituality), NATV 3320, IDM 4090, ENTR 3100, or ENTR 4100.

Accounting

The Major consists of: ACC 2010, ACC 2020, ACC 3040 and ACC 4030. The prerequisite for ACC 2010 is "C+" in ACC 1100 and for ACC 3040 is "C+" in ACC 1110.

Actuarial Mathematics

The Major consists of any 12 hours from ACT 2020, ACT 2120, ACT 2210, ACT 3130, ACT 3230, ACT 3330, ACT 3530, ACT 4140, ACT 4240, and ACT 4340.

Prior to registration, all students enrolled in Actuarial Mathematics should consult the Director or a Student Advisor for program planning advice.

To facilitate entry into and understanding of material covered in some advanced Actuarial courses, students entering the second year of the four-year program are advised to take the following courses: MATH 2720 plus MATH 2730 or MATH 2750 (which satisfies the elective requirement). Students declaring Actuarial Mathematics as their first major may take these courses as either Business Options or non-Business Electives.

Business/Government Relations

This Major was deleted January 2002. Students who enrolled in the Business/Government Relations Major prior to January 2002 should consult the Program Office for course requirements for the major.

Entrepreneurship/Small Business

The Major consists of: ENTRE 3100, ENTR 4100, FIN 3470 and one of: ACC 3050, FIN 3250, ACC 3530, ACT 4050, GMGT 3050, GMGT 3080, MKT 3220, MKT 3310 or MKT 4270.

Finance

NOTE: Students in the Joint Program with Red River College, Assiniboine Community College, University College of the North, or Ecole technique et professionnelle who want to major in Finance will be required to take FIN 2200 as one of their Business options.

The Major consists of: FIN 3410, FIN 3460, FIN 3480, and FIN 4400.

Finance Options are: FIN 3450, FIN 4230, FIN 4260, and FIN 4270. Students in the Finance Major may take all of these courses.

Generalist

The Major consists of one course from the list of courses from four different Majors (i.e., Options that are not part of a Major's requirements are not eligible for the Generalist Major).

Human Resources Management/Industrial Relations

Effective September 2005 the Major consists of: HRIR 3450 plus three of the following: HRIR 4410, HRIR 4420, HRIR 4480, HRIR 4520 **OR** HRIR 3450 plus two of the following: HRIR 4410, HRIR 4420, HRIR 4480, HRIR 4520, plus one of the following: HRIR 3430, LABR 3010, LABR 3060, LABR 3070, LABR 3130, and LABR 3140.

Students admitted prior to September 2005 may complete the following requirements: HRIR 3450 plus any three of the following: HRIR 3430, HRIR 4410, HRIR 4420, HRIR 4480 or HRIR 4520.

Students entering the second year of the four-year program are advised to take HRIR 2440 since it is a prerequisite to advanced courses in the area.

International Business

Effective September 2000 the Major consists of: FIN 3450, INTB 2200, HRIR 4520, and MKT 3300.

Students admitted prior to September 2000 may complete the following requirements: INTB 2200; one of either FIN 3450 or MKT 3300; plus two of ACC 3060*, FIN 3450 (if not already chosen), FIN 3460, GMGT 3020*, GMGT 4120, HRIR 4520, MKT 3240*, or MKTG 3300 (if not already chosen). (*Selected topics must be an approved international topic.)

Students majoring in International Business are permitted to take 12 credit hours of a foreign language and/or courses with an international focus from an approved list and have these non-business courses count as Business Options. The list is available in the Program Office.

Logistics and Supply Chain Management

Effective September 2005 the Major consists of: SCM 2210, SCM 2230, SCM 3360 plus one of the following: SCM 2220, SCM 3230, SCM 4240, OPM 4630.

Students admitted prior to September 2005 may complete the following requirements: SCM 2210, SCM 2220, SCM 3360, OPM 4630.

Recommended Options/Electives in this area include: MIS 3500, MIS 3510, INTB 2200, HRIR 3450, GMGT 3120, GMGT 3160, GMGT 4160, MSCI 3400, IDM 4050, IDM 4070, IDM 4080, MKT 3220, MKT 3320, MKT 3340, MKT 4410, GEOG 3800, ECON 2450, ECON 2460.

Management Information Systems

Effective September 2004 the Major consists of MIS 3500, MIS 3510, MIS 3520, and MIS 4500.

Students admitted prior to September 2004 may complete the following requirements: COMP 1010, MIS 3500, MIS 3510, and MIS 4500.

Options available in this area are ACC 3530 and MIS 4250.

Students interested in pursuing the Management Information Systems Major are encouraged to take MIS 2000 in the second year of the four-year program since it is a prerequisite to advanced courses in the area.

Management of Organizations

NOTE: Students in the Joint Program with Red River College who want to major in Management of Organizations will be required to take GMGT 2080 as one of their Business Options.

The Major consists of any 12 hours from: GMGT 3010, GMGT 3020, GMGT 3040, GMGT 3160, GMGT 4040, GMGT 4140 and GMGT 4150. Students entering the second year of the four-year program are advised to take GMGT 2070 and GMGT 2080 since they are prerequisites to advanced courses in the area.

Marketing

NOTE: Students in the Joint Program with Assiniboine Community College or University College of the North who want to major in Marketing will be required to take MKT 2210 as one of their Business Options.

The Major consists of MKT 3220, MKT 3230, MKT 4210 and 3 hours from MKT 324, MKT 3250, MKT 3300, MKT 3310, MKT 3320, MKT 3340, MKT 3390, MKTG 4240, MKTG 4270 or MKTG 4410. In addition to the 12 credit hours required for the major, Marketing students may take up to an additional 12 credit hours from the above list.

Operational Research

This Major is not currently offered.

Operational Research/Operations Management

The Major consists of any 12 hours from MSCI 3400, OPM 3650, OPM 3660, OPM 367, MSCI 4220, MSCI 4230, OPM 4620, and OPM 4630.

Prior to registration, all students enrolled in Operational Research/Operations Management should consult the Department Head or a Student Advisor for program planning advice.

Production/Operations Management

This Major is not currently offered.

Section 12: Course Descriptions

Department of Accounting and Finance

U1 ACC 1100 Introductory Financial Accounting Cr.Hrs.3 (Formerly 009.110) Examination of accounting postulates underlying the preparation and presentation of financial statements.

ACC 1101 Introduction à la comptabilité financière Cr.Hrs.3 (L'ancien 009.110) Analyse des termes, principes et concepts utilisés dans la préparation et la présentation d'états financiers. Donné au Collège de St. Boniface.

ACC 1110 Introductory Managerial Accounting Cr.Hrs.3 (Formerly 009.111) Role of accounting in creation and application of business information used by decision-makers in the management of enterprise. *Prerequisite:* ACC 1100 (or 009.110). *Corequisite:* ECON 1200 (or 018.120).

ACC 1111 Introduction à la comptabilité de management Cr.Hrs.3 (L'ancien 009.111) L'importance des méthodes comptables dans la gestion de l'information utilisée par la direction d'une entreprise. Donné au Collège de St. Boniface. *Préalable:* ACC 1100 (ou 009.110).

ACC 2010 Intermediate Accounting - Assets Cr.Hrs.3 (Formerly 009.201) Accounting policies and practices dealing with calculation and measurement of assets and related reporting problems. *Prerequisite:* ACC 1100 (or 009.110) (C+).

ACC 2020 Intermediate Accounting - Equities Cr.Hrs.3 (Formerly 009.202) Consideration of current accounting relating to equities with attention to the accounting treatment of current and long-term liabilities, income tax allocation, share capital, and surplus. Students may not hold credit for both ACC 2020 (or 009.202) and FIN 3250 (or 009.325). *Prerequisite:* ACC 2010 (or 009.201).

ACC 3030 Advanced Accounting Cr.Hrs.3 (Formerly 009.303) Topics include: partnerships, consolidations, mergers, reporting on conglomerates, and fund accounting. *Prerequisites:* ACC 2010 (or 009.201) and ACC 2020 (or 009.202) or approval of department head.

ACC 3040 Cost Accounting Cr.Hrs.3 (Formerly 009.304) Study of accounting concepts and functions as they relate to product costing, planning, control, and decision-making. *Prerequisite:* ACC 1110 (or 009.111) (C+).

ACC 3050 Taxation Accounting Cr.Hrs.3 (Formerly 009.305) Structure and concepts of the Canadian tax system, emphasis on current tax practices. *Prerequisite:* ACC 1100 (or 009.110) (C+).

ACC 3060 Selected Topics in Accounting Cr.Hrs.3 (Formerly 009.306) An examination of current controversial issues in accounting. Topics will vary from year to year but could include, for example, such issues as: human resource accounting; published forecasts of operations; fund accounting; interim reporting. Not offered every year. *Prerequisites:* ACC 2010 (or 009.201) and ACC 2020 (or 009.202).

ACC 3070 Tax Planning Cr.Hrs.3 (Formerly 009.307) Study of the impact of income taxes on managerial decision-making. Not offered every year. *Prerequisite:* ACC 3050 (or 009.305).

ACC 3490 Ethics in Financial Reporting Cr.Hrs.3 (Formerly 009.349) Applies ethical theories to resolve ethical dilemmas faced by various parties in the financial reporting process as they carry out their roles and responsibilities. *Prerequisite:* ACC 1100 (or 009.110).

ACC 3530 Accounting Information Systems Cr.Hrs.3 (Formerly 009.353) Role of accounting systems in total management information systems; design and installation of accounting systems. *Prerequisites:* ACC 1110 (or 009.111) and MIS 2000 (or 009.200).

ACC 4010 Auditing Cr.Hrs.3 (Formerly 009.401) Study of philosophy and concepts of auditing, legal and ethical responsibilities of the auditor, basic techniques of auditing including statistical sampling and flowcharting, and the operational audit. *Prerequisites:* ACC 2010 (or 009.201) and ACC 2020 (or 009.202) or approval of department head.

ACC 4030 Accounting Theory Cr.Hrs.3 (Formerly 009.403) Examination of principles and postulates of accounting theory. Coverage of selected topics will vary from year to year depending on interests of course participants. *Prerequisites:* ACC 2010 (or 009.201) and ACC 2020 (or 009.202) or approval of department head.

ACC 4040 Advanced Managerial Accounting Cr.Hrs.3 (Formerly 009.404) A critical examination of managerial accounting techniques and the controllership function. *Prerequisite:* ACC 3040 (or 009.304).

ACC 4280 Intermediate Auditing Cr.Hrs.3 (Formerly 009.428) An examination of the external audit process, audit concepts, and applicable professional standards. *Prerequisites:* MIS 2000 (or 009.200) and ACC 4010 (or 009.401).

ACC 4290 Current Issues in Financial Reporting Cr.Hrs.3 (Formerly 009.429) An examination of specific accounting standards and issues not covered in previous courses. Topics may include foreign currency translation, not-for-profit accounting and financial instruments. Case analysis is an important component of this course. *Prerequisite:* ACC 3030 (or 009.303).

FIN 2200 Corporation Finance Cr.Hrs.3 (Formerly 009.220) An introduction to business financial policies regarding the allocation, acquisition and control of funds. *Prerequisite:* ACC 1100 (or 009.110) and ECON 1200 (or 018.120). *Corequisite:* STAT 1000 (or 005.100) or equivalent.

FIN 2201 Gestion financière Cr.Hrs.3 (L'ancien 009.220) Introduction aux principes de la gestion financière de l'entreprise en particulier dans le choix du financement, le choix de l'investissement et la gestion des fonds. Donné au Collège de St. Boniface. *Préalable:* ACC 1100 (ou 009.110).

FIN 3250 Financial Statement Analysis Cr.Hrs.3 (Formerly 009.325) A study of the methods and techniques used for interpretation of annual financial reports and the significance of alternative accounting policies on reported income. Students may not hold credit for both FIN 3250 (or 009.325) and ACC 2020 (or 009.202). *Prerequisite:* ACC 1100 (or 009.110).

FIN 3270 Personal Financial Planning Cr.Hrs.3 (Formerly 009.327) An introduction to financial planning techniques used in professional practice. Topics include financial assessment, income tax planning, risk management, insurance, debt and credit management, investments, retirement planning, and estate planning. *Prerequisite:* FIN 2200 (or 009.220).

FIN 3400 Investment Banking Cr.Hrs.3 (Formerly 009.340) The practice and theory of investment banking including valuation, initial public offerings, mergers and acquisitions, and restructuring. *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 3410 Investments Cr.Hrs.3 (Formerly 009.341) Study of financial assets and their pricing. An introduction to formal models and methods of portfolio analysis and construction. *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 3420 Security Analysis Cr.Hrs.3 (Formerly 009.342) Study of methods for evaluating securities, investment decision-making, and effecting financial transactions. *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 3440 Real Estate Investments Cr.Hrs.3 (Formerly 009.344) An introduction to real estate investment and finance. Topics include urban growth, land use patterns, real estate market behaviour and property rights. *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 3450 International Finance Cr.Hrs.3 (Formerly 009.345) An introduction to the study of international corporate financial issues and international security markets. *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 3460 Financial Markets and Institutions Cr.Hrs.3 (Formerly 009.346) A study of finance at the macro level. Topics include the monetary and banking systems, flow of funds analysis, interest rates and exchange rates. Students may not hold credit for both FIN 3460 (or 009.346) and ECON 3640 (or 018.364). *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 3470 Small Business Finance Cr.Hrs.3 (Formerly 009.347) Study of the financial issues faced by small business enterprises. *Prerequisite:* FIN 2200 (or 009.220).

FIN 3480 Corporate Finance Theory and Practice Cr.Hrs.3 (Formerly 009.348) Capital budgeting theory and techniques. Determination of relevant cost of capital. Implications of capital structure and dividend policy. *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 4230 Selected Topics in Finance Cr.Hrs.3 (Formerly 009.423) A study of current

issues in finance. Topics considered will depend on the interests and needs of the participants. *Prerequisite:* FIN 2200 (or 009.220) (C+).

FIN 4260 Advanced Finance Theory Cr.Hrs.3 (Formerly 009.426) Theories that provide the foundation for modern corporate finance. Empirical tests of finance theories. Implications for managers. *Prerequisites:* FIN 3410 (or 009.341) and FIN 3480 (or 009.348).

FIN 4270 Options and Futures Cr.Hrs.3 (Formerly 009.427) Derivative securities. Pricing, markets, strategies and implications. *Prerequisite:* FIN 3410 (or 009.341).

FIN 4400 Financial Management Practices Cr.Hrs.3 (Formerly 009.440) Financing capital and current operations of business enterprises. Topics include expansion financing, setting of dividend policies, acquisitions, leasing, mergers, refundings, capitalization and reorganizations. *Prerequisite:* FIN 3480 (or 009.348).

MIS 2000 Information Systems for Management Cr.Hrs.3 (Formerly 009.200) Introduction to information systems in organizations, systems development/acquisition, and management issues concerning information technology in organizations. *Prerequisite:* COMP 1260 (or 074.126) and ACC 1100 (or 009.110) or consent of instructor.

MIS 2001 Les systèmes d'information de gestion Cr.Hrs.3 (L'ancien 009.200) Introduction aux systèmes d'information dans les organisations, au développement/acquisition des systèmes et à la gestion des systèmes d'information. Donné au Collège de St. Boniface. *Préalable:* COMP 1260 (ou 074.126) et ACC 1100 (ou 009.110) ou consentement du professeur ou de la professeure.

MIS 3500 Database Management Systems Cr.Hrs.3 (Formerly 009.350) This course is designed for students who are interested in learning how to design, develop and maintain databases. Students will be introduced to methodologies to design their systems and then implement them using currently popular end user tools. *Prerequisite:* MIS 3510 (or 009.351). *Corequisite:* COMP 1010 (or 074.101).

MIS 3510 Systems Analysis and Design Cr.Hrs.3 (Formerly 009.351) This course is designed for students who are interested in developing information systems. Working in teams, students will learn how to employ methodologies, techniques and popular end user tools to design and implement a functioning business information system. *Prerequisites:* MIS 2000 (or 009.200) (C+).

MIS 3520 Data Communications and Networking Cr.Hrs.3 (Formerly 009.352) A survey of data communications topics, including media and technology, protocols, security, structures, electronic commerce and the Internet, and related management issues. *Prerequisite:* MIS 2000 (or 009.200) (C+).

MIS 4250 Advanced Topics in Management Information Systems Cr.Hrs.3 (Formerly 009.425) A study of current issues in MIS. The topics for this course will vary over time, depending on student interests, faculty interests, and student demand. Not offered every year. *Prerequisite:* consent of instructor.

MIS 4500 Management Information Systems and Strategy Cr.Hrs.3 (Formerly 009.450) A survey of the various issues associated with managing information as a resource. Explores MIS planning frameworks and tools, and the linkages between information systems, organizational structure and organizational strategy. *Prerequisites:* at least two of the following: ACC 3530 (or 009.353), MIS 3500 (or 009.350), MIS 3510 (or 009.351), MIS 3520 (or 009.352), MIS 4250 (or 009.425).

Warren Centre for Actuarial Studies and Research

ACT 2020 Economic and Financial Applications Cr.Hrs.3 (Formerly 010.202) A synthesis of macroeconomic issues, quantitative aspects of finance using interest theory, and insurance economics. *Prerequisite:* ACT 2120 (or 010.212) (C+).

ACT 2120 Interest Theory Cr.Hrs.3 (Formerly 010.212) The application of calculus and probability to discrete and continuous interest functions. Key topics are the measurement of interest, present and accumulated values, and annuities. May not be held with the former 010.232 or ACT 3320 (or 010.332). *Prerequisite:* MATH 1690 (or 136.169) (B) or MATH 1700 (or 136.170) (B) or MATH 1710 (or 136.171) (B). *Corequisites:* MATH 2750 (or 136.275) or MATH 2720 (or 136.272 or 136.270) or MATH 2730 (or 136.273 or 136.271); and STAT 2000 (or 005.200).

ACT 2210 Introduction to Risk Management Cr.Hrs.3 (Formerly 010.221) Mathematical tools for the quantitative assessment of risk and their application to problems encountered in risk management. *Prerequisite:* MATH 1700 (or 136.170) or MATH 1690 (or 136.169). *Corequisites:* MATH 2750 (or 136.275) or MATH 2730 (or 136.273 or 136.271); and STAT 2000 (or 005.100); or consent of instructor.

ACT 2321 Mathématiques financières Cr.Hrs.3 L'étude de l'intérêt composé et des rentes discrètes et continues; équations de valeur, analyse de fonds; détermination de taux de rendement; construction de tables. L'étudiant (e) ne peut se faire créditer à la fois le 010.232 et le 010.332. Donné au Collège de St. Boniface. *Préalable:* MATH 1500 (ou 136.150) ou MATH 1520 (ou 136.152), ou l'équivalent.

ACT 3130 Actuarial Models 1 Cr.Hrs.3 (Formerly 010.313) Elementary concepts respecting the quantification of the financial impact of contingent payments. May not be held with the former 010.347. *Prerequisite:* ACT 2120 (or 010.212) (C+). *Corequisite:* STAT 3500 (or 005.350).

ACT 3230 Actuarial Models 2 Cr.Hrs.3 (Formerly 010.323) Intermediate and advanced concepts respecting the quantification of the financial impact of contingent payments. Not to be held with the former 010.348. *Prerequisite:* ACT 3130 (or 010.313) (C+). *Corequisite:* STAT 3600 (or 005.360).

ACT 3330 Actuarial Models 3 Cr.Hrs.3 (Formerly 010.333) Frequency and Severity Models, Compound Distribution Models, Ruin Models. May not be held with the former 010.448 Topic Risk Theory. *Prerequisite:* ACT 3130 (or 010.313) (C+). *Corequisite:* ACT 3230 (or 10.323).

ACT 3530 Actuarial Models 4 Cr.Hrs.3 (Formerly 010.353) Survival Models, Stochastic Process Models, and Simulation Models. May not be held with the former 010.447. *Prerequisite:* ACT 3130 (or 010.313) (C+). *Corequisite:* ACT 3230 (or 10.323).

ACT 4000 Advanced Actuarial Topics Cr.Hrs.3 (Formerly 010.400) A selection of advanced topics of current actuarial interest. *Prerequisite:* ACT 3230 (or 010.323).

ACT 4050 Life Insurance Products and Employee Benefit Plans Cr.Hrs.3 (Formerly 010.405) Design, risk assumption for, and analysis of individual and group insurance products. Exploration of pension, employee benefit and government programs in a Canadian setting. May not hold credit with the former 010.451.

ACT 4060 Actuarial Aspects of Investment Practice Cr.Hrs.3 (Formerly 010.406) This course examines stochastic interest rates and tools and techniques for coping with general product issues in asset/liability management. May not be offered every year. Students may not hold credit for both ACT 4060 (or 010.406) and the former 010.448 Topic Asset/Liability Management. *Prerequisites:* FIN 2200 (or 009.220) and FIN 3410 (or 009.341), or consent of instructor.

ACT 4140 Actuarial Modeling Methods 1 Cr.Hrs.3 (Formerly 010.414) Estimation and Fitting of Survival Models. May not hold credit with the former 010.448 Topic Survival Models. *Prerequisite:* ACT 3230 (or 010.323).

ACT 4150 Pension Mathematics Cr.Hrs.3 (Formerly 010.415) Actuarial applications for defined benefit pension plans. Actuarial cost methods, funding levels, operation of pension plans from an actuarial perspective. Students may not hold credit with ACT 7550 (or 010.755). *Prerequisite:* ACT 3230 (or 010.323).

ACT 4240 Actuarial Modeling Methods 2 Cr.Hrs.3 (Formerly 010.424) Estimation and Fitting of Frequency and Severity Models. May not be offered every year. *Prerequisite:* ACT 3330 (or 010.333).

ACT 4340 Actuarial Modeling Methods 3 Cr.Hrs.3 (Formerly 010.434) Classical, Bayesian and Buhlmann Credibility Models. The connection between Credibility Theory and Experience Rating. Underlying assumptions for the different methods. Simulation in Estimating and Fitting Actuarial Models. May not hold credit with the former 010.488 Topic Credibility Theory. May not be offered every year. *Prerequisite:* ACT 4240 (or 010.424).

Department of Business Administration

GMGT 1110 Environment and Functions of Business Cr.Hrs.3 (Formerly 027.111) Study of the institutions and environment of the business community and their development and the interaction of these areas with the functional aspects of business.

GMGT 2000 Introduction to Communications Cr.Hrs.3 (Formerly 027.200) An analysis of oral and written communication. Topics covered include methods of logic, organization, analysis, presentation and mechanics of written and oral communication. The course is designed to improve students' writing and public speaking skills. *Prerequisite:* University approved written English course.

U1 GMGT 2030 Administrative Theory Cr.Hrs.3 (Formerly 027.203) Examination of the underlying principles concerning internal management of organizations. Emphasis on the study and analysis of various theoretical approaches to management. Students may not hold credit for both GMGT 2030 (or 027.203) and GMGT 2080 (or 027.208).

U1 GMGT 2070 Introduction to Organizational Behaviour Cr.Hrs.3 (Formerly 027.207) Examination of the impact of human behaviour on the formal and informal organization. Topics include leadership, work groups, organizational conflict, and communications.

GMGT 2071 Introduction au comportement organisationnel Cr.Hrs.3 (L'ancien 027.207) Analyse de l'impact du comportement humain sur l'organisation formelle et informelle. Les sujets traités sont le leadership, les groupes de travail, les conflits au sein de l'organisation et la communication. Donné au Collège de St. Boniface.

U1 GMGT 2080 Introduction to Management and Organization Theory Cr.Hrs.3 (Formerly 027.208) Examination of the underlying principles concerning the formation of organizations and their internal management. Emphasis on the study and analysis of various theoretical approaches to organization theory and management. Students may not hold credit for both GMGT 2080 (or 027.208) and GMGT 2030 (or 027.203).

GMGT 2081 Introduction au management et à la théorie de l'organisation Cr.Hrs.3 (L'ancien 027.208) Analyse des principaux concepts régissant la formation d'organisations et leur gestion interne. L'accent est mis sur l'analyse de différentes approches théoriques concernant l'organisation et sa gestion. L'étudiant (e) ne peut se faire créditer à la fois le GMGT 2080 (ou 027.208) et le GMGT 2030 (ou 027.203). Donné au Collège de St. Boniface.

GMGT 2120 Business/Government Relations Cr.Hrs.3 (Formerly 027.212) Analysis of the interaction between business firms and government in the creation, modification, and implementation of government policies that affect business. Study of the ways business can influence government decision-making. *Prerequisite:* ECON 1200 (or 018.120).

GMGT 2121 Les entreprises et le gouvernement Cr.Hrs.3 (L'ancien 027.212) Analyse des rapports entre le gouvernement et les entreprises au niveau de la conception, de la modification et de la mise en place des politiques gouvernementales affectant l'entreprise. Analyse des moyens dont disposent les entreprises pour influencer la prise de décision des gouvernements. Donné au Collège de St. Boniface. *Préalable:* ECON 1200 (ou 018.120).

GMGT 2141 Introduction aux communications Cr.Hrs.3 (L'ancien 027.214) Communication orale dans le milieu des affaires. Rédaction de documents écrits venant appuyer les activités d'écoute et de parole. Apprentissage des connaissances grammaticales, syntaxiques et lexicales. Apprendre à s'exprimer en public. Donné au Collège de St. Boniface.

GMGT 3010 Management Decision-Making Cr.Hrs.3 (Formerly 027.301) The decision-making process and factors that enter into making the decisions, including the objectives and approaches to decision-making, the basic type of managerial decisions, and exemplification of decision in operations. *Prerequisites:* GMGT 2030 (or

027.203) or GMGT 2080 (or 027.208) and GMGT 2070 (or 027.207).

GMGT 3020 Seminar in Administration Cr.Hrs.3 (Formerly 027.302) Selected problem areas and issues as they relate to administration of complex organizations. *Prerequisites:* GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208) and GMGT 2070 (or 027.207), or consent of instructor.

GMGT 3030 Contemporary Social Issues in Business Cr.Hrs.3 (Formerly 027.303) Study of key issues in the relationship of business organizations and society with emphasis on the impact of management. *Prerequisites:* GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208) and GMGT 2070 (or 027.207).

GMGT 3040 Organizational Systems Analysis Cr.Hrs.3 (Formerly 027.304) An integrative cross-functional study of organizations, their decision-making processes, and their dynamic interactions with their technical, marketing, and social environments using the concepts of systems analysis. *Prerequisites:* GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208) and GMGT 2070 (or 027.207).

GMGT 3050 Technological Entrepreneurship Cr.Hrs.3 (Formerly 027.305) Examines the factors associated with the start-up, growth and success of technological entrepreneurial firms. Specific consideration is given to the environmental conditions associated with the success of these firms. *Prerequisites:* GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208) and GMGT 2070 (or 027.207).

GMGT 3080 Issues in Technological Change Cr.Hrs.3 (Formerly 027.308) Analysis of the nature of invention and innovation including human, financial, economic, and legal factors. Social implications of innovation. Public policy towards research, invention, and innovation.

GMGT 3090 Management of Research and Development Cr.Hrs.3 (Formerly 027.309) Organization and management of industrial research and development; specific inventions and their impact on industry.

GMGT 3120 Regulation Cr.Hrs.3 (Formerly 027.312) Study of the rationale and impact of public policies affecting the organization and behaviour of Canadian industry.

GMGT 3130 Management Applications of Forecasting Models Cr.Hrs.3 (Formerly 027.313) An introduction to analytic tools which can be used by management (private, public or non-profit) to predict the impact of general economic developments on a firm or industry. Industry or firm specific examples will be emphasized. *Prerequisite:* ECON 1200 (or 018.120).

GMGT 3160 Managerial Economics Cr.Hrs.3 (Formerly 027.316) Principles and techniques of managerial economics with applications from business and the public sector. *Prerequisite:* ECON 1200 (or 018.120) or equivalent.

GMGT 3170 Administration of the Public Sector Cr.Hrs.3 (Formerly 027.317) Application of contemporary concepts of the administrative process: approaches and problems involved in performing managerial functions in public sector organizations with emphasis on socio-political issues. *Prerequisite:* GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208).

GMGT 3180 Non-Market Decision Making Cr.Hrs.3 (Formerly 027.318) The use of economic methodology to explain government decision-making processes and their impact on business organizations. Focus is on understanding the behaviour of government policy makers and the incentives which motivate them. *Prerequisite:* GMGT 2120 (or 027.212).

GMGT 3300 Commercial Law Cr.Hrs.3 (Formerly 027.330) General history of law, the organization of courts, the Canadian Constitution, federal and provincial legislative functions. Legal concepts and problems relating to business organization, contracts, principal and agent, negotiable instruments, common torts, and bankruptcy proceedings.

GMGT 3301 Droit commercial Cr.Hrs.3 (L'ancien 027.330) Sommaire historique du droit, l'organisation des tribunaux, la constitution du Canada, les attributions législatives du gouvernement fédéral et des assemblées provinciales. Notions juridiques et problèmes attendant à l'organisation des entreprises, la rédaction des contrats, le mandant et le mandataire, les effets négociables, les débits et les procédures de faillite. Donné au Collège de St. Boniface.

GMGT 3500 Communications: Contextual Applications Cr.Hrs.3 (Formerly 027.350) This course is designed to introduce students to basic linguistically specialized areas of typical business and administrative settings. Course offered at St. Boniface College.

GMGT 3521 Culture et organisation Cr.Hrs.3 (L'ancien 027.352) L'influence des facteurs culturels sur la vie des entreprises et réciproquement. Les différentes dimensions de la culture telles que la langue, la religion, les valeurs, l'organisation sociale, l'éducation, la technologie, les institutions politiques, les législations, etc. Leurs influences sur l'organisation, le marketing, la gestion du personnel, la communication. Donné au Collège de St. Boniface. *Préalable:* GMGT 2070 (ou 027.207).

GMGT 3561 Séminaire en management Cr.Hrs.3 (L'ancien 027.356) Analyse de la gestion d'organisation: Réflexion critique sur des sujets d'actualité pertinents. L'étudiant(e) ne peut se faire créditer à la fois le GMGT 3561 (ou 027.356) et le GMGT 3020 (ou 027.302). Donné au Collège de St. Boniface. *Préalable:* GMGT 2080 (ou 027.208) et GMGT 2070 (ou 027.207) ou le consentement du professeur.

GMGT 3581 Éthique et responsabilité sociale Cr.Hrs.3 (L'ancien 027.358) Le rôle social de l'entreprise. L'environnement interne et externe de l'entreprise; les problèmes sociaux et les activités de responsabilité sociale; l'éthique professionnelle du gestionnaire contemporain, la comptabilité sociale; les groupes défavorisés; etc. Donné au Collège de St. Boniface. *Préalable:* GMGT 2070 (ou 027.207).

GMGT 4010 Administrative Policy Cr.Hrs.3 (Formerly 027.401) Studies of policies available to business enterprise; with case studies to focus attention on problems involved in formulating and administering policies with interdisciplinary considerations. Take only in final term of program or with consent of department head. *Prerequisite:* prior to being admitted to GMGT 4010 (or 027.401) students must have attempted all 30 credit hours of courses specified in Year 2 of the 4-Year Program and

successfully completed at least 27 credit hours. Corequisite: at most three credit hours of courses specified in Year 2 of the 4-Year Program.

GMGT 4011 Gestion stratégique des organisations Cr.Hrs.3 (L'ancien 027.401) Étude de la gestion stratégique des organisations. L'étude de cas permettra à l'étudiante ou à l'étudiant d'intégrer les connaissances acquises tout en mettant l'accent sur les questions qui entourent l'élaboration des stratégies et la gestion des politiques établies. Ce cours ne sera suivi qu'à la fin du programme ou avec l'autorisation écrite du professeur ou de la professeure. Donné au Collège de St. Boniface.

GMGT 4040 Advanced Organization Theory and Behaviour Cr.Hrs.3 (Formerly 027.404) An analysis of the human and structural aspects of organizations and how their interrelationship influences organizational performance. Topics covered include leadership, motivation, conflict, and organizational politics. The influence of technology, size, and the external environment on organizational structure is also examined. *Prerequisite:* GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208) and GMGT 2070 (or 027.207).

GMGT 4110 Commercial Law 2 Cr.Hrs.3 (Formerly 027.411) Aspects of the law relating to business units, including a study of the law relating to proprietorships, partnerships and corporations, and secured transactions. Not taught every year. *Prerequisite:* GMGT 3300 (or 027.330).

GMGT 4120 Tariffs, Trade, and Commercial Policy Cr.Hrs.3 (Formerly 027.412) The economics and institutions of international trade, tariffs, and commercial policy, including economics of tariffs, special trading arrangements, the financial aspects of international trade, and trade and commercial policy.

GMGT 4140 Evaluation Techniques for Management Cr.Hrs.3 (Formerly 027.414) The development of specific techniques for program evaluation, the design of evaluations, the implementation of an evaluation within an ongoing organizational environment, and the problems associated with applying findings. *Prerequisite:* MIS 2000 (or 009.200).

GMGT 4150 Managing Not-For-Profit Organizations Cr.Hrs.3 (Formerly 027.415) A description and analysis of the management perspective that is unique to organizations operating in the not-for-profit sector of the economy. Examination of both the internal and external environment of management in not-for-profit organizations. *Prerequisites:* GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208) and GMGT 2070 (or 027.207).

GMGT 4160 Seminar in Business-Government Relations Cr.Hrs.3 (Formerly 027.416) Description and analysis of significant, current issues in the business-government relationship at an advanced level. *Prerequisite:* GMGT 2120 (or 027.212).

GMGT 4551 Développement d'habiletés de gestionnaire Cr.Hrs.3 (L'ancien 027.455) Développement de certaines habiletés nécessaires au succès professionnel. Les principaux apprentissages sont: la gestion du stress, la communication orale, la négociation, la recherche d'emploi, les techniques de créativité et d'innovation, la gestion des relations vie privée/vie professionnelle. Donné au Collège de St. Boniface. *Préalable:* GMGT 2070 (ou 027.207).

HRIR 2440 Human Resource Management Cr.Hrs.3 (Formerly 027.244) Introduction to principles and procedures in the management of human resources. Topics include conflict resolution, employment, law, planning, job analysis, performance appraisal, staffing, compensation, union-management relations, and current issues.

HRIR 2441 Gestion des ressources humaines 1 Cr.Hrs.3 (L'ancien 027.244) Introduction au système de gestion des ressources humaines. Les sujets sont: la résolution de conflits, l'embauche, l'encadrement juridique, la planification, l'analyse de postes, l'évaluation, l'acquisition des ressources humaines, le système de relations industrielles et la problématique de la gestion des ressources humaines. Donné au Collège de St. Boniface.

HRIR 3411 Gestion des relations de travail Cr.Hrs.3 (L'ancien 027.341) Analyse des relations de travail et des facteurs économiques, psychologiques et sociologiques. Les sujets traités sont: l'évolution de l'organisation syndicale, les relations intergroupes et la résolution de conflit, les relations patronales-syndicales, la négociation collective, la législation du travail et les problèmes contemporains. Donné au Collège de St. Boniface.

HRIR 3430 Selected Topics in Industrial Relations Cr.Hrs.3 (Formerly 027.343) Analysis of specific topics or issues in the employment relationships in an industrial society. *Prerequisites:* HRIR 3450 (or 027.345 or 027.341) and HRIR 2440 (or 027.244) or consent of instructor.

HRIR 3450 Labour and Employment Relations Cr.Hrs.3 (Formerly 027.345) This course is to enhance knowledge and understanding of labour and employment relations in Canada and beyond. It addresses various issues and debates about these relations; their history, structure, and functioning; management employment relations practices; the role of labour unions; collective bargaining; and contemporary developments and alternatives. May not be held with the former 027.341.

HRIR 3511 Gestion des ressources humaines 2 Cr.Hrs.3 (L'ancien 027.351) La planification des tâches, la structuration des rôles et du travail, la coordination et la réalisation des activités feront l'objet d'un apprentissage théorique associé au développement d'habiletés. Donné au Collège de St. Boniface. *Préalable:* HRIR 2440 (ou 027.244).

HRIR 3541 Gestion des équipes de travail Cr.Hrs.3 (L'ancien 027.354) Initiation à la gestion des équipes de travail en mettant l'accent sur les dimensions humaines et administratives du travail en équipe. Donné au Collège de St. Boniface. *Préalable:* GMGT 2070 (ou 027.207).

HRIR 4410 Staffing and Management Development Cr.Hrs.3 (Formerly 027.441) A review of: employment planning; recruitment and selection; internal placement; out placement; performance appraisal; career development. Training needs analysis, methods and evaluation. *Prerequisite:* HRIR 2440 (or 027.244).

HRIR 4411 Dotation et développement des ressources humaines Cr.Hrs.3 (L'ancien

027.441) Le cours est une analyse approfondie et pratique des problèmes de dotation et de développement des ressources humaines au sein des organisations. À travers ce cours, les étudiant(e)s développeront leurs habiletés d'intervention dans des domaines tels que la planification des emplois, le recrutement et la sélection, l'évaluation de la performance, l'analyse des besoins de formation, l'implantation et le contrôle d'un programme de formation, etc. *Préalable*: HRIR 2440 (ou 027.244).

HRIR 4420 Compensation Cr.Hrs.3 (Formerly 027.442) A review of the major concepts and design of compensation systems including: strategy, internal equity, external competitiveness, rewarding individual contributions, performance incentives, employee benefits, government regulations, union role in compensation; budgets and administration. *Prerequisite*: HRIR 2440 (or 027.244).

HRIR 4421 Rémunération Cr.Hrs.3 (L'ancien 027.442) Ce cours est une analyse des principaux concepts et des systèmes de rémunération incluant: stratégie, équité salariale, compétitivité, reconnaissance des contributions individuelles, incitatifs de performance, avantages sociaux, politiques gouvernementales, rôle des syndicats dans la rémunération, incidences et gestion du processus de rémunération. *Préalable*: HRIR 2440 (ou 027.244).

HRIR 4480 Collective Bargaining and Administration Cr.Hrs.3 (Formerly 027.448) Detailed examination of the elements and issues in contract negotiation and administration and of the legal framework imposed on public and private negotiations. Comparison of Canadian industrial relations system with other national systems. *Prerequisite*: HRIR 3450 (or 027.345 or 027.341).

HRIR 4481 La négociation collective Cr.Hrs.3 (L'ancien 027.448) Ce cours est une analyse des éléments et enjeux de la négociation collective et de la gestion des conventions collectives et une analyse du cadre juridique des négociations publiques et privées. Le système canadien de relations industrielles est comparé à d'autres systèmes nationaux. *Préalable*: HRIR 3450 (ou 027.345) ou l'ancien 027.341.

HRIR 4511 Gestion de la diversité Cr.Hrs.3 (L'ancien 027.451) La gestion de la diversité du point de vue historique, social, légal et opérationnel. L'influence de la diversité de la main-d'œuvre sur les politiques, les pratiques et les procédures de l'organisation. Modèle du développement organisationnel pluraliste relié à un ensemble de systèmes sociaux. Donné au Collège de St. Boniface. *Préalable*: HRIR 2440 (ou 027.244).

HRIR 4520 Comparative Industrial Relations and Human Resource Management Cr.Hrs.3 (Formerly 027.452) To provide an international perspective on industrial relations (IR) and human resource management (HRM) through analysis and comparison of IR systems and HRM practice across selected countries and of current developments therein. Also covers theories and issues relevant to these topics. Students are encouraged, but not required, to complete HRIR 3450 (or 027.345 or 027.341) prior to taking this course.

HRIR 4531 Gestion du changement Cr.Hrs.3 (L'ancien 027.453) Changement et développement organisationnel: processus de changement, agent de changement. Domaines d'intervention: changements dans l'environnement et l'organisation, processus sociaux, culture d'entreprise, techno-structure, qualité devie au travail. Dilemmes et perspectives. Donné au Collège de St. Boniface. *Préalable*: HRIR 2440 (ou 027.244).

HRIR 4541 Innovations en gestion des ressources humaines Cr.Hrs.3 (L'ancien 027.454) Présentation des nouveaux courants en gestion des ressources humaines, en examiner les fondements, en présenter les modèles d'implantation et en faire une analyse critique. Donné au Collège de St. Boniface. *Préalable*: HRIR 2440 (ou 027.244).

INTB 2200 International Management Cr.Hrs.3 (Formerly 027.220) Analysis of the practice of management in an international setting. Examines the cultural, political, and economic environments which influence managerial decision-making in an international context.

INTB 4501 Cultures du monde Cr.Hrs.3 (L'ancien 027.450) Un aperçu des principales cultures du monde. Étude des relations entre la culture d'un peuple et ses rapports économiques internationaux. Donné au Collège de St. Boniface.

INTB 4571 Introduction au management international Cr.Hrs.3 (L'ancien 027.457) Acquisition de connaissances et savoir-faire relatifs à la gestion, au maintien et au contrôle du flux international de personnes, d'informations, de fonds, de biens ou de services, à des fins commerciales, entrepreneuriales ou caritatives. Donné au Collège de St. Boniface. *Préalable*: HRIR 2440 (ou 027.244).

Interdisciplinary Management

IDM 3000 Aboriginal Business Context: Influences and Impacts Cr.Hrs.3 (Formerly 098.300) Explore the impact of legal, constitutional and governance issues on the internal and operating environment affecting economic development by Aboriginal peoples. Current strategies for successful partnerships between industry and Aboriginal peoples will also be examined. *Prerequisites*: NATV 1200 (or 032.120) or NATV 1220 (or 032.122) and NATV 1240 (or 032.124) or consent of instructor.

IDM 4050 Readings in Management Cr.Hrs.3 (Formerly 098.405) Supervised readings in one of the areas of Management. Students are limited to a maximum of six hours of readings and research courses.

IDM 4070 Management Research 1 Cr.Hrs.3 (Formerly 098.407) Individually supervised preparation of a detailed research proposal for an advanced study in one of the areas of Management. Students are limited to a maximum of six hours of readings and research courses.

IDM 4080 Management Research 2 Cr.Hrs.3 (Formerly 098.408) Individually supervised research and preparation of a paper in one of the areas of Management based on the proposal developed in IDM 4070 (or 098.407). Students are limited to a maximum of six hours of readings and research courses.

IDM 4090 Aboriginal Business Leadership Cr.Hrs.3 (Formerly 098.409) An analysis of current leadership strengths and challenges facing Aboriginal organizations. Out of

this analysis will come understanding of strategies for working effectively or ineffectively with Aboriginal organizations. *Prerequisite*: NATV 1200 (or 032.120) or NATV 1220 (or 032.122) and NATV 1240 (or 032.124) or consent of instructor.

Department of Marketing

ENTR 3100 Small Business Management Cr.Hrs.3 (Formerly 118.310) An appreciation of the primary issues that should be considered in starting and managing a small business within the Canadian context. *Prerequisites*: ACC 1100 (or 009.110), MKT 2210 (or 118.221), and GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208).

ENTR 4100 New Venture Analysis Cr.Hrs.3 (Formerly 118.410) A project oriented course focusing on the identification and evaluation of viable new venture concepts and their associated risks, problems, and opportunities. *Prerequisites*: MKT 2210 (or 118.221) and ACC 1110 (or 009.111) and GMGT 2030 (or 027.203) or GMGT 2080 (or 027.208).

ENTR 4511 Entrepreneurship et création d'entreprises Cr.Hrs.3 (L'ancien 118.451) Ce cours porte sur la création d'entreprise. Lancement d'entreprise; caractéristiques de l'entrepreneur; plan d'entreprise; définition du projet; détermination du marché; fonctions administratives; problèmes particuliers au lancement d'entreprise, aide gouvernementale. On ne pourra se faire créditer ce cours avec le ENTR 4100 (ou 118.410). Donné au Collège de St. Boniface. *Préalable*: ACC 1100 (ou 009.110), MKT 2210 (ou 118.221), et GMGT 2030 (ou 027.203) ou GMGT 2080 (ou 027.208).

U1MKT 2210 Fundamentals of Marketing Cr.Hrs.3 (Formerly 118.221) Analysis of marketing problems, emphasizing various alternatives available for achieving economic efficiency in the distribution process; public policy with respect to marketing.

MKT 2211 Principes de marketing Cr.Hrs.3 (L'ancien 118.221) Analyse des problèmes précis de marketing, l'accent étant mis sur l'analyse de différentes façons de maximiser les bénéfices dans le processus de la distribution des biens et des services; le marketing et la société. Donné au Collège de St. Boniface.

MKT 3220 Marketing Research Cr.Hrs.3 (Formerly 118.322) Study of marketing research as a tool for decision-making. The ability to use one of the statistical analysis computer packages (SPSS-X, SAS, etc.) is expected. *Prerequisites*: MKT 2210 (or 118.221) and STAT 1000 (or 005.100) or consent of instructor.

MKT 3230 Consumer Behaviour Cr.Hrs.3 (Formerly 118.323) Study of buying behaviour of individuals and organizations as affected by psychological and sociological forces within society. *Prerequisite*: MKT 2210 (or 118.221).

MKT 3231 Comportement du consommateur Cr.Hrs.3 (L'ancien 118.323) Étude de l'influence de l'environnement et de l'influence individuelle sur le comportement du consommateur. Donné au Collège de St. Boniface. *Préalable*: MKT 2210 (ou 118.221).

MKT 3240 Selected Topics in Marketing Cr.Hrs.3 (Formerly 118.324) Analysis of marketing as it relates to specialized fields. *Prerequisite*: MKT 2210 (or 118.221).

MKT 3250 Marketing Strategy Cr.Hrs.3 (Formerly 118.325) Integration of sales and marketing strategies, including planning, formulation, and implementation. Emphasis on the role and importance of marketing strategy in overall corporate growth. *Prerequisite*: MKT 2210 (or 118.221).

MKT 3291 Publicité Cr.Hrs.3 Analyse du rôle et de la gestion de la publicité dans le cadre du plan marketing. Théorie de la communication et la formulation de messages publicitaires, établissement du budget, la sélection des médias et l'analyse de l'efficacité de la publicité. Donné au Collège de St. Boniface. *Préalable*: 118.221.

MKT 3300 International Marketing Cr.Hrs.3 (Formerly 118.330) A study of international similarities and differences in marketing structures, functions and processes as related to the socio-economic and cultural environment and a consideration of the opportunities and problems of international marketing. *Prerequisite*: MKT 2210 (or 118.221).

MKT 3310 Retail and Channel Management Cr.Hrs.3 (Formerly 118.331) The study of the functions performed by traditional and e-commerce distributors. Topics include location and competitive analysis, promotion, merchandising, buying, design, selection and historical development. *Prerequisite*: MKT 2210 (or 118.221). May not be held with the former 118.321.

MKT 3320 Competitive Intelligence Cr.Hrs.3 (Formerly 118.332) An examination of the information sources and analytical techniques required by business to develop the competitive intelligence necessary to successfully compete in today's marketplace. *Prerequisites*: ACC 1110 (or 009.111), MIS 2000 (or 009.200), MKT 3220 (or 118.322).

MKT 3340 Services Marketing Cr.Hrs.3 (Formerly 118.334) An examination of the differences in the marketing of goods versus services. Topics covered include service process design and management, problem identification and resolution, positioning issues, the importance of human resources, and promotional issues. *Prerequisite*: MKT 2210 (or 118.221).

MKT 3390 Integrated Marketing Communication Cr.Hrs.3 (Formerly 118.339) The process of using promotional tools in a unified way so that a synergistic communications is created. The course examines the roles of advertising, sales promotion, direct marketing, and the internet within this broader framework. *Prerequisite*: MKT 2210 (or 118.221). May not hold with the former 118.329.

MKT 4210 Marketing Management Cr.Hrs.3 (Formerly 118.421) Study of location and nature of markets, techniques by which firms attempt to affect the demand for their goods and services and the significance of these effects on business and society. Can be taken only in final year of program. *Prerequisites*: Two of: MKT 3220 (or 118.322), MKT 3230 (or 118.323), and one other 300 or 400 level Marketing course.

MKT 4240 Advanced Seminar in Marketing Cr.Hrs.3 (Formerly 118.424) An in-depth examination of special topics in marketing including marketing theory, and recent developments in marketing philosophy and thought. *Prerequisite*: MKT 2210 (or 118.221), plus at least two other 300 or 400 level marketing courses.

MKT 4270 Sales Management Cr.Hrs.3 (Formerly 118.427) The study of the management of the personal selling area including an examination of the selling function, the sales manager, and sales management. *Prerequisite:* MKT 2210 (or 118.221).

MKT 4271 Administration des ventes Cr.Hrs.3 (L'ancien 118.427) Analyse de l'administration de la vente personnelle, y compris l'analyse la fonction-vente, la supervision de la force de vente et la gestion des ventes. Donné au Collège de St. Boniface. *Préalable:* MKT 2210 (ou 118.221).

MKT 4410 Business to Business Marketing Cr.Hrs.3 (Formerly 118.441) The study of marketing management and its decision-making implications within the industrial and commercial marketplace. *Prerequisite:* MKT 2210 (or 118.221). May not hold with the former 118.440.

Department of Supply Chain Management

MSCI 2150 Introduction to Management Sciences Cr.Hrs.3 (Formerly 164.215) An introduction to management science techniques and models. Topics include linear programming, distribution problems, decision theory and queuing models. *Prerequisites:* MATH 1310 (or 136.131) or MATH 1300 (or 136.130) or equivalent; and MATH 1520 (or 136.152) or MATH 1500 (or 136.150) or equivalent. *Corequisites:* STAT 1000 (or 005.100) or equivalent and COMP 1260 (or 74.126). May not hold with the former 027.215.

MSCI 2151 Introduction aux sciences de la gestion Cr.Hrs.3 (L'ancien 164.215) Introduction aux techniques et modèles des sciences de la gestion. Les sujets traités incluent la programmation linéaire, les problèmes d'affectation et de transport, la théorie de la décision, les files d'attente. *Préalables:* MATH 1310 (ou 136.131) ou MATH 1300 (ou 136.130) et MATH 1520 (ou 136.152), ou MATH 1500 (ou 136.150). *Préalable* ou *corequis:* STAT 1000 (ou STAT 1001) et COMP 1260 (ou COMP 1261) ou consentement du professeur. May not hold with former 027.215.

MSCI 3400 Intermediate Management Science Cr.Hrs.3 (Formerly 164.340) Operations research models used in the analysis of management problems. Topics include network analysis, deterministic inventory models, dynamic programming and game theory. *Prerequisite:* MSCI 2150 (or 164.215) or consent of instructor. May not hold with former 027.340.

MSCI 3401 Sciences de la gestion 2 Cr.Hrs.3 (L'ancien 164.340) Modèles de la recherche opérationnelle utilisés dans l'analyse de problèmes de gestion. Les sujet traités incluent les réseaux, les problèmes d'inventaire du point de vue déterministe, la programmation dynamique, la théorie des jeux. *Préalables:* MSCI 2150 (ou 164.215) ou le consentement du professeur. May not hold with former 027.340F.

MSCI 4200 Topics in Management Science Cr.Hrs.3 (Formerly 164.420) Topics of current interest in management science. *Prerequisite:* MSCI 2150 (or 164.215). May not hold with former 027.420. Not taught every year.

MSCI 4220 Management Science Models in Business and Industry Cr.Hrs.3 (Formerly 164.422) An applied course providing practical experience in modeling and solving business and industrial problems. Emphasis to be placed upon analysis, formulation, solution and implementation. Not taught every year. *Corequisite:* one of MSCI 3400 (or 164.340 or 027.340), MSCI 4200 (or 164.420 or 027.420) or MSCI 4230 (or 164.423 or 027.423). May not hold with former 027.422.

MSCI 4230 Simulation Models in Management Science Cr.Hrs.3 (Formerly 164.423) Introduction to and use of simulation models and techniques to solve business and industrial problems. Not taught every year. *Prerequisite:* MSCI 2150 (or 164.215) May not hold with former 027.423.

OPM 2600 Fundamentals of Production and Operations Management Cr.Hrs.3 (Formerly 164.260) Study of production function and management; production systems; system design, analysis and control. *Prerequisite:* must have completed 12 credit hours of Asper School of Business courses. Pre- or corequisite: STAT 1000 (or 005.100) or equivalent. May not hold with former 027.260.

OPM 2601 Principes de gestion des opérations et de la production Cr.Hrs.3 (L'ancien 164.260) Étude des notions de base en gestion des opérations et de la production, systèmes de production, conception de système, analyse et contrôle. Donné au Collège universitaire de Saint-Boniface. *Préalable* ou *corequis:* STAT 1000 (ou 005.100) ou l'équivalent. May not hold with former 027.260F.

OPM 3630 Simulation Models for Operations Management Cr.Hrs.3 (Formerly 164.363) Currently not offered. May not hold with former 027.363.

OPM 3640 Project Planning and Control Cr.Hrs.3 (Formerly 164.364) Currently not offered. May not hold with former 027.364.

OPM 3650 Management of Quality and Reliability Cr.Hrs.3 (Formerly 164.365) This course offers a practical introduction to modern quality assurance and reliability management concepts, methods and practices. It builds upon the relevant subject matter in basic courses in production management and prepares for positions in the field of quality and reliability management. *Prerequisite:* OPM 2600 (or 164.260). May not hold with former 027.365.

OPM 3660 Operations Management in Service Organizations Cr.Hrs.3 (Formerly 164.366) This course explores the applications of operations management concepts to the management of service operations. The characteristics of a service operation, while generally comparable to manufacturing a product, often place a unique demand upon the service manager. These demands, along with the analysis of actual company situations through case study applications, are emphasized. May not hold with former 027.366.

OPM 3670 POM Project in Industry Cr.Hrs.3 (Formerly 164.367) An applied course, designed to bridge the gap between theoretical concepts developed in previous POM courses and current industrial practices by means of an industrial project. *Prerequisites:* OPM 2600 (or 164.260 or 027.260) or consent of instructor. May not hold with former 027.367.

OPM 4620 Production Management Seminar Cr.Hrs.3 (Formerly 164.462) Problems, development, and application of analytical methods in production and operations management with emphasis on planning and control. *Prerequisite:* MSCI 2150 (or 164.215) and OPM 2600 (or 164.260). May not hold with former 027.462.

OPM 4630 Production and Inventory Systems: Planning and Control Cr.Hrs.3 (Formerly 164.463) To develop concepts and understanding about the planning and control system used to guide and coordinate the flow of materials, labor inputs and goods and services through the physical productive system. Topics to be covered include: 1) Independent demand inventory systems, 2) Dependent demand inventory systems, 3) Aggregate planning, 4) Capacity planning and control. *Prerequisite:* OPM 2600 (or 164.260). May not hold with former 027.463.

SCM 2210 Transportation Principles Cr.Hrs.3 (Formerly 164.221) Demand forecasting, cost analysis, regulation of carriers, role of transport in economic development, project appraisal and transport planning. Also offered as ABIZ 2210 by the Department of Agribusiness and Agricultural Economics. May not be held with ABIZ 2210 (or 061.221). *Prerequisite:* ECON 1200 (or 018.120).

SCM 2220 Selected Topics in Logistics and Transportation Cr.Hrs.3 (Formerly 164.222) This course provides coverage on a number of critical topics in Supply Chain Logistics and Transportation. Areas of emphasis are based on current issues confronting managers and regulators/policy makers such as global supply chain logistics and transportation policy.

SCM 2230 Introduction to Supply Chain Management Cr.Hrs.3 (Formerly 164.223) An examination of the management activities that are necessary to ensure an efficient flow of materials, funds, and information among the various organizations in supply chains, from the acquisition of raw materials to the delivery of the finished product to the end user.

SCM 3230 Global Supply Chains Cr.Hrs.3 (Formerly 164.323) The course provides a global orientation to supply chain management, with a particular emphasis on the global linkages between organizations in international supply chains. Supply chain management practices in selected countries are also examined. *Prerequisite:* SCM 2230 (or 164.223) or SCM 3360 (or 164.336 or 118.336) or consent of instructor.

SCM 3360 Supply Chain Logistics Cr.Hrs.3 (Formerly 164.336) The course provides an international/global orientation to logistics and supply chain management. *Prerequisite:* MKT 2210 (or 118.221). May not be held with the former 118.336 or 118.326.

SCM 4240 Policy and Regulation in Supply Chain Management Cr.Hrs.3 (Formerly 164.424) An analysis of the process of policy development of supply chain regulation, a review of the legislation that regulates supply chains, and an assessment of the impact of such legislation on supply chain management activities. *Prerequisite:* SCM 2230 (or 164.223) or consent of instructor.

School of Medical Rehabilitation

General Office

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Director: Emily Etcheverry

Head, Department of Occupational Therapy: Donna Collins

Head, Department of Physical Therapy: Jenneth Swinamer

Head, Department of Respiratory Therapy: Ted Yachemetz

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Chapter Contents

SECTION 1: Academic Staff

SECTION 2: The Professions of Occupational Therapy, Physical Therapy and Respiratory Therapy

SECTION 3: Admission to the School of Medical Rehabilitation

- 3.1 Degrees Offered
- 3.2 Course Requirements: Occupational Therapy
- 3.3 Course Requirements: Physical Therapy
- 3.4 Course Requirements: Respiratory Therapy

SECTION 4: Academic Regulations

- 4.1 General
- 4.2 Health Requirements
- 4.3 Dean's Honour List
- 4.4 Attendance
- 4.5 Criminal Record Check and Child Abuse Registry Check

SECTION 5: Program Requirements

- 5.1 Educational Objectives of Programs
- 5.2 Clinical/Fieldwork Education

SECTION 6: Course Descriptions

- 6.1 Year 1
 - 6.2 Year 2
 - 6.3 Year 3
 - 6.4 Other: Undergraduate Course in Occupational Therapy
-

SECTION 1: Academic Staff

Department of Occupational Therapy

Professor Emerita:

Cooper, J.E., Dip. P. and O.T. (Toronto), B.O.T., M.Sc., Ph.D. (Manitoba).

Professors:

Anderson, J., B.Sc. (British Columbia), Ph.D. (Manitoba); **Etcheverry, E.,** Dip.O.T., B.O.T., M.Ed., Ph.D. (Manitoba).

Associate Professors:

Booth, A.D., B.Sc.(O.T.) (Pennsylvania), M.B.A. (Manitoba); **Collins, D.,** Dip.O.T., B.Sc.(O.T.) (Queen's), M.Sc.(Community Health Sciences) (Manitoba).

Assistant Professors:

Friesen, M., Dip.O.T. (Alberta), B.O.T., M.Ed., Ph.D. (Manitoba); **Leclair, L.,** B.A. (Manitoba), B.H.Sc.(O.T.) (McMaster), M.Sc. (Manitoba); **Nesbit, S.,** B.S. (Ohio), M.S.(O.T.) (Columbia); **Quanbury, A.,** B.Sc. (Queen's), M.A.Sc. (Toronto); **Restall, G.,** B.M.R.(O.T.) (Manitoba), M.Sc.(O.T.) (Alberta); **Ripat, J.,** B.M.R.(O.T.), M.Sc.(Rehab) (Manitoba).

Adjunct Professor:

Ethans, K.D., B.Sc. (Manitoba), M.D., FRCP(C) (Dalhousie).

Senior Instructors:

Sullivan, T., B.Sc.(O.T.) (Western Ontario), M.A. (Columbia); **Wener, P.,** B.M.R.(O.T.), M.Ed. (Manitoba).

Academic Fieldwork Co-ordinator and Instructor 2:

Campbell-Rempel, M., B.Sc. (Brandon), B.M.R.(O.T.) (Manitoba).

Instructor 2:

Giesbrecht, E., B.S.W., B.M.R.(O.T.) (Manitoba); **Mendez, L.,** B.M.R.(O.T.) (Manitoba).

Sessional and Term Instructors:

Almdal, S., B.A. (Winnipeg), B.H.Sc.(O.T.) (McMaster); **Bergen, C.,** B.M.R.(O.T.) (Manitoba), M.A.(Marriage, Family and Child Counselling) (California); **Cortens, B.,** B.M.R.(O.T.) (Manitoba); **Diamond-Burchuk, L.,** B.M.R.(O.T.) (Manitoba); **Hales, S.,** B.M.R.(O.T.) (Manitoba); **Johnson, L.,** B.H.Sc.(O.T.) (McMaster); **MacLeod-Schroeder, N.,** B.Sc.(O.T.), M.Sc. (Western Ontario); **Miller, K.,** B.Sc.(O.T.) (Western Ontario); **Skrabek, S.,** B.Ed. (Winnipeg), B.M.R.(O.T.) (Manitoba); **Smith, K.,** B.M.R.(O.T.) (Manitoba); **Steur, T.,** B.A., B.M.R.(O.T.) (Manitoba).

Department of Physical Therapy

Associate Professors:

Kriellaars, D., B.P.E. (Manitoba), M.Sc. (Dalhousie), Ph.D. (Manitoba); **Swinamer, J.,** B.P.T. (Manitoba), M.S.A.(Health) (Central Michigan); **Szturm, T.J.,** B.Sc.(Biology), B.Sc.(P.T.) (Western Ontario), Ph.D.(Neurophysiology) (Manitoba).

Assistant Professors:

Macdonald, J.A., B.P.T. (McGill), M.S.Ed. (Connecticut); **MacNeil, B.,** B.Sc.(P.T.) (Dalhousie), Ph.D. (Waterloo); **Shay, B.,** B.M.R.(P.T.), M.Sc., Ph.D. (Manitoba); **Weinberg, L.E.,** B.P.T., M.Sc., Ph.D. (Manitoba).

Senior Instructor:

Pereira, G., Dip.(P.T.) (Saskatchewan), B.P.T. (Manitoba).

Instructors:

Barclay-Goddard, R., B.M.R.(P.T.) (Manitoba), M.H.Sc. (McMaster); **Fricke, M.,** B.M.R.(P.T.), M.Sc. (Manitoba); **McMurray, M.,** B.P.E., B.M.R.(P.T.) (Manitoba); **Ryan-Arbez, N.,** B.M.R. (P.T.) (Manitoba); **Walker, M.,** B.M.R.(P.T.), M.Sc. (Manitoba); **Webber, S.,** B.M.R.(P.T.), M.Sc. (Manitoba).

Academic Co-ordinator of Clinical Education, and Instructor 2:

Garrett, M., B.Phty (Queensland), M.H.A. (New South Wales).

Clinical Lecturers:

Abbott, B., B.M.R.(P.T.) (Manitoba), M.D. (Saskatchewan); **Fruehm, C.,** B.M.R.(P.T.) (Manitoba); **Horbal, R.,** B.P.E. (Manitoba), Cert.Ed. (Brandon), B.M.R.(P.T.) (Manitoba); **Lavallee, R.,** B.A., B.M.R.(P.T.) (Manitoba), (FCAMT); **Lightly, E.,** B.M.R.(P.T.) (Manitoba); **Newton, L.,** R.N. (Winnipeg General Hospital), B.A. (Winnipeg), B.S.N. (Victoria), M.N. (Manitoba); **Silk, C.,** B.M.R.(P.T.) (Manitoba); **Stevenson, T.,** B.Sc.(Kin.) (Waterloo), Dip.(P.T.) (Mohawk College), B.H.Sc.(P.T.) (McMaster), M.Sc.(P.T.) (Western Ontario); **Urban, L.,** B.P.T. (Manitoba).

Department of Respiratory Therapy

Professors:

Anthonsen, N.R., A.B. (Dartmouth), M.D. (Harvard), Ph.D. (McGill); **McCarthy**, D.S., M.B., B.Ch.(Ire.), M.R.C.P.(Ire.Edin.andLond.), M.D.(Ire.), Ph.D.(Lond.).

Associate Professor:

Yachemetz, T., B.A.(Hons.) (Manitoba), R.R.T. (Health Sciences Centre).

Assistant Professors:

Chiu, A., B.Sc., M.D. (Toronto); **Honcharik**, N., B.Sc.(Pharm.) (Manitoba), Pharm.D. (SUNY Buffalo).

Lecturer:

Parker, J., B.Sc. (Calgary), R.T. (Red River College).

Instructor 2:

Wall, B., R.N., R.R.T. (Health Sciences Centre).

Instructor 1:

Chambers, K., R.R.T. (Health Sciences Centre); **Haywood**, E., R.R.T. (Health Sciences Centre); **Heese**, R., R.R.T. (Health Sciences Centre); **Mestdagh**, F., R.R.T. (Health Sciences Centre); **Minski**, J., R.R.T. (Health Sciences Centre); **Moore**, M., B.Sc.(E.Eng.) (Red River Community College); **Mortimer**, T., R.R.T. (Health Sciences Centre); **Simcoe**, T., B.Sc. (Manitoba), R.R.T. (Health Sciences Centre).

SECTION 2: The Professions of Occupational Therapy, Physical Therapy and Respiratory Therapy

The School of Medical Rehabilitation offers three entry-level professional programs: one in Occupational Therapy, one in Physical Therapy, and one in Respiratory Therapy. Occupational Therapy is a health discipline that endeavours to promote, develop, restore and optimize health and functional ability. Therapists use a holistic approach and work collaboratively with their clients to facilitate their achievement of independence in all aspects of their daily living. Physical Therapy is a discipline directed towards the prevention or alleviation of movement dysfunction. The goal of physical therapy is to assist patients in achieving, or restoring to them, the highest level of movement possible and maximum independence. Respiratory Therapy is a health discipline devoted to the scientific application of technology to assist in the diagnosis, treatment, and promotion of well being of patients with respiratory and associated disorders. Respiratory Therapists work as part of a multidisciplinary health care team in a variety of hospital and alternate care settings as well as the private sector and the community.

The School of Medical Rehabilitation was established in September 1960 as a response by the University of Manitoba to the increasing need for occupational and physical therapists. It was founded as an academic unit within the Faculty of Medicine and was located originally in the Children's Hospital. In 1962 the school moved to the third floor of the newly completed Manitoba Rehabilitation Hospital. Since the incorporation of the Health Sciences Centre in 1972, the school has retained this location but now exists primarily as an integrated part of the Bannatyne Campus. The general office is located at 771 McDermot Avenue on the Bannatyne Campus. The Department of Respiratory Therapy is housed in the Isabel M. Stewart Building, 700 McDermot Avenue. In 1996, the school was given 25,000 square feet of new space in the former Medical Library Building and a major redevelopment plan was completed in 2002.

In 1964 the University Senate approved extensions of the original diploma curricula from two and one-half to three years. Optional fourth-year programs leading to the degrees of Bachelor of Occupational Therapy and Bachelor of Physical Therapy were approved by Senate in 1966.

In February 1976, new undergraduate programs leading to the degrees of Bachelor of Medical Rehabilitation (Occupational Therapy) and Bachelor of Medical Rehabilitation (Physical Therapy) were approved by Senate in recognition of expanding roles of occupational and physical therapy in health care. The diploma programs were discontinued.

Effective September 1989, a revised B.M.R.(O.T.) and a revised B.M.R.(P.T.) program were introduced.

Plans are underway for the development of a graduate entry-level program in Physical Therapy within the next few years. If approved, this program

would replace the current undergraduate program. Students are advised to consult the School of Medical Rehabilitation web site for current information about the Physical Therapy program.

Effective in 2003, the Occupational Therapy entry-level program became a graduate program leading to a Master of Occupational Therapy degree. There is a Regular program and an Accelerated option. The Regular program is for individuals who do not have a previous degree in occupational therapy. The Accelerated option is for occupational therapists who have a B.M.R.(O.T.) degree or equivalent. Students are advised to consult the University of Manitoba Graduate calendar and the Master of Occupational Therapy program supplementary regulations for further information.

The Bachelor of Respiratory Therapy program was approved by Senate in 2002, modified from the previous diploma program, established at the Health Sciences Centre in 1964. The original diploma program was established as a two-year program, was modified to a three-year program in 1984, and subsequently evolved to require a pre-professional year of study in 1995. The current B.M.R.(R.T.) program has introduced a number of curricular changes to the most recent diploma program, offering a revised four-year program of study leading to a bachelor degree.

In 1989, a Masters of Physical Therapy program was approved and in 1992 the program became an M.Sc.(Rehabilitation), in which all other disciplines related to rehabilitation could further their research endeavours.

Accreditation

The Occupational Therapy program maintains accreditation through the Canadian Association of Occupational Therapists. Accreditation was received in 1986, 1989, 1991, 1995, 2000 and 2005.

The Physical Therapy program was awarded ongoing accreditation status until 2008 from the Accreditation Council for Canadian Physiotherapy Academic Programs (ACCPAP).

The Respiratory Therapy diploma program was awarded full accreditation through the Canadian Medical Association Conjoint Committee on Accreditation in 1975, 1980, 1985, 1990 and 1995. In 2000, the Canadian Society of Respiratory Therapists assumed responsibility for accreditation of respiratory therapy educational programs through the Council on Accreditation of Respiratory Therapy Education (CoARTE). CoARTE accredited the diploma program in 2001. Accreditation status was accorded the degree program in 2003 after satisfactory submission of documentation related to the transfer of the program to the University of Manitoba. It is within the goals and objectives of the baccalaureate program to adhere to the principles and requirements of professional accrediting bodies.

SECTION 3: Admission to the School of Medical Rehabilitation

3.1 Degrees offered

Master of Occupational Therapy (M.O.T.)

Regular Program minimum time to graduation: Five years (prior bachelor's degree plus two years)

Accelerated Option minimum time to graduation: Five years (B.M.R.(O.T.) degree and prerequisite year plus one year)

Bachelor of Medical Rehabilitation (Physical Therapy) (B.M.R.(P.T.))

Bachelor of Medical Rehabilitation (Respiratory Therapy) (B.M.R.(R.T.))

Minimum time to graduation: Four years (University 1 plus three years).

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in applicant information bulletins that are available from the School of Medical Rehabilitation general office, R106-771 McDermot Avenue, Bannatyne Campus. P.T. and R.T. info can also be obtained from the Admissions Office, Enrolment Services, 424 University Centre. This information is also posted on the university's website.

3.2 Course requirements: Occupational Therapy

Regular Program

Completion of a previous undergraduate degree, minimum B average in last 60 credit hours of study, completion of all program prerequisite courses

es or approved alternates with no grade in prerequisites below a C. Prerequisite courses include all of the courses listed below or equivalents approved by the M.O.T. Admissions Committee:

SOC 1200 Introduction to Sociology
PSYC 1200 Introduction to Psychology
PSYC 2290 Child Development
PSYC 2370 Developmental Psychology from Adolescence to Old Age
STAT 1000 Basic Statistical Analysis 1
ZOOL 1320 Anatomy of the Human Body
ZOOL 1330 Physiology of the Human Body.

Accelerated Option

Completion of a B.M.R.(O.T.) degree or equivalent, minimum B average in the last 60 credit hours of the degree, completion of an additional 42 credit hours of non-O.T. degree credits and evidence of having passed the Canadian Association of Occupational Therapists (CAOT) certification examination and/or eligibility for registration in Manitoba by the Association of Occupational Therapists of Manitoba (A.O.T.M.).

3.3 Course requirements: Physical Therapy

BIOL 1250 Biology, or both BIOL 1000 and BIOL 1010 Biology, or BIOL 1230 Biology, or ZOOL 1320 and ZOOL 1330 (or ZOOL 2530 and ZOOL 2540)

SOC 1200 Introduction to Sociology
PSYC 1200 Introduction to Psychology
3 credit hour course to satisfy the written English requirement
6-9 credit hours of electives to total 30 credit hours in University 1

Other requirements: Physical Therapy

Minimum GPA required for consideration: 3.0. Minimum 3.0 in core courses.

The written English requirement must be satisfied in University 1; the mathematics requirement is satisfied after admission to Physical Therapy by the required course, REHB 2460.

Selection criteria: 50% interview and 50% grades. Volunteer experiences are strongly recommended prior to application.

High school prerequisites for Physical Therapy degree only

High school prerequisites: Biology 40S, Chemistry 40S, English 40S, Physics 30S or 40S are strongly recommended.

3.4 Course requirements: Respiratory Therapy

BIOL 1250 Biology, or both BIOL 1000 and BIOL 1010 Biology
SOC 1200 Introduction to Sociology
PSYC 1200 Introduction to Psychology
3 credit hour course to satisfy the written English requirement
9 credit hours of electives to total 30 credit hours in University 1

Other requirements: Respiratory Therapy

Minimum GPA for consideration is 2.5.
The mathematics requirement is satisfied after admission to Respiratory Therapy by required course REHB 2460.
The following High School Courses are recommended: Biology 40S, English 40S, Mathematics 40S, Chemistry 40S and Physics 40S.
Selection Criteria: 67% Grades and 33% Interview.
Applicants having less than 30 credit hours in a regular winter session will be considered if they have an AGPA of 3.0 or better.

SECTION 4: Academic Regulations

4.1 General

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the School of Medical Rehabilitation has regulations and requirements, published below, that apply specifically to its students.

Policies with regard to admissions, selection, academic progression of the student, compulsory attendance, examination procedures, supplemental examination procedures, and withdrawal dates are in force and are on file in the general office of the School of Medical Rehabilitation.

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web

Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

4.2 Health Requirements

Students in all departments are required to provide a health history and immunization record. A student will not be permitted to attend fieldwork/clinical placements until all health, immunization and CPR requirements are current.

Immunizations

Standard health record forms are sent to occupational, physical and respiratory therapy students upon acceptance into the program. New students must provide the completed health record form and proof of current immunizations by August 31 (September 30 for Physical Therapy) of the academic year in which they commence classes. Students are required annually to review and update immunizations as necessary.

Cardiopulmonary Resuscitation Certification (Occupational Therapy only)

All students of the Department of Occupational Therapy are required to obtain certification in cardiopulmonary resuscitation. Certification must be at the Basic Rescuer Level. New students in the school must provide proof of certification by August 31 of the academic year in which they commence classes. Thereafter, second year students must provide proof of certification annually by December 15.

Cardiopulmonary Resuscitation Certification (Physical Therapy only)

All students of the Department of Physical Therapy are required to obtain certification in cardiopulmonary resuscitation annually. Certification must be at the Basic Rescuer Level. New students in the department must provide proof of certification by October 30. All students must assume responsibility for recertifying by October 30 of the subsequent two years.

Cardiopulmonary Resuscitation Certification (Respiratory Therapy only)

All students of the Department of Respiratory Therapy are required to obtain certification in cardiopulmonary resuscitation. Certification must be at the Basic Rescuer Level. First and second year students must provide proof of certification before their first fieldwork experience, usually mid-September. Third year students will be certified/re-certified by the program at the beginning of their clinical internship year in preparation for advanced level certification(s) in cardiopulmonary resuscitation.

4.3 Dean's Honour List

Undergraduate Students (Physical Therapy and Respiratory Therapy)

Students carrying a full course load, with a sessional Grade Point Average of 3.7 or higher and have not done resit or supplemental exams, are placed on the Dean's Honour List.

4.4 Attendance

Regular attendance is expected of all students in all courses. Prior permission is required for any anticipated absences. Students absent from class due to illness may be required to present a certificate from a physician. Unexcused absence from an examination may result in a grade of zero for that examination. Make-up examinations may be allowed under special circumstances.

4.5 Criminal Record Check and Child Abuse Registry Check

Students are advised that clinical/fieldwork education sites require that students complete a Criminal Record Check and/or a Child Abuse Registry Check.

New students in the Master of Occupational Therapy program must provide results of a Child Abuse Registry Check and a Criminal Record Check by August 31 of the academic year in which they commence classes.

All physical therapy students are required to obtain a Criminal Record Check and a Child Abuse Registry Check by September 30 of each year of the program.

All respiratory therapy students are required to produce a Criminal Record Check and a Child Abuse Registry Check by August 31 of the year in which they commence classes. Both the Criminal Record Check and the Child

Abuse Registry Check must be completed within a six-month time period prior to commencing the program.

SECTION 5: Program Requirements

5.1 Educational Objectives of Programs

The M.O.T., B.M.R.(P.T.) and B.M.R.(R.T.) programs have been designed so that students successfully completing the required academic, professional, and clinical/fieldwork education programs should be able to:

- Understand the interrelationships between medical, psychosocial, economic, and cultural factors affecting the patient/client;
- Identify the role of the therapist in health care;
- Demonstrate application of ethical and professional responsibilities;
- Demonstrate knowledge, understanding, and use of therapeutic intervention;
- Plan, apply and interpret assessment and/or diagnostic procedures;
- Participate in the decisions of a health care team with respect to the design of a total rehabilitation program or other treatment regime including the initiation, progression and discontinuation of therapy;
- Implement the occupational, physical or respiratory therapy components of a total rehabilitation program or other treatment regime;
- Review and modify therapy according to patient/client response and according to the progression of a total rehabilitation program or other treatment regime.
- Assign appropriate areas of a rehabilitation program or selected work assignments to supervised support personnel;
- Participate in clinical and/or basic science research; and
- Participate in and encourage the improvement of health care in the community.

5.2 Clinical/Fieldwork Education

Occupational Therapy

See University of Manitoba Graduate Calendar for descriptions of courses in the Master of Occupational Therapy (M.O.T.) program.

Physical Therapy

1,200 full-time hours of clinical/practical experience are required. Clinical placements are conducted from February to August of the first, second and third years of the program. Placements occur primarily in locations in Manitoba, Saskatchewan, northwest Ontario and Kivalliq Region of Nunavut. Students are advised to take into account the financial implications of the summer placement requirements of the B.M.R.(P.T.) program. All students should be prepared to be placed outside of Winnipeg for a minimum of one placement.

Respiratory Therapy

1,600 full-time hours of clinical/fieldwork experience are required. Clinical placements are integrated throughout the three academic years with the majority of the clinical placements occurring in Year 3, the internship year. Placements during the regular academic year all take place within greater Winnipeg. Placements occur within a variety of hospital, public and private settings. (Refer to start and end dates for all years of the program.)

Clinical/Fieldwork Education Sites (PT and RT)

The university recognizes the following sites which provide clinical therapists who lecture in the academic component of the program and also provide supervision of students in clinical/fieldwork placements:

Winnipeg: Access Physiotherapy; Andrea Vinci Physiotherapy; Community Therapy Services of Manitoba; Concordia Hospital; Corydon Physiotherapy Clinic; D'Arcy Bain Physiotherapy & Sports Injury Clinic; Deer Lodge Centre; Fitness Physiotherapy Services of Manitoba Ltd.; Grace Hospital; Health Sciences Centre; Heather Howdle P.T. & Consulting; Hunter Physiotherapy; Interhospital Transport Team, WRHA; Manitoba Lung Association; Markham Physiotherapy Clinic; Misericordia Health Centre; Ness Physiotherapy and Sports Injury Centre; Nova Physiotherapy and Sports Fitness Clinic; Plessis Physiotherapy - Sports Injury Clinic; RANA Medical Inc.; Rehabilitation Centre for Children; River East Physiotherapy Sports Fitness Clinic; Riverview Health Centre; Rose & Max Rady Community Centre; St. Amant Centre; St. Boniface General Hospital; School Therapy Services; Seven Oaks General Hospital; Sport and Spine Physiotherapy Centre; Transcona Physiotherapy and Sports Injury Clinic; Victoria General Hospital; Vital Aire (Manitoba Branch); Wellness Institute; Whyte Ridge P.T. & Sports Injury Clinic; YM-YWCA of Winnipeg.

Outside of Winnipeg: Allied Health Group; Boundary Trails Health Centre, Winkler; Brandon Regional Health Authority; Central Regional Health Authority; Manitoba Developmental Centre, Portage la Prairie; Parkland Regional Therapy Program; PhysioFirst; Portage District General Hospital; Portage P.T. & Sports Injury Clinic; Quarry P.T. Sports Injury & Rehab Clinic, Ashern; Rankin Inlet Health Centre, Nunavut; Steinbach P.T. Clinic & Sports Injury Centre; Swan River Valley Hospital; Thompson General Hospital; West Fit P.T. & Sports Injury Clinic; Yellowhead P.T. & Athletic Centre.

SECTION 6: Course Descriptions

6.1 Year 1:

See University of Manitoba Graduate Calendar for descriptions of courses in the Master of Occupational Therapy (M.O.T.) program.

Courses in Physical Therapy		Courses in Respiratory Therapy	
REHB 1200	REHB 1480	REHB 1200	REHB 1480
REHB 1490	REHB 1500	REHB 1490	RESP 1270
PT 1700	PT 1730	RESP 1280	RESP 1290
PT 1740	PT 1750	RESP 1320	RESP 1330
PT 1910		RESP 1360	RESP 1370
		RESP 1380	
Total credit hours 45		34	

REHB 1200 Basic Clinical Sciences Cr.Hrs.3 (Formerly 068.120) A lecture and tutorial course covering basic physiology related to membrane, muscle, pain and the cardiovascular, respiratory, endocrine, and immune systems. 50 hours.

REHB 1480 Human Anatomy - Systems Cr.Hrs.3 (Formerly 068.148) Lecture and laboratory study of the microscopic and macroscopic structure of the major systems of the human body. Living anatomy of the cardiorespiratory system. 90 hours.

REHB 1490 Musculoskeletal Anatomy 1 Cr.Hrs.2 (Formerly 068.149) Lecture and laboratory study, including living anatomy, of the musculoskeletal structures of the head, neck and trunk. 50 hours.

REHB 1500 Musculoskeletal Anatomy 2 Cr.Hrs.3 (Formerly 068.150) Lecture and laboratory study, including living anatomy, of the musculoskeletal structures of the upper and lower extremities. 80 hours.

PT 1700 Psychosocial Issues Cr.Hrs.6 (Formerly 167.170) A general course to provide an overview of psychosocial behaviour and the implication for physiotherapy practice. 75 hours.

PT 1730 Physical Therapy Management Cr.Hrs.10 (Formerly 167.173) A theory and practical course on applying physical therapy techniques to patients with cardio and respiratory disorders. 166 hours.

PT 1740 Cardiorespiratory Clinical Education Cr.Hrs.7 (Formerly 167.174) Consists of an introductory period of clinical practice and specific practice related to the management of cardiorespiratory conditions. Course evaluated on a pass/fail basis. 245 hours.

PT 1750 Rehabilitation Exercise 1 Cr.Hrs.6 (Formerly 167.175) Consists of lecture, tutorials, and practical sessions focused on topics of exercise physiology, fitness testing and training and rehabilitation exercise skills related to the healthy adult and selected patient populations. 105 hours.

PT 1910 Pathology and Clinical Manifestations Cr.Hrs.5 (Formerly 167.191) A theory course including the basic principles of pathology and microbiology; the natural history, pathology, clinical manifestations, management and prognosis of patients with disorders of the cardiovascular and respiratory systems. *Corequisite:* REHB 1200 (or 068.120). 83 hours.

RESP 1270 Respiratory Anatomy and Physiology Cr.Hrs.3 (Formerly 169.127) Principles of pulmonary mechanics, ventilation, diffusion, perfusion, ventilation-perfusion relationships, gas transport, control of ventilation, and acid-base physiology. 60 hours.

RESP 1280 Medical Microbiology and Disease Transmission Cr.Hrs.2 (Formerly 169.128) Introduction to Medical Microbiology with emphasis on common pathogens, disease transmission, principles of asepsis, isolation sterilization and disinfection procedures. 32 hours.

RESP 1290 Cardiopulmonary Pharmacology Cr.Hrs.2 (Formerly 169.129) Pharmacology principles, phases of drug events, factors modifying drug effect, drug preparation, individual pharmacologic agents including: ANS drugs, CNS drugs, cardiac medications, respiratory medications, antibiotics. 36 hours.

RESP 1320 Applied Sciences for Respiratory Therapy Cr.Hrs.3 (Formerly 169.132) Gas laws, unique behaviour of specialty gases, fluid dynamics, fundamental principles of electricity, electronics and electrical safety, concepts of basic and advanced chemistry not treated in REHB 1200 (or 068.120). 60 hours.

RESP 1330 Technical Aspects of Respiratory Therapy Cr.Hrs.3 (Formerly 169.133) Medical gas and supply systems, flowmetering devices, regulators, medical gas outlets, vacuum systems, regulatory authorities on the supply, production and distribution of medical gases. 45 hours.

RESP 1360 Treatment Administration in Respiratory Care Cr.Hrs.3 (Formerly

169.136) Administration of medical gases, humidity and aerosol therapy, environmental therapy, positive pressure breathing devices, respiratory exercises, incentive spirometry and bedside spirometry. 60 hours.

RESP 1370 Ventilatory Support Principles Cr.Hrs.6 (Formerly 169.137) Physical principles of continuous ventilatory support including: physics of ventilator operation and physiological aspects of ventilatory support. Provides a framework for RESP 2310 (or 169.231) and RESP 2320 (or 169.232). 120 hours.

RESP 1380 Basic Fieldwork 1 Cr.Hrs.4 (Formerly 169.138) A preparatory period followed by four weeks of field experience under supervision of a practicing respiratory therapist at one or more approved clinical sites. 160 hours.

6.2 Year 2:

See University of Manitoba Graduate Calendar for descriptions of courses in the M.O.T. program.

Courses in Physical Therapy		Courses in Respiratory Therapy	
REHB 2410	REHB 2450	REHB 2450	REHB 2460
REHB 2460	PT 2720	RESP 2300	RESP 2310
PT 2750	PT 2760	RESP 2320	RESP 2330
PT 2770	PT 2780	RESP 2340	RESP 2350
PT 2790	PT 2890	RESP 2360	RESP 2370
Total credit hours 48		36	

REHB 2410 Pathology and Clinical Manifestations Cr.Hrs.4 (Formerly 068.241) A theory course including the basic principles of pathology and clinical manifestations, management and prognosis of patients with musculoskeletal disorders. *Prerequisite:* PT 1910 (or 167.191). 60 hours.

REHB 2450 Research Methodology for Medical Rehabilitation Cr.Hrs.3 (Formerly 068.245) A theory and practical course designed to provide a basic understanding of research principles and their application in Medical Rehabilitation. 45 hours.

M REHB 2460 Statistics Cr.Hrs.3 (Formerly 068.246) A theory and practical course designed to provide a basic understanding of statistics with application to Medical Rehabilitation. 45 hours.

PT 2720 Electro-Physical Agents in Physical Therapy Management Cr.Hrs.3 (Formerly 167.272) Selection and application of electro-physical agents in physical therapy. 45 hours.

PT 2750 Rehabilitation Exercise 2 Cr.Hrs.2 (Formerly 167.275) A lecture and lab based course which focuses on the development of comprehensive rehabilitation, health, and fitness exercise programs for normal subjects, clients with specific conditions/disabilities, and athletes. 34 hours.

PT 2760 Orthopedic Assessment and Management 1 Cr.Hrs.6 (Formerly 167.276) Integrated approach to the orthopedic assessment and management of upper limb, lower limb, and spinal disorders. 113 hours.

PT 2770 Orthopedic Assessment and Management 2 Cr.Hrs.6 (Formerly 167.277) Integrated approach to the physiotherapy assessment and management of upper limb, lower limb, and spinal disorders. Successful completion of PT 2760 (or 167.276) and PT 2770 (or 167.277) equivalent to E2/N2 level of professional classification. 111 hours.

PT 2780 Musculoskeletal Clinical Education Cr.Hrs.10 (Formerly 167.278) Consists of a period of clinical practice related to the management of musculoskeletal conditions. Course evaluated on a pass/fail basis. 375 hours.

PT 2790 Physical Therapy Management of Musculoskeletal Disorders Cr.Hrs.8 (Formerly 167.279) A theory and practical course on physical therapy management of patients with specific disorders. 149 hours.

PT 2890 Rehabilitation Biomechanics Cr.Hrs.3 (Formerly 167.289) Theory and practical application of biomechanics of human movement in relation to rehabilitation. *Prerequisites:* REHB 1480 (or 068.148), REHB 1490 (or 068.149) and REHB 1500 (or 068.150), or equivalent. 40 hours.

RESP 2300 Respiratory Clinical Assessment Cr.Hrs.6 (Formerly 169.230) The correlation of patho-physiological mechanisms with the clinical manifestations of the common respiratory diseases and how rational management evolves from this understanding. 92 hours.

RESP 2310 Clinical Aspects of Ventilatory Management Cr.Hrs.3 (Formerly 169.231) Lecture, seminar and laboratory simulation on adult and pediatric ventilatory management. Estimation of ventilatory requirements, ventilator selection, weaning, ventilatory adjuncts, transport, and long term ventilatory support. 45 hours.

RESP 2320 Ventilatory Support Instrumentation Cr.Hrs.6 (Formerly 169.232) Comprehensive review of the components, operation and use of specified adult, pediatric and neonatal mechanical ventilators. Classroom and laboratory sessions. 180 hours.

RESP 2330 Pulmonary Investigations Cr.Hrs.3 (Formerly 169.233) Lung function testing principles and procedures including: static and dynamic measures, determination of volumes and capacities, exercise physiology. An analysis of lung function changes relative to common disease physiology. 50 hours.

RESP 2340 Physiologic Measurements and Instrumentation Cr.Hrs.3 (Formerly 169.234) Acid base physiology, interpretation of physiologic values, design theory, operation and care of gas analyzing devices, oximetry, capnography. 45 hours.

RESP 2350 Cardiology Cr.Hrs.3 (Formerly 169.235) Aspects of clinical assessment of the cardiovascular system, pathophysiology and selected treatment regimens and modalities. Laboratory on rhythm analysis and aspects of advanced cardiac life support. 60 hours.

RESP 2360 Pediatrics Cr.Hrs.3 (Formerly 169.236) Normal physiology, diseases and treatment, the child in hospital environment, high risk neonates, principles of intensive care, pediatric emergencies and fetal and maternal medicine. 60 hours.

RESP 2370 Anesthesiology Cr.Hrs.3 (Formerly 169.237) Principles of anesthesia, airway management, pain management, anesthetic agents, function of the anesthesia machine, pre- and postoperative assessment, recovery and safety features in the operating room. 45 hours.

6.3 Year 3:

Courses in Physical Therapy		Courses in Respiratory Therapy	
REHB 3410	REHB 3460	REHB 3460	RESP 3300
REHB 3930	REHB 3940	RESP 3310	RESP 3320
PT 3730	PT 3740	RESP 3330	RESP 3340
PT 3750	PT 3760	RESP 3350	RESP 3360
PT 3880	PT 3920	RESP 3370	RESP 3380
Total credit hours 47		38	

REHB 3410 Pathology and Clinical Manifestations of Neurological Conditions Cr.Hrs.3 (Formerly 068.341) Theoretical study of neurological pathology and clinical manifestations of the basic principles of medical management of persons with neurological disorders. *Prerequisite:* REHB 2410 (or 068.241). 38 hours.

REHB 3460 Introduction to Health Care Administration and Management Cr.Hrs.3 (Formerly 068.346) An introduction to professional and administrative issues of current concern to respiratory and physical therapists. Topics to be covered in lecture and seminar format are health care systems, professional ethics, departmental administration, principles of supervision, and medical and legal responsibilities. 39 hours.

REHB 3930 Neuroanatomy Cr.Hrs.3 (Formerly 068.393) The study of neuroanatomy and neurophysiology of the human body. 47 hours.

REHB 3940 Neurosciences Cr.Hrs.3 (Formerly 068.394) The study of neuroanatomy and neurophysiology of the human body. 45 hours.

PT 3730 Advanced Musculoskeletal Topics Cr.Hrs.3 (Formerly 167.373) A theory, practical and tutorial-based course designed to provide the opportunity for problem-solving through the integration of relevant information, in the areas of orthopedic and sports physiotherapy. 61 hours.

PT 3740 Integrated Tutorials Cr.Hrs.3 (Formerly 167.374) A theory, practical and tutorial-based course designed to provide the opportunity for problem-solving through the integration of relevant information, in the physiotherapy management of geriatric, women's health, and multi-system conditions. 41 hours.

PT 3750 Physical Therapy Neurological Interventions Across the Lifespan 1 Cr.Hrs.6 (Formerly 167.375) A theory and practical course on the basic principles of the application of techniques used in the Physical Therapy management of clients with neurological conditions, with a focus on neurological assessment and the treatment for spinal cord injured clients and clients with certain neurological conditions. 108 hours.

PT 3760 Physical Therapy Neurological Interventions Across the Lifespan 2 Cr.Hrs.7 (Formerly 167.376) A theory and practical course on the basic principles of the application of techniques used in the Physical Therapy management of clients with neurological conditions, with a focus on neurological treatment. 115 hours.

PT 3880 Clinical Education in Neurological Disorders Cr.Hrs.8 (Formerly 167.388) Consists of a period of clinical practice related to the management of neurological conditions. Course evaluated on a pass/fail basis. 300 hours.

PT 3920 Summer Internship Cr.Hrs.8 (Formerly 167.392) An eight-week period of clinical/practical experience under the direction and supervision of registered physiotherapists. Course evaluated on a pass/fail basis. 300 hours.

RESP 3300 Seminars in Respiratory Care Cr.Hrs.3 (Formerly 169.330) A series of seminars on Respiratory Disease and other clinical topics designed to bring together practical and theoretical aspects of the program. 60 hours.

RESP 3310 Clinical Education in Intensive Care Cr.Hrs.10 (Formerly 169.331) This course consists of 10 weeks of clinical experience in the adult intensive care setting in an approved clinical site. 432 hours.

RESP 3320 Clinical Education in Pediatric Respiratory Care Cr.Hrs.3 (Formerly 169.332) Three weeks of clinical experience in the Pediatric Intensive Care Unit at Children's Hospital. Shiftwork and extended shifts may be required. 144 hours.

RESP 3330 Clinical Education in Neonatal Respiratory Care Cr.Hrs.4 (Formerly 169.333) Four weeks of clinical experience in the Neonatal Intensive Care Unit at Children's Hospital and/or St. Boniface General Hospital. Shiftwork and extended shifts may be required. 180 hours.

RESP 3340 Clinical Education in Maternal/Fetal Health Cr.Hrs.1 (Formerly 169.334) One week of clinical experience in maternal and fetal health at the Women's Centre, Health Sciences Centre. 36 hours.

RESP 3350 Clinical Education in Pulmonary Diagnostics Cr.Hrs.3 (Formerly 169.335) Three weeks of clinical experience in the pulmonary diagnostic laboratory of an approved clinical site. 144 hours.

RESP 3360 Clinical Education in Anesthesia Cr.Hrs.3 (Formerly 169.336) Three weeks of clinical experience designed to acquaint the student with actual clinical techniques and procedures used in the operating and recovery room. 144 hours.

RESP 3370 Clinical Education in Community Care Cr.Hrs.4 (Formerly 169.337) Four weeks of clinical experience in community care settings including: pre-hospital care, health and wellness promotion, interfacility transport, chronic care, home care and community outreach. 180 hours.

RESP 3380 Clinical Education in Respiratory Care Cr.Hrs.4 (Formerly 169.338) Four weeks of clinical experience spent in the non-intensive care setting working with a variety of medical and surgical patients. 180 hours.

6.4 Other:

Undergraduate Course in Occupational Therapy

OT 4130

OT 4130 Re-Entry Fieldwork Cr.Hrs.8 (Formerly 168.413) Self-directed period of fieldwork preparation followed by a seven-week fieldwork education experience under the supervision of a licensed occupational therapist. Course evaluated on a pass/fail basis. *Prerequisites:* an earned degree in occupational therapy, permission of Head of Department of Occupational Therapy.

Faculty of Medicine

General Office

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Assistant Dean (Admissions): Fred Aoki
Director of Operations: Keith McConnell
Manager Admissions and Student Affairs: Beth Jennings

Chapter Contents

MISSION STATEMENT

SECTION 1: Medical Education

SECTION 2: Admission to the Faculty of Medicine

- 2.1 Degree Offered
- 2.2 Course Requirements
- 2.3 Immunization
- 2.4 Registration with the College of Physicians and Surgeons of Manitoba

SECTION 3: Academic Regulations

- 3.1 Requirements for the Degree of Doctor of Medicine (M.D.)
- 3.2 Requirements for Registration to Practice Medicine

SECTION 4: The Program for the M.D. Degree

- 4.1 Governance
- 4.2 General Statement
- 4.3 The Plan of the Curriculum

SECTION 5: Evaluation

- 5.1 Responsibility
- 5.2 Evaluation of Students in the Pre-Clerkship Program
- 5.3 Evaluation of the Students in the Clerkship Program
 - Introduction to Clerkship (ITC)
 - ITC Remediation
 - The Major Clinical Clerkships
 - The Comprehensive Clinical Examination (CCE)
 - The Multi-Specialty Clerkship Rotation
 - The Community Health Science Paper
 - The Elective Periods
 - Failure of a Student in the Clerkship Program
- 5.4 Regulations for Students Taking Leave from the Clerkship Program
- 5.5 Reviews and Appeals of Failed Rotations and Examinations

SECTION 6: Other Undergraduate Programs

- 6.1 Bachelor of Science in Medicine B.Sc. (Med.)
- 6.2 MD/PhD Option
- 6.3 Special Courses Offered for Undergraduate Credit in Other Faculties
 - Department of Pharmacology and Therapeutics
 - Department of Human Genetics

SECTION 7: Academic Staff

MISSION STATEMENT

Develop and deliver high quality educational programs for undergraduate and postgraduate students of medicine and medical rehabilitation, for graduates and post-doctoral fellows in the basic medical sciences and for physicians in practice;

Conduct research and other scholarly enquiry in the basic and applied medical sciences; and,

Contribute to the improvement of health status in Manitoba and beyond by providing advice, disseminating information to health professionals and the public, and by cooperating in the planning for the development and delivery of health care services.

SECTION 1: Undergraduate Medical Education Program

Medical education in Manitoba is designed to provide students with the knowledge and experience they need to practice medicine in a profession where new developments in science and the public health policy create an ever-changing environment. In the first two years of the program the subject matter is divided into blocks which cover core concepts in health and medicine, human development and body systems. Clinical Skills, Problem Solving, Medical Humanities, Laboratory Medicine and Stress Management are integrated into the six blocks. The final two years, called the "clerkship" are spent in direct contact with patients and doctors in a clinical setting in which students gain experience with increasing responsibility for patient care and management.

Medical education had its beginnings in 1883 when 13 physicians applied to the local legislature for a charter to form the Manitoba Medical College. The college was chartered as an affiliate of the University of Manitoba. The number of students registered for the first session was 15, and the number in attendance at each session from that date to the present has ranged from 15 to 400. The university came to the aid of the Medical School from time to time by furnishing full-time professors in chemistry, physiology, pathology, bacteriology, and zoology. With the session of 1918-1919 the Manitoba Medical College ceased to exist as a separate institution. It made a gift of all its property and equipment to the University of Manitoba "on condition that the university establish a Faculty of Medicine, and carry on the work of medical education in an efficient manner."

In 1921, a building for the accommodation of the departments of Physiology, Biochemistry, and Bacteriology was erected on the old Medical School property, and a further unit, now occupied by Pathology, was completed in February, 1922. In January, 1956, the new wing of the medical building was officially opened, which included new quarters for the Medical Library. In February, 1965, the Chown Building was opened providing five-stories of administration offices and space for Pharmacology and Therapeutics and the Computer Department for Health Sciences. The Basic Medical Sciences Building, containing undergraduate teaching facilities, opened in 1973. It provides accommodation for anatomy, biochemistry, physiology, medical microbiology and immunology. The Brodie Centre officially opened in the spring of 1996; it provides a library, research and recreational facilities. In 2004, the Office of the Dean and the Education Offices relocated to new administrative facilities in the Brodie Centre. General teaching facilities are located in the medical buildings, and facilities for clinical instruction are provided in the teaching hospitals affiliated with the University of Manitoba and in related institutions. The varied settings in which medicine is practiced in Winnipeg and in rural and northern Manitoba also provide students with the opportunity to study community medicine outside the major teaching institutions.

The Neil John Maclean Health Sciences Library

The Neil John Maclean Health Sciences Library opened in 1996 and supports the teaching, research and patient care requirements of the staff and students of the Faculties of Medicine and Dentistry and the Schools of Dental Hygiene and Medical Rehabilitation. It also serves the Health Sciences Centre, supporting the teaching, research and patient care activities of all staff and students in the hospital-based educational programs. The Health Libraries located at the St. Boniface General Hospital, Victoria General Hospital, Seven Oaks General Hospital, Grace General Hospital and Concordia Hospital are also satellites of the Neil John Maclean Library.

Through its outreach services, it is the primary resource for faculty and students located at other teaching sites both in Winnipeg and rural Manitoba. In addition the Library acts as a resource centre for health sciences information in Winnipeg and rural Manitoba and a fee-based service is offered for external users.

The Library collection of print, audiovisual and electronic media includes the Aboriginal Health Collection and a small but valuable collection of medical classics in the Ross Mitchell Rare Book Room. The Library acts as an important component of professional education, and two Learning Resource Centres for multimedia computer applications are an integral part of the Library.

Graduate Studies

Graduate Studies information about graduate studies in medicine or related sciences, and information regarding opportunities for medical research may be obtained from: The Assistant Dean (Graduate Studies and Research), Faculty of Medicine, University of Manitoba, A108 Chown Building, 753 McDermot Avenue, Winnipeg, MB, R3E 0W3.

The Department of Community Health Sciences teaches the basic disciplines and practices of community health at the undergraduate, graduate and residency training levels. The department shares a multi-disciplinary approach combining academic, service, outreach and consultative activities. Specific specialized areas include biostatistics, epidemiology, health policy, social services, Aboriginal health, alcohol and tobacco, and occupational and environmental health. Further information may be obtained from: The Head, Department of Community Health Sciences, Faculty of Medicine, University of Manitoba, 750 Bannatyne Avenue, Winnipeg, MB R3E 0W3.

Department of Medical Education

The mandate of the department of Medical Education is to work in a collaborative manner across all programs and schools within the Faculty of Medicine to provide expertise and services related to medical education issues including: curriculum development, faculty development, design of evaluation tools and assessment strategies and the provision of standardized patients. These services are provided by the department through the Office of Educational Development. The second purpose of the department of Medical Education is to engage in research and scholarly activity related to medical education issues and serve as an academic home for faculty with primary appointments within medical education.

Continuing Medical Education

This office is responsible for the Continuing Medical Education programs of the faculty, which are conducted in the Medical School, teaching hospitals, and in urban and rural medical centres. Information regarding programs may be obtained from: The Office of Continuing Medical Education, Faculty of Medicine, University of Manitoba, S203-753 McDermot Avenue, Winnipeg, MB R3E 0W3.

SECTION 2: Admission to the Faculty of Medicine

2.1 Degree Offered

Doctor of Medicine (M.D.)

Minimum time to graduation: Seven to eight years (University 1, plus two or three years to complete first degree, plus four years in the Faculty of Medicine).

2.2 Requirements for Admission

The following is a summary of the admission requirements. Equivalent academic courses can be completed at recognized universities elsewhere. For complete admission requirements, as well as application deadline

dates and forms, refer to the Applicant Information Bulletin, available at www.umanitoba.ca/medicine.

The Faculty of Medicine restricts enrolment to Canadian citizens and landed immigrants.

All applicants must have completed a bachelor's degree, and prerequisites in Biochemistry and English Literature or French Literature. At the University of Manitoba these are Biochemistry 2360 and 2370 and English 1200 or 1300 or 1310 and 1340, or French 1190 or 1200. Applicants should be aware that there are prerequisites for Biochemistry and should obtain this information from their faculty student advisors.

We recommend students consider taking courses in the life sciences, particularly anatomy, microbiology, physiology and genetics.

Other requirements

- All applicants must write the Medical College Admission Test (MCAT). Since the MCAT will test the applicant's knowledge and problem solving skills in Biology, Physical Chemistry, Organic Chemistry and Physics, applicants must consider taking these courses during their first two years of university studies.
- Applicants must have an adjusted GPA of at least 3.60 and an MCAT average of at least 8 with no individual subset score below 7 and a Writing Sample score of at least M.
- A Personal Assessment Score will be assessed based on an autobiographical sketch, 3 referee reports and an interview.

Transfer into the undergraduate program

The Faculty of Medicine will consider requests for transfer from students who are enrolled in LCME accredited medical schools in Canada and the United States. Student transfers are only considered in exceptional circumstances. Canadian citizens and landed immigrants who attend non-LCME accredited institutions may apply for admission as described in the Applicant Information Bulletin.

Transfers can be considered only when there is a position open, by attrition, in the class into which the applicant requests transfer or to which evaluation shows the student to be qualified.

2.3 Immunization Requirements

All students enrolled in the Faculty of Medicine should be immunized against the following diseases: diphtheria/tetanus, polio, rubella, measles, mumps and hepatitis B. Evidence of chickenpox immunity by history, serology or vaccination will be required. Students who cannot be immunized because of allergies or for other reasons must provide a physician's certificate to verify these reasons. Students admitted to first year Medicine will be provided with an immunization package at the time of acceptance into the Faculty and will be required to provide their Immunization Record Form before being allowed to attend classes. Students may not be able to participate in clinical exposures until all immunization requirements are up-to-date. Students are responsible for updating their immunizations as needed.

2.4 Registration with the College of Physicians and Surgeons of Manitoba

All students must obtain an educational license with the College of Physicians and Surgeons of Manitoba prior to beginning clinical contact with patients. Note that the College requires all applicants to undergo a criminal record check.

SECTION 3: Academic Regulations

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Medicine has regulations and requirements, published below, that apply specifically to its students.

Detailed information concerning the general regulations governing admissions, evaluation, academic progress and withdrawal for undergraduate and postgraduate medical students may be obtained from the general office of the Dean of Medicine. These regulations include the following items:

Students will not be allowed to register unless they are in good academic and financial standing from the previous year.

No student may repeat more than one year, and no year may be repeated more than once except by special permission of the Faculty Executive Council or Committee on Academic Standing.

Students who withdraw from the Faculty of Medicine without prior written notice will be considered to have terminated their connection with the faculty and will not be eligible for re-admission.

Students who withdraw from the faculty having given due notice of their intention to withdraw are eligible for re-admission. If re-admission is approved they will be required to conform to the rules and regulations, fee schedules, sequence of courses, in effect at the time of such readmission.

Students may, after completion of the work of a full year, be granted a leave of absence for one year subject to certain conditions related to the purpose of the leave of absence and on subsequent registration will be required to conform to the rules and regulations, fee schedules, and sequence of courses in effect at the time of such registration.

Students who have been or expect to be prevented from attending any regular examination by reason of illness or other cause beyond their control should at once notify the Associate Dean Undergraduate Education (UGME) and must give satisfactory documentary evidence of the cause of absence.

The Faculty Executive Council reserves the right to require any student to withdraw from the program for which the student is enrolled when it believes the student to be unsuited, on general considerations of scholarship, or conduct for the profession, or the field within the profession, to which the program of studies normally leads. This right prevails notwithstanding any other provision in the faculty regulations.

Students in the medical program are expected to conform to such new requirements as may be adopted from year to year.

Students are required to present the personal and professional appearance, attitudes and behaviours expected of members of the medical profession. The Faculty of Medicine has a process through which lapses in professionalism are reported, investigated, and, when necessary, will result in remedial or punitive actions up to and including dismissal. For additional information please refer to the Curriculum Guide.

Students must complete the undergraduate program for the M.D. degree of the Faculty of Medicine within six years of entry to first-year Medicine, exclusive of those students undertaking additional academic pursuits which are acceptable to the Committee on Academic Standing. When a student fails to complete the program the committee will review the academic record of the student. If the student is in good academic standing at that time, the committee may grant one further year for the completion of the program. The reasons for the prolonged duration of the student's program are confidential but must be approved as valid by the Associate Dean UGME.

3.1 Requirements for the Degree of Doctor of Medicine (M.D.)

Every candidate for the degree of Doctor of Medicine must have satisfied the following requirements:

Subsequent to the successful completion of the required university studies, a student must have attended four full sessions of not less than nine months each in this or some other school of medicine approved by this university, the last two years of which must have been spent as a student of the University of Manitoba.

A student must have completed the required work, have fulfilled satisfactorily all special requirements, have received satisfactory grades throughout the entire medical program, and have discharged all indebtedness to the university.

Degrees: All degrees in Medicine will be conferred by the Senate of the university on the recommendation of the Faculty Executive Council at a regular meeting of the University Senate or at a meeting specially called for that purpose.

3.2 Requirements for Registration to Practice Medicine

A university degree in medicine does not in itself confer the right to practice the profession of medicine in Canada. That right is obtained from a provincial registering body in the particular province in which the graduate

desires to practice, and follows the successful completion of the Medical Council of Canada's two qualifying examinations.

Federal Registration: The Medical Council of Canada

The Medical Council of Canada was established in 1912 by the Canada Medical Act. Its purpose is to grant a qualification to practice medicine acceptable for licence in every province of Canada. It is not a licensing body, but "anyone who secures the diploma of the Medical Council of Canada by examination is registered on the Canadian Medical Register. This registration entitles one to become licensed to practice medicine in any province in Canada upon payment of the necessary fee and on meeting other provincial requirements."

The Medical Council of Canada examinations are normally taken by undergraduate medical students of the University of Manitoba at the end of the fourth year. There is a fee for this examination. Examinations are held annually in Winnipeg in May and November, and registration for these examinations may be made with: The Registrar, Medical Council of Canada, 2283 St. Laurent Boulevard, Ottawa, ON K1G 5A2. The deadline for application is usually in December; candidates are advised to contact the Medical Council of Canada for current information (www.mcc.ca).

Provincial Registration

In Manitoba, the College of Physicians and Surgeons of Manitoba grants medical licenses. All medical students are registered with the College of Physicians and Surgeons of Manitoba before seeing patients. For information on registration in Manitoba contact: The Registrar, The College of Physicians and Surgeons of Manitoba, 1000-1661 Portage Ave., Winnipeg, MB R3G 3T7; telephone: (204) 774 4344.

SECTION 4: The Program for the M.D. Degree

4.1 Governance

The program and its curriculum is the responsibility of the Faculty Executive Council (FEC). The policies, regulations, implementation and modifications of the educational program for the M.D. degree are determined by the FEC on the recommendation of the Faculty of Medicine Undergraduate Medical Curriculum Committee (UGMCC). The UGMCC consists of the faculty curriculum coordinators appointed by the Dean, two members elected by the Faculty Executive Council, the Associate Dean UGME, the Associate Dean Student Affairs, the Director of Educational Development and six students. All members are voting members. The UGMCC is responsible for the curriculum, syllabus, teaching, and evaluation in the educational program leading to the M.D. degree.

4.2 General Statement

The program is a continuum over the four years but is divided into the Pre-clerkship, Years 1 and 2, and the Clerkship, Years 3 and 4, for administrative purposes. The mission and performance expectations of the program are published. They are given to faculty and students and are the guide for the curriculum. The curriculum is based on the view that it is neither necessary nor desirable for the faculty to present all the knowledge, skills and behaviours that are expected of a student by graduation. Instead the students are provided with the core material which lies in the mainstream of medical science. Students are expected to acquire further knowledge and skills for themselves through study, discussion and scholarly development. They are encouraged to take the initiative to approach instructors and colleagues with regard to learning. The program values the search for knowledge, the evaluation of its worth and its application to the analysis and solution of problems as opposed to the simple memorization of information. Students are expected to develop skills to acquire new knowledge and to realize that these skills will be used throughout their professional lives irrespective of their field of medicine. The curriculum encourages an interdisciplinary and integrated approach to medicine. Teaching sessions promote participation and active learning by students. Instructors, whatever their own discipline, ensure that their teaching is relevant to the overall development of students to become undifferentiated graduates of medicine with the potential to enter any postgraduate position for which they have the ability and aptitude. The Faculty of Medicine does not support students' limitation of their studies to only fields and disciplines of personal interest. Nonetheless, students are encouraged to pursue areas of interest and to develop their own education through electives. Our students learn to use information, skills and behaviour from multiple sources of teaching to prevent and solve the problems that face their patients and society. Our

students learn that physicians are part of an interdisciplinary team and health care system that provide adequate, accessible, continuous and comprehensive health care. In order to modify and enhance the educational program, the opinions of students and their evaluation of the program and its teachers are formally sought and respected by faculty. This information is used by the UGMCC to improve the program.

4.3 The Plan of the Curriculum

Pre-clerkship Program:

Year 1 (Blocks 1-3, 40 weeks), and Year 2 (Blocks 4-6, 40 weeks)

The pre-clerkship program is designed by the course directors and program coordinators in conjunction with department/discipline advisors/representatives and by committees governed by the faculty Pre-Clerkship Curriculum Committee. The curriculum consists of five mandatory programs: Cognitive, Clinical Skills, Problem Solving, Medical Humanities and Laboratory Medicine, and one voluntary program: Stress Management. The Problem Solving program attempts to integrate and re-iterate important concepts presented during the Cognitive component, emphasizing a clinical presentation approach to your medical education. The Clinical Skills program (which includes communication, history taking and physical examination skills), the Medical Humanities program (which includes human values, medical ethics, medical history and palliative care and complementary and alternative medicine) and the Lab Medicine program are integrated with the Cognitive program as much as possible.

The objectives of the curriculum are based on the mission and performance expectations of the undergraduate program as outlined in the Curriculum Guide. The evaluation of student academic progress is based on the student's achievement of the written objectives as provided in the student notes, course of study books, and on the Pre-Clerkship web page. The curriculum is composed of six instructional blocks that address the core concepts of health and medicine, human growth and development and four blocks based on organ-systems. The two-year pre-clerkship curriculum brings together teachers from the basic science and clinical departments, from other health related faculties/disciplines as well as the public. All sciences basic to medicine, including anatomy and molecular science, biochemistry, human genetics, immunology, microbiology, physiology contribute to the curriculum as do the clinically applied basic sciences of pathology, pharmacology and community health sciences. Clinical departments including anesthesia, clinical health psychology, family medicine, internal medicine, obstetrics, gynecology, ophthalmology, otolaryngology, pediatrics, psychiatry, surgery are also involved.

The Pre-Clerkship is divided into six blocks, three per year.

Block I – Introduction to Medicine: Takes 11 weeks to complete and has two sections:

Population Health and Medicine (PH) - introduces the main elements to the understanding of any disease or health problem including definitions of life, health, disease and death; burden of illness or size of the problem; causes or risk factors; the natural history and outcomes; prevention and control; all based on the principles of emphasizing the concept of evidence-based medicine. This section will provide the core concepts of statistical methods in the health sciences, research methods, critical appraisal of the medical literature, and the framework for the determinants of health, an understanding of the role of stress in health and disease, the conceptual basis for making a diagnosis, including treatment, occupational and environmental health and health policy. Students learn the concept of the physician as a member of a multidisciplinary health team both in the hospital and in the community.

Structure and Function and Disease Mechanisms (SF) – The first half of SF introduces Anatomy, Physiology, Molecular Biology and Medical Genetics and has an overall goal to provide background knowledge in preparation for the subsequent intensive study of the human body in health and disease in later blocks. The art of medicine can be called an “applied science”, and so SF emphasizes the application of these basic sciences to the human organism. A selection of examples to illustrate “foundational concepts” or principles of human biology are covered. Students are given directed readings and references for study of some topics in depth, according to individual needs.

In the second half of SF, the core concepts of disease processes are illustrated through lectures and tutorials. Building on the previous sections, basic science principles and clinical applications are presented. Contributions are made by the disciplines of Pathology, Pharmacology, Oncology, Hematology, Infectious Diseases and Immunology to present

core concepts of disease at both a cellular and patient level. Study of normal anatomy will continue. Students will be encouraged to use clinical examples of disease to appreciate and understand the underlying cellular processes. This material is introductory and the topics will be further expanded and revisited in greater depth in the system subject blocks.

Block II - Human Development (HD): This nine week block will cover the stages of development from conception to geriatrics including embryology, child development, nutrition, adulthood, sexuality, palliative care and death. Community Health, Genetics, Pediatrics, Psychology, Psychiatry, and Geriatrics will be highlighted. In this block students will be introduced to the principles of physical, psychological, social and behavioural aspects of normal human development at the various life stages from conception to death within populations, families and as individuals. As well they will learn about the physical, psychological, social and behavioural challenges individuals face during the various development stages. Students will learn to appreciate health as a component of life cycle development and to identify principles of community development which impact on the well-being of individuals and families at various life stages.

System Blocks: Each of the following Blocks will cover, in a clinically relevant context, normal anatomy and physiology, followed by pathophysiology of disease.

Block III - Involves Cardiovascular (CV), Respiratory (RS), Ear, Nose & Throat (ET). There will also be a few additional SF classes.

Block IV - Medicine II commences with the fourth block consisting of Reproduction (RP), Kidney (KD) and Endocrinology & Metabolism (EM).

Block V – This block consists of the following systems: Neuroscience (NE), Musculoskeletal (MS) and Ophthalmology (OP).

Block VI – The Pre-Clerkship curriculum ends with the following systems: Gastrointestinal/Liver (GI), Blood & Lymph (BL) and Dermatology (DM).

Methods of Teaching

The Cognitive component is delivered by a variety of formats including assigned self-study periods, small group tutorials, traditional didactic lectures, small group activities in entire class format, lab practicals or demonstrations and computer simulated labs. Regular time is scheduled each week to provide students with the opportunity for self-directed and independent learning. Group study is encouraged. Problem solving is emphasised in all small group tutorials as well as in the identified problem solving sessions.

Attendance

Attendance is mandatory at all teaching sessions that divide the whole class into smaller groups e.g. tutorials of whatever size, problem solving, clinical skills, laboratories, demonstrations. Failure to attend sessions in which patients, members of the public or standardised patients are used is particularly serious. Attendance may be mandatory at certain lectures.

Clerkship Program: Years 3 And 4

The Clerkship component of the undergraduate program is designed to give medical students didactic instruction, supervised responsibility for patient care and frequent feedback and evaluation. The program is governed by the Clerkship Committee, consisting of a Chair appointed by the Dean, the clerkship directors of the clinical departments, the Director of Educational Development and student representatives. The Clerkship Program consists of the Introduction to Clerkship program, core clerkship rotations, a multiple specialty rotation, selectives and electives. It lasts 20 months. Core clerkships last a minimum of six weeks, multiple specialty clerkships are comprised of shorter individual rotations and selectives/electives are offered in units of two weeks or longer.

Introduction to Clerkship (ITC) (5 weeks): The Clerkship Program begins with the ITC that is a preparation for clerkship. It consists of observed clinical encounters with patients in the major disciplines, predominantly arranged to take place in the hospitals. Courses in clinically based laboratory medicine, clinical pharmacology and therapeutics, community health sciences, immunization/infection control, and radiology are given.

Clerkship Phase I:

Core Clerkship Rotations (48 weeks): The primary responsibility of the clerks in the program is the care of patients under the supervision of post-graduate students and faculty. Rotation through all major clinical disciplines is provided and these are supplemented by “elective” periods of the students’ choice. Six-week periods are spent in family/community medicine, internal medicine, selectives in medicine and surgery, obstetrics/

gynecology, pediatrics, psychiatry, surgery, multiple specialty rotation of anesthesia, emergency medicine, ophthalmology, otolaryngology and a community health sciences project. Settings for the clerkship experience are varied, including wards and outpatient facilities of the hospitals, doctors' offices, rural and community-based hospitals. Formal teaching and evaluation of the knowledge, skills, attitudes and behaviours pertinent to the discipline are provided during the clerkships.

Clerkship Phase II:

Electives (12 to 15 weeks): An elective period at the end of the core clinical rotations of 12 weeks is provided during the clerkship. During the month of January of the Graduation year an additional 2 weeks of floating elective time is available dependent on the CaRMS Interview Schedule. Students can pursue education in one or more disciplines in a setting of their own choice. All electives must be approved by the faculty elective coordinator.

ACLS/ CaRMS Interviews / Floating Elective (4 weeks): Following the winter holiday break students will participate in a mandatory ACLS course, attend their national CaRMS Interviews and also participate in floating electives.

Selectives (8 to 9 weeks): After the completion of all core rotations and electives, students will have the opportunity to rotate through various disciplines, both in the teaching hospitals and in community-based settings. Students will choose the disciplines from a broad list of available opportunities and sites. The number of weeks is dependent on CaRMS National Interview dates.

MCCQE Part I Refresher course (4 weeks): The clerkship program ends with a short course of half day lectures and time for self study in preparation for the Licensing Examination, Part 1, of the Medical Council of Canada.

SECTION 5: Student Evaluation and Academic Progress

5.1 Responsibility

The policies and procedures for the evaluation of the students in the program for the M.D. degree are the responsibility of the Faculty Executive Council (FEC).

The Committee on Academic Standing (CAS) recommends to FEC the academic standards by which the progress of students are judged and ensures that examiners have followed the policies and procedures set by FEC. The CAS is chaired by the Dean and its members include the department heads, the Associate Deans UGME and Student Affairs and two students. The CAS, following the recommendations of the Committees of Evaluation also:

- Determines which students may proceed to the next stage of the program or to graduation.
- Determines which students should write supplemental examinations, or be required to take remedial study, or be required to repeat all or part of the academic year before promotion to the next stage of the program or graduation.
- Ensures that the Committees of Evaluation have followed the policies and regulations of evaluation that have been approved by the FEC.

The Committees of Evaluation (COE): The COE's, Pre-clerkship (years 1 and 2) and Clerkship (years 3 and 4) conduct the evaluation of the students. The knowledge, clinical and communication skills, attitudes and behaviour of the students are evaluated by examination, assessment of performance and completion of assignments.

The responsibilities of the COE's include:

- Planning and administration of the evaluation of all aspects of student examinations and performance.
- Planning and administration of all supplemental examinations.
- Planning and administration of all other measures of academic performance.
- Planning and administration of remedial training for students with unsatisfactory academic performance.

- The reporting of the results of examinations, supplemental examinations, other academic performance evaluation and remedial training to the CAS.

Procedure for students with non-academic problems that interfere with evaluation

Students who cannot take an examination, attend mandatory sessions, perform satisfactorily or complete assignments because of non academic problems must inform either the Associate Dean UGME or Associate Dean Student Affairs as soon as possible. Either of the associate deans will decide if the reason is sufficient to postpone or cancel evaluation. This may be applied retroactively. The Associate Dean UGME will then determine how the evaluation will be completed. In the case of illness a confirming certificate from the student's regular physician or a specialist in the field of the illness is expected. In other situations confirmation that problems are affecting the student should be provided from a recognized authority e.g. the University Counselling Services. In all cases the nature of the problem is confidential between the student and the physician or adviser involved. The physician or adviser must confirm in writing that the problem has affected student's performance and evaluation. The student will usually be expected to submit a further confirmation that the problem will not affect performance or evaluations when the student resumes the program.

5.2 Evaluation in the Pre-clerkship Program

The Committee of Evaluation pre-clerkship will be responsible for evaluation of students during the first two years of the program. The COE pre-clerkship will be headed by two co-chairs, responsible for first and second year respectively and appointed by the Dean. The members of the COE include the pre-clerkship faculty curriculum coordinators, the Associate Dean UGME and representatives of the individual blocks of the program, the clinical/communication skills programs and the medical humanities program. Additional members may be added at the discretion of the FEC. The COE pre-clerkship is responsible for developing the evaluation process, determining the pass mark of the examinations and ensuring that the examinations of each block are comparable, reliable, valid and fair.

Attendance

Students failing to attend mandatory sessions may be reported to the Associate Dean UGME. Each student will receive a warning from the dean's office. If this warning is ignored then the student's attendance record will be considered by the COE pre-clerkship and the student may be failed for unsatisfactory attendance. A suitable remedial period may be provided during the summer vacation. (See section on remediation.) If the student does not perform satisfactorily in the remedial period the year will be failed.

Examinations

The COE will inform the students of the pre-determined pass mark for all examinations at the beginning of their block. The student, however, will be given the overall as well as the actual marks obtained in the different sections of the examination. Students' results will be reported to them as a pass or fail; neither grades nor honours will be given. Grades and relative performance will be recorded in students' evaluation files and each student can view his or her evaluation file in the undergraduate office.

The Faculty of Medicine uses a Pass/Fail system where grades are not reported external to the Faculty of Medicine. Transcripts and Dean's Letters will indicate only whether a student has passed or failed a year or block. However, within the Faculty of Medicine, student grades will be used to help identify students at academic risk and to help select students for distinctions such as awards and specialized programs.

Knowledge: There are written comprehensive examinations based on the objectives at the end of each block i.e. three in first year and three in second year. Except for the first block, all the blocks may include up to 10 per cent of questions from material in the previous block. For each block there is an examination committee that consists of the COE chair, course directors and pertinent departmental representatives for the respective block. The examination committees are responsible to ensure that the taught objectives are tested and the evaluation is fair. Each examination of knowledge may use various methods of evaluation: multiple choice questions, short answer essays, demonstrations etc.

Clinical/communication skills: The students' performance in the clinical/communication skills program will be assessed by observation of performance and by examination. There is a clinical/communication skills evaluation committee, responsible to the COE pre-clerkship, that determines the standards of performance expected of students and develops examinations. There will usually be an examination of clinical/communication skills at the end of each year. The format of the examination will normally be an

“objective structured clinical examination,” (OSCE). The clinical/communication skills evaluation committee is responsible to the COE pre-clerkship for the planning and administration of the examination. The committee will recommend the pass mark, once the stations have been chosen, for approval to the COE pre-clerkship. The format of the examination and the system used to determine the pass mark will be told to the students. The clinical/communication skills evaluation committee will inform the COE pre-clerkship about those students who fail the clinical skills program. If a preceptor determines that a student’s performance is unsatisfactory then the student must be informed and reported to the clinical/communication skills evaluation committee. The committee will provide supplemental education to help the student reach the satisfactory standard. The COE pre-clerkship will confirm that the student has failed due to poor performance or by examination and will determine the period of remedial work to help the student meet the standard of the program.

Attitudes and Behaviour: Behaviour and attitudes befitting medical professionals is expected of our students in all phases of the curriculum. The Faculty of Medicine looks forward to learn of students who display exceptional professionalism through letters sent to the Associate Dean, UGME. The Faculty of Medicine uses a Professionalism Report by which single egregious or recurrent lapses in student professionalism can be brought to the school’s attention. A summary statement will be included on the Medical Student Performance Record if two or more validated reports have been received. The Faculty of Medicine maintains the option to dismiss students on the basis of unprofessionalism, regardless of performance in the curriculum.

Failures of the Evaluation in pre-clerkship years 1 and 2

Pass marks: May be revised from time to time but will be declared before the initial and supplementary examinations.

Examinations: Students failing in up to two examinations can write supplementary examinations. Students who fail any supplementary examination in first- or second-year will fail that year.

Students who are granted supplemental privileges will be given the opportunity for remedial study at a time determined by the Faculty during the summer period. Following the remedial period, they will sit a supplemental examination comparable but different to that failed. Students who fail the clinical/communication skills program will be granted supplemental privileges and receive a remedial period during the summer vacation that will take into account the areas of weakness revealed by their performance and the examination. The performance of students during the remedial period will be evaluated by a preceptor and will normally include an oral and/or written examination and/or repeated OSCE. Students who fail to reach the standard expected after remediation will fail the year.

Students in first and second year who are successful following remediation will be promoted.

First year students who fail the year must apply for re-admission to medical school before June 1. Students being considered for re-admission will usually be interviewed by the Admissions Committee to determine how they might better approach medical school so that they might succeed on a second attempt. The Admissions Committee will advise the Assistant Dean Admissions who will recommend to the Committee on Academic Standing whether the student should be re-admitted.

Students who fail second year will automatically repeat it and are not subject to review by the Admissions Committee.

Remediation of failures: The student will be required to seek the counsel of the Associate Deans Student Affairs and UGME, who may also direct the student to other faculty members or services for students. The exact nature of the remediation may vary with the student and will be designed to meet individual learning needs as defined by the student.

5.3 Evaluation of Students in the Clerkship Program

During the clerkship years students will be evaluated on their competence and this will include assessment of their cognitive knowledge and understanding, clinical skills, problem solving and judgement, technical skills, interpersonal attributes and general professional responsibility. Evaluation will be the responsibility of the Committee of Evaluation, Clerkship (COE Clerkship) chaired by a member of faculty appointed by the Dean.

The committee will consist of:

- *Voting Members:* The chair; one representative, usually the clerkship director, or delegate, from each department, and the coordinator of ITC laboratory medicine, the coordinators of ITC, clerkship, electives and comprehensive clinical examination. In the absence of the elected representative the department may send a substitute.

- *Non-Voting Members:* Ex-officio the Associate Dean UGME; the Associate Dean Student Affairs, and four undergraduate student representatives.

Method of Evaluation (General)

The policy and procedures applicable for evaluation are: Examination Regulations Policy: 1305 of the University of Manitoba; Faculty of Medicine Security of Records policy approved, 1982; Policy on Disclosure and Security of Student Academic Records approved University of Manitoba Board, May, 1989. Examinations and evaluations will use various methods to assess students. These will include mid-point and final evaluation reports (FITERs); written examinations (externally or internally prepared in essay, multiple-choice or other formats); projects; clinical examinations with “traditional” cases, case scenarios, simulated or standardized patients using “traditional” long cases, short station Objective Structured Clinical Examinations (OSCE) or longer Comprehensive Clinical Examination (CCE) formats. Students’ performance for evaluation purposes during examination may be recorded by writing, orally, by computer, by audio or by video taping. Whatever form is used, the data generated is subject to the examination regulations of the University of Manitoba and the Faculty of Medicine. Material necessary to generate the mark such as papers, computer records, tapes will be destroyed once the student has passed that evaluation (such material can be of help to a student needing remediation before the pass).

The Committee of Evaluation Clerkship will monitor examinations and evaluations of students to ensure that they are credible, appropriate, precise, valid and reliable. To achieve this quality assurance the Committee of Evaluation Clerkship may use direct observation or indirect observation by audio and video monitoring. Quality assurance material is subject to the aforementioned regulations of the university and the faculty. Material, such as audio/video tapes which could identify the individual student will not be released to anyone, other than the Dean and Committee of Evaluation Clerkship, without the written consent of the student.

Research in evaluation of student performance is part of the educational responsibilities of the Faculty of Medicine. All research generated by this process will not identify individual students and must have prior approval by the Ethics Committee of the Faculty of Medicine.

The Introduction to Clerkship (ITC)

The goal of Introduction to Clerkship (ITC) is to prepare the student for clerkship rotations. Students will be assessed for attendance and performance in learning groups. The purpose of student evaluations in ITC is to ensure that students are ready to begin their clerkship rotations.

Readiness for clerkship must be demonstrated in many areas including: basic medical knowledge and its application; clinical skills in evaluating patients; analysis of clinical data; problem identification and diagnosis; planning of investigation; planning of management and therapy; relationships to patients and staff. These attributes will be evaluated in a variety of ways throughout ITC.

Method of Evaluation

Students failing to attend mandatory sessions may be reported to the Associate Dean UGME, who will inform the COE Clerkship. Each student will receive a warning from the Dean’s office. If this warning is ignored the student’s attendance record and performance will be considered by the COE Clerkship and the student may be failed for the sessions missed. A suitable remedial period may be provided. If the student does not perform satisfactorily in the remedial period the ITC will be failed.

Each department, clinical or laboratory, will determine the criteria for determining the competence of the student during the ITC experience in that department. These standards should be based on the expected requirements for satisfactory preparation for the clerkship of the department. Each preceptor, with significant involvement in clinical or laboratory teaching, will provide a pass/fail decision on each student taught to the ITC supervisor of the department together with a written evaluation of the performance when needed. The preceptor will advise each student during the course if the performance is likely to lead to a failing assessment. Students must be given due opportunity to improve their performance to the expected standard. The departmental supervisor, with the undergraduate committee of

the department, will review the evaluations and preceptor pass/fail assessments to determine if the student has achieved an overall pass/fail for the ITC period in that department. The student must be informed of a recommendation for failure within seven working days of the end of the session. The pass/fail decision will be given by the departmental representative to the COE Clerkship. In the case of a failing evaluation the reasons for failure must be documented and submitted to the COE Clerkship.

ITC Remediation

Failure for inadequate attendance

The coordinator of the block of sessions missed may, with approval of the clerkship coordinator, provide the student with a remedial course, of comparable educational experience in that subject and the student will have to attend and perform satisfactorily to pass the ITC.

Failure for poor clinical performance

The COE Clerkship will review the deficiencies of the student and will provide the student with a remedial period prior to the beginning of the Clerkship. The remediation will be designed to improve the clinical deficiencies of the student to meet the standard for a pass and will be assessed by the preceptors.

Failure of the ITC remedial

Failure of the remedial period for non-attendance or poor clinical performance will be recorded as a failure of a major clerkship. But, since a repeat of the ITC would need to be postponed until the core rotations are completed, the student may proceed to the regular clerkship rotations. However, if such a student fails a core/major rotation in addition to the ITC, then the Clerkship Program must be restarted at the next ITC period.

The Major Clinical Clerkships

Method of Evaluation

The evaluation of the students during the clinical clerkship rotations may be assessed by review of clinical performance, written examinations, projects as in community health sciences and a comprehensive clinical examination.

Clinical Performance

The goals and expectations of the Clerkship Program are consistent with the Undergraduate Medical Education Performance Expectations (1996) and the Undergraduate Medical Education Learning Goals and Objectives (2003).

Students must complete a self-evaluation Intern Evaluation Report (ITER) midway through the rotation. The self-evaluation ITER should be discussed by the student and his/her preceptor(s). The clerkship director, or delegate, will collect preceptor assessments throughout the rotation. If a student's performance is likely to lead to a failure, the clerkship director must advise the student of an impending failure by the midway point of the rotation. In such cases, these students must be given help to improve their performance to the expected standard. The clerkship director, or delegate, will use all evaluations to make a final decision on the student's performance at the end of the rotation in that department. A Final In-Training Evaluation Report (ITER) of each student's achievement of these goals will be completed for each rotation.

A failing student must be informed of the failure by the clerkship director, or delegate, preferably before the end of the rotation but not later than seven working days after the end. All results will be submitted to the undergraduate committee of the department, who, for a failure, will review all the evaluations and preceptors' pass/fail assessments and determine the overall, pass/fail standing for the student during the rotation in question.

The pass/fail recommendation, with the FITER and any supporting evidence for that decision, will be submitted by the departmental representative to the COE Clerkship. The pass/fail decision will be reviewed and affirmed if there is a majority vote of the members of COE Clerkship present at the first meeting of the COE Clerkship after the end of the clerkship. In the case of a tie, the chair of COE Clerkship will have the deciding vote, otherwise he or she will not vote.

Major Clerkship Clinical Performance Remediation

The COE Clerkship will provide the student who has failed a clinical rotation an appropriate remedial period with the department in which the rotation was failed. The rotation will be an equivalent educational experience to the clerkship failed, and its goal will be to assist the student to reach the expected standard of clinical competence. A similar process of evaluation will be used, and this may be supplemented by a clinical oral

examination if the departmental undergraduate committee deems it necessary. The remedial will be taken during an elective period.

Clerkship Departmental Examinations

Students will take the National Board of Medical Examiners (NBME) subject examinations at the end of the following clerkship periods: obstetrics/gynecology, pediatrics, psychiatry, surgery, and internal medicine. For internal medicine and surgery, this examination will be taken following the selectives in these rotations. The passing standard for National Board Exams will be the 11th percentile of the entire reference group. Students failing a National Board examination will resit it at a time agreed upon with the associate dean or delegate.

Remediation for NBME Examination Failures

Students failing the National Board exam twice in the same subject will receive a remedial period of training from the department of that subject. The Associate Dean UGME in conjunction with the clerkship director, or delegate, will design the remediation with the purpose of the student achieving at least the 11th percentile in the examination; further clinical experience may be needed to meet that purpose. Such a remedial period will be a maximum of four weeks and will be taken in an elective period. Should it be required, a third attempt at the National Board examination will be at the end of the Clerkship Program, in April of the final year of medicine.

The Comprehensive Clinical Examination (CCE)

The goal of the comprehensive clinical examination (CCE) is to objectively evaluate students' clinical competence in generic skills of data collection, interpersonal relationships, along with the content of the case for diagnosis, investigation, and management of common clinical problems. This examination frequently uses standardized patients to test these clinical skills. The CCE committee is a sub-committee of the COE Clerkship and is chaired by the CCE coordinator. The CCE is marked to a standard predetermined by the CCE committee and the results of the examination are submitted to the COE Clerkship.

Remediation for Failure in the CCE

The COE Clerkship will devise an appropriate remedial period which will take into account the areas of weakness demonstrated by the CCE and will be taken during elective time. This remediation will be evaluated by a clinical assessment and may include an oral and/or written exam.

The Multiple Specialty (MSR) Clerkships

Method of Evaluation

The evaluation of students during the MSR clerkship rotations includes assessments of attendance, performance and could include faculty prepared examinations. Students will be expected to attend all clinical, small group, and laboratory sessions. If more than 10% of a block of sessions is missed, without an excused absence, then the student may fail that block of sessions. Clinical performance will be judged, where applicable, as in the major clerkships. The clerkship director, or delegate, will obtain the information from the staff of the department as determined necessary to evaluate the student by the undergraduate committee of the department. The clerkship director, or delegate, must advise each student by the midway point in the rotation if his or her performance is likely to lead to a failing assessment. Failing students must be given due opportunity to improve their performance to the expected standard. The clerkship director, or delegate, will use all evaluations to make a final decision on the student's performance at the end of all rotations in that department. While a constituent part of the MSR clerkship may be failed, failure may be outweighed by good evaluations in other constituent parts. A failing student must be informed of the failure by the preceptor, clerkship director, or delegate preferably before the end of the rotation but not later than seven working days after the end. All results will be submitted to the undergraduate committee of the department, who, in the case of a failure will review all the evaluations and preceptors' pass/fail assessments to determine the overall, pass/fail standing for the student in that department.

The Community Health Science Project

Each student will complete a paper and presentation in community health sciences during the Multiple Specialty Clerkships. The paper will be evaluated by the supervisor to a standard set by the department with approval of the community health science undergraduate clerkship director. If the paper is unsatisfactory then the preceptor will meet with the student to determine an appropriate time for improvement before a failure is recorded. In the case of a failure, the clerkship director, or delegate, will submit the failure to the COE Clerkship and advise upon the remediation needed for the student to produce a satisfactory paper.

Remediation for an MSR Clerkship Failure:

The COE Clerkship will provide the student who has failed a clinical MSR rotation with a remedial period in the department in which the rotation was failed. This period is flexible but can be up to the same length as the failed rotation. Such a remedial rotation will be an equivalent educational experience to that failed and its goal will be for the student to reach the expected standard of clinical performance. A similar process of evaluation will be used and may be supplemented by a clinical oral and/or written examination if the department deems it necessary. The remedial will be taken in an elective period.

The Elective Periods

Method of Evaluation

Electives are evaluated in a similar manner to other clerkship rotations and students are required to obtain a completed elective evaluation form for every elective pursued. These evaluations will be reviewed by the electives coordinator and unsatisfactory assessments will be submitted to the COE Clerkship. If an elective experience is failed, all of the student's elective evaluations will be considered to determine a composite pass/fail for the elective period.

Remediation for an Electives Failure

The COE Clerkship will devise a remedial period of up to four weeks which will take into account the areas of weakness revealed by the student's elective evaluation. This will be taken in the next available free time for the student. The remedial period will be evaluated by clinical assessment and can include an oral exam if the COE Clerkship deems it necessary.

Failure of a Student in the Clerkship Program

The Clerkship Program is a continuum held over third and fourth years. A failure of the Clerkship Program is considered to be a failure of one year, see Section 3 Academic Regulations, above.

The student will be determined to have failed the Clerkship Program if:

Failure of Clinical Assessments

The student has received failing evaluations in one or more of the following:

- Two major clerkships
- OR
- One major clerkship and:
 - its remedial, or
 - an ITC remedial, or
 - an MSR remedial, or
 - an elective remedial

OR

- Two remedials in MSR clerkship, ITC and/or elective

Failure of Examinations

The student has failures in one or more of the following::

- A National Board examination three times, or
- Three National Board examinations twice, or
- The CCE after remediation, or
- The community health science paper.

Failure of Remediation

If the remediation period recommended for a student, for whatever cause, requires more than eight weeks, then the student will be deemed to have failed the Clerkship Program.

Remediation for Failure of the Clerkship Program on Clinical Assessment

A student who fails the Clerkship Program immediately ceases in the program and the COE Clerkship will examine the complete record of the student to design a remedial program to correct the deficiencies unless otherwise prohibited (see Section 3 Academic Regulations).

This remedial program may include, if the committee deems it appropriate, rotations and examinations already passed. This remedial will be at least 48 weeks. No elective time will be included. The student must satisfactorily meet all clinical assessments, examinations and the CCE. The same rules for remediation will apply. The remediation course designed by the COE Clerkship will be submitted to the Committee on Academic Standing for review and final approval.

Remediation for Failure of the Clerkship Program by Examination

A student who fails the Clerkship Program because of examination failure(s) will complete the Clerkship Program (i.e. all clerkships). The COE Clerkship will examine the complete record of the student in the Clerkship Program and will design a remedial program for the student to correct and improve weaknesses and deficiencies. This program may include, if the committee deems it appropriate, rotations and examinations already passed. The remedial will be designed to help the student pass the failed examination and improve the areas of weakness and deficiency. The remedial may include major and minor clerkships including ward and other clinical work. The remedial will be 16 to 52 weeks. The student will be assessed by the same medical assessment methods as in the major and minor clerkships and will have to pass the examination(s) failed. The examination(s) will be taken at the end of the remedial period.

All remediations designed by the COE Clerkship will be submitted to the Committee on Academic Standing for review and approval. A student who fails the remedial, whether of the Clerkship Program and/or examinations, will be required to withdraw from the faculty (see General Regulations). The student will be considered to have failed the medicine program and will not continue in the undergraduate program of the medical faculty.

5.4 Regulations for Students Taking Leave from the Clerkship Program

Students may, for health or personal reasons, withdraw from the clinical rotations or take temporary leave. For sudden unexpected reasons, except under extreme circumstances, the clerkship director, or delegate, and resident must be informed and later the office of the Associate Dean UGME. For planned leave, prior permission must be obtained from the Associate Dean UGME or Student Affairs, the clerkship director or delegate, and the chief resident of the services involved must be informed. Written documentation of the reason for absence may be required by the Dean. The information is confidential to the Associate Dean UGME and Student Affairs.

If, at the time of taking leave, less than one half of that part of the rotation has been completed, the student will have to start the rotation again from the beginning of the rotation at a later date convenient to the schedule.

If, at the time of taking leave, more than one half of that part of the rotation has been completed and if the student's performance to that date has been considered satisfactory, the student will only have to complete the missed time at a later date convenient to the schedule. The final evaluation will be made from the assessments in both parts of the rotation.

Brief periods of leave (less than 5 days) may be taken with the permission of the clerkship director, or delegate, illness greater than one day must be documented with a doctor's certificate. Brief leaves of absence are allowed for academic purposes and for interviews for postgraduate positions without penalty, but prior permission must be obtained. In order to pass a rotation, or a sub-element of a rotation, no student can be absent for more than 15 per cent of the rotation or sub-element of the rotation.

The normal clerkship is completed in 80 weeks, not counting CaRMS interview time and holiday time. When, because of leaves of absence, a student will take more than 80 weeks, including elective periods, to complete the Clerkship Program then the COE Clerkship will review the student's record (clinical assessments and examinations) during the Clerkship Program to ensure that the time lost has not compromised the overall achievement of the student. Moreover the COE Clerkship must decide if the extended nature of the student's course has resulted in a standard of evaluation for the student that is different from the other students of the year who have had less time. If the COE Clerkship determines that this student has not reached the standard expected of a student completing the regular Clerkship Program, and even if all rotations have been completed, then the COE Clerkship may require a further period of clinical training for students. This will not count as a failure, but as a remedial period to help the student to attain the standard expected in a student completing the Clerkship Program. During this remedial period all regular methods of evaluation, clinical assessments and examinations, will apply although, at the recommendation of the COE Clerkship, certain examinations may be omitted. If this remedial period is failed then the student will be deemed to have failed the Clerkship Program.

5.5 Reviews and Appeals of Failed Rotations and Examinations

A student who disagrees with any evaluation, or recommended remediation, from departmental rotations or by examination, whether externally or

internally produced, may ask for it to be reviewed and re-evaluated. The student should consider obtaining the advice of the Student Advocate (telephone (204) 474-9251). Students are required to sign their FITERs but can include a notation about disagreement with the findings.

The request for review should be addressed to the Associate Dean Student Affairs, who direct the request to the appropriate authorities. The request can be made verbally to the authority but is better in writing; the request should be supported by reasons for the disagreement. Student representatives or the Associate Dean Student Affairs can put forward the student's request at the undergraduate departmental committees and COE. If the recommendation for failure is upheld by the appropriate committee of evaluation, the same request and its supporting arguments can be submitted to the Committee on Academic Standing and presented by either the student representatives, the Associate Dean Student Affairs, the Associate Dean UGME, or the Student Advocate. If the Committee on Academic Standing upholds the failure, then the student may appeal the result within 28 working days of receipt of the failure from the CAS by submitting a written appeal to the Committee on Academic Standing.

On the receipt of such an appeal the Committee on Academic Standing will refer the appeal to the Faculty Executive Council Committee on Student Academic Appeals. The Student Academic Appeals Committee will hear the appeal within 28 days of an appeal being filed. The student will be informed of the decision within 10 working days of the conclusion of the appeal. If necessary, the student may then appeal to the Senate Committee on Student Appeals. It is strongly recommended that the student obtain the advice of the Student Advocate. If a failing evaluation is overturned on appeal then the original pass/fail evaluation must be stricken from the student's record and the new evaluation inserted -- examination marks and the comments of clinical assessments will be kept, except where they were found to be invalid during the appeal, in which case a correct comment or mark is inserted.

SECTION 6: Other Undergraduate Programs

6.1 Bachelor of Science in Medicine B.Sc. (Med)

The Bachelor of Science in Medicine program is offered during the summer months following first and second year of the undergraduate program in Medicine. The B.Sc. (Med) program is designed to provide the undergraduate medical student with the opportunity to gain firsthand experience in medical research. A large variety of basic science and clinical research projects are available for the student to choose from each year.

The program is open to undergraduate students in the Faculty of Medicine. The work for this degree may be carried out in any department of the Faculty of Medicine. This program may not be taken concurrently with any part of the medical curriculum nor by a student carrying any failures or required remediation in his/her medical program.

To enrol in the B.Sc. (Med) program the student must find a supervisor in any field within the Faculty of Medicine. The supervisor must be a member of the Faculty of Medicine. Together, the student and supervisor submit a written project proposal for scrutiny to the B.Sc. (Med) Committee. To engage in the B.Sc. (Med) program, students must register with the university for summer sessions.

An examining committee of three faculty members, one from outside the department in which the research work is carried out, will be established for each student. The supervisor will report upon the student's progress to the B.Sc. (Med) Committee.

Students will be required to produce research and present their findings acceptably in both a written report and at a research forum. Students will be evaluated after the first summer and following the completion of the requirements for the B.Sc. (Med) degree. Students will be required to withdraw from the program if they make unsatisfactory progress, including after the first summer of research.

The B.Sc. (Med) degree will be conferred at the same time as the M.D. degree unless the student, having satisfactorily completed the requirements for the B.Sc. (Med) degree, discontinues the study of medicine in this faculty. In this case, the B.Sc. (Med) degree will not be conferred.

6.2 MD/PhD Option

Purpose

The combined-degree MD/PhD Option in the Faculty of Medicine is designed to produce academic clinician scientists who are interested in a career that combines both research and clinical medicine.

Duration

The minimum program of study is the total required by the Faculty of Medicine for the MD program (4 years) plus the minimum requirements of the Faculty of Graduate Studies (3 years from honours undergraduate degree). Students having obtained advanced/graduate training prior to admission may be granted advanced standing. Students will be considered to be full-time graduate students through the entire period.

Eligibility

Students enrolled in or admitted to Medicine are eligible to apply.

Application process

Students wishing to apply should contact the Director of the Option. Acceptance will minimally require: 1) identification of a supervisor (within a department in the Faculty of Medicine which has an approved PhD program) who has adequate resources for the proposed program of study and whose department recommends acceptance, 2) interview with the Faculty MD/PhD Selection Committee and their recommendation for acceptance, 3) identification of a source of adequate financial support for the student and 4) acceptance by the Faculty of Graduate Studies.

Program fees

The total tuition fees payable are the sum of the fees required for the MD and PhD programs of study. Continuing fees (Graduate Studies) are also applicable.

Administration

The Associate Deans for Research and UGME and Assistant Dean Admissions are advisory to the Option Director (Associate Dean Graduate Studies). They will ensure 1) adequate resources for all aspects of the delivery of the program, 2) liaison with the Department, the Faculty of Medicine (including flexibility re: leaves for research) and Faculty of Graduate Studies, 3) review of advisory committee composition/function and of student progress and satisfaction and 4) the provision of program elements considered important to the success of the Option. Faculty members holding dual MD/PhDs will be requested to provide input as resource persons to the program.

Coursework

The minimum course requirements of the Faculty of Graduate Studies will be applicable in addition to the normal curriculum of medical studies.

Research/Thesis requirements

The quality and quantity of research supporting the thesis shall be consistent with that required for other doctoral candidates in the field.

Additional program elements:

Seminar Series and Research Progress Evaluations

Each student will be required to regularly attend a designated research seminar series organized by the sponsoring research discipline of the student. In addition, mandatory attendance will be required of all MD/PhD students and their supervisory faculty advisors to participate in a quarterly, program-wide, MD/PhD Student Research Forum which will include MD/PhD graduates. These regular research days will provide time for students to present their work to a critical audience (research proposals, work-in-progress, critical reviews in major areas of recent scientific advances, etc.), and will also serve to promote networking within the program. Each student will be required to present a research update at least once a year, and satisfactory performance at this yearly assessment is required for continuation of program support.

Conferment of the Dual Degrees of MD/PhD

The MD and PhD degrees will normally be conferred simultaneously during convocation upon satisfactory completion of the entire option.

6.3 Special Courses Offered for Undergraduate Credit in Other Faculties and Schools

Department of Pharmacology and Therapeutics

PHAC 2100 Pharmacology (8) See Faculty of Pharmacy section in this *Calendar*.

Department of Biochemistry and Medical Genetics

BGEN 3020 Introduction to Human Genetics (6) Topics to be included are the chromosomal level of genetic inheritance, Mendelian genetics, gene mutation and its consequences, the problems of multiple loci, and genetic-environmental interaction as these areas apply to human beings; the applications of human genetics in medicine.

BGEN 4020 Project Course in Human Genetics (6) A research project chosen in consultation with and supervised by a faculty member. A written report is required. The course is available primarily to final year Honours students in the Honours Genetics program. Selection of project and supervision to be arranged prior to September 30 and submitted in writing to department head. Deadline for submission of first draft to supervisor by March 1. Deadline for submission of final draft to department head is March 31.

SECTION 7: Academic Staff

Anesthesia

Professors

Biehl, D., B.Sc., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Craig, D.**, B.Sc., M.D., C.M., M.Sc. (McGill), F.R.C.P.C.; **Doak, G.**, B.Sc., M.D. (Manitoba), Ph.D. (Dalhousie), F.R.C.P.C.; **Duke, P.**, M.D. (Manitoba), F.R.C.P.C., F.A.C.A.; **Mutch, A.**, M.D. (Queen's), F.R.C.P.C.; **Ong, B.**, B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Thomson, I.**, B.Sc.(Hons.), M.D. (Manitoba), F.R.C.P.C.

Associate Professors

Bradley, B., B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Beckstead, J.**, B.Sc., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Benoit, A.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Brownell, L.**, B.A., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Cannon, J.**, M.D. (Manitoba), F.R.C.P.C.; **Graham, M.**, B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Intrater, H.**, M.D. (Manitoba), F.R.C.P.C.; **Kowalski, S.**, M.D. (Toronto), F.R.C.P.C.; **Lemon, P.**, B.Sc.(Hons.), M.D. (Manitoba), F.R.C.P.C.; **Littleford, J.**, B.Sc.(Hons.) (Toronto), M.D. (Calgary), F.R.C.P.C.; **Maguire, D.**, B.Sc.(Hons.), M.D. (Manitoba), F.R.C.P.C.; **McNeill, A.**, B.Sc., M.D. (Saskatoon), F.R.C.P.C.; **Nugent, L.**, B.Sc.(Hons.), M.D. (Manitoba), F.R.C.P.C.; **Patel, L.**, M.B., B.S. (Bombay), F.R.C.P.C.; **Ringaert, K.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Ulyot, S.**, B.Sc.(Med.), M.D.(Hons.) (Manitoba), F.R.C.P.C.

Assistant Professors

Amadeo, R., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Baker, C.**, M.D. (Manitoba), F.R.C.P.C.; **Barc, J.**, B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Baron, C.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Baron, K.**, M.D. (Manitoba), F.R.C.P.C.; **Bell, D.**, B.Sc.(Med.), M.D.(Hons.) (Alberta), F.R.C.P.C.; **Brown, R.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Cameron, M.**, M.D. (Manitoba), F.R.C.P.C.; **Cappellani, R.**, M.D. (Ottawa), F.R.C.P.C.; **Christodoulou, C.**, M.B., Ch.B. (Stellenbosch), F.R.C.P.C.; **DeBrouwere, R.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Deutscher, R.**, M.D. (Manitoba), F.R.C.P.C.; **Dionne, C.**, M.D. (Laval), F.R.C.P.C.; **Doerr, J.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Eliasson, T.**, B.Sc.(Med.), M.D. (Alberta), F.R.C.P.C.; **Enns, J.**, B.Sc. (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Ewert, F.**, M.D. (Manitoba), F.R.C.P.C.; **Freedman, J.**, B.Sc. (Winnipeg), M.D. (Calgary), F.R.C.P.C.; **Friesen, J.**, B.A., M.D. (Manitoba), F.R.C.P.C.; **Gard, M.**, B.Sc.(Hons.), B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Gard, S.**, B.Sc. (Alberta), B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Godlewski, W.**, M.D. (Warsaw), F.R.C.P.C.; **Govender, P.**, M.B., Ch.B. (Natal), F.F.A., F.R.C.P.C.; **Haberman, C.**, B.Sc. (Brandon), M.D. (Manitoba), F.R.C.P.C.; **Lee, T.**, B.Sc. (British Columbia), B.Sc.(Med.), M.D. (Manitoba), M.R.C.A., F.R.C.P.C.; **Lefevre, G.**, M.D. (Saskatchewan), F.R.C.P.C.; **Levy, S.**, M.D. (Manitoba), F.R.C.P.C.; **Loiselle, J.**, B.Sc., M.D. (Saskatchewan), F.R.C.P.C.; **Lucy, S.**, M.D. (Manitoba), F.R.C.P.C.; **MacKenzie, S.**, B.A., M.D. (Manitoba), F.R.C.P.C.; **Mathieson, A.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **McDonald, H.**, M.D. (Manitoba), F.R.C.P.C.; **Miller, T.**, B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Muirhead, B.**, M.D. (Manitoba), F.R.C.P.C.; **Paetkau, D.**, M.D. (Manitoba), F.R.C.P.C.; **Patel, P.**, M.B., Ch.B. (Welsh), F.F.A., F.F.A.R.C.S., F.R.C.P.C.; **Peters, D.**, M.D. (Manitoba), F.R.C.P.C.; **Pickering, B.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Putnins, C.**, M.D. (Manitoba), F.R.C.P.C.; **Reimer, H.**, M.D. (Manitoba), F.R.C.P.C.; **Sareen, S.**, B.Sc. (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Scatliff, J.**, M.D. (Manitoba), F.R.C.P.C.; **Segstro, R.**, B.Sc.(Hons.), M.D. (Manitoba), F.R.C.P.C.; **Sethi, S.**, M.B., Ch.B. (Glasgow), F.F.A.R.C.S., F.R.C.P.C.; **Stanko, L.**, B.N., M.D. (Manitoba), F.R.C.P.C.; **Sutherland, E.**, B.A. (Winnipeg), B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Sutton, I.**, M.D. (Manitoba), F.R.C.P.C.; **Swartz, J.**, M.D., (Manitoba) F.R.C.P.C.; **Tulloch Brownell, H.**,

B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Weirich, M.**, M.D. (Manitoba), F.R.C.P.C.; **Wong, H.**, B.Sc.(Hons.), M.D. (Manitoba), F.R.C.P.C.; **Young, S.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.

Lecturers

Botha, D., M.B., Ch.B. (Johannesburg), M.Med. (Pretoria); **Cohen, M.**, M.D. (Manitoba), F.R.C.P.C.; **Dabrowski, P.**, M.D. (Warsaw), F.R.C.P.C.; **Girard, J.**, B.Sc.(Hons.) (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Harms, S.**, M.B., Ch.B. (Orange Free State), F.R.C.P.C.; **Hawaleshka, A.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Leen, D.**, M.B., Ch.B., B.A.O. (Ireland); **Lieberman, D.**, B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Miller, M.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Nair, U.**, M.B., Ch.B. (Glasgow), F.F.A.R.C.S.; **Svorkdal, N.**, B.S.P., M.D. (Saskatchewan), F.R.C.P.C.

Biochemistry and Medical Genetics

Distinguished Professor Emeritus

Hamerton, J., B.Sc.(Hons.), D.Sc. (London), F.C.C.M.G.

Professors Emeriti

Blanchaer, M., B.A.(Hons.), M.D., C.M. (Queen's); **Dakshinamurti, K.**, B.Sc. (Madras), M.Sc., Ph.D. (Rajputna), F.R.I.C.; **Stevens, F.**, Licentiate (Ghent), Ph.D., D.Sc. (Belgium); **Yamada, E.**, B.Sc.(Hons.) (Western Ontario), M.Sc. (McGill), Ph.D. (Western Ontario)

Senior Scholar

Jacobs, H., M.D. (Freiburg), Ph.D. (Marburg)

Professors

Arthur, G., B.Sc.(Hons.) (Ghana), Ph.D. (Leeds); **Choy, P.**, B.Sc. (McGill), M.Sc., Ph.D. (North Dakota); **Chudley, A.**, M.D. (Manitoba), F.R.C.P.C., F.C.C.M.G.; **Davie, J.**, B.Sc.(Hons.), Ph.D. (British Columbia); **Evans, J.**, B.Sc. (Birmingham), Ph.D. (Leicester), F.C.C.M.G.; **Greenberg, C.**, B.Sc.(Hons.), M.D., C.M. (McGill), F.R.C.P.C., F.C.C.M.G.; **Hatch, G.**, B.Sc. (Winnipeg), M.Sc. (Saskatchewan), Ph.D. (Manitoba); **Mai, S.**, B.Sc., M.Sc., M.A. (Cologne), Ph.D. (Karlsruhe); **Mowat, M.**, B.Sc. (York), Ph.D. (Alberta); **Murphy, L.**, B.Sc.(Hons.), Ph.D. (Sydney); **Szathmáry, E.**, B.A.(Hons.), Ph.D., L.L.D. (Toronto), D.Sc. (Western Ontario); **Triggs-Raine, B.**, B.Sc., Ph.D. (Manitoba); **Watson, P.**, B.A., M.A., M.B., Ch.B. (Cambridge), F.R.C.P.C.; **Wilkins, J.**, B.Sc., M.Sc. (Waterloo), Ph.D. (Manitoba); **Wrogemann, K.**, M.D. (Marburg), Ph.D. (Manitoba); **Zelinski, T.**, B.Sc., M.Sc., Ph.D. (Manitoba)

Associate Professors

Amara, F., B.Sc.(Hons.), Ph.D. (Ulster); **Bhullar, R.**, B.Sc. (McMaster), Ph.D. (Manitoba); **Chodirker, B.**, M.D., M.Sc. (Manitoba), F.R.C.P.C., F.C.C.M.G.; **Dawson, A.**, B.Sc.(Hons.), M.Sc. (Queen's), Ph.D. (Western Ontario), F.C.C.M.G.; **Dembinski, T.**, B.Sc.(Hons.) (St. Andrews), M.Sc. (Leeds), Ph.D. (Wales); **Gibson, S.**, B.Sc. (Carleton), Ph.D. (Toronto); **Gietz, R.**, B.Sc. (Guelph), Ph.D. (Alberta); **Hicks, G.**, B.Sc., Ph.D. (Manitoba); **Los, M.**, M.D. (Krakow), Ph.D. (Heidelberg); **Mesaeli, N.**, B.Sc., M.Sc. (Kuwait), Ph.D. (Manitoba); **Williams, G.**, B.Sc.(Hons.), D.P. (Sussex), M.D. (Manitoba), F.R.C.P.C.

Assistant Professors

Dalton, J., B.Sc.(Hons.), M.Sc., Ph.D. (Manitoba); **Ding, H.**, M.D. (Shanghai), Ph.D. (Leuven); **Leygue, E.**, M.Sc. (Paul Sabatier), D.E.A., Ph.D. (P & M Currie); **Marles, S.**, M.D. (Alberta), F.R.C.P.C., F.C.C.M.G.; **Merz, D.**, B.Sc.(Hons.), Ph.D. (McGill); **Parry, D.**, Ph.D. (Memorial); **Pind, S.**, B.Sc.(Hons.) (Queen's), Ph.D. (Toronto); **Spriggs, E.**, B.Sc.(Hons.) (Manitoba), M.Sc., Ph.D. (Calgary); **Valdimarsson, G.**, B.Sc., M.Sc. (Manitoba), Ph.D. (Western Ontario); **Wigle, J.**, B.Sc.(Hons.) (Queen's), Ph.D. (Ottawa)

Adjunct Professors

Civetta, A., Licenciado (Buenos Aires), Ph.D. (McMaster); **Craig, D.**, B.Sc. (Mount Allison), Ph.D. (Dalhousie); **Franck, J.**, B.Sc. (Alberta), Ph.D. (Dalhousie); **Graham, M.**, B.Sc.(Hons.) (Waterloo), Ph.D. (Guelph); **Kashour, T.**, M.B., Ch.B. (Libya), F.R.C.P.C.; **Kupriyanov, V.**, M.Sc., Ph.D., D.Sc. (Moscow); **Mhanni, A.**, M.B., Ch.B. (Libya), Ph.D. (Manitoba), F.R.C.P.C., F.C.C.M.G.; **Reed, M.**, B.A., B.Sc., M.D. (Manitoba); **Siow, Y.**, B.Sc.(Hons.) (Regina), Ph.D. (Manitoba); **Vanderwel, D.**, B.Sc.(Hons.) (Victoria), Ph.D. (Simon Fraser); **Ye, J.**, M.D. (Wenzhou Med. College), M.Sc. (Fujian Med. College)

Lecturers

LaPointe, M., B.Sc.(Hons.) (Manitoba), M.Sc.(Hons.) (Minnesota); **Leroux, M.**, M.Sc. (Manitoba); **MacDonald, K.**, B.Sc. (Brandon), B.Ed. (Manitoba), M.Sc. (Wisconsin); **Sanders, S.**, B.Sc.(Hons.) (Brandon), M.Sc. (Manitoba), C.C.G.C.

Clinical Health Psychology

Senior Scholar

Martin, R., B.A. (Miami), M.S., Ph.D. (Purdue)

Professors

Arnett, J., B.A. (Rhode Island), M.A. (Michigan), Ph.D.; **McIlwraith, R.**, B.A. (Winnipeg), M.A. (Acadia), Ph.D. (Manitoba); **Roy, R.**, B.A. (Delhi), A.A.P.S.W. (London); **Walker, J.**, B.A., M.A., Ph.D. (Manitoba)

Associate Professors

Bilash, I., B.Sc., M.A., Ph.D. (Ottawa); **Bow, S.**, B.Sc. (Toronto), M.Sc. (Calgary), Ph.D. (Waterloo); **Ellis, E.**, M.A., Ph.D. (California); **Gill, D.**, B.A. (Hons.), M.A., Ph.D. (Manitoba); **Graff, L.**, B.A., M.A. (Saskatchewan), Ph.D. (Manitoba); **Hiebert-Murphy, D.**, B.S.W., M.A., Ph.D. (Manitoba); **Holms, V.**, B.A., M.A., Ph.D. (Manitoba); **Robertson, R.**, B.A., M.A., Ph.D. (Manitoba); **Sexton, C.**, B.A., M.A., Ph.D. (Manitoba); **Sexton, D.**, B.A., M.A., Ph.D. (Manitoba); **Shady, G.**, B.A., M.A. (Windsor), Ph.D. (Manitoba); **Stambrook, M.**, B.A., M.A., Ph.D. (Manitoba); **Vincent, N.**, B.A., M.A., Ph.D. (Manitoba)

Assistant Professors

Adkins, E., B.A., M.A., Ph.D. (Manitoba); **Altman, I.**, B.A. (McGill), M.Ps.Sc. (Pennsylvania), Ph.D. (Manitoba); **Bailly, M.**, B.A., M.A., Ph.D. (Manitoba); **Brown-DeGagne, A.**, B.A., Ph.D. (Dalhousie); **Cohen, C.**, B.A., M.A., Ph.D. (Manitoba); **Demare, D.**, B.A., M.A., Ph.D. (Manitoba); **DeRocquigny, R.**, B.A., M.A., Ph.D. (Manitoba); **Ducharme, J.**, B.A. (Manitoba), M.A., Ph.D. (Concordia); **Dyck, K.**, B.A., M.A., Ph.D. (South Dakota); **El-Khatib, A.**, B.Sc., M.A., Ph.D. (Tanta); **Enns, K.**, B.A., M.A., Ph.D. (York); **Enns, L.**, B.A. (Winnipeg), M.A., Ph.D. (Manitoba); **Feldgaier, S.**, B.A. (McGill), M.A., Ph.D. (Ohio State); **Fergusson, P.**, B.A. (Winnipeg), Ph.D. (Waterloo); **Fisher, G.**, B.A. (McGill), M.A., Ph.D. (Windsor); **Frain, J.**, B.A. (Winnipeg), M.A. (Saskatchewan), Ph.D. (Concordia); **Furer, P.**, B.A., M.A., Ph.D. (Manitoba); **Gibson, G.**, B.A., M.A., Ph.D. (Manitoba); **Greenwood, L.**, B.A. (Calgary), M.A., Ph.D. (Manitoba); **Hack, T.**, B.Sc. (Calgary), M.A., Ph.D. (Manitoba); **Haugen, M.**, B.A. M.A., Psy.D. (Manitoba); **Herscovitch, A.**, B.A., M.A., Ph.D. (Manitoba); **Holm, S.**, B.A. (Winnipeg), M.A., Ph.D. (Concordia); **Hutchison, B.**, B.A., M.A. (Manitoba), Ph.D. (Ottawa); **Kaoukis, G.**, B.Sc. (McGill), M.A., Ph.D. (Manitoba); **Kilgour, A.**, B.Sc., M.A., Ph.D. (Queen's); **Kolton, D.**, B.A., M.A., Ph.D. (Manitoba); **Koven, L.**, B.A., M.A., Ph.D. (West Virginia); **Laforce, J.**, B.A. (Alberta), M.A., Ph.D. (Queen's); **Lionberg, C.**, B.A., M.A., Ph.D. (Manitoba); **Millikin, C.**, B.A. (Toronto), M.A., Ph.D. (Windsor); **Mintz, C.**, B.A., M.A., Ph.D. (Manitoba); **Newton, J.**, B.A., B.Ed., M.Ed., Ph.D. (Saskatchewan); **Prober, N.**, B.A. (McGill), M.S.W. (Hawaii), Psy.D. (Illinois); **Rallo, J.**, B.A. (McMaster), M.A., Ph.D. (Manitoba); **Rhodes, L.**, B.A. (Winnipeg), M.A., Ph.D. (Concordia); **Slusky, G.**, B.A., M.A., Ph.D. (Manitoba); **Somers, M.**, B.A., Ph.D. (Waterloo); **Teschuk, M.**, B.A. (British Columbia), Ph.D. (Waterloo); **Torgrud, L.**, B.A., M.A., Ph.D. (Manitoba); **Trigg, L.**, B.Sc. (McGill), M.A., Ph.D. (Manitoba); **Trinke, S.**, B.A. (Manitoba), Ph.D. (Simon Fraser); **Wallbridge, H.**, B.A., M.A., Ph.D. (Manitoba); **Warren, M.**, B.A., M.A., Ph.D. (Simon Fraser); **Whitney, D.**, B.A. (Winnipeg), M.A., Ph.D. (Saskatchewan)

Lecturers

Inayatulla, M., B.A., M.A. (Mysore), M.A. (Florida); **Staley, J.**, B.Sc., M.A. (Manitoba)

Community Health Sciences

Senior Scholars

Murray, R., B.A. (McGill), M.A., Ph.D. (Manitoba); **Shapiro, E.**, B.A., M.A. (McGill), L.L.D. (Hons.) (Manitoba)

Professors

Black, C., M.D. (Manitoba), Sc.D. (Baltimore); **Chochinov, H.**, B.A. (Winnipeg), M.D., Ph.D. (Manitoba), F.R.C.P.C.; **Cooper, J.**, D.P.O.T. (Toronto), B.O.T., M.Sc., Ph.D. (Manitoba); **Enns, M.**, B.Sc. (Med.), M.D. (Manitoba), F.R.C.P.C.; **Evans, J.**, B.Sc. (Birmingham), Ph.D. (Leicester); **Forget, E.**, B.A. (Hons.) (Glendon College), M.A., Ph.D. (Toronto); **Glavin, G.**, Ph.D. (Manitoba); **Halli, S.**, B.Sc., M.Sc. (Karnataka), Ph.D. (Western Ontario); **Hassard, T.**, B.Sc., M.Sc., Ph.D. (Belfast); **Kaufert, J.**, B.A. (Minnesota), M.A., Ph.D. (Northwestern); **Kaufert, P.**, B.A. (Hons.) (Leeds), Ph.D. (Birmingham); **McKenzie, J.**, B.Med.Sc., M.B., Ch.B. (New Zealand), M.D. (London), R.A.C.P., F.R.C.P., F.R.C.P.C.; **Moffatt, M.**, B.Sc., M.D. (Toronto), M.Sc. (McGill), F.R.C.P.C.; **Moses, S.**, M.D. (Toronto), M.P.H. (Johns Hopkins); **O'Neil, J.**, B.A., M.A. (Saskatchewan), Ph.D. (Berkeley); **Orr, P.**, M.Sc. (Manitoba), M.D. (Toronto), F.R.C.P.C.; **Postl, B.**, M.D. (Manitoba), F.R.C.P.C.; **Ronald, A.**, M.D. (Manitoba), B.Sc. (Toronto),

F.A.C.P., F.R.C.P.C.; **Roos, L.**, A.B. (Stanford), Ph.D. (Massachusetts); **Roos, N.**, B.A. (Stanford), Ph.D. (Massachusetts); **Segall, A.**, B.A., M.A. (Manitoba), Ph.D. (Toronto); **Tenenbein, M.**, M.D. (Manitoba), F.R.C.P.C.; **Wade, J.**, B.S. (North Dakota), B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Yassi, A.**, B.Sc. (McGill), M.D., D.O.H.S. (McMaster), M.Sc. (Toronto), F.R.C.P.C.; **Young, K.**, B.Sc. (Hons.), M.D., C.M. (McGill), M.Sc. (Toronto), D.P. (Oxford), F.R.C.P.C.

Associate Professors

Bartlett, J., M.Sc., M.D. (Manitoba), C.C.F.P., F.C.F.P.; **Blanchard, J.**, B.Sc. (Med.), M.D. (Manitoba), M.P.H., Ph.D. (Johns Hopkins); **Cox, B.**, B.A. (Hons.) (Winnipeg), M.A., Ph.D. (York); **Hammond, G.**, B.Sc., M.D., C.M. (McGill), F.R.C.P.C.; **Kliwer, E.**, B.Sc., M.Sc. (Manitoba), Ph.D. (British Columbia); **Kraut, A.**, M.D. (Manitoba), F.R.C.P.C.; **Macdonald, S.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Martens, P.**, B.Sc., B.Ed., M.Sc., Ph.D. (Manitoba); **Menec, V.**, B.A., M.A., Ph.D. (Manitoba); **Payne, B.**, B.A. (York), M.Sc., Ph.D. (Toronto); **Plummer, F.**, M.D. (Manitoba), F.R.C.P.C.; **Sevenhuysen, G.**, B.Sc., Ph.D. (London); **Taback, S.**, B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Tate, R.**, B.Sc. (Winnipeg), M.Sc., Ph.D. (Manitoba); **Walker, J.**, B.A. (Hons.), M.A., Ph.D. (Manitoba); **Washington, R.**, D.D.N.B., M.D., M.B., B.S. (India)

Assistant Professors

Agot, K., B.Educ., M.P. (Kenya), M.P.H., Ph.D. (Washington); **Beaudoin, C.**, B.A., M.Sc., Ph.D. (Manitoba); **Bowen, S.**, B.A., Cert.Ed., M.Sc., Ph.D. (Manitoba); **Bohm, E.**, B.Sc. M.E., M.D. (McMaster), M.Sc. (Dalhousie), F.R.C.S.C.; **Brown, K.**, M.D., M.B.A. (Western Ontario); **Brownell, M.**, B.A. (Winnipeg), M.A. (Toronto), Ph.D. (Manitoba); **Bruce, S.**, B.A., M.A., Ph.D. (Manitoba); **Buchan, S.**, M.D. (Saskatchewan), C.C.F.P., F.R.C.P.C.; **Carrothers, L.**, B.A. (Brandon), M.P.A., Ph.D. (Manitoba); **Chase, R.**, B.Sc. (Toronto), M.D., M.Sc. (McMaster), C.C.F.P., F.R.C.P.C.; **Chipperfield, J.**, B.A. (Hons.), M.A., Ph.D. (Manitoba); **Cook, C.**, M.Sc., M.D. (Manitoba), C.C.F.P.; **Czaykowski, P.**, B.Sc., M.D. (British Columbia), M.Sc. (Toronto); **DeCoster, C.**, R.N., C.A.C.E., M.B.A. (Hons.), Ph.D. (Manitoba); **Demers, A.**, B.Sc., M.Sc., Ph.D. (Laval); **Demeter, S.**, B.Sc., M.D. (Saskatchewan), M.H.Sc., F.R.C.P.C. (Toronto); **Doupe, M.**, B.P.E., M.Sc., Ph.D. (Manitoba); **Driedger, S.**, B.A. (Hons.) (Winnipeg), M.A. (Carleton), Ph.D. (McMaster); **Elias, B.**, M.A., Ph.D. (Manitoba); **Elliott, L.**, M.D. (Manitoba), M.Sc., (Dalhousie), F.R.C.P.C., C.C.F.P.; **Fast, M.**, B.Sc., M.D. (Manitoba), F.R.C.P.C., D.T.C.H.; **Finlayson, M.**, B.M.R., M.Sc., Ph.D. (Manitoba); **Gelskey, S.**, B.Sc. (D.H.) (Marquette), M.P.H. (Michigan), Ph.D. (Manitoba); **Green, C.**, B.A. (Winnipeg), M.H.Sc. (Toronto), Ph.D. (Manitoba); **Hackett, P.**, B.A. (Carleton), M.A., Ph.D. (Manitoba); **Harlos, S.**, B.Sc. (Alberta), M.D. (British Columbia), F.R.C.P.C.; **Hilderman, R.**, B.Sc. (Med.), M.D. (Manitoba), F.R.C.P.C.; **Katz, A.**, B.Sc., M.B., Ch.B. (Capetown), M.Sc. (Manitoba), C.C.F.P.; **Kettner, J.**, M.D. (Manitoba), F.R.C.S.C., M.Sc. (London), F.R.C.P.C.; **Kozyrskyj, A.**, B.Sc. (Hons.) (Toronto), M.Sc., Ph.D. (Manitoba); **Latosinsky, S.**, B.E.Sc. (Hons.) (Western Ontario), M.D. (Hons.) (Toronto), M.Sc. (McMaster), F.R.C.S.C.; **Lavoie, J.**, B.Sc., M.A. (McGill), Ph.D. (London); **Lix, L.**, B.SHEc. (Saskatchewan), M.Sc., Ph.D. (Manitoba); **Marchessault, G.**, B.H.Ec., M.Sc., Ph.D. (Manitoba); **Martin, B.**, B.Sc. (Toronto), M.D. (Queen's), M.Sc. (Manitoba), C.C.F.P.; **McKeen, N.**, R.N., B.A. (Hons.) (Carleton), M.A., Ph.D. (Manitoba); **Metge, C.**, B.Sc. (Alberta), Ph.D. (Maryland); **Mignone, J.**, M.A. (Alberta), Ph.D. (Manitoba); **Ngugi, E.**, R.N. (Kenya), B.Sc., M.A., Ph.D. (Columbia Pacific); **Peschken, C.**, M.D. (Saskatchewan), M.Sc. (McGill), F.R.C.P.C.; **Peters, D.**, B.Sc., M.D. (Manitoba), M.P.H., D.P.H. (Johns Hopkins); **Plourde, P.**, M.D. (Ottawa), F.R.C.P.C.; **Poffenroth, L.**, B.Sc. (Alberta), M.Sc., M.D. (Manitoba), F.R.C.P.C.; **Pope, W.**, M.D. (Manitoba), L.L.B., F.R.C.P.C.; **Ramesh, B.**, B.A., M.A., Ph.D. (India); **Ramsey, C.**, B.Sc., M.D. (Manitoba), M.Sc. (Harvard); **Reading, J.**, B.P.E. (Alberta), M.Sc., Ph.D. (Toronto); **Redekop, T.**, B.Sc., M.D. (Manitoba), C.C.F.P., F.R.C.P.C.; **Reza-Paul, S.**, M.B., B.S. (India), M.P.H., D.P.H. (Alabama); **Roberts, J.**, M.B., B.S. (Sydney), M.Sc., Ph.D. (Manitoba); **Robson, R.**, B.A. (Manitoba), M.D. (McGill), F.R.C.P.; **Routledge, M.**, B.Sc. (Med.), M.D., M.Sc. (Manitoba), C.C.F.P., F.R.C.P.; **Sareen, J.**, B.Sc. (Winnipeg), B.Sc. (Med.), M.D. (Manitoba), F.R.C.P.C.; **Shoostari, S.**, B.Sc., M.S.P.H. (Iran), Ph.D. (Manitoba); **Stranc, L.**, B.Sc.A. (Hons.), M.Sc., Ph.D. (Manitoba); **Tataryn, D.**, B.A. (Hons.) (Manitoba), M.A., Ph.D. (Arizona); **Taylor, M.**, M.D., M.Sc. (Toronto), F.R.C.P.S.C.; **Turner, D.**, B.Sc. (Victoria), M.Sc. (Calgary), Ph.D. (Alberta); **Weiss, E.**, M.Sc., M.D. (Manitoba), C.C.F.P.; **Wright, B.**, M.B.A., B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Wylie, J.**, B.Sc., Ph.D. (Manitoba), M.Sc. (Ottawa); **Yu, N.**, M.D. (Harbin), M.Sc. (Beijing), Ph.D. (Manitoba)

Lecturers

Popplow, J., B.Sc., B.Ed., M.D. (Queen's), M.Sc. (Wright State); **Spiegel, J.**, B.A., M.A. (McGill), M.Sc. (Toronto), Ph.D. (Manitoba)

Instructors

Cranswick, K., B.A. (Brandon), M.A. (Calgary); **Stewart**, G., D.D.H., B.A., M.Sc. (Manitoba)

Adjunct Professors

Anderson, J., B.Sc. (British Columbia, B.Sc.(Med.)), Ph.D. (Manitoba); **Boily**, M., B.Sc. (Laval), M.Sc., Ph.D. (London); **Hirdes**, J., B.Sc.(Hons.), M.A., Ph.D. (London); **Mayo**, N., D.P.T., B.Sc. (Queen's), M.Sc., Ph.D. (McGill)

Family Medicine

Professor Emeritus

Beazley, G., M.D. (Manitoba), C.C.F.P., F.C.F.P.

Senior Scholar

Murphy, C., M.D. (Manitoba), C.C.F.P., F.C.F.P., F.R.C.A.G.P.

Professors

Harlos, M., M.D. (British Columbia), C.C.F.P.; **Palatnick**, W., M.D. (Manitoba), F.R.C.P.C., A.B.E.M., A.B.M.T.; **Reynolds**, J., M.Sc. (McMaster), M.D. (Manitoba), M.H.Sc. (Toronto), C.C.F.P., F.C.F.P.

Associate Professors

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Assistant Professors

Blouw, R., M.D. (Manitoba), C.C.F.P.; **Bryski**, L., B.Sc., M.D. (Manitoba), C.C.F.P.; **Buchel**, T., B.Sc., M.D. (Manitoba), C.C.F.P., A.B.F.P.; **Cameron**, M., M.D. (Manitoba), C.C.F.P., F.R.C.P.C.; **Cavett**, T., B.Sc.(Hons.) (Carlton), M.D. (Manitoba), C.C.F.P.; **Chan**, P., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Connor**, G., M.D. (Manitoba), D.A.B.E.M.; **Craton**, N., M.D. (Manitoba); **Daeninck**, P., B.Sc., M.Sc. (Manitoba), M.D. (Calgary), F.R.C.P.C.; **Daen**, B., B.S.W., M.S.W. (Manitoba); **Dyck**, C., M.D. (Manitoba), C.C.F.P.; **Garcia**, M., M.D. (Cordoba), C.C.F.P.; **Grierson**, R., B.Sc., B.Sc.(Med.) M.D. (Manitoba), F.R.C.P.C.; **Hamilton**, J., B.H.Ec. (Manitoba); **Herd**, A., B.Sc.(Med.) (Winnipeg), M.D. (Manitoba), C.C.F.P.; **Kesselman**, E., M.D. (Manitoba); **Kisil**, K., M.D. (Manitoba), C.C.F.P.; **Kliwer**, K., M.D. (Manitoba), C.C.F.P.; **Konrad**, G., B.A. (Fresno Pacific), M.Sc. (Stanford), M.D. (Vanderbilt); **Kristjanson**, M., M.D. (Manitoba), C.C.F.P.; **Kuegle**, P., M.D. (Toronto), C.C.F.P.; **Lee**, L., M.D. (Manitoba), F.R.C.P.C.; **Lee**, S., M.D. (Manitoba), C.C.F.P.; **Lysack**, A., B.A., M.D. (Manitoba), F.R.C.S.C.; **Mehta**, P., M.B., Ch.B. (England), D.O., R.C.O.G., C.C.F.P.; **O'Hagan**, D., M.B., Ch.B. (Capetown), C.C.F.P.; **Peters**, S., M.D. (Manitoba), C.C.F.P.; **Peterson**, C., M.D. (Manitoba), C.C.F.P.; **Reynolds**, L., B.S.W., M.S.W. (Manitoba); **Shah**, A., M.B., Ch.B. (Glasgow), F.A.C.E.P.; **Sisler**, J., M.D. (Manitoba), C.C.F.P., F.C.F.P.; **Steigerwald**, R., M.D. (Manitoba), F.R.C.P.C.; **Stenhouse**, J., M.D. (Manitoba); **Thiele**, K., B.H.Ec. (Manitoba); **Webster**, G., D.M. (Toronto); **Wiebe**, J., M.D. (Manitoba), C.C.F.P.

Instructor 1

Allard, M., B.N. (Manitoba); **Byquist**, R., B.N. (Manitoba); **Frego**, A., L.P.N., R.N. (Manitoba); **Kennedy**, B., B.N. (Manitoba); **Labossiere**, D., M.Sc., D.O.N. (Manitoba); **Murphy**, P., B.Ed., M.Ed. (Manitoba); **Parker**, J., B.N. (Manitoba), M.N. (Syracuse); **Treytiak**, J., R.N. (Manitoba)

Lecturers

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Medicine

Distinguished Professors

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Professors Emeriti

Cuddy, T., M.D., F.R.C.P.C., F.A.C.P.; **MacDonell**, J., M.D., C.R.C.P.C., F.R.C.P.C.; **Ross**, R., M.D. (London), F.R.C.P.C., F.R.C.P.; **Thomson**, A., B.A. (Saskatchewan), M.D., M.Sc., F.R.C.P.C.

Professors

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Assistant Professors

Agha Khani, Y., M.D. (Iran); **Allan**, D., B.Sc. (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Amir**, N., M.B., B.S. (India), M.D. (Pakistan); **Barac**, I., M.D. (Belgrade), A.B.I.M.; **Bohm**, C., B.Sc.(Hons.) (Kingston), M.D. (McMaster); **Bourque**, C., M.D. (El Salvador), F.R.C.P.C.; **Brunt**, M., M.Sc., M.D. (British Columbia); **Cantor**, M., B.Sc. (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Casey**, A., B.Sc., M.D. (Saskatchewan), F.R.C.P.C.; **Chrusch**, C., B.Sc.(Med.), M.D., M.Sc. (Manitoba), F.R.C.P.C., R.C.P.S.; **Cleghorn**, S., M.D. (Manitoba), F.R.C.P.C.; **Cohen**, B., B.Sc. (McGill), M.D., M.Ed. (Dalhousie), F.R.C.P.C.; **Cooke**, A., B.Sc., M.D. (Manitoba), F.R.C.P.C., A.B.I.M.; **Corne**, S., B.A. (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Czaykowski**, P., B.Sc., M.D. (British Columbia), M.Sc. (Toronto); **Daeninck**, P., B.Sc., M.Sc. (Manitoba), M.D. (Alberta), F.R.C.P.C.; **Drebot**, G., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Eggertson**, D., B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Engel**, C., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Esfahani**, F., M.D. (Hungary); **Eschun**, G., M.D. (Manitoba), F.R.C.P.C., R.C.P.S.C., D.A.B.I.M.; **Ethans**, K., B.Sc. (Manitoba), M.D. (Dalhousie), F.R.C.P.C.; **Fast**, M., B.Sc. (Winnipeg), B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Garber**, P., M.D. (Manitoba), F.R.C.P.C., D.A.B.I.M.; **Giannouli**, E., M.D. (Greece), F.R.C.P.C.; **Grenier**, D., B.Sc.(Hons.), M.D. (Saskatchewan), F.R.C.P.C., C.S.P.C., A.B.I.M.; **Griffin**, P., M.B., Ch.B., B.A.O. (Dublin), F.R.C.P.C.; **Hajidiacos**, N., B.Sc. (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Henry**, S., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C., C.S.P.C.; **Hitchon**, C., B.Sc.(Hons.) (Calgary), M.D. (Alberta), F.R.C.P.C.; **Hobson**, D., B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Hodge**, S., B.Sc. (Winnipeg), M.D. (Manitoba), F.R.C.P.C.; **Hussain**, F., B.Sc., M.D. (Toronto), F.R.C.P.C.; **Ilse**, W., B.Sc.(Hons.), M.Sc. (Toronto), M.D. (Western Ontario), F.R.C.P.C.; **Ilnyckyj**, A., B.Sc., M.D. (Manitoba), F.R.C.P.C.; **Johnson**, C., B.Sc., M.D. (Alberta), C.A.F.P., F.R.C.P.C.; **Jolly**, K., M.B., B.S. (India), F.R.C.P.C., A.B.I.M.; **Junaid**, A., M.D. (Manitoba), F.R.C.P.C.; **Kahanovitch**, D., M.D., Ph.D. (Manitoba), F.R.C.P.C.; **Kaita**, K., M.D. (Manitoba), F.R.C.P.C.; **Kalicsinsky**, C., B.Sc., M.D. (Manitoba), A.M.B.D., F.R.C.P.C.; **Karpinski**, M., M.D. (Saskatchewan), F.R.C.P.C.; **Kasper**, K., M.D. (Manitoba), F.R.C.P.C.; **Krahn**, M., B.Sc.(Med.), M.D. (Manitoba), F.R.C.P.C.; **Lo**, E., M.D. (Toronto); **McCarthy**, T., M.D. (Manitoba), F.R.C.P.C.; **Melanson**, M., M.D. (Warsaw); **Miller**, L., B.Sc., M.D.

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Obstetrics, Gynaecology and Reproductive Sciences

Professors

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Lecturer

Bluhm, L.

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Hasinoff, B., B.Sc.(Hons.), Ph.D. (Alberta); Zhang, M., M.D., M.Sc. (Norman Bethune)

Pediatrics and Child Health

Professors Emeriti

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Bowman, J., M.D. (Manitoba)

Professors

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Surgery

Professors Emeriti

Barwinsky, J., M.D. (Manitoba), F.R.C.S.C., F.A.C.S., F.A.C.C.P., D.A.B.S., D.A.B.T.S., F.A.C.C., F.R.S.M.; **Blanchard**, R., M.D. (Manitoba), B.Sc.(Med.), M.Sc.(Surg.) (Minnesota), F.R.C.S.C., F.A.C.S.; **Downs**, A., M.D., C.M. (Manitoba), F.R.C.S.C., F.A.C.S.; **Riese**, K., M.D. (Manitoba), F.R.C.S.C., F.A.C.S.; **Stranc**, M., M.D. (Dublin), F.R.C.S., F.R.C.P.I., F.A.C.S., F.R.C.S.C.

Professors

Black, G., B.Sc., M.D. (Dalhousie), F.R.C.S.C.; **Cristante**, L., M.D., Ph.D. (Giessen); **Danzinger**, R., B.Sc., M.D. (Manitoba), F.R.C.S.C., F.A.C.S.; **Hosking**, D., M.D., M.B., Ch.B. (Capetown), F.R.C.S., F.R.C.S.C., F.A.C.S.; **Kirkpatrick**, J., M.B., Ch.B., (Edinburgh), F.R.C.S., F.R.C.S.C., F.A.C.S.; **MacDonald**, P., B.Sc.(Med.), M.D. (Manitoba), F.R.C.S.C.; **Menkis**, A., D.D.S. (Toronto), M.D. (McMaster), F.A.C.S., F.R.C.S.C.; **Oppenheimer**, L., M.D., Ph.D. (Barcelona), F.R.C.S.C.; **Postuma**, R., B.Sc.(Med.), M.D. (Manitoba), F.R.C.S.C., F.A.C.S.; **Rennie**, W., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Saadia**, R., M.D. (France), F.R.C.S.; **Unruh**, H., M.D. (Manitoba), F.R.C.S.C.; **West**, M., B.Sc.(Med.), M.D., Ph.D. (Manitoba), F.R.C.S.C.

Associate Professors

Abdoh, A., M.B., Ch.B. (Cairo), Ph.D. (New Orleans); **Buchel**, E., B.Sc., B.Sc.(Med.), M.D. (Manitoba), A.B.S., A.B.P.S.; **Chochinov**, H., B.Sc.(Med.), M.D., F.R.C.S.C., F.A.C.S., D.A.B.S.; **Dolynchuk**, K., B.Sc., M.D., Ph.D. (Manitoba), F.R.C.S.C., F.A.C.S.; **Duerksen**, F., M.D. (Argentina), F.R.C.S.C.; **Fewer**, H., B.Sc. (Loyola), M.D., C.M. (McGill), F.R.C.S.C.; **Gillespie**, D., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Gray**, P., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Guzman**, R., M.D. (Manitoba), F.R.C.S.C., F.A.C.S.; **Hancock**, B., B.Sc., M.D., M.Sc. (Manitoba), F.R.C.S.C., F.A.C.S.; **Kassum**, D., B.A., M.B., Ch.B., M.A. (Cambridge), F.R.C.S.C., F.R.C.S.; **Kaufmann**, A., B.Sc.(Med.), M.D., M.Sc. (Manitoba), F.R.C.S.C.; **Khan**, T., M.B., B.S. M.Sc. (East Pakistan), F.R.C.S., F.R.C.S.C., F.A.C.S.; **Kriellaars**, D., M.Sc. (Dalhousie), Ph.D. (Manitoba); **Lipschitz**, J., M.B., Ch.B. (Witwatersand), R.C.S., F.C.S., F.R.C.P.C.; **Louridas**, G., M.B., Ch.B., M.Med. (South Africa), F.C.S., F.A.C.S., F.R.C.P.C.; **MacMahon**, R., M.B., Ch.B., B.A.O. (Ireland), F.R.C.S., F.R.C.S.C.; **Monson**, R., M.D. (Manitoba), F.R.C.S.C.; **Murray**, K., B.A., M.D. (Dalhousie), F.R.C.S.C.; **Nason**, R., B.Sc. (Acadia), M.D. (Dalhousie), M.Sc. (Alberta), F.R.C.S.C.; **Pascoe**, E., M.D. (Manitoba), F.R.C.S.C.; **Robertson**, G., M.B., B.S., M.Phil. (London), F.R.C.S., F.R.C.S.C.; **Taylor**, M., M.D., M.Sc. (Toronto), F.R.C.S.C., F.A.C.S.; **Thorlakson**, R., M.D. (Manitoba), F.R.C.S., F.R.C.S.C., F.A.C.S.; **Thorlakson**, T., M.D., F.R.C.S., F.R.C.S.C., F.A.C.S.; **Torchia**, M., M.Sc., Ph.D. (Manitoba), M.C.I.C., M.A.C.S.; **Vajcner**, A., M.D. (Manitoba), F.R.C.S.C., F.A.C.S.; **Warrian**, K., B.Sc.(Med.), M.D. (Manitoba), F.R.C.S.C.; **Waters**, W., B.Sc., M.D., C.M. (McGill), F.R.C.S.C., F.A.C.S., F.I.C.S.; **Wiseman**, N., B.Sc.(Med.), M.D. (Manitoba), F.R.C.S.C., F.A.C.S.; **Yaffe**, C., M.D. (Manitoba), F.R.C.S.C.; **Ziesmann**, M., M.D. (Manitoba), F.R.C.S.C.

Assistant Professors

Andrew, C., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Assuras**, G., M.D. (Toronto), F.R.C.S.C.; **Bard**, R., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Bartlett**, L., M.D. (Western Ontario), F.R.C.S.C.; **Berrington**, N., M.B., Ch.B. (South Africa), M.Med., F.R.C.S., F.C.S.; **Bohm**, E., B.M.E., M.D. (McMaster), F.R.C.S.C.; **Boyar**, R., D.M.D.C. (Manitoba); **Bracken**, J., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Bratu**, I., B.M.Sc., M.D. (Alberta), M.Sc. (McGill), F.R.C.S.C.; **Burnell**, C., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Cross**, H., D.M.D., M.Sc. (Manitoba), C.P.D. (Connecticut); **Curran**, J., B.D.S., F.F.D. (Ireland); **Decter**, A., M.D. (Manitoba), F.R.C.S.C.; **deKorompay**, V., B.Sc.,

M.D. (Saskatchewan), F.R.C.S.C.; **Dharamsi**, N., B.Ed., B.Sc., M.Sc., M.D. (Calgary), F.R.C.S.C.; **Drachenberg**, D., B.Sc., M.D. (British Columbia), F.R.C.S.C.; **Dubberley**, J., B.Sc. (Acadia), M.D. (Manitoba), F.R.C.S.C.; **Fraser**, V., M.D. (Manitoba), F.R.C.S.C.; **Goytan**, M., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Graham**, C., B.Sc., D.C., M.D. (Saskatchewan), F.R.C.S.C.; **Hayakawa**, T., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Hedden**, D., B.Sc., M.D. (Cape Town), F.R.C.S.C.; **Huebert**, D., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Huebert**, H., M.D. (Manitoba), F.R.C.S.C.; **Johnson**, M., B.A., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Kettner**, J., M.D., M.Sc. (Manitoba), F.R.C.S.C.; **Koulack**, J., M.D. (Manitoba), M.Sc. (Dalhousie), F.R.C.S.C.; **Kowalski**, S., M.D. (Toronto), F.R.C.P.C.; **Krcek**, J., B.A., M.Sc. (Western Ontario), Ph.D., M.D. (Calgary), F.R.C.S.C.; **Latosinsky**, S., B.E.Sc. (Western Ontario), M.D. (Toronto), F.R.C.S.C.; **Leboldus**, L., M.D. (Manitoba), F.R.C.S.C.; **Lee**, J., M.D. (Toronto), M.Sc. (Western Ontario), F.R.C.S.C.; **Leitao**, D., M.D. (Saskatchewan), F.R.C.S.C.; **Lekic**, C., D.D.S., M.Sc. (Copenhagen), Ph.D. (Belgrade), F.R.C.D.C.; **Lysack**, A., B.A., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **MacIntosh**, E., B.Sc., M.D., M.Sc. (Manitoba), F.R.C.S.C.; **McDonald**, P., M.D. (Hons.) (Toronto), F.R.C.S.C.; **McGoey**, J., B.A. (Saskatchewan), M.D. (Toronto), F.A.C.S., F.R.C.S.C.; **McPherson**, J., M.D. (Manitoba), F.R.C.S.C.; **Nasser-Sharif**, S., B.Sc. (Manitoba), M.D. (McGill), F.R.C.S.C.; **Pilkey**, B., B.Sc., M.D. (Saskatchewan), F.R.C.S.C.; **Psooy**, K., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Raabe**, M., B.Sc., M.D., M.Sc. (Manitoba), F.R.C.S.C.; **Ross**, J., M.D. (Manitoba), F.R.C.S.C.,

F.A.C.S.; **Ross**, L., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Saettler**, E., M.D. (Western Ontario), F.R.C.S.C.; **Saranchuk**, J., B.Sc., M.D. (Manitoba), F.R.C.S.C.; **Scurrah**, J., M.B., Ch.B. (Liverpool), F.R.C.S., F.R.C.S.C., F.I.C.S., F.A.C.S.; **Silvaggio**, J., B.Sc. (Queen's), M.D. (Toronto), F.R.C.S.C.; **Silverman**, R., M.D. (Manitoba), F.R.C.S.C.; **Singh**, G., M.B., B.S. (India), F.R.C.S.C., F.A.C.S.; **Stimpson**, R., M.D. (Manitoba), F.R.C.S.C.; **Stoykewych**, A., B.Sc., D.M.D., N.D.E.B. (Manitoba); **Tan**, L., B.Sc. (Dalhousie), M.D., C.M. (McGill), F.R.C.S.C.; **Tanner**, J., B.A., B.Sc.(Med.), M.D. (Manitoba), F.R.C.S.C.; **Turgeon**, T., B.Sc., M.D. (Western Ontario), F.R.C.S.C.; **Violago**, F., M.D. (Manila), D.A.B.S., F.R.C.S.C., F.A.C.S.; **Williams**, O., B.Sc., M.D. (Calgary), F.R.C.S.C.; **Yip**, B., M.S. (Manitoba), M.D. (Western Ontario), Human Kinetics, (Windsor), F.R.C.S.C.

Lecturers

Balageorge, D., M.D. (Manitoba), F.R.C.S.C.; **Hussain**, M., M.D. (India), F.A.C.S.C., F.A.C.S.; **Lockwood**, A., B.M.Sc., M.D. (Memorial), F.R.C.S.C.; **Milner**, J., B.Sc., M.D., M.Sc. (Alberta), F.R.C.S.C., F.A.C.S.; **Parham**, S., B.Sc., M.D. (Alberta), F.R.C.S.C.; **Taylor**, H., M.D. (Manitoba), F.R.C.S.C.; **Turner**, R., B.Sc., M.D. (Manitoba), F.R.C.S.C.

Demonstrators

McFadden, L., D.D.S. (Alberta), M.Sc. (Dalhousie); **Roberts**, D., M.D. (Toronto), F.R.C.S.C.; **Rusen**, D., B.Sc., D.M.D., D.O.S. (Manitoba)

Faculty of Music

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Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Music Education

SECTION 3: Admission to the Faculty of Music

- 3.1 Degrees Offered
- 3.2 Course Requirements

SECTION 4: Academic Regulations

- 4.1 Written English Requirement and Mathematics Requirement
- 4.2 Electives (non-music)
- 4.3 Ensembles
- 4.4 Scholarships
- 4.5 Scholastic Progress
- 4.6 Dean's Honour List
- 4.7 Attendance

SECTION 5: Program Requirements

- 5.1 First Year
- 5.2 Second Year
- 5.3 Third Year
- 5.4 Fourth Year
- 5.5 Fifth Year
- 5.6 Electives: Third and Fourth Year
- 5.6 Courses Offered Outside the B.Mus. Program for Students in Other Faculties

SECTION 6: Post-Baccalaureate Diploma in Performance

- 6.1 Admission Requirements
- 6.2 Admission Procedures
- 6.3 Program Requirements
- 6.4 Academic Standing
- 6.5 Maximum Time Limits
- 6.6 Courses Available
- 6.7 Credit Transfer
- 6.8 Completion of the Program
- 6.9 Assessment

SECTION 7: Course Descriptions

- 7.1 Topics in Music
 - 7.2 Post-Baccalaureate
-

SECTION 1: Academic Staff

Professor Emeritus:

Turner, R., B.Mus. (McGill), M.Mus. (Peabody), D.Mus. (McGill).

Professors

Cooper, J.E., Dip. P. and O.T. (Toronto), B.O.T., M.Sc., Ph.D. (Manitoba); **Engbrecht, H.**, A.R.C.T., B.Mus. (Bethel College), M.Mus. (Southern Methodist); **Jensen, K.**, B.Mus. (Saskatchewan), L.Mus. (Saskatchewan), Recital Dip. (Royal Academy of Music), L.R.A.M., Ph.D. (London); **Lonis, D.**, B.S.E (Illinois), M.M. (North Western), E.D.D. (Illinois); **Matthews, M.**, B.Mus. (California State, Northridge), M.A. (California State, Sacramento), Ph.D. (North Texas State).

Associate Professors

Braun, M., B.Mus., M.Mus. (Toronto); **Burleson, R.**, B.Mus. (Hartford), M.A. (Washington); **Gillis, R.**, B.Mus.Ed. (Saskatchewan), M.Mus., D.M.A. (Michigan); **Horton, C.**, B.Mus. (Redlands), M.Mus. (North Carolina); **Kehler Siebert, J.**, B.A. (Winnipeg), M.Mus. (Toronto), D.M.A. (Eastman); **Kirby, S.**, B.Mus. (Webster), M.Mus. (Manhattan); **Moroz, D.**, B.Mus. M.Mus. (Juilliard), D.Mus. (Montreal); **Paterson, P.**, Mus.Bac. (Toronto), M.Sc. (Ithaca); **Rempel, U.**, B.Mus., Ed.Cert. (UBC), M.A. (California, Santa Barbara); **Sandred, Ö.**, M.F.A. (Royal College of Music Stockholm), Diplom i Komposition (Royal College of Music Stockholm).

Assistant Professors

Fitzell, G., B.Mus. (Brandon), M.Mus. (Alberta), Ph.D. Theory and Composition (British Columbia); **Linklater, F.**, B.Mus. (Brandon), M.Mus. (North Texas), Ph.D. (Michigan); **Linklater, J.**, B.Mus. (Brandon), M.Mus. (Michigan); **Loewen, L.**, B.Mus. (Brandon), M.Mus. (Montreal), D.M.A. (Minnesota); **Markstrom, K.**, B.Mus., M.Mus., M.Lib.Sc. (Alberta), Ph.D. (Toronto); **Pokhanovski, O.**, D.Mus. (Montreal).

Full-time Instructors

Gitlin, C., B.Mus. (Cincinnati); **Harrington, A.**, B.Mus. (Saskatchewan), M.Mus. (Illinois); **Howard, R.**, B.A., Ed.Dip. (McGill); **MacLaren, R.**, B.A., Ed.Dip. (McGill).

Part-time Instructors

Anderson, V., B.Mus. (Manitoba), Opera Dip. (Toronto); **Bairstow, D.**; **Berger, D.**, B.Mus. (Manitoba); **Dahl, T.**, B.Ed. (Manitoba); **Denby, S.**, B.Mus. B.Ed. (Manitoba); **Dyer, S.** B.Mus. (McGill), M.Mus. (DePaul); **Enns-Braun, C.**, B.ChurchMus. (CMBC), B.Mus. (Manitoba), M.A. (Western Ontario); **Fletcher, D.**, B.Mus. (Manitoba), M.Mus. (Toronto); **Gilliam, J.**, B.S. (Butler), M.M. (Cleveland); **Gold, K.**, B.F.A. (Concordia), Mus.Ed Cert. (McGill), M.Mus. (Brandon); **Goman, N.**, M.Mus. (Moscow); **Green, P.**, B.A./Mus. (Southern Illinois); **Harvey, B.**, B.Mus. (Mount Allison), B.Ed. (Mount Allison); **Helmer, J.**, B.Mus. (British Columbia); **Hooker, Y.**, B.Mus. (Brandon); **Huisman, M.**, B.Ed (Manitoba) Opera Dip. (Toronto); **Kirby, A.**; **Kocman, J.**, B.Mus.Ed., M.M. (Indiana); **Kristjanson, W.**, B.Sc. (Moorhead); **Lee, C.**, B.Mus. (McGill), M.M. (Indiana); **Martens, J.**, B.A. (Manitoba), M.Mus (South Methodist), D.M.A. (Michigan); **McIntyre, J.**, B.Mus. (Toronto); **Miller, J.**, B.Mus. Ed. (Lawrence Conservatory), M.Mus. (New England Conservatory); **Paley, R.**, B.Mus. (Manitoba); **Pokhanovski, M.**, Artist Dip. (St. Louis); **Pollard, G.**, B.Mus. Ed. (Bemidji), M.Mus. Ed. (Bemidji); **Presslaff, J.**, A.B. (Princeton), M.A. (Wesleyan); **Ridd, L.**; **Robbins, C.**, B.Mus., B.Ed. (Manitoba); **Roy, L.**; **Scholz, D.**, B.Mus. Ed. (Regina); **Smith, S.**, B.Mus. Ed. (Saskatchewan), M.M. (Northwestern); **Stafford, E.**; **Siwik, R.**, B.Sc. (Manitoba); **Sykora, B.**, B.Mus. (Cleveland); **Turner, R.**, Concert Dip. (Curtis Institute); **Twaddle, K.**, B.Mus. (Toronto), P.G.C.E. Drama (Middlesex); **Tyborowski, R.**, M.F.A. (Wroclaw); **Watson-Lyons, L.**, A.M.M. and A.R.C.T (Manitoba), Concert Dip. (McGill).

SECTION 2: Music Education

The educational objectives of the Faculty of Music are best presented in its mission statement: It is the mission of the Faculty of Music of the University of Manitoba to provide a broad range of opportunity for music study and to produce creative and scholarly work which is of local, national and international significance, and to instil a love of music and a recognition of its importance in defining and ennobling human experience.

The Department of Music began in 1944 when classes in music theory and history were given as electives for Arts and Science students. Then, in the early 1960's a series of courses leading to a Bachelor of Music degree were approved by the Senate of the university. This was followed in 1964 with the establishment of the School of Music. The first students enrolled in that year for a three-year general Bachelor of Music degree. A new music building was completed during 1965. Since then, the school has seen rapid growth and development, the establishment of a four-year Bachelor of Music program (which began in the fall of 1974), the Integrated Bachelor of Music/Bachelor of Education degrees (from 1984), Post-Baccalaureate Diploma in Performance (2004) and Graduate degree, in performance, conducting and composition (2001). In January 2005, the Faculty of Music was established as a full-fledged Faculty of Music.

The Faculty of Music is housed in its own building which contains teaching studios and classrooms with specialized equipment, practice studios, lounges, storage facilities, a listening room and an acoustically superior 228-seat recital hall with full recording facilities.

The Music Library is also in the Music Building and contains volumes, bound periodicals and scores, performance editions, and audio recordings. Performance tapes of concerts held at the Faculty of Music also form an important part of the Music Library. The collection is primarily devoted to the European classical tradition but there are special collections of jazz, ethnic music from around the world, collected works of certain local and Canadian composers, and a thoroughly representative cross-section of the entire tradition of music history.

In addition to Bosendorfer and Steinway concert grand pianos, many practice pianos and an increasingly superior collection of orchestral instruments, the Faculty is equipped with a Casavant organ, harpsichords by Denzilwraight and Ritchey, Sperrhake spinet, Dolmetsch clavichord, an electronic keyboard lab equipped with 10 Roland MIDI keyboards, 1784 Beyer fortepiano, 1876 Steinway square piano, troubadour and pedal harps, chest of viols, Renaissance recorders, krummhorns, various Renaissance wind instruments, Orff instruments, and an electronic synthesizer. The Casavant organ in St. John's Chapel is also available for practice. There is also an Electronic music and research facility.

SECTION 3: Admission To Music

3.1 Degrees Offered

Bachelor of Music

Bachelor of Music (Composition)

Bachelor of Music (History)

Bachelor of Music (Performance)

Minimum time to graduation: Four years if admission is directly from high school and five years if admission is via University 1.

Bachelor of Music/Bachelor of Education

An integrated degree that combines Music with Education; minimum time to graduation: five years in Music and Education if admission is directly from high school and six years if admission is via University 1.

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are available from the Faculty of Music general office, 206 Music building, or Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

3.2 Course Requirements for Admission from High School

Admission to the Faculty of Music is directly from high school, although admission from University 1 is an option.

Other requirements

High school prerequisites: Music 40S is strongly recommended, while a second 40S language is recommended.

Formal instruction in music theory and keyboard is recommended, but not required.

At the time of the audition, an examination in music theory fundamentals will be given.

All applicants are required to audition. Minimum level of practical ability is Conservatory Canada or Royal Conservatory Grade 8 piano or strings; Grade 7 singing or winds; Grade 6 Organ. All auditions include a theory exam and may include a sight-reading component.

Advanced Standing in Music: Students claiming advanced standing in music may be asked to undergo placement tests to substantiate such claims. Standing will not be accorded automatically. The above privilege applies only to courses in Music and has no bearing upon the number of non-Music courses required by the Bachelor of Music program. Advance standing examinations cannot be taken in courses previously failed at the Faculty.

SECTION 4: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Music has regulations and requirements, published below, which apply specifically to its students. Detailed information regarding regulations is available in the general office of the Faculty. The aim of the Bachelor of Music program is to provide a basic framework of knowledge and ability, both theoretical and practical, from which either professional activities or graduate specialization can start. Thus, the four-year program contains concentrations in specified areas in the third and fourth years. After their first two years, students select the area in which their interests and abilities are strongest.

The faculty offers four-year programs leading to the degree of Bachelor of Music, with the following concentrations: Performance, Composition, Music History, and General Music, and the five-year integrated Bachelor of Music/Bachelor of Education degrees.

Practical study may be in piano, organ, harp, harpsichord, classical guitar, lute, recorder, voice, or any standard orchestral instrument: strings, woodwinds, brass, and percussion. Ensemble work is included in all years of the program.

Music courses are available to students in other faculties and schools. Consult the appropriate section of this *Calendar* for regulations.

4.1 Written English and Mathematics Requirement

All students are required to complete the university's written English and mathematics requirement within the first 60 credit hours of their program. This requirement is described in the chapter, General Academic Regulations and Requirements.

Students in the Bachelor of Music programs meet the written English requirement through a required three credit hours of English. The written English requirement may be satisfied by English ENGL 1310, or equivalent. It is possible that a student may wish to take a six credit hour English course which meets this requirement; if so, three credit hours will count toward meeting the written English requirement and three credit hours toward the requirement for additional non-music electives in the second and later years of the Bachelor of Music programs.

Students meet the mathematics requirement through course MUSC 3230 Acoustics of Music (3 credit hours).

These courses are listed as requirements to complete the first year of all Bachelor of Music programs.

4.2 Electives (Non-Music)

Students are required to take one course in a subject other than music for each year of the Bachelor of Music program to a total of 24 credit hours (18 for the Integrated B.Mus./B.Ed.). With the exception of the first-year requirement of English, the student is free to choose any subject but is advised to seek the advice of faculty.

4.3 Ensembles

The Faculty of Music offers a wide variety of opportunities for participation in ensembles such as the Women's Choir, Bison Men's Chorus, University Concert Band, University Singers, University Symphony Orchestra, University Wind Ensemble, University Jazz Orchestra, Jazz Ensembles, Colle-

gium Musicum, Opera Workshop, Chamber Ensemble, Percussion Ensemble, Musical Theatre, New Music Ensemble, Classical Guitar Ensemble and other wind, string and keyboard combinations.

Faculty of Music students are required to participate in one large ensemble (Women's Choir, Bison Men's Chorus, Concert Band, University Singers, Wind Ensemble, Jazz Orchestra, University Orchestra or Jazz Ensemble) each year for four years, and to participate in a total of eight ensembles during that time. Placement in credit ensembles is determined by the ensemble committee; such participation will normally be in ensembles directly relevant to the student's major practical study area. Students from other faculties, and non-university musicians, are welcome to participate as space and instrumental balance allow, but all participation is at the discretion of the conductor or coach of the ensemble. Some ensembles are offered for credit in other faculties.

4.4 Scholarships

Entrance and continuing scholarships are available for Faculty of Music students. Details may be obtained from Financial Aid and Awards or the Faculty of Music.

4.5 Scholastic Progress

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

Within the first week of the term, students will be informed of the organization of materials, the nature and timing of testing, and the proportionate weighting of marks that contribute to the final grade in all academic courses at the Faculty of Music. Regulations regarding the grading of all practical courses at the Faculty of Music, are contained in the *Undergraduate Calendar*; special attention is called to the Recital and Master Class Attendance Policy which is an integral part of the grading system for Major practical study in each year of the program.

A grade of "C" or better is required in each Music course throughout the Bachelor of Music program, except where the Faculty of Music Handbook states otherwise. Supplemental examinations are not normally given in the Faculty of Music, with the following exceptions: where a jury mark of "D" has been assigned in Major practical study, the juried examination may be reheard prior to the next registration.

A sessional grade point average of less than 2.0 or failure to achieve a grade of "C" or better in two Music courses will result in a student being placed on probation. A student failing to equal or exceed the minimum sessional performance level by the end of the regular session following probationary assignment will be placed on academic suspension.

Each student is permitted a maximum 21 credit hours of failed Music courses in the Bachelor of Music program. Students will not be permitted to register for a required music course more than twice without the permission of the faculty.

Students who take Music elective courses and fail to achieve a minimum grade of "C" in them should repeat these courses. Due to the system of rotating electives, this may not be possible and in such a case another approved Music elective may be substituted.

4.6 Dean's Honour List

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

B.Mus. students who achieve a sessional Grade Point Average of 3.5 and are registered in 60 per cent or more of the credit hours required in any one academic year of the program will be eligible for the Dean's Honour List. Students who are granted incomplete or deferred status will not be eligible.

4.7 Attendance

Regular attendance is expected of all students in all courses. Any unexcused absences from ensemble or practical study courses or three unexcused absences from any other music course may result in the student being required to withdraw from the course or ensemble, or may result in a failing grade being assigned.

Students absent from a class for three or more consecutive meetings due to illness may be required to present a certificate from a physician. Prior approval for extended absences from class for reasons other than illness must be obtained from the instructor and the director.

Unexcused absence from a class test may result in a grade of zero for the test. Make-up tests may be allowed in special circumstances.

SECTION 5: Program Requirements

These programs are in effect for students admitted since 1997-98. Students who entered in previous years should consult earlier calendars.

Course No.		Credit Hours
5.1 First Year All Concentrations		
MUSC 1070	Introduction to the History of Music	3
MUSC 1080	History of Music 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2
MUSC 1380	Basic Musical Skills 1	2
MUSC 1390	Basic Musical Skills 2	2
MUSC 1400	Major Practical Study	6
MUSC 3230	Acoustics of Music	3
ENGL 1310	English	3
Total Credit Hours		32

5.2 Second Year

Bachelor of Music Program		
MUSC 2070	History of Music 3	3
MUSC 2080	History of Music 4	3
MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2
MUSC 2190	Ensemble	2
MUSC 2380	Basic Musical Skills 3	2
MUSC 2390	Basic Musical Skills 4	2
MUSC 2400	Major Practical Study	6
	Non-Music elective	6
Total Credit Hours		32

Integrated Bachelor of Music (Music Education)/ Bachelor of Education Program

MUSC 2070	History of Music 3	3
MUSC 2080	History of Music 4	3
MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2
MUSC 2190	Ensemble	2
MUSC 2380	Basic Musical Skills 3	2
MUSC 2390	Basic Musical Skills 4	2
MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3
	Teachable Minor or second Music specialization	6
Total Credit Hours		35

NOTE: Apply to Integrated Program during Year 2. Deadline to apply is February 1.

5.3 Third Year

Performance		
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6
MUSC 3550	Recital 1	3
MUSC 3960	Music of the 20th Century 1	3
MUSC 3970	Music of the 20th Century 2	3
	Music electives	6
	Non-Music elective	6
Total Credit Hours		31

NOTE: A grade of "B" is required in 3550 to continue in the Performance Concentration.

History

MUSC 3050 Research Methods	3
MUSC 3180 Ensemble	2
MUSC 3190 Ensemble	2
MUSC 3470 Major Practical Study	6
MUSC 3960 Music of the 20th Century 1	3
MUSC 3970 Music of the 20th Century 2	3
Music History elective	3
Music Theory elective	3
Non-Music electives	6
Total Credit Hours	31

Composition

MUSC 2460 Conducting	3
MUSC 3150 Orchestration	3
MUSC 3180 Ensemble	2
MUSC 3190 Ensemble	2
MUSC 3300 Composition Study	6
MUSC 3810 Electroacoustic Music 1	3
MUSC 3960 Music of the 20th Century 1	3
MUSC 3970 Music of the 20th Century 2	3
Non-Music electives	6
Total Credit Hours	31

General

MUSC 3180 Ensemble	2
MUSC 3190 Ensemble	2
MUSC 3470 Major Practical Study	6
MUSC 3960 Music of the 20th Century 1	3
MUSC 3970 Music of the 20th Century 2	3
Music History elective	3
Music Theory elective	3
Music or non-music elective	3
Non-Music electives	6
Total Credit Hours	31

Integrated Bachelor of Music (Music Education)/ Bachelor of Education Program

MUSC 3180 Ensemble	2
MUSC 3190 Ensemble	2
MUSC 3470 Major Practical Study	6
MUSC 3960 Music of the 20th Century 1	3
Music Education (area of specialization)	9
EDUB 1200 Teaching the Arts in Senior Years	3
EDUB 1600 Teaching General Music	3
Teachable Minor or second Music specialization	6
Total Credit Hours	34
Intersession:	
EDUB 1940 Integrated Programs School Experience I	3
EDUB 1520 Education in the Senior Years Integrated Programs I	2

5.4 Fourth Year

Performance

MUSC 4180 Ensemble	2
MUSC 4190 Ensemble	2
MUSC 4470 Major Practical Study	6
MUSC 4560 Recital 2	6
Music electives	9
Non-Music elective	6
Total Credit Hours	31

NOTE: A grade of at least "B" is required in 4560 for graduation with the Performance Concentration.

History

MUSC 4110 Special Area (Paper)	3
MUSC 4180 Ensemble	2
MUSC 4190 Ensemble	2
MUSC 4470 Major Practical Study	6
or	
MUSC 4160 Major Practical Study	3
Music History electives	6
Music electives(9 if MUSC 4160 is elected)	6
Non-Music electives	6
Total Credit Hours	31

Composition

MUSC 3550 Recital 1	3
MUSC 4180 Ensemble	2
MUSC 4190 Ensemble	2
MUSC 4300 Composition Study	6
MUSC 4810 Electroacoustic Music 2	3
Music Theory elective	3
Music History elective	3
Music Elective	3
Non-Music Electives	6
Total Credit Hours	31

General

MUSC 4180 Ensemble	2
MUSC 4190 Ensemble	2
MUSC 4470 Major Practical Study	6
or	
MUSC 4160 Major Practical Study	3
Music electives	9
(12 if MUSC 4160 is elected)	
Music or Non-Music Electives	6
Non-Music Electives	6
Total Credit Hours	31

Integrated Bachelor of Music (Music Education)/ Bachelor of Education Program

MUSC 4180 Ensemble	2
MUSC 4190 Ensemble	2
MUSC 4470 Major Practical Study	6
MUSC 3970 Music of the 20th Century 2	3
EDUB 2240 Teaching Music in Senior Years	3
or	
EDUB 2160 Teaching Music in Early/Middle Years Music Education (area of specialization)	12
Teachable Minor or second Music specialization	6
Total Credit Hours	34

Intersession:

EDUB 1950 Integrated Programs School Experience 2	3
EDUB 1530 Education in the Senior Years Integrated Programs 2	1

5.5 Fifth Year

Integrated Bachelor of Music (Music Education)/ Bachelor of Education Program

EDUB 2980 Senior Years School Experience	6
EDUA 1800 Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810 School and Society 1: The Foundations of Education	3
EDUB 1990 Teacher and Technology	3
EDUA 2800 Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA 2810 School and Society 2: The Administrative Foundations of Education	3
EDUB 2500 Themes in Senior Years Education (for Early/Middle Years specialization, students may take a 3 credit hour Education complementary course)	3
EDUB 2510 Language and Literacy Across the Curriculum (for Early/Middle Years specialization, students may take a 3 credit hour Education complementary course)	3
Students with a Music teachable minor take an Education Complementary Course. Students with a non-music teachable minor take a Year 1 Curriculum & Instruction Course.	3
Total Credit Hours	30

Further information about the integrated program is in the chapter for the Faculty of Education.

5.6 Electives: Third and Fourth Years

All Concentrations

MUSC 3020 History and Performance of Jazz	3
MUSC 3030 History of Music in Worship	3
MUSC 3050 Research Methods (History Concentration requirement)	3
MUSC 3090 Introduction to Ethnomusicology	3
MUSC 3100 Opera Repertoire	3

MUSC 3110	Chamber Music Repertoire	3
MUSC 3130	Music for Children 1 (see Note)	6
MUSC 3140	Music for Children 2 (see Note)	6
MUSC 3150	Orchestration (Composition Concentration requirement)	3
MUSC 3230	Acoustics of Music	3
MUSC 3270	Performance Skills	3
MUSC 3380	From Rock to Rap and Beyond: A History of Popular Music in the Later 20 th Century	3
MUSC 3390	From Ragtime to Rock'n'Roll: A History of Popular Music in the 20 th Century	3
MUSC 3360	Topics in Music Education	3
MUSC 3370	Topics in Music Education	3
MUSC 3480	Minor Practical Study	3
MUSC 3620	Independent Study 1	3
MUSC 3690	Percussion Techniques (see Note)	3
MUSC 3730	Early Musical Development (see Note)	3
MUSC 3770	Vocal Techniques (see Note)	3
MUSC 3780	Woodwind Techniques (see Note)	3
MUSC 3790	Brass Techniques (see Note)	3
MUSC 3800	String Techniques (see Note)	3
MUSC 3810	Electroacoustic Music 1	3
MUSC 3820	Topics in Music	3
MUSC 3830	Topics in Music	3
MUSC 3840	Topics in Music	3
MUSC 3850	Topics in Music	3
MUSC 3880	Jazz Band Techniques	3
MUSC 4010	French Diction and Repertoire	3
MUSC 4020	Italian Diction and Repertoire	3
MUSC 4030	German Diction and Repertoire	3
MUSC 4130	History of Women in Music	3
MUSC 4150	Choral Repertoire (see Note)	3
MUSC 4350	Music for Children 3 (see Note)	6
MUSC 4360	Wind Repertoire	3
MUSC 4370	Wind Conducting Techniques	3
MUSC 4380	Piano Repertoire (Required course for Piano performance majors)	3
MUSC 4390	Piano Chamber Music Literature Seminar	3
MUSC 4430	Pedagogy and Repertoire	3
MUSC 4440	Vocal Pedagogy (Required course for voice majors in Performance and General Concentrations)	3
MUSC 4480	Minor Practical Study	3
MUSC 4490	Piano Pedagogy (Required course for piano and organ majors in Performance and General Concentrations)	3
MUSC 4520	Coaching Skills	3
MUSC 4530	Operatic Piano	3
MUSC 4630	20th to 21st Century Piano Repertoire	3
MUSC 4750	Choral Techniques 1 (see Note)	3
MUSC 4760	Choral Techniques 2 (see Note)	3
MUSC 4770	Band and Orchestral Techniques 1 (see Note)	3
MUSC 4780	Band and Orchestral Techniques 2 (see Note)	3
MUSC 4810	Electroacoustic Music 2	3

General Notes Regarding Electives

Most electives are not offered every year; some are offered every other year and some are offered less frequently. The listing of a subject as an elective does not guarantee that it will always be available or that it will be possible to fit it into all of the many varied timetable combinations of full- and part-time students.

There may be a maximum limit set on the number of students permitted to take an elective in a particular session. Similarly, there will be a minimum limit. If registration is below the minimum, the elective will be cancelled for the session, and those registered will be required to transfer to another elective before the course change deadline date.

Students are urged to discuss their elective program with members of the faculty toward the end of their second and third years to obtain advice concerning the best choice of electives for their needs.

Each year, second-year and third-year students will be asked to complete a questionnaire concerning their choice of electives for the following year.

5.7 Courses Offered Outside the B.Mus. Program for Students in Other Faculties

Some courses are offered outside the B.Mus. program for students in other faculties. Students in Arts and Education wishing to enter a Music Minor should refer to the appropriate chapter in this *Calendar*.

SECTION 6: Post-Baccalaureate Diploma in Performance

The Faculty of Music offers a Post-Baccalaureate Diploma in Performance designed for musicians who wish to further their performance skills in preparation for further study or professional activity. The unique features of the PBDP program are that students can design their own program of study and tailor it to their own areas of interest. They may take courses at the Faculty of Music as well as in other faculties and schools at the University of Manitoba. In addition, courses taken while a student in the PBDP program may be transferred into the Master's program where the appropriate standard has been met and requirements have been satisfied.

6.1 Admission Requirements

Applicants for Admission must submit the completed application form and fee, and must possess a Bachelor of Music degree or a Conservatory Diploma taken in residence. They must also pass an entrance audition, which requires the performance of three works of contrasting styles and/or historical periods appropriate to the audition medium. This audition would normally be held in person, but audio or video-taped auditions may be accepted where distance is a prohibitive factor. Application materials which misrepresent the level of performance ability will be treated as fraudulent, resulting in dismissal from the program.

Admission may not be possible for all qualified applicants, as it is dependent on number of spaces available, the major practical study area, and instructor availability.

Applicants who hold the Post-Baccalaureate Diploma in Performance from the University of Manitoba (or an equivalent Post-Baccalaureate one-year program from another institution) may apply for a second PBDP if studying a different applied instrument than that of their first PBDP in their Major Practical Study, and Recital courses, and if the remaining course credits taken do not duplicate those of the first PBDP.

6.2 Admission Procedures

Application forms may be obtained from the Faculty of Music. Completed application forms must be received by March 1st to begin study in September, or June 15th for a January start date.

6.3 Program Requirements

Reminder: While Faculty of Music staff and faculty are available to clarify Faculty and university regulations and degree requirements, it is the student's responsibility to ensure that diploma and program requirements are met.

The Post-Baccalaureate Diploma in Performance requires the successful completion of 30 credit hours of coursework, subject to the following regulations:

- a) A minimum of 18 credit hours must be taken in the Faculty of Music (although all 30 may be taken within the Faculty).
- b) Required Courses:
 - a. MUSC 5400 Major Practical Study, 6 credit hours, 1 hr. instruction/week or the equivalent
 - b. MUSC 5560 Recital, 6 credit hours, 1 hr. instruction/week
 - c. MUSC 5180 Ensemble 3 credit hours
- c) Electives will be chosen from available 300 and 400 level courses recommended by the advisor and approved by the Faculty of Music.

6.4 Academic Standing

Regulations for the Post-Baccalaureate Diploma program regarding academic standing, scholastic progress, attendance, required GPA, probation and suspension will follow those governing the Bachelor of Music program as outlined in the Faculty of Music Student Handbook.

6.5 Maximum Time Limits

Expected time to complete program: 1 year. The maximum time allowed for completing the Post-Baccalaureate Diploma program is 3 years. Students will not be permitted to transfer for credit any course completed more than five years prior to the completion date of the diploma.

6.6 Courses Available

Undergraduate 300 and 400 level courses approved by the Faculty of Music may be used as electives in designing the program of study. Students will register for their courses after their program has been determined in consultation with their major practical study teacher who will act as academic advisor during the Post-Baccalaureate Diploma program. Students may not count toward the PBDP any courses which counted for credit in a previous degree.

6.7 Credit Transfer

Transfer of credits into the PBDP program will be processed by the Faculty of Music Registrar. A maximum of 12 credit hours of courses may be transferred into the PBDP program provided that they have not counted toward any previous degree.

A minimum of 18 credit hours must be taken within the Faculty of Music, although up to the full 30 credit hours of the diploma program may be taken within the Faculty.

Transfer of credits from the PBDP program into the M.Mus. is processed through the Faculty of Graduate Studies. Courses may not be counted for more than one degree, and may be transferred from the PBDP to the M.Mus. only if they have not been counted toward the PBDP or more than the minimum credit hours have been taken.

6.8 Completion of the Program

Minimum: 1 year

Maximum: 3 years. Extensions may be granted the Dean for medical or compassionate reasons.

Medical: A letter from the student's physician stating the diagnosis and treatment with projected recovery.

Compassionate: A letter from the student outlining the reasons for the extension showing that extenuating circumstances beyond the student's control have contributed to the need for an extension.

6.9 Assessment

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

Student Assessment: Type of evaluation: Academic freedom dictates that there will be variation between classes according to the professor's preferred systems, approaches, materials, readings, and assignments. However, the University of Manitoba regulations as outlined in the General Calendar state that within the first week of lectures, instructors must inform the class of the method of evaluation to be used in each course.

Minimum Grade Requirements: In the Faculty of Music students must attain a grade of "C" or higher for course to count toward a degree except in the case of Recital where a minimum of "B" is required. The PBDP program will be governed by these regulations, as outlined the Student Handbook. Should the student transfer to another faculty in the university, that faculty's regulations would apply relating to transfer of credit. Successful completion of the program will be achieved by receiving a "C" or higher in 30 credit hours.

Teacher Assessment: The SEEQ course evaluations will be used in the PBDP program for academic courses, and the Faculty of Music specialized forms will be used for the performance-related courses.

SECTION 7: Course Descriptions

U1 MUSC 1050 The Well-Tempered Concert-Goer Cr.Hrs.3 (Formerly 033.105) This course is an introduction to the art of music with the listening component based on attendance at ten live performances by Winnipeg's superior performing ensembles. Topics include instruments of the orchestra, musical materials, forms and structures, historical periods and biographical information on composers.

U1 MUSC 1070 Introduction to the History of Music Cr.Hrs.3 (Formerly 033.107) Introduction to the study of music history with emphasis on historical and stylistic developments of the Middle Ages and Renaissance.

U1 MUSC 1080 History of Music 2 Cr.Hrs.3 (Formerly 033.108) A study of the development of style, idiom and performance practise in the music of the 17th and early 18th centuries. *Prerequisite:* MUSC 1070 (or 033.107) or equivalent, or consent of the Faculty of Music.

U1 MUSC 1110 Music Theory 1 Cr.Hrs.3 (Formerly 033.111) This course is designed to develop fluency in the writing and recognition of the elements of music: melodic and harmonic intervals, modes and scales, rhythm and metre, triads and inversions, and the principles of melodic and homophonic design. *Prerequisite:* Knowledge of music rudiments as demonstrated by a Placement Test given during the first week of classes, or by completing MUSC 1930 (or 033.193) with a mark of "C" or better.

U1 MUSC 1120 Music Theory 2 Cr.Hrs.3 (Formerly 033.112) An examination of the idioms of vocal melody through the writing and analysis of duple paraphrase, duple- and syncopated-rhythm counter-point in two parts, and tonal homophony leading to the Chorale phrase and Bar form. *Prerequisite:* a grade of "C" or better in MUSC 1110 (or 033.111).

MUSC 1180 Ensemble Cr.Hrs.2 (Formerly 033.118) Participation in University Symphony Orchestra, University Wind Ensemble, Women's

Choir, Bison Men's Chorus, University Jazz Orchestra, University Concert Band or University Singers, as is appropriate to the student's background and/or major applied area (placement to be determined by ensemble committee).

MUSC 1190 Ensemble Cr.Hrs.2 (Formerly 033.119) Participation in a Faculty of Music Ensemble other than the one designated in MUSC 1180 (or 033.118) (to be chosen in consultation with the Faculty of Music).

U1 MUSC 1280 Musical Style and Structure 1 Cr.Hrs.3 (Formerly 033.128) An integrated study of the history and theory of Western music to 1750. *Prerequisite:* Canadian Conservatory Grade 4 or RCT Grade 2 Theory or consent of the Faculty of Music. Continuation in the Music Major or Minor requires a grade of C or better in this course.

U1 MUSC 1290 Musical Style and Structure 2 Cr.Hrs.3 (Formerly 033.129) An integrated study of the history and theory of Western music from 1750 to the present. *Prerequisite:* MUSC 1280 (or 033.128) . Continuation in the Music Major or Minor requires a grade of "C " or better in this course.

MUSC 1380 Basic Music Skills 1 Cr.Hrs.2 (Formerly 033.138) A practical approach to the cultivation of critical aural perception: specifically, to develop the student's sight-singing, transcription and keyboard skills.

MUSC 1390 Basic Music Skills 2 Cr.Hrs.2 (Formerly 033.139) A continuation of MUSC 1380. *Prerequisite:* MUSC 1380 (or 033.138).

MUSC 1400 Major Practical Study Cr.Hrs.6 (Formerly 033.140) Individual instruction in one of the following: any of the standard orchestral instruments (strings, woodwinds, brasses, percussion), classical guitar, harp, harpsichord, lute, organ, piano, recorder composition or voice. An important constituent of the grading procedure for this course is performance in, and attendance at, the recitals/concerts of the Faculty of Music. For Music students only.

MUSC 1460 Minor Practical Study Cr.Hrs.3 (Formerly 033.146) Individual instruction in an area other than that selected for MUSC 1400 (or 033.140) or in composition by special permission. Written consent of the director is required prior to registration. MUSC 1900 Cr.Hrs.3

U1 MUSC 1930 Rudiments of Music Cr.Hrs.3 (Formerly 033.193) An introduction to fundamental aspects of music such as sound generation, notation, melodic and harmonic construction, with emphasis on an aural approach.

MUSC 2070 History of Music 3 Cr.Hrs.3 (Formerly 033.207) A study of music in the eighteenth century from the Rococo and pre-Classical repertoire through the works of Haydn and Mozart. *Prerequisites:* MUSC 1070 (or 033.107) and MUSC 1080 (or 033.108) or equivalents, or consent of the Faculty of Music.

MUSC 2080 History of Music 4 Cr.Hrs.3 (Formerly 033.208) A study of the changing styles, forms and contexts of music from the late 18th century to 1915. *Prerequisite:* MUSC 2070 (or 033.207) and MUSC 2110 (or 033.211) or consent of the Faculty of Music. First offering in the 1998-99 academic year.

MUSC 2110 Music Theory 3 Cr.Hrs.3 (Formerly 033.211) An examination of the idioms of instrumental melody through the writing and analysis of triple paraphrase, triple- and quadruple-rhythm counterpoint in two parts, and chromatic homophony leading to the Minuet and binary form. *Prerequisite:* MUSC 1120 (or 033.112) or the consent of the Faculty of Music.

MUSC 2120 Music Theory 4 Cr.Hrs.3 (Formerly 033.212) An examination of the diffusion of tonality in instrumental textures through the writing and analysis of chromatic paraphrase, florid counterpoint in two parts and chromatically-extended homophony leading to the Cavatina and ternary form. *Prerequisite:* MUSC 2110 (or 033.211) or consent of the Faculty of Music.

MUSC 2180 Ensemble Cr.Hrs.2 (Formerly 033.218) Participation in University Symphony Orchestra, University Wind Ensemble, Women's Choir, Bison Men's Chorus, University Jazz Orchestra, University Concert Band or University Singers, as is appropriate to the student's background and/or major applied area (placement to be determined by the ensemble committee).

MUSC 2190 Ensemble Cr.Hrs.2 (Formerly 033.219) Participation in a Faculty of Music Ensemble other than the one designated as appropriate to the student's background and/or major applied area (to be chosen in consultation with the Faculty of Music).

MUSC 2360 Keyboard Skills 2 Cr.Hrs.3 (Formerly 033.236) A continuation of the previously required MUSC 1360, with emphasis on stylistic melody accompaniment, modulation and transposition. Score reading and figured bass playing are included. For Keyboard Majors. *Prerequisites:* MUSC 1120 (or 033.112) or consent of the Faculty of Music.

MUSC 2380 Basic Music Skills 3 Cr.Hrs.2 (Formerly 033.238) A continuation of MUSC 1390.

MUSC 2390 Basic Music Skills 4 Cr.Hrs.2 (Formerly 033.239) A continuation of MUSC 2380. *Prerequisite:* MUSC 2380 (or 033.238).

MUSC 2400 Major Practical Study Cr.Hrs.6 (Formerly 033.240) Individual instruction, normally in the area chosen in MUSC 1400 (or 033.140). An important constituent of the grading procedure for this course is performance in and attendance at the recitals/concerts of the Faculty of Music. For Music students only.

MUSC 2460 Conducting Cr.Hrs.3 (Formerly 033.246) The principles and development of baton technique and expressive gestures. Fundamentals of vocal and instrumental score reading, preparation and interpretation. *Prerequisites:* MUSC 1120 (or 033.112) or equivalent, or consent of the Faculty of Music.

MUSC 2480 Minor Practical Study Cr.Hrs.3 (Formerly 033.248) Individual instruction in an area other than that selected for MUSC 2400. Normally a continuation of MUSC 1460. Written consent of the director is required to register.

U1 MUSC 3020 History and Performance of Jazz Cr.Hrs.3 (Formerly 033.302) A course on the nature and processes of jazz in terms of its historical background and development in the United States.

MUSC 3030 History of Music in Worship Cr.Hrs.3 (Formerly 033.303) A consideration of the various modes of worship within the Judeo-Christian tradition, together with the music associated with these modes, historically and at present.

MUSC 3050 Research Methods Cr.Hrs.3 (Formerly 033.305) Techniques of bibliography and expository writing in music. Minor research projects in selected areas; the use of primary and secondary sources.

MUSC 3090 Introduction to Ethnomusicology Cr.Hrs.3 (Formerly 033.309) A study of style, performance methods and social role of selected non-Western and indigenous Western music, with particular emphasis on native Canadian music, through readings in field studies and methodology.

MUSC 3100 Opera Repertoire Cr.Hrs.3 (Formerly 033.310) The nature of the opera, its beginnings and development to modern times.

MUSC 3110 Chamber Music Repertoire Cr.Hrs.3 (Formerly 033.311) A survey of the mainstream of chamber music, from Purcell to the present.

MUSC 3130 Music for Children 1 Cr.Hrs.6 (Formerly 033.313) The philosophy, techniques and materials in Orff-Schulwerk, including practical activities in the areas of Basic Orff, creative movement, recorder, aural skills and choral techniques. Applicants should have a knowledge of music rudiments. *Prerequisite:* a grade of "C" or better in MUSC 1930 (or 033.193) or equivalent preparation (CC grade 4 theory; RCT grade 2 theory; an introductory Orff-Schulwerk course) or consent of the Faculty of Music.

MUSC 3140 Music for Children 2 Cr.Hrs.6 (Formerly 033.314) Further study of the Orff-Schulwerk approach music education, including the areas of Basic Orff, creative movement, recorder, aural skills, improvisation and choral techniques. *Prerequisite:* a grade of "C + " or better in MUSC 3130 (or 033.313) or equivalent preparation, plus consent of the instructor.

MUSC 3150 Orchestration Cr.Hrs.3 (Formerly 033.315) A study of the technical capabilities and tonal characteristics of orchestral instruments, as well as practical scoring and arranging for various groups, from chamber to full orchestra and band. *Prerequisite:* MUSC 2120 (or 033.212) or consent of the Faculty of Music. Required course for Composition majors.

MUSC 3180 Ensemble Cr.Hrs.2 (Formerly 033.318) Participation in University Symphony Orchestra, University Wind Ensemble, Women's Choir, Bison Men's Chorus, University Jazz Orchestra, University Concert Band or University Singers, as is appropriate to the student's background and/or major applied area (placement to be determined by ensemble committee).

MUSC 3190 Ensemble Cr.Hrs.2 (Formerly 033.319) Participation in a Faculty of Music Ensemble other than the one designated as appropriate to MUSC 3180 (or 033.318) (to be chosen in consultation with the Faculty of Music).

M MUSC 3230 Acoustics of Music Cr.Hrs.3 (Formerly 033.323) A study of the physical basis of music; consideration of the nature of musical sound, tone production of typical musical instruments, scales, and temperaments, and architectural acoustics. Experiments and projects.

MUSC 3270 Performance Skills Cr.Hrs.3 (Formerly 033.327) For performance majors in the Faculty of Music. Provides training in performance-related skills of the music profession, including such topics as acting, body awareness, self-promotion, career management, master classes, concert organizing, concert promotion and participation.

MUSC 3300 Composition Study Cr.Hrs.6 (Formerly 033.330) Individual instruction in composition. For Music students only.

MUSC 3360 Topics in Music Education Cr.Hrs.3 (Formerly 033.336) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3370 Topics in Music Education Cr.Hrs.3 (Formerly 033.337) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3380 From Rock to Rap and Beyond: A History of Popular Music in the Later 20th Century Cr.Hrs.3 (Formerly 033.338) A survey of popular music in North America and Britain from the mid-sixties to the present, beginning with the two foremost

bands of the British Invasion, the Beatles and Stones, and the development of folk rock and psychedelic rock. Coverage of the seventies consists of a survey of the various genres of mainstream and album oriented rock while coverage of the eighties juxtaposes the superstars of MTV with radical developments in rap/hip hop and punk/new wave. The nineties focuses on the continual mainstreaming of music on the edge of rap, alternative and world beat.

MUSC 3390 From Ragtime to Rock'n'Roll: A History of Popular Music in the 20th Century Cr.Hrs.3 (Formerly 033.339) A survey of popular music in North America from the ragtime craze and Tin Pan Alley tradition, through the development of blues and country to the emergence of Rhythm and Blues and Rock'n'Roll to the beginnings of the British Invasion..

MUSC 3470 Major Practical Study Cr.Hrs.6 (Formerly 033.347) Individual instruction, normally in the area chosen in MUSC 2400 (or 033.240). An important constituent of the grading procedure for this course is performance in and attendance at the recitals/concerts of the Faculty of Music. For Music students only.

MUSC 3480 Minor Practical Study Cr.Hrs.3 (Formerly 033.348) Individual instruction in an area other than that selected for Major Practical Study. Normally a continuation of MUSC 2480. Written consent from the Faculty of Music is required prior to registration.

MUSC 3550 Recital 1 Cr.Hrs.3 (Formerly 033.355) *Prerequisite:* consent of the instructor and the director required.

MUSC 3600 Conducting Cr.Hrs.3 (Formerly 033.360) Development of the conducting craft including the use of the baton, effective verbal and non-verbal rehearsal skills and practice in score preparation.

MUSC 3620 Independent Study 1 Cr.Hrs.3 (Formerly 033.362) Individual project designed by the student and a supervising faculty member. This study may be in an academic or applied area. Approval from the Faculty of Music is required.

MUSC 3690 Percussion Techniques Cr.Hrs.3 (Formerly 033.369) Class instruction in percussion instruments. Development of basic playing techniques and examination of materials and procedures for individual and group instruction.

MUSC 3730 Early Music Development Cr.Hrs.3 (Formerly 033.373) Procedures and materials for the development of musicality in children through listening activities, movement, creativity, singing and classroom instruments.

MUSC 3770 Vocal Techniques Cr.Hrs.3 (Formerly 033.377) Class instruction in vocal technique. Development of good vocal and choral sound and examination of materials and procedures for individual and group instruction.

MUSC 3780 Woodwind Techniques Cr.Hrs.3 (Formerly 033.378) Class instruction in woodwind instruments. Development of music playing techniques and examination of materials and procedures for individual and group instruction.

MUSC 3790 Brass Techniques Cr.Hrs.3 (Formerly 033.379) Class instruction in brass instruments. Development of basic playing techniques and examination of materials and procedures for individual and group instruction.

MUSC 3800 String Techniques Cr.Hrs.3 (Formerly 033.380) Class instruction in string instruments. Development of basic playing techniques and examination of materials and procedures for individual and group instruction.

MUSC 3810 Electroacoustic Music 1 Cr.Hrs.3 (Formerly 033.381) An introduction to computer applications in music. Topics include: Historical perspective, FM synthesis, MIDI, personal computers, digital sequencing, basic mixing and recording techniques. *Prerequisite:* MUSC 2120 (or 033.212) or consent of instructor.

7.1 Topics in Music Courses

The study of music through such themes as the music of a single composer or a single country, music for a specific instrument or a specific type of ensemble, or in a particular theoretical, historical or cultural context. Open to any student who has completed second year music history or music theory courses with a grade of "C" or better, or who has written consent of the Faculty of Music.

MUSC 3820 Topics in Music Cr.Hrs.3 (Formerly 033.382) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3830 Topics in Music Cr.Hrs.3 (Formerly 033.383) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3840 Topics in Music Cr.Hrs.3 (Formerly 033.384) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3850 Topics in Music Cr.Hrs.3 (Formerly 033.385) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3880 Jazz Band Techniques Cr.Hrs.3 (Formerly 033.388) Procedures for organizing, rehearsing, and directing small and large group jazz ensembles. Study of repertoire and performance materials, with emphasis on personal understanding of jazz improvisation and style. *Prerequisite:* enrolment in the B.Mus./B.Ed. integrated program or consent of the Faculty of Music.

MUSC 3960 Music of the Twentieth Century 1 Cr.Hrs.3 (Formerly 033.396) An introduction to music written between 1900 and 1945. Works will be examined from both a compositional/theoretical perspective and in terms of their historical/social/philosophical contexts. *Prerequisites:* MUSC 2120 (or 033.212) and MUSC 2070 (or 033.207) and MUSC 2080 (or 033.208).

MUSC 3970 Music of the Twentieth Century 2 Cr.Hrs.3 (Formerly 033.397) A continuation of MUSC 3960, examining works from 1945 to the present. *Prerequisites:* MUSC 3960 (or 033.396) and MUSC 2120 (or 033.212) or consent of the instructor.

MUSC 4010 French Diction and Repertoire Cr.Hrs.3 (Formerly 033.401) Specialized instruction in French diction, translation and transcription using the International

Phonetic Alphabet, with direct application to performance activities in French vocal repertoire. This course will be rotated on a three-year cycle with MUSC 4020 (or 033.402) and MUSC 4030 (or 033.403).

MUSC 4020 Italian Diction and Repertoire Cr.Hrs.3 (Formerly 033.402) Specialized instruction in Italian diction, translation and transcription using the International Phonetic Alphabet, with direct application to performance activities in Italian vocal repertoire. This course will be rotated on a three-year cycle with MUSC 4010 (or 033.401) and MUSC 4030 (or 033.403).

MUSC 4030 German Diction and Repertoire Cr.Hrs.3 (Formerly 033.403) Specialized instruction in German diction, translation and transcription using the International Phonetic Alphabet, with direct application to performance activities in German vocal repertoire. This course will be rotated on a three-year cycle with MUSC 4010 (or 033.401) and MUSC 4020 (or 033.402).

MUSC 4060 History of Music 6 Cr.Hrs.3 (Formerly 033.406) A study of European music from the Greek Aesthetic and practical roots to the Trecento. *Prerequisites:* MUSC 2120 (or 033.212) and MUSC 3970 (or 033.397), or consent of the Faculty of Music.

MUSC 4070 History of Music 7 Cr.Hrs.3 (Formerly 033.407) A study of European music from the Ars nova to 1600. *Prerequisites:* MUSC 2120 (or 033.212) and MUSC 3170 (or 033.317), or consent of the Faculty of Music.

MUSC 4110 Special Area Paper Cr.Hrs.3 (Formerly 033.411) The student will select a particular area of special interest or significance, work under supervision of a faculty member, and present results in an extended paper. *Prerequisites:* MUSC 2120 (or 033.212) and MUSC 2070 (or 033.207), or consent of the Faculty of Music.

MUSC 4130 History of Women in Music Cr.Hrs.3 (Formerly 033.413) A study of the female contribution to the art of music from the Middle Ages to the present; emphasis on the changing roles of, and attitudes towards, women as composers and performers.

MUSC 4150 Choral Repertoire Cr.Hrs.3 (Formerly 033.415) A study and examination of choral repertoire suitable for community and church choir.

MUSC 4160 Major Practical Study Cr.Hrs.3 (Formerly 033.416) Individual instruction, normally in the area chosen in MUSC 3470 (or 033.347). An important constituent of the grading procedure for this course is performance in and attendance at the recitals/concerts of the Faculty of Music. For Music students only.

MUSC 4180 Ensemble Cr.Hrs.2 (Formerly 033.418) Participation in University Symphony Orchestra, University Wind Ensemble, Women's Choir, Bison Men's Chorus, University Jazz Orchestra, University Concert Band or University Singers, as is appropriate to the student's background and/or major applied area (placement to be determined by ensemble committee).

MUSC 4190 Ensemble Cr.Hrs.2 (Formerly 033.419) Participation in a Faculty of Music Ensemble other than the one designated as appropriate in MUSC 4180 (or 033.418) (to be chosen in consultation with the Faculty of Music).

MUSC 4260 Composition Seminar Cr.Hrs.6 (Formerly 033.426) Consideration of various stylistic, formal and aesthetic problems of particular concern to the composer. Experimental and research projects; topics vary from year to year. May be repeated for credit with different subject matter. *Prerequisites:* MUSC 2120 (or 033.212), or consent of the Faculty of Music.

MUSC 4300 Composition Study Cr.Hrs.6 (Formerly 033.430) A continuation of MUSC 3300; under the instructor's supervision, the student will compose a major work intended for performance at the conclusion of the course. For Music students only.

MUSC 4350 Music for Children 3 Cr.Hrs.6 (Formerly 033.435) Advanced study of the Orff-Schulwerk approach to music education. *Prerequisite:* a grade of "B" or better in MUSC 3140 (or 033.314), plus consent of the instructor.

MUSC 4360 Wind Repertoire Cr.Hrs.3 (Formerly 033.436) A selected survey of wind literature from 1500 to the present.

MUSC 4370 Wind Conducting Techniques Cr.Hrs.3 (Formerly 033.437) A study of the psychological, philosophical and practical aspects of conducting wind ensembles at all levels. (entry to professional)

MUSC 4380 Piano Repertoire Cr.Hrs.3 (Formerly 033.438) A comprehensive survey of major composers and their compositions for solo Piano. (Required course for piano Performance majors)

MUSC 4390 Piano Chamber Music Literature Seminar Cr.Hrs.3 (Formerly 033.439) A selected survey of piano chamber music.

MUSC 4430 Pedagogy and Repertoire Cr.Hrs.3 (Formerly 033.443) A consideration of approaches to the teaching of style and technique, through an examination of the repertoire for the student's major practical study.

MUSC 4440 Vocal Pedagogy Cr.Hrs.3 (Formerly 033.444) An exploration of the foundations of the singer's art and craft, including the physical nature of the singing voice, stages of development, and various national, historical and individual pedagogical approaches to the teaching of singing. Required course for voice majors in Performance and General concentrations.

MUSC 4470 Major Practical Study Cr.Hrs.6 (Formerly 033.447) Individual instruction, normally in the area chosen in MUSC 3470 (or 033.347). An important constituent of the grading procedure for this course is performance in and attendance at the recitals/concerts of the Faculty of Music. For Music students only.

MUSC 4480 Minor Practical Study Cr.Hrs.3 (Formerly 033.448) Individual instruction in an area other than that selected for Major Practical Study. Normally a continuation of MUSC 3480. Written consent of the director is required prior to registration.

MUSC 4490 Piano Pedagogy Cr.Hrs.3 (Formerly 033.449) An introduction to teaching of styles and techniques through an examination of piano repertoire. (Required course for piano and organ majors in Performance and General Concentrations.)

MUSC 4520 Coaching Skills Cr.Hrs.3 (Formerly 033.452) Introduction to and training in philosophies and techniques of vocal coaching including both song and operatic repertoire.

MUSC 4530 Operatic Piano Cr.Hrs.3 (Formerly 033.453) Development of skills required of an operatic pianist, including standard arias, operatic scores, working with conductors and developing an orchestral sound. May include participation in community opera events. (by audition only)

MUSC 4560 Recital 2 Cr.Hrs.6 (Formerly 033.456) Preparation and performance of a public, full-length graduation recital. The program, which must be approved by the applied instructor and the director, will normally include a major chamber music work.

MUSC 4630 20th to 21st Century Piano Repertoire Cr.Hrs.3 (Formerly 033.463) Piano repertoire from 1900 to the present.

MUSC 4750 Choral Techniques 1 Cr.Hrs.3 (Formerly 033.475) Procedures for organizing, rehearsing and conducting various types of choral ensembles. Examination of performance materials.

MUSC 4760 Choral Techniques 2 Cr.Hrs.3 (Formerly 033.476) Continued study in rehearsing and conducting standard choral ensembles. Study of repertoire and related literature. *Prerequisite:* MUSC 4750 (or 033.475).

MUSC 4770 Band and Orchestral Techniques 1 Cr.Hrs.3 (Formerly 033.477) The historical development and present instrumentation of standard instrumental ensembles. Procedures for organizing, rehearsing and conducting bands and orchestras. Examination of performance and instructional materials.

MUSC 4780 Band and Orchestral Techniques 2 Cr.Hrs.3 (Formerly 033.478) Continued study in rehearsing and conducting standard instrumental ensembles. Study of repertoire and related literature. *Prerequisite:* MUSC 4770 (or 033.477).

MUSC 4810 Electroacoustic Music 2 Cr.Hrs.3 (Formerly 033.481) An examination of additional topics in computer music. Topics include: digital sampling, advanced sequencing and other MIDI applications, digital recording and editing, software synthesis, algorithmic composition. *Prerequisite:* MUSC 3810 (or 033.381) or equivalent, or consent of instructor.

7.2 Post-Baccalaureate

MUSC 5180 Ensemble Cr.Hrs.3 (Formerly 033.518) Participation in a Faculty of Music ensemble as is appropriate to the student's background and/or major applied area. (To be decided by the Major Practical Study Teacher in consultation with the ensemble committee).

MUSC 5400 Major Practical Study Cr.Hrs.6 (Formerly 033.540) Individual instruction in the instrument area of study at the Post-Baccalaureate level.

MUSC 5560 Recital Cr.Hrs.6 (Formerly 033.556) Preparation and performance of a public, full-length recital at the Post-Baccalaureate level. The program, must be approved by the applied instructor and the jury committee judging the recital. It should include an appropriate balance of solo and chamber repertoire.

Faculty of Graduate Studies

MUSC 7000 Music History Seminar Cr.Hrs.3 (Formerly 033.700) The study of the nature of past and current concepts and practices in the discipline of music history

MUSC 7050 Bibliography and Research Methods Cr.Hrs.3 (Formerly 033.705) The techniques of bibliography and research methods in music are studied through research projects in selected areas relevant to each student's major field of study. Skill is developed in the use of primary and secondary sources, expository writing and documentation

MUSC 7060 Advanced Diction 1 Cr.Hrs.1 (Formerly 033.706) Advanced training in rules of pronunciation, language use and translations skills in Italian and German. Lab Required.

MUSC 7070 Advanced Diction 2 Cr.Hrs.1 (Formerly 033.707) Advanced training in rules of pronunciation, language use and translations skills in French and English. Lab Required.

MUSC 7110 Music Theory Seminar Cr.Hrs.3 (Formerly 033.711) A comprehensive survey of 20th century analytical methodologies of tonal and post-tonal music.

MUSC 7180 Ensemble Cr.Hrs.3 (Formerly 033.718) Studio instruction and monitored pre-professional training activities in chamber music, leading to the presentation of ensemble performance.

MUSC 7380 Piano Repertoire Seminar Cr.Hrs.2 (Formerly 033.738) Advanced study of the repertoire for solo piano up to the early 20th century.

MUSC 7390 Piano Chamber Music Literature Seminar Cr.Hrs.2 (Formerly 033.739) Advanced survey of piano chamber music.

MUSC 7400 Major Practical Study 1 Cr.Hrs.3 (Formerly 033.740) Private studio instruction and monitored pre-professional training activities in one of the following: composition, conducting, or any one of the standard instruments or voice.

MUSC 7410 Major Practical Study 2 Cr.Hrs.3 (Formerly 033.741) A continuation of Major Practical Study 1.

MUSC 7490 Advanced Piano Pedagogy Cr.Hrs.2 (Formerly 033.749) Consideration of advanced approaches to the teaching of styles and techniques through an examination of piano repertoire.

MUSC 7520 Coaching Skills Cr.Hrs.2 (Formerly 033.752) Advanced training in philosophies and techniques of vocal coaching including both song and operatic repertoire.

MUSC 7530 Operatic Piano Cr.Hrs.2 (Formerly 033.753) Development of skills required of an operatic pianist, including standard Arias, operatic scores, working with conductors and developing orchestral sound. May include participation in community opera events (by audition only).

MUSC 7600 Advanced Orchestration Cr.Hrs.3 (Formerly 033.760) Advanced practical work in orchestration for various-sized large ensembles up to and including full orchestra. Detailed study of selected scores and work on individual orchestration projects.

MUSC 7630 20th to 21st Century Piano Repertoire Cr.Hrs.2 (Formerly 033.763) Advanced study of piano repertoire since 1900.

MUSC 7810 Electroacoustic Music Cr.Hrs.3 (Formerly 033.781) A study of the techniques of electroacoustic music.

MUSC 7860 Topics in Music Cr.Hrs.3 (Formerly 033.786) Course orientation will vary according to the needs and interests of students. A specific topic will be chosen for each offering of the course.

Faculty of Nursing

General Office

Helen Glass Centre for Nursing

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Associate Deans:

Undergraduate: Christine Ateah

Graduate: Pamela Hawranik

Research: Maureen Heaman

Program Coordinators:

International Affairs: Janet Beaton

Four-Year Program: Penny Davis

Learning Labs: Nicole Harder

BPRN/Placements: Sandy Gessler

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Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Nursing Education

SECTION 3: Admission to the Faculty of Nursing

- 3.1 Degree Offered
- 3.2 Admission Requirements: Four-Year Program
- 3.3 Admission Requirements: Program for Registered Nurses

SECTION 4: Academic Regulations

- 4.1 Regulations Applicable to the Four-Year Baccalaureate Nursing Program
- 4.2 Regulations Applicable to the Baccalaureate Program for Registered Nurses
- 4.3 Regulations for All Students

SECTION 5: Program Requirements: Four-Year Baccalaureate Nursing Program

- 5.1 Curriculum for Students Admitted Prior to September 2006
- 5.2 Revised Four-Year Baccalaureate Nursing Program – Commencing September, 2006
- 5.3 Courses Which May Be Used as Electives

SECTION 6: Program Requirements: Baccalaureate Program for Registered Nurses

- 6.1 Special Student Status in Nursing
- 6.2 Program Effective September 1997 Admission
- 6.3 Program Effective September 2002 Admission
- 6.4 Clinical Courses for the BPRN
- 6.5 Courses Which May Be Used as Non-Nursing Electives in the BPRN
- 6.6 Adult Intensive Care Courses

SECTION 7: Inter-Faculty Option In Aging

SECTION 8: Course Descriptions

- 8.1 Four-Year Baccalaureate Nursing Program
 - 8.2 Baccalaureate Program for RNs
 - 8.3 Nursing Electives
 - 8.4 Nursing Electives: Baccalaureate Program for RNs Only
-

SECTION 1: Academic Staff

Dean Emerita

Beaton, J.I., B.N. (Manitoba), M.A. (Washington), Ph.D. (Texas).

Professor Emeritus

Glass, H., B.Sc., M.A., M.Ed., Ed. D. (Columbia), L.L.D. (Memorial), L.L.D. (Western Ontario), L.L.D. (St. Francis Xavier), L.L.D. (Montreal), D.Sc. (McGill); **Hart, M.,** B.Sc., M.A., Ed.D. (Columbia), L.L.D. (Manitoba).

Senior Scholars

Cameron, C.F., B.A. (Queens), M.Sc. (Boston), Ph.D. (Wayne State); **Chalmers, K.,** B.Sc.N. (McMaster), M.Sc.(A.) (McGill), Ph.D. (Manchester); **Gupton, A.,** B.S. (California), M.N., Ph.D. (Manitoba); **Naimark, B.J.,** B.N., M.Sc., Ph.D. (Manitoba); **Opochinsky, C.J.,** B.Sc.N. (Rhode Island), M.Sc. (Colorado), M.A. (Manitoba).

Professors

Beaton, J.I., B.N. (Manitoba), M.A. (Washington), Ph.D. (Texas); **Degner, L.F.,** B.N. (Manitoba), M.A. (Washington), Ph.D. (Michigan); **Gregory, D.M.,** B.Sc.N. (Ottawa), M.N. (Manitoba), Ph.D. (Arizona);

Associate Professors

Ateah, C.A., B.N. (Manitoba), M.Ed. (Alberta), Ph.D. (Manitoba); **Care, W.D.,** B.N., M.Ed. (Manitoba), Ed.D. (Nova Southeastern); **Chernomas, W.,** B.Sc. (Bridgeport), M.A. (New York), Ph.D. (Maryland); **Fraser, D.,** B.N., M.N. (Manitoba.); **Guse, L.W.,** B.N., M.N., Ph.D. (Manitoba); **Hack, T.,** B.Comm. (Saskatchewan), B.Sc., M.A., Ph.D (Manitoba); **Hawranik, P.,** B.N., M.N., Ph.D. (Manitoba); **Heaman, M.I.,** B.N., M.N., Ph.D. (Manitoba); **Scanlan, J.,** B.N., M.Ed., Ph.D. (Manitoba).

Assistant Professors

Clarke, D., B.Sc., B.N., M.N., Ph.D. (Manitoba); **Cohen, B.,** B.A. (Carleton), B.N.S. (Ottawa), M.Sc., Ph.D. (Manitoba); **Currie, J.,** B.N. (Manitoba), M.S.A. (Central Mich); **Diehl-Jones, W.,** B.Sc. (Brandon), M.Sc., Ph.D. (Manitoba), B.Sc.N. (Western Ontario); **Edwards, M.,** B.Sc., (Waterloo), B.N., M.N. (Manitoba), Ph.D. (Toronto); **Lobchuk, M.,** B.N., M.N., Ph.D. (Manitoba); **McClement, S.,** B.Sc.N. (Victoria), M.N., Ph.D. (Manitoba); **McMillan, D.,** B.A., B.Sc.N. (Queens), M.N. (Manitoba), Ph.D. (Washington); **Neufeld, K.R.,** B.N., M.N. (Manitoba); **Sawatzky, J.V.,** B.N., M.N., Ph.D. (Manitoba); **Scrubby, L.S.,** B.N. (McGill), M.S. (Minnesota), Ph.D. (Manitoba); **Stutsky, B.J.,** B.N. (Manitoba), M.S.N. (Western Ontario); **Wall, K.,** B.Sc.N., (McMaster), M.N. (Manitoba); **Woodgate, R.,** B.N., M.N., Ph.D. (Manitoba).

Lecturers

Lahaie, U., B.N., M.N. (Manitoba); **Udod, S.,** B.Sc.N. (Saskatchewan), M.S. (Nursing Administration) (Pace).

Instructors

Allman-Anderson, P., B.Sc. (Andrews), M.Sc. (Aston); **Ashcroft, T.,** B.N., M.N. (Manitoba); **Barkwell, D.,** B.A., B.Sc.N. (Saskatchewan), M.N., Ph.D. (Manitoba); **Benoit, T.,** B.N. (Manitoba), M.N. (Dalhousie); **Bowser, T.,** B.N. (Manitoba); **Clark, L. A.,** B.Sc.N. (Brandon), M.N. (Manitoba); **Davis, P.,** B.Sc.N. (Saskatchewan), M.Ed. (Manitoba); **Dean, R.A.,** B.N. (Manitoba), M.Sc. (Minnesota), Ph.D. (Manitoba); **Collyer, T.,** B.Sc.N. (Brandon); **Duff, E.,** B.Sc.N. (Brandon); **Enns, C.L.,** B.N., M.N. (Manitoba); **Enns, M.,**

B.N., (Manitoba); **Foster**, C., B.N. (Manitoba); **Gessler**, S., B.A., M.P.A. (Manitoba); **Goodwin**, B., B.A., B.N., M.N. (Manitoba); **Harder**, N., B.N., M.P.A. (Manitoba); **Harrison**, B., B.A., B.N. (Manitoba); **Hyndman**, K.J., B.S.N. (Victoria), M.N. (Manitoba); **Jensen**, F., B.N. (Queens), M.N.Sc. (Pittsburgh); **Kellett**, P., B.N. (Memorial); **Klassen**, K., K. B.N., M.N. (Manitoba); **Klimczak**, M., B.N., M.N. (Manitoba); **Kluka**, S.M., B.N., M.N. (Manitoba), Ph.D. (UBC); **Kozun**, D., B.N. (Manitoba); **Lee**, A., B.N. (Athabasca); **Lees**, M., B.Sc.N (Victoria), M.S. (North Dakota); **Leferink**, E., B.Sc.N. (Saskatchewan), M.N. (Manitoba); **Loewen**, L., B.A., B.N., M.N. (Manitoba); **McKay**, M.L., B.N., M.N., M.A., Ph.D. (Manitoba); **Mordoch**, E., B.N., M.N. (Manitoba), Ph.D. (UBC); **Newton**, L., B.A. (Winnipeg), B.S.N. (Victoria), M.N. (Manitoba); **O'Regan**, T., B.Sc. (Hertfordshire), M.Sc. (London); **Pangman**, V.C., B.A., M.Ed., M.N. (Manitoba); **Peters-Wa-tral**, B., B.N. M.N. (Manitoba); **Plouffe**, J., B.Sc.N. (Alberta), M.N. (Manitoba); **Sarvis**, C., B.N. (Manitoba), M.N. (British Columbia); **Sawatzky-Dickson**, D., B.N., M.N. (Manitoba); **Schoenborn**, B., B.N. (Manitoba); **Seguire**, M., B.N. (Saskatchewan), M.N. (Manitoba); **Shapiro**, C., B.N., M.N. (Manitoba); **Shuster**, S., B.N. (Manitoba), M.N. (British Columbia); **Taylor-Mendes**, C., B.A., M.Ed. (Manitoba); **Temple**, B., B.N. (Brandon), M.N. (Manitoba); **Toth**, J., B.A. (Winnipeg), M.N. (Manitoba); **Venkatesh**, P., B.Sc.N. (Windsor), M.N. (Manitoba); **West**, L., B.A. (Laurentian), M.B.A. (Toronto); **Whittaker**, C., B.N., M.N. (Manitoba).

SECTION 2: Nursing Education

The mission of the Faculty of Nursing of the University of Manitoba is to advance, communicate, and preserve nursing knowledge and to prepare individuals for the practice of professional nursing, thereby contributing to the health and well-being of individuals, groups and communities.

Nursing as a profession is an art and a science, placing its focus on the health care of the person, the family, and the community. The nurse is a sustaining force in providing assistance in maintaining health and care when health is threatened by illness or disability. The professional nurse views people in their entirety in providing a service essential to community health and welfare.

The undergraduate programs have been planned in the belief that the professional nurse is able to give nursing care in a variety of health care settings including the skills to function in primary health care; to use basic communication skills competently in organizing, planning, and directing the work of others; to collaborate with allied professional and citizen groups for the improvement of health services; to maintain personal identity; to attain individual satisfaction in daily life and, at the same time, to serve the community. These responsibilities are accepted as contributing to nursing research, as upholding the ideals of the nursing profession, and as working toward the profession's continued improvement and growth.

The first Nursing program at the University of Manitoba was offered in 1943. One-year certificate courses prepared registered nurses either for teaching and supervision or for public health nursing.

As the demand for nurses with preparation beyond the one-year certificate courses grew critical, two program sequences leading to the degree of Bachelor of Nursing were designed. In 1962, the program sequence for registered nurses was offered, and in 1963 the program sequence for students from high school or other faculties in the university was established. A new program for applicants with a bachelor's degree in another field and for registered nurses was established in 1971. These programs were replaced by a four-year curriculum instituted in 1975 for all applicants to the School of Nursing. A Master of Nursing program was introduced at the Faculty of Nursing in 1979. Modification to the existing program for registered nurses was implemented in 1982, and in 1986, a revised two-year Baccalaureate Nursing Program for Registered Nurses was approved. A two-year Northern Bachelor of Nursing Program (NBNP) for registered nurses in The Pas was offered from 1990-1995. In 2002, the current Baccalaureate Program for Registered Nurses was further revised.

The Four-Year Baccalaureate Nursing Program was revised and first offered as the revised Baccalaureate Nursing Program (Four-Year) in 1990. A collaborative undergraduate program between the University of Manitoba and Health Sciences Centre commenced 1991. In 1992, the School of Nursing attained faculty status. In 1992, the collaborative undergraduate program between the University of Manitoba and St. Boniface General Hospital was initiated. In 1995, collaboration with Brandon General Hospital began.

In 1996, under the auspices of the Manitoba Nursing Education Strategy (MNES), the Faculty of Nursing extended its Four-Year undergraduate program to include urban, rural and northern sites. New partnerships with Red River College and Keewatin Community College (renamed University College of the North) resulted, as well as a redefinition of the previous hospital collaborations as these hospitals assumed different roles in nursing education, practice and research. As part of the northern sites initiative, the Four-Year Baccalaureate Nursing Program began in Norway House in 1996. Commencing in 2003, only the first year Nursing and general studies courses have been offered in Norway House. Upon completion of entrance requirements, eligible students may apply for admission to one of the Faculty of Nursing sites.

In addition to the Bachelor of Nursing and Master of Nursing programs, the Faculty offers courses and programs designed to provide health care professionals with the opportunity to upgrade skills and education. In partnership with the Manitoba Keewatinowi Okimakanak (MKO), primary care skills courses were first offered in 1997 for nurses practising in northern Manitoba and rural settings to address the scope of practice required of nurses employed by the First Nations and Inuit Health Branch and First Nations communities in expanded nursing care and public health. The primary care skills courses permit nurses to meet the scope of practice for nurses working in nursing stations and rural settings. Community health nursing courses are offered for non-baccalaureate nurses employed in health centres and nursing stations. In partnership with the Health Sciences Centre, St. Boniface General Hospital, and Brandon Regional Health Authority, the faculty offers adult intensive care nursing courses to prepare highly skilled registered nurses who are able to care for critically ill patients.

The Four-Year Baccalaureate nursing program offered through the University of Manitoba, Brandon site, was gradually phased into the School of Health Studies at Brandon University. The University of Manitoba program physically relocated to the new School of Health Studies building in the summer of 2003. Brandon University admitted its first class in September 2004. The University of Manitoba offered the final year of its program with Brandon in 2005-2006. The curriculum of the Four-Year Baccalaureate Nursing Program was further revised and implemented commencing in 2006-2007.

SECTION 3: Admission to the Faculty of Nursing

3.1 Degree Offered

Bachelor of Nursing

Four-Year Baccalaureate Nursing Program: As of September 2006, the program consists of 90 credit hours of Nursing courses and 39 credit hours of Arts and Science courses. Normally, it takes four years to complete the program, including University 1. A student has ten years to complete the Four-Year undergraduate program.

Baccalaureate Program for Registered Nurses: This program is specifically designed for active practicing Registered Nurses. It consists of 33 credit hours of Nursing courses and 12 credit hours of courses from Arts, Science, or a professional faculty. A student has seven years to complete the Baccalaureate Program for Registered Nurses.

Admission Requirements: Four-Year Program – Effective for September 2006 Admission

The following is a summary of the admission requirements. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

Courses completed at recognized universities other than the University of Manitoba must be assessed as exact equivalents and have been completed within the past 10 years for applicants to be considered as having met the requirements. The adjusted grade point average (AGPA) for admission will be calculated on the most recent 60 credit hours of course work and will not be limited to the last 10 years. If an applicant has less than 60 credit hours, the AGPA will reflect all credit hours completed (i.e.: a minimum of 24 credit hours to a maximum of 60 credit hours). Only courses completed within 10 years prior to the date of admission to nursing will be considered for transfer credit.

Course requirements for admission: Four-Year program

Students must meet the entrance requirements under Option 1 or Option 2, and complete the University written English course to be eligible for admission (see Note 1). All required courses must be at a 100 level or higher. "090" level courses (e.g. 004.093 or ENGL 0930) are not accepted for admission or transfer credit. Preference will be given to Option 1 applicants. The lowest AGPA accepted in 2005 was 2.816 for Option 1, and 3.24 for Option 2.

The minimum AGPA of applicants admitted under Option 2 may be significantly higher than for Option 1 applicants. An AGPA higher than the minimum is recommended as admission may be competitive.

Note 1: According to University policy, students who have a completed undergraduate degree are exempt from the written English and math requirements (see appropriate section in Calendar for University policy on written English requirement).

Option 1

All applicants must complete a minimum of 30 credit hours in the following identified courses (or their equivalent) with a minimum grade of "C" in each course before entering the Faculty of Nursing. The minimum adjusted GPA for admission to the Faculty of Nursing under Option 1 is 2.5. The Faculty of Nursing may admit students from Option 1 with a GPA of 2.0-2.49 (in descending AGPA order) when space is available.

ZOOL 1320 (formerly 022.132) Anatomy of the Human Body

ZOOL 1330 (formerly 022.133) Physiology of the Human Body

NURS 1260 (formerly 049.126) Human Growth & Development

NURS 1280 (formerly 049.128) Introduction to Nursing

MBIO 1220 (formerly 060.122) Essentials of Microbiology

plus

3 credit hours of Humanities electives (see Note 2)

6 credit hours of Social Science courses (see Note 3)

plus

6 credit hours of courses offered by the Faculty of Science (see Notes 4 and 5)

Complete the University written English requirement

Note 2: Humanities. English, Philosophy, History, Religion, Languages, Classics, Native Studies, etc. Humanities information is found in the chapter for the Faculty of Arts, Additional Faculty Regulations and Policies section, 5.1.1. ARTS 1110 (formerly 099.111) [Introduction to University] is not a Humanities course. "090" level courses are not accepted.

Note 3: Select from: Introduction to Psychology PSYC 1200 (formerly 017.120) (6), **or** Introduction to Sociology SOC 1200 (formerly 077.120) (6), **or** Human Origins and Antiquity ANTH 1210 (formerly 076.121) (3) and Cultural Anthropology ANTH 1220 (formerly 076.122) (3).

Note 4: With the exception of Geological Sciences GEOL 1xxx (formerly 007.1xx), courses under the Clayton H. Riddell Faculty of Environment, Earth, and Resources do not meet the Science elective requirement if taken in 2003-2004 and later. 100 level introductory Geological Sciences courses GEOL 1xxx (formerly 007.1xx) now offered under the Clayton H. Riddell Faculty of Environment, Earth, and Resources, will be accepted as Science courses until September 1, 2006.

Note 5: BIOL 1110 (formerly 071.111) [Health and Health Professions] may not be used as a Science elective.

Option 2

All applicants must complete at least 30 credit hours. The University written English course is required (see Note 1). A minimum adjusted grade point average of 2.5 is required. A minimum grade of C is required in each of the following courses, (or a minimum of 60% in the high school courses). Completed courses must include:

100 level English (3 credit hours) or English 40S (2 credits) from high school

100 level Science (3 credit hours) or Science 40S from high school

Students who do not have these subjects in their university coursework must have completed the senior high school equivalent in English (40S – 2 credits) and Science (40S – 1 credit) with a minimum grade of 60 % in each course.

Special Consideration Category

The Special Consideration Category will consider applicants to the Fort Garry Site from Aboriginal populations of Canada and the University of Manitoba Nursing Access Program. Applicants in this category must meet

the minimum entrance requirements of Option 1; however, they do not have to meet the competitive grade point average of admitted students in the admission year. Applicants must complete a Special Consideration Category application, as well as a general application to the Faculty of Nursing. Selection is determined by the Admissions Committee.

In considering applications in this category, less weight will be given to background academic performance.

Up to five percent of admission spaces may be offered to Special Consideration Category applicants. The allocation of available spaces is entirely at the discretion of the Faculty of Nursing.

The Admissions Committee shall not be bound to admit the maximum percentage of applicants in the Special Consideration category in any given year.

The Admissions Committee reserves the right to consider the applicant who has applied for Special Consideration under the regular admission category, if it benefits the applicant.

Appeals of decisions are limited to the question of procedural regularity only. The merits of the decision will not be reviewed.

Criminal Record Check/Child Abuse Registry Check

The College of Registered Nurses of Manitoba (CRNM), as well as many clinical agencies where Nursing students are placed for clinical practice, requires that all graduates of an approved nursing education program who wish to practice nursing in this province disclose information about any conviction for an offence under the Criminal Code (Canada), the Controlled Drugs and Substances Act (Canada), or the Food and Drugs Act (Canada) in order to be considered for eligibility for registration with the College. The review process by the Faculty of Nursing is independent of the review process conducted by the CRNM.

Accordingly, all successful applicants must provide a self-declaration of a criminal record and Child Abuse Registry listing following provisional admission to the Faculty of Nursing. Successful applicants are also required to submit an official Criminal Record Check and Child Abuse Registry check before being allowed to register for courses. Failure to disclose any adult criminal record or listing on the Child Abuse Registry will invalidate an applicant's application and shall result in automatic expulsion from the Faculty of Nursing if the applicant has been admitted. Any applicant on the Child Abuse Registry will be denied admission. A criminal conviction will not necessarily result in denial of admission to the Faculty of Nursing. However, criminal offences will be reviewed by a sub-committee of the Nursing Admissions Committee for the implications of the conviction in view of the professional mandate to protect the public.

Information on the self-declaration of a criminal record and Child Abuse Registry listing is provided in the Application Information Bulletin, available from Enrolment Services at 424 University Centre.

Advance Standing/Transfer Credit

Advance standing will be considered for courses completed at the University of Manitoba. Courses completed at other recognized institutions will be considered if completed within the past 10 years. Credit for previously completed nursing courses is not given if there has been a lapse of five years or more since last attendance in the program. Nursing courses from other universities will be considered for credit only if they have been completed within five years prior to admission to the Faculty of Nursing.

Norway House Site Admission Requirements

First year Nursing and general studies courses are offered in Norway House. Upon completion, eligible students may apply for admission to one of the Faculty of Nursing sites.

Advance Placement Option: LPN

Applicants who graduated from the enhanced Licensed Practical Nursing (LPN) Program from Assiniboine Community College may be eligible for transfer credit. Applicants must meet admission requirements. Students who completed a different LPN program may be considered for advanced standing in the RRC/UM Joint Four-Year Baccalaureate Nursing Program. Contact a nursing student advisor for details.

Advance Placement Option: RPN

Registered Psychiatric Nurses may be eligible for advanced standing in the Baccalaureate Nursing Program. Applicants should inform the Faculty of their RPN status.

Professional Registration

A graduate of the Four-Year Baccalaureate Nursing Program must write the Canadian Registered Nurse Examination to become eligible to practice nursing. For information on registration in Manitoba, contact: The Registrar, College of Registered Nurses of Manitoba (CRNM), 647 Broadway Avenue, Winnipeg, MB R3C 0X2.

Applicants for registration with the College of Registered Nurses of Manitoba (CRNM) are required to report any conviction for an offence under the Criminal Code (Canada), the Controlled Drugs and Substances Act (Canada) or the Food and Drugs Act (Canada). Please contact the CRNM for more information.

3.3 Admission Requirements: Baccalaureate Program for Registered Nurses

All admission requirements for applicants who are already Registered Nurses are described in detail in an applicant information bulletin that includes application deadline dates and application forms. This material is also available from Enrolment Services, 424 University Centre, and is posted on the university website.

Admission Requirements

- 1) Graduation from an approved diploma of nursing education program;
- 2) Current active practicing membership in a provincial, territorial, state, or national nursing association/college of registered nurses; and
- 3) A minimum of 1125 hours of nursing experience will normally be required for selection.

The selection of students is based upon academic standing and professional experience. If applications exceed the number of spaces available, the best qualified candidates will be selected.

Proof of Professional Registration

Active practicing membership must be maintained throughout the program in the jurisdiction under which the student is a practicing RN. Verification will be obtained annually from the College of Registered Nurses of Manitoba by the Faculty for returning Manitoba students.

Students from outside of Manitoba must submit proof of registration annually from the registering body to the Faculty of Nursing.

After admission and at any time prior to completing the program, students with any changes to their active practicing status with the College of Registered Nurses of Manitoba, (e.g., conditions placed on a registration or ineligibility for active practicing status), are required to report this information the Associate Dean, Undergraduate Programs, Faculty of Nursing. Such changes will be reviewed on a case by case basis. Failure to report a change in status may result in disciplinary action.

Transfer of Credit

University credits earned outside of nursing diploma programs or earned as part of an incomplete degree may be considered for transfer of credit. If a required course in the baccalaureate program was earned as part of a nursing diploma program or as part of another degree, an alternative course must be substituted. Transfer of credit will be considered for university level nursing courses completed within the five years prior to admission. Credit for previous nursing courses is not given if there is a lapse of five years or more from the last date of attendance in the program. Credit for courses taken at other universities over 10 years prior to admission will not be granted credit.

Graduates of the Red River College Diploma Nursing Accelerated Program (DNAP) (est. 2000) will receive advanced standing in the Baccalaureate Program for Registered Nurses (BPRN) for the following courses, provided a minimum grade of C+ was achieved in each course for transfer, and the courses were completed within five years prior to admission to the Faculty of Nursing: NURS 3210 (formerly 049.321) Research Methods, NURS 4220 (formerly 049.422) Law and Ethics, and non-nursing electives (6). All remaining courses for the BPRN must be completed at the University of Manitoba in order to meet the residency requirement for the BPRN.

Transfer of Credit for Advanced Certificate Programs

No credit will be given for these certificates in the revised (45 credit hours) Baccalaureate Program for Registered Nurses.

SECTION 4: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information. The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Nursing has regulations and requirements, published below, that apply specifically to its students.

4.1 Regulations Applicable to the Four-Year Baccalaureate Nursing Program

Scholastic Progress

To enter second year of the Four-Year Baccalaureate Nursing Program, a GPA of 2.0 or better is required; to enter third and fourth years, and to be eligible for graduation, a cumulative GPA of 2.5 or better is required. For further information, refer to: Academic Probation - Four-Year Baccalaureate Nursing Program.

Until the final disposition of a disciplinary appeal, students in the four-year undergraduate program will not be permitted to attend clinical practice or the nursing skills laboratory. At the discretion of the Associate Dean, Undergraduate Programs, Faculty of Nursing, students may be granted permission to attend the lecture component only of a nursing course(s) while awaiting a final disposition of an appeal currently in progress.

Failures in Nursing Courses

Students will be permitted to repeat a non-clinical nursing course only once following a failure. Withdrawal from the program will be required following a second failure in the same nursing course.

Commencing September 2004, a student who fails a clinical course will be permitted to repeat the course once. A subsequent failure in any clinical course (including the one being repeated) will normally require the student to withdraw from the program.

Students who fail the same Nursing course twice, prior to applying to the Faculty of Nursing, are ineligible for admission to the Faculty of Nursing. Students who fail a Nursing course twice and are required to withdraw from the Faculty of Nursing are ineligible for re-admission to the Faculty of Nursing.

Criminal Record Check/Child Abuse Registry Check

All successful applicants are required to provide a self-declaration of a criminal record and Child Abuse Registry listing following provisional admission, and are required to provide to the Faculty of Nursing an official Criminal Record Search and Child Abuse Registry check prior to registration. See Section 3.2. At any time prior to completing the program (regardless of admission date), students charged with or convicted of a criminal offence or listed on the Child Abuse Registry are required to report this information to the Associate Dean, Undergraduate Programs, Faculty of Nursing. Failure to report a criminal offence may result in dismissal from the program. Criminal offences will be reviewed by the Faculty of Nursing for the implications of the conviction in view of the professional mandate to protect the public. A listing on the Child Abuse Registry or failure to report the listing will result in dismissal.

Students admitted prior to September 2004 are advised that some clinical practice sites require that students complete a Criminal Record search and/or a Child Abuse Registry check.

Residence Requirements

See the chapter, General Academic Regulations and Requirements in this *Calendar*.

University Mathematics and Written English Requirement

The written English requirement may be satisfied by a course also chosen to meet the Humanities requirement. Students should refer to the General Academic Regulations and Requirements in this *Calendar*. The mathematics requirement will be met in Year 2 of Nursing by Statistics STAT 1000 (formerly 005.100).

4.2 Regulations Applicable to the Baccalaureate Program for Registered Nurses

Scholastic Progress

Students in the Baccalaureate Program for Registered Nurses will be assessed initially after the completion of 18 credit hours. Students must have

a cumulative GPA of 2.5 to proceed in the program and to graduate. For further information, refer to: Academic Probation - Baccalaureate Nursing Program for Registered Nurses.

Residence Requirements

Students in the Baccalaureate Program for Registered Nurses are required to complete, with the minimum grade of "C" in each course, at least 32 credit hours of University of Manitoba courses. Of these courses, a minimum of 20 credit hours must be from among those offered by the Faculty of Nursing.

Failures in Nursing Courses

Students will be permitted to repeat a nursing course only once following a failure. Withdrawal from the program will be required following a second failure in the same nursing course.

Students who fail the same Nursing course twice, prior to applying to the Faculty of Nursing, are ineligible for admission to the Faculty of Nursing. Students who fail a Nursing course twice and are required to withdraw from the Faculty of Nursing are ineligible for re-admission to the Faculty of Nursing.

Proof of Professional Registration

Verification of registration of returning students will be obtained by the Faculty annually from the College of Registered Nurses of Manitoba.

After admission and at any time prior to completing the program, students with any changes to their active practicing status will the College of Registered Nurses of Manitoba, (e.g., conditions placed on a registration or ineligibility for active practicing status), are required to report this information to the Associate Dean, Undergraduate Programs, Faculty of Nursing. Such changes will be reviewed on a case by case basis. Failure to report a change in status may result in disciplinary action.

4.3 Regulations for All Students

Students are reminded of their obligation to be familiar with all regulations governing their continued progress in the program.

Students who do not register for any courses in one academic year must apply in writing to the Associate Dean, Undergraduate Programs, for permission to continue. Refer to section on Leave of Absence for further information.

Orientation Sessions

Optional orientation sessions will be held for students upon admission to the Faculty of Nursing, **prior to** registration. New students at the Fort Garry Campus will receive an orientation package in the mail, and may attend an optional orientation session. Several sessions will take place in June, July and August.

Degree with Distinction

Four-Year Baccalaureate Nursing Program: Students who obtain a cumulative GPA of 3.8 and above based on the last 67 credit hours of course work will be eligible for a Degree with Distinction.

Baccalaureate Program for Registered Nurses: Students who obtain a cumulative GPA of 3.8 and above in their program of studies will be eligible for a Degree with Distinction.

Dean's Honour List

Students who achieve a sessional GPA of 3.5 will be included in the Dean's Honour List. Eligible students in the Four-Year Baccalaureate Nursing Program will be defined as those who are registered for a minimum of 27 credit hours in Year 1; 28 credit hours in Year 2; and 23 credit hours in Year 3 or Year 4.

Eligible students in the Baccalaureate Program for Registered Nurses will be defined as those who are registered for a minimum of 24 credit hours. (30 credit hours will be considered a 100 per cent course load for the BPRN.)

Uniforms

Students are expected to obtain uniforms and other equipment for Nursing courses and practice, as specified by the Faculty of Nursing. All students, including those in the Baccalaureate Program for Registered Nurses, are required to wear name tags during clinical courses. Students should contact the Nursing Students' Association Council uniform representative for information. Name tags and crests are ordered through the clinical course leader during the clinical course orientation.

Health Requirements and Immunization Regulations

Immunizations are a requirement mandated by the Regional Health Authorities. Students who do not meet the immunization requirement will not be able to complete the clinical portion of the program.

Students are required annually to review and update immunization against communicable diseases. Annual physical and dental examinations are recommended.

Standard immunization forms are sent to students upon acceptance into the program. Additional forms are available upon request. New students enrolling in the Faculty of Nursing must provide proof of current immunizations by August 1. Thereafter, returning students must provide proof of immunizations that require updating annually by June 1. See "Penalty for Non-Compliance of Immunization and CPR" section.

Cardiopulmonary Resuscitation Certification (CPR)

All students are required to obtain certification in cardiopulmonary resuscitation at the Basic Rescuer Level. Newly admitted students must provide proof of certification by August 1. Thereafter, returning students in the Four-Year Baccalaureate Nursing Program must provide proof of certification annually by June 1 (at the Fort Garry site, students give the information to the Student Services Assistant or designate). Certification must be valid for the entire academic year, therefore all nursing students should recertify in April/May.

All students in the Baccalaureate Program for Registered Nurses must be certified at the Basic Rescuer Level. Newly admitted students must submit proof of certification to the Student Services Assistant or designate by August 1. Thereafter, registered nurses are to maintain current BCLS certification.

Penalty for Non-Compliance of Immunization and CPR

Students who do not comply with the deadlines for proof of current Cardiopulmonary Resuscitation Certification and/or immunizations will be placed on hold status or blocked from the registration system. Students on hold status will be permitted to register after the initial registration period (normally mid-August) after all documentation has been received. Hold status also prevents receipt of refunds or histories/transcripts from the Registrar's Office, attending clinical practice and graduation.

Scholastic Progress Requirements Applicable to All Students

Students will be required to obtain a minimum of "C" grade (2.0) in every course, and a cumulative GPA of 2.5 in order to graduate. A final grade of "D" in any course taken to complete the degree requirement is considered a failure and is not accepted in the faculty.

Supplemental Examinations

The Faculty of Nursing does not permit supplemental examinations.

"090" Level Courses

Although students may register for "090" level courses, credit will not be given for these courses.

Prerequisite Deficiency

Students who enrol in courses provisionally pending satisfactory completion of pre- or corequisites must, if unsuccessful, withdraw or amend their registration accordingly. The Faculty of Nursing reserves the right not to send reminders of the requirement to withdraw.

Challenge for Credit

Students wishing to challenge a course for credit should contact a student advisor.

Academic Probation

Four-Year Baccalaureate Nursing Program

Students in their first-year in the Faculty of Nursing will be assessed after completion of a minimum of 24 credit hours. Students with a cumulative GPA below 2.0 at the end of the academic year will be placed on probationary status for the next regular session.

Students in second-, third-, and fourth-year nursing with a cumulative GPA below 2.5 at the end of the academic year will be placed on probationary status for the next regular session.

Probationary students are assessed at the end of the next academic year, after completion of a minimum of 15 credit hours. Students failing to achieve the required GPA will be placed on academic suspension.

With special permission of the Associate Dean, Undergraduate Programs, Faculty of Nursing, a student can request a review of academic progress based on less than 15 credit hours if course work taken during summer session has the potential to change the probationary status. Refer to Academic Suspension section.

Students will be required to withdraw from Nursing Summer Term if their cumulative GPA does not meet year requirements at the end of regular session. Students must assume responsibility to ensure their CGPA meets the year requirement for Nursing Summer Term.

Students on probation are expected to meet with a student advisor at least twice, with a minimum of once per term, for academic advisement.

Baccalaureate Program for Registered Nurses

All students enrolled in the Baccalaureate Program for Registered Nurses with a GPA under 2.5, after the completion of 18 credit hours, will be placed on probation. Students failing to achieve a GPA of 2.5 after the completion of their next 15 credit hours of study will be placed on academic suspension.

Academic Suspension

A probationary student who does not achieve the minimum academic standing is required to withdraw from the Faculty of Nursing with the status "academic suspension." While suspended indefinitely, after one year's suspension the student may apply for reinstatement on academic probation.

To request reinstatement following academic suspension, the student should submit a written request before May 1 to the Chair, Student Appeals Committee, Faculty of Nursing.

Security of Academic Records

The university's policies regarding the security of student academic records is found in the chapter, University Policies, of this *Calendar*.

Professional Unsuitability By-Law

The Senate of the University has approved a by-law granting authority to the Faculty to require a student to withdraw for reasons of professional unsuitability. A student may be required to withdraw from the Faculty when, at any time, the Faculty Council, through the Professional Unsuitability By-Law, believes the student to be unsuited for the profession of nursing, on general considerations of scholarship, professional fitness or professional conduct.

Copies of this by-law may be obtained from the general office. See chapter, General Academic Regulations and Requirements.

Attendance

Regular attendance at class is expected of all students in all courses. Attendance in the clinical practice/laboratory portions of nursing courses is mandatory to enable the student to satisfy the evaluative criteria of the theoretical and practical components of courses. Students absent from class or practice due to illness may be required to present a certificate of illness. This certificate must be signed by a recognized health care provider. Absence for compassionate reasons is considered on an individual basis. Where absence is involved, make-up time may be required.

An instructor may initiate procedures to debar a student from attending classes and from final examinations and/or from receiving credit where unexcused absences exceed those permitted by faculty regulations.

Voluntary Withdrawal and Limited Access

The Faculty of Nursing will follow the University's General Policy on Limited Access in that registration will be restricted for students who have withdrawn from, or previously completed, a course. This shall apply to all courses, and enforcement will apply to the two sessions following the session in which the course was taken.

Students admitted prior to September 2004:

The maximum number of voluntary withdrawal hours is set at 34 credit hours which will include Arts and Science and other courses that can be transferred into the nursing program and given credit hours towards the B.N. program.

Students admitted September 2004 and later:

The maximum number of voluntary withdrawal hours is set at 34 credit hours which will include all courses required to complete the program (Arts, Science, and other courses transferred into the nursing program and given credit hours toward the B.N. program). Students are allowed only one voluntary withdrawal per nursing course in the Faculty of Nursing.

Clinical Practice

Four-Year Baccalaureate Nursing Program students enrolled in nursing courses with clinical practice components may not register for any other course during those designated clinical days. Nursing clinical practice may be scheduled during the morning, afternoon or evening. Weekends are also used for some sections in clinical courses. Transportation costs to clinical practice settings are the responsibility of the student.

All students must be registered in all clinical courses for both terms by the specified deadline. Failure to register by this date may prevent accommodation in a clinical course. Current deadlines are published in the *Registration Guide*.

Personal Health Information Act (PHIA)

Students must abide by the policies and procedures established at clinical practice sites. Within Winnipeg, this includes: attending a Winnipeg Regional Health Authority (WRHA) orientation session regarding the Personal Health Information Act (PHIA), signing the PHIA pledge, and obtaining a PHIA card. Students attending clinical practice at institutions outside the jurisdiction of the WRHA, such as hospital or community health programs in rural health authorities, may be required to attend a separate orientation and obtain a PHIA card appropriate for the health institution or region. PHIA card(s) and attendance at the PHIA orientation(s) are required for clinical practice and will be checked at clinical sites.

Unsafe Clinical Practice Policy

The debarment policy will be invoked when the student demonstrates unsafe clinical practice. Unsafe clinical practice is behaviour which places the client or staff in either physical or emotional jeopardy. Physical jeopardy is the risk of causing physical harm. Emotional jeopardy means that the student creates an environment of anxiety or distress which puts the client or family at risk for emotional or psychological harm. Unsafe clinical practice is an occurrence or a pattern of behaviour involving unacceptable risk.

Debarment Policy

A student may be debarred from class, clinical practice, laboratories, and examinations by action of the Dean for persistent non-attendance, unsafe clinical practice, and/or failure to produce assignments to the satisfaction of the instructor. Once the debarment process has been initiated, the student will not be able to voluntarily withdraw from the course that is presently under investigation. Students so debarred will have failed that course.

Clinical Absence

Four-Year Baccalaureate Nursing Program students returning following one year or more absence from clinical courses must complete a mandatory demonstration of psychomotor skills competency in the skills lab. Competency must be demonstrated prior to clinical attendance. Students should consult with a student advisor for instructions. Testing must be completed prior to July 1st.

Leave of Absence

Students wishing to interrupt their studies must have completed a minimum of three credit hours of course work in the regular academic session. Students must submit a written leave of absence request to the Associate Dean, Undergraduate Programs, Faculty of Nursing. Leave of absence status does not extend the program time limit outlined in the Faculty of Nursing regulations. To maintain leave of absence status at the University of Manitoba, students may not attend any other university during the period in which the leave of absence is in effect. See "Transfer of Credit" under section 3.2.

Reinstatement

Students who have withdrawn from the Faculty of Nursing (interrupted their studies without requesting a leave of absence) must submit a written request for reinstatement to the Associate Dean, Undergraduate Programs. The student advisor will inform the student of the appropriate procedure and advance standing, if any, that the student may receive. Note: 1) the student who does not attend another faculty or institution and requests, within five years of voluntary withdrawal, to re-enter the Faculty of Nursing will be advised to forward such a request to the Associate Dean, Undergraduate Programs. 2) the student who requests to return to the Faculty of Nursing more than five years after withdrawal must re-apply through Admissions. 3) the student who has attended another faculty or institution following withdrawal from Nursing must re-apply through Admissions. See "Transfer of Credit" under section 3.2.

SECTION 5: Program Requirements: Four-Year Baccalaureate Nursing Program

5.1 Curriculum for Students Admitted Prior to September 2006

The Fort Garry Campus site offers part-time and full-time study.

Note: As a general principle, all courses from any given year are to be completed before proceeding to the next year.

Course No.

University 1		33 credit hours
ZOOL 1320	Anatomy of the Human Body (see Note 1)	3
(formerly 022.132)		
ZOOL 1330	Physiology of the Human Body (see Note 1)	3
(formerly 022.133)		
MBIO 1220	Essentials of Microbiology (see Note 1)	3
(formerly 060.122)		
	Social Science (six credits of) (see Note 1)	6
PSYC 1200	Introduction to Psychology (6)	
(formerly 017.120)		
	or	
SOC 1200	Introduction to Sociology (6)	
(formerly 077.120)		
	or	
ANTH 1210	Human Origins and Antiquity (3)	
(formerly 076.121)		
	and	
ANTH 1220	Cultural Anthropology (3)	
(formerly 076.122)		
Science	(six credits from the Faculty of Science)	6
	(see Notes 1, 3, 4 & 5)	
Humanities	Elective (see Notes 1 & 2)	6
	Nursing Courses:	
NURS 1260	Human Growth and Development (see Note 1)	3
(formerly 049.126)		
NURS 1280	Introduction to Nursing (see Note 1)	3
(formerly 049.128)		

Note 1: All courses can be completed in University 1, or an equivalent program, if students do not wish to extend their program of study.

Note 2: Humanities. English, Philosophy, History, Religion, Languages, Classics, Native Studies, etc. Humanities information is found in the chapter for the Faculty of Arts, Additional Faculty Regulations and Policies section, 5.1.1. ARTS 1110 (formerly 099.111) Introduction to University is not a Humanities Course. "090" level courses are not accepted.

Note 3: Science prerequisites. Students must meet the current Science prerequisites before registration for Science courses. See the chapter for the Faculty of Science for the current prerequisites. It is preferred that the above prerequisites have been completed within the last five years.

Note 4: With the exception of Geological Sciences GEOL 1xxx (formerly 007.1xx), courses under the Clayton H. Riddell Faculty of Environment, Earth, and Resources do not meet the Science elective requirement if taken in 2003-2004 and later. 100 level introductory Geological Sciences courses GEOL 1xxx (formerly 007.1xx) now offered under the Clayton H. Riddell Faculty of Environment, will be accepted as Science courses until September 1, 2006.

Note 5: The course, BIOL 1110 (formerly 071.111) Health and Health Professions, may not be used as a Science elective. It may, however, be used as an elective from years 3 or 4, provided that the level requirements of all electives are met.

Year 2		34 credit hours
STAT 1000	(former-Basic Statistical Analysis 1)	3
(formerly 005.100)		
NURS 2120	Nursing Health Assessment	4
(formerly 049.212)		
NURS 2130	Nursing Skills Laboratory	2
(formerly 049.213)		
NURS 2140	Health Promotion of Individuals	4
(formerly 049.214)		
NURS 2150	Facilitation of Self Care	3
(formerly 049.215)		
NURS 2160	Introduction to Legal and Ethical Foundations of Nursing Practice	3
(formerly 049.216)		
NURS 2170	Prevention of Illness	3
(formerly 049.217)		

NURS 2180	Clinical Nursing Practice 1	3
(formerly 049.218)		
NURS 2190	Clinical Nursing Practice 2	3
(formerly 049.219)		
NURS 2220	Pharmacology in Nursing Practice	3
(formerly 049.222)		
NURS 3270	Health Promotion in Families	3
(formerly 049.327)		
Year 3		29 credit hours
NURS 3210	Nursing Research Methods	3
(formerly 049.321)		
NURS 3280	Nursing Skills Laboratory	2
(formerly 049.328)		
NURS 3290	Health Restoration in Nursing	6
(formerly 049.329)		
NURS 3300	Clinical Nursing Practice 3	3
(formerly 049.330)		
NURS 3310	Health Maintenance in Nursing	6
(formerly 049.331)		
NURS 3320	Clinical Nursing Practice 4	3
(formerly 049.332)		
	Elective	3
	Elective	3

Year 4		39 credit hours
NURS 4170	Issues and Trends in Nursing and Health Care	3
(formerly 049.417)		
NURS 4190	Leadership in Nursing Practice	3
(formerly 049.419)		
NURS 4240	Health Promotion in the Community	4
(formerly 049.424)		
NURS 4250	Palliative Nursing Care	3
(formerly 049.425)		
NURS 4260	Nursing Care in Mental Health and Illness	3
(formerly 049.426)		
NURS 4270	Clinical Nursing Practice 5	4
(formerly 049.427)		
NURS 4280	Theories in Nursing Practice	3
(formerly 049.428)		
	Elective	3
	Elective	3
NURS 4290	Clinical Practicum	10
(formerly 049.429)		

Reminder: It is the responsibility of the student to ensure that degree requirements are met. In order to be eligible to work as a graduate nurse and/or write the Canadian Registered Nurse Examinations, students must meet all program requirements. It is the responsibility of students to ensure all program requirements have been met before working as a graduate nurse and/or writing the qualifying exams to become a Registered Nurse.

NURS 4290 (formerly 049.429) Clinical Practicum

All courses in the curriculum must be completed prior to starting NURS 4290.

Any costs incurred in completing this course are the responsibility of the student. Proposals must meet the approval of the Faculty of Nursing and must have academic merit. A student's chosen area for completion of practicum experience must be approved by the Faculty of Nursing. Practicum experiences are to be completed within the province of Manitoba. The location of the practicum must meet the approval of the University of Manitoba. The location of the practicum is subject to change in the event approval is not received. There may be organizations which require contractual arrangements with the student and/or University of Manitoba prior to permitting the student to enter into the practicum experience. There is no guarantee the University of Manitoba will enter into such contractual arrangements to permit the student to carry out practice at a particular agency or site. In such cases, the student should be prepared to choose an alternate agency or site.

5.2 Revised Four-Year Baccalaureate Nursing Program – Commencing September, 2006

The curriculum has been designed and subsequently revised to develop the cognitive, affective and psychomotor attributes required for professional nursing practice. The past decade has seen many changes in higher education, in health and illness care, and in nursing education and practice.

Some changes include a shifting emphasis in health care to a focus on the promotion of health and prevention of illness, and a growing emphasis on the care of the elderly, and on primary health care. In response to these and other changes, a curriculum has been developed and subsequently revised and includes foundation courses in the liberal arts and sciences, a focus on evidence-based practice, the development of cognitive skills for critical thinking, and the development of skills of collaboration for work in a multi-disciplinary health care system. The conceptual framework of the revised Four-Year Baccalaureate Nursing Program is based on the concept of health promotion across the lifespan.

The Fort Garry Campus site offers part-time and full-time study.

Note: As a general principle, all courses from any given year are to be completed before proceeding to the next year.

Course No.

University 1		30 credit hours
ZOOL 1320	Anatomy of the Human Body (see Note 1) (formerly 022.132)	3
ZOOL 1330	Physiology of the Human Body (see Note 1) (formerly 022.133)	3
NURS 1260	Human Growth and Development (formerly 049.126)	3
NURS 1280	Introduction to Nursing (formerly 049.128)	3
MBIO 1220	Essentials of Microbiology (see Note 1) (formerly 060.122)	3
	Social Science (6 credits - see Note 1)	6
PSYC 1200	Introduction to Psychology (6) (formerly 017.120)	
	or	
SOC 1200	Introduction to Sociology (6) (formerly 077.120)	
	or	
ANTH 1210	Human Origins and Antiquity (3) (formerly 076.121)	
	and	
ANTH 1220	Cultural Anthropology (3) (formerly 076.122)	
	Science (6 credits from the Faculty of Science, see Notes 1, 3, 4 & 5)	6
	Humanities Elective (see Notes 1,2 & 6)	3

Note 1: All courses can be completed in University 1, or an equivalent program, if students do not wish to extend their program of study.

Note 2: Humanities. English, Philosophy, History, Religion, Languages, Classics, Native Studies, etc. Humanities information is found in the chapter for the Faculty of Arts, Additional Faculty Regulations and Policies section, 5.1.1. ARTS 1110 (formerly 099.111) Introduction to University is not a Humanities Course. "090" level courses are not accepted.

Note 3: Science Prerequisites. Students must meet the current Science prerequisites before registration for Science courses. See the chapter for the Faculty of Science for the current prerequisites. It is preferred that the above prerequisites have been completed within the last five years.

Note 4: With the exception of Geological Sciences GEOL 1xxx (formerly 007.1xx), courses under the Clayton H. Riddell Faculty of Environment, Earth, and Resources do not meet the Science elective requirement if taken in 2003-2004 and later. 100 level introductory Geological Sciences courses GEOL 1xxx (formerly 007.1xx) now offered under the Clayton H. Riddell Faculty of Environment, will be accepted as Science courses until September 1, 2006.

Note 5: The course, BIOL 1110 (formerly 071.111) Health and Health Professions, may not be used as a Science elective. It may, however, be used as an elective from year 4, provided that the level requirements of all electives are met.

Year 2

		31 credit hours
STAT 1000	Basic Statistical Analysis 1 (formerly 005.100)	3
NURS 2120	Nursing Health Assessment (formerly 049.212)	4
NURS 2130	Nursing Skills Laboratory (formerly 049.213)	2
NURS 2180	Clinical Nursing Practice 1 (formerly 049.218)	3
NURS 2190	Clinical Nursing Practice 2 (formerly 049.219)	3
NURS 2220	Pharmacology in Nursing Practice (formerly 049.222)	3
NURS 2230	Health Promotion of Older Adults and Their Families	4

NURS 2240	Health Promotion of Child Bearing and Child Rearing Families	6
HNSC 1210	Nutrition for Health and Changing Lifestyles (formerly 030.121)	3

Year 3

	29 credit hours	
NURS 3210	Nursing Research Methods (formerly 049.321)	3
NURS 3280	Nursing Skills Laboratory (formerly 049.328)	2
NURS 3290	Health Restoration in Nursing (formerly 049.329)	6
NURS 3300	Clinical Nursing Practice 3 (formerly 049.330)	3
NURS 3310	Health Maintenance in Nursing (formerly 049.331)	6
NURS 3320	Clinical Nursing Practice 4 (formerly 049.332)	3
NURS 3450	Introduction to Legal and Ethical Foundations of Nursing Practice	3
	Elective – Department of Native Studies – selected options available (see Note 6):	
NATV 1220	Native Peoples of Canada, Part I (3) (formerly 032.122)	3
	or	
NATV 1240	Native Peoples of Canada, Part II (3) (formerly 032.124)	3
	or	
NATV 2020	Metis of Canada (3) (formerly 032.202)	3
	or	
NATV 2220	Native Societies and the Political Process (3) (formerly 032.222)	3
	or	
NATV 2450	Images of Indian People in North American Society (formerly 032.245)(3)	3
	or	
NATV 3240	Native Medicine and Health (3) (formerly 032.324)	3
	or	
NATV 3360	Aboriginal Women of Canada (3) (formerly 032.336)	3

Year 4

	29 + 10 credit hours	
	TERM A (16 credit hours)	
NURS 4250	Palliative Nursing Care (formerly 049.425)	3
NURS 4260	Nursing Care in Mental Health and Illness (formerly 049.426)	3
NURS 4270	Clinical Nursing Practice 5 (formerly 049.427)	4
	Electives (see Note 6)	6
	TERM B (13 credit hours)	
NURS 4310	Nursing Leadership: Issues & Practices (formerly 049.431)	4
NURS 4420	Health Promotion in the Community	3
NURS 4430	Clinical Nursing Practice 6	3
NURS 4440	Prevention of Illness	3
	TERM C (10 credit hours)	
NURS 4290	Clinical Practicum (12 weeks) (formerly 049.429)	10

Note 6: Six credits of the twelve credits of electives including the Native Studies and the Humanities electives, must be at the 200 level or above.

Reminder: It is the responsibility of the student to ensure that degree requirements are met. In order to be eligible to work as a graduate nurse and/or write the Canadian Registered Nurse Examinations, students must meet all program requirements. It is the responsibility of students to ensure all program requirements have been met before working as a graduate nurse and/or writing the qualifying exams to become a Registered Nurse.

NURS 4290 (formerly 049.429) Clinical Practicum

All courses in the curriculum must be completed prior to starting NURS 4290.

Any costs incurred in completing this course are the responsibility of the student. Proposals must meet the approval of the Faculty of Nursing and must have academic merit. A student's chosen area for completion of practicum experience must be approved by the Faculty of Nursing. Practicum experiences are to be completed within the province of Manitoba. The location of the practicum must meet the approval of the University of Manitoba. The location of the practicum is subject to change in the event approval is not received. There may be organizations which require contractual arrangements with the student and/or University of Manitoba prior to permitting the student to enter into the practicum experience. There is no guarantee the University of Manitoba will enter into such contractual arrangements to permit the student to carry out practice at a particular agency or site. In such cases, the student should be prepared to choose an alternate agency or site.

5.3 Courses Which May be Used as Electives

Electives are to be taken from Arts, Science, professional faculties or the Inter-Faculty Option in Aging (18 credit hours). (See section 8). Of the total credit hours of electives, at least 12 credit hours must be at the 200 level or higher. Electives offered by the Faculty of Nursing are:

Course No.		Credit Hours
NURS 2200 (formerly 049.220)	Topics in Aging	3
NURS 3330 (formerly 049.333)	Women and Health	3
NURS 3340 (formerly 049.334)	Providing Care in a Culturally Diverse Society	3
NURS 3350 (formerly 049.335)	Counselling Skills for Nurses	3
NURS 3400 (formerly 049.340)	Men's Health: Concerns, Issues and Myths	3
These "NURS" (formerly 049) courses may be taken as electives only, and are not an alternative for a required nursing course.		
	Inter-Faculty Option in Aging	18

SECTION 6: Program Requirements: Baccalaureate Program for Registered Nurses (BPRN)

The Faculty of Nursing has developed a baccalaureate program that recognizes and values the knowledge and experience of practicing Registered Nurses. The learner-centred, process curriculum is designed to further the capacity of Registered Nurse practice in an ever-changing health care system.

The curriculum consists of a minimum of 33 credit hours in Nursing, and 12 credit hours from Arts, Science or a professional faculty (for a total of 45 credit hours).

Students graduating with the minimum of 45 credit hours of coursework may be required to complete additional courses or pre-Master's study prior to entry to the graduate program in Nursing (Master of Nursing). For further information, contact the Graduate Program Assistant, Faculty of Nursing, 474-6216.

Current students who were admitted prior to September 2002 may complete the requirements of the curriculum to which they were admitted, or the requirements of the current 45 credit hour curriculum.

Students may elect full-time or part-time study. A variety of community settings are utilized for clinical experience. Courses may be offered in late afternoons or evenings, during summer session and through distance education (correspondence) or internet-based study.

6.1 Special Student Status in Nursing

Students who are not enrolled in the Baccalaureate Program for Registered Nurses may be eligible to apply to the Faculty of Nursing as a special student in Nursing. Once admitted, students may register in University of Manitoba courses. Following are the guidelines for special student status:

- Special Students are allowed to register for a maximum of 15 credit hours.
- Special Students must obtain a minimum of "C" grade in a course in order to transfer credit into the Baccalaureate Program for Registered Nurses.
- A nursing course completed as a special student may be accepted subsequently for credit in the Baccalaureate Program for Registered Nurses up to five years from the date of completion of said course.

Prior to registering for a nursing course, all special students must obtain written permission from a Faculty of Nursing student advisor and present a photocopy of their current Active Practising Membership with the College of Registered Nurses of Manitoba.

Completion of courses as a special student does not guarantee admission into the Baccalaureate Program for Registered Nurses. All students must complete the application forms and submit required information by April 1 annually, unless otherwise indicated at the time of application.

The Faculty of Nursing will allow Registered Nurses admitted to another faculty at the University of Manitoba or another university to register for a maximum of 15 credit hours of nursing courses prior to being admitted to the Faculty of Nursing. Written permission must be obtained from a student advisor and does not guarantee space in the course.

6.2 BPRN

Program Effective September, 1997

There are a number of students completing this program. For details on this program and courses, please contact the BPRN Student Advisor.

6.3 BPRN

Program Effective September 2002

Note: Nursing electives may not be offered every year.

Course No.	Core Courses:	
NURS 3430 (formerly 049.343)	Seminar in Professional Nursing Foundations (see Note 1)	2
STAT 1000 (formerly 005.100)	Basic Statistical Analysis 1	3
NURS 3210 (formerly 049.321)	Nursing Research Methods	3
NURS 3220 (formerly 049.322)	Community Health Nursing 1 (see Note 2)	4
	or	
NURS 3360 (formerly 049.336)	Assessing the Health of Communities (see Note 2)	4
NURS 4200 (formerly 049.420)	The Teaching-Learning Process in Nursing Practice	3
NURS 4210 (formerly 049.421)	Independent Study in Nursing Practice	4
NURS 4220 (formerly 049.422)	Law and Ethics in Nursing Practice	3
NURS 4310 (formerly 049.431)	Nursing Leadership: Issues and Practices	4
	Nursing Electives (see Note 3)	10
	Non-Nursing Electives (see Note 4)	9

Nursing Electives

10 credit hours of acceptable Nursing electives are to be chosen from the following list – at least one course chosen must be a 4 credit hour course.

- NURS 2110 (formerly 049.211) Health Assessment of Individuals (3)
- NURS 2200 (formerly 049.220) Topics in Aging (3)
- NURS 3200 (formerly 049.320) Nursing of Individuals and Families with Long-Term Illness and Disability (4)
- NURS 3230 (formerly 049.323) Perspectives on Mental Health Nursing (4)
- NURS 3240 (formerly 049.324) Adult Intensive Care Nursing I (4)
- NURS 3330 (formerly 049.333) Women and Health (3)
- NURS 3340 (formerly 049.334) Providing Care in a Culturally Diverse Society (3)
- NURS 3350 (formerly 049.335) Counselling Skills for Nurses (3)
- NURS 3390 (formerly 049.339) Nursing in Rural Environments (4)
- NURS 3400 (formerly 049.340) Men's Health: Concerns, Issues and Myths (3)
- NURS 4160 (formerly 049.416) Community Health Nursing 2 (4)

NURS 4250 (formerly 049.425) Palliative Nursing Care (BPRN specific section only) (3)

NURS 4300 (formerly 049.430) Promoting the Health of Communities (4)

NURS 3440 (formerly 049.344) Principles of Disease Related to Adult Intensive Care (3) (see Note 5)

In addition, the following courses from the Inter-Faculty Option in Aging are acceptable as Nursing electives:

NURS 2610 (formerly 049.261)/ PHED 2610 (formerly 057.261) Health and Physical Aspects of Aging (3)

NURS 2650 (formerly 047.265)/ IDES 2650 (formerly 051.265)/ HMEC 2650 (formerly 028.265)/ REC 2650 (formerly 123.265) The Social Aspects of Aging (3)

NOTES:

1) It is recommended that NURS 3430 (formerly 049.343) be taken in the first 12 credit hours of the program. Students who have credit for the previous NURS 3190 (formerly 049.319) may substitute this course for NURS 3430 (formerly 049.343).

2) Students may select either NURS 3220 (formerly 049.322) or NURS 3360 (formerly 049.336) as their core community clinical course.

3) Nursing electives may be used to customize a student's program. Electives may be used to expand on a number of different areas of nursing or may be used to focus on a particular area of nursing practice.

4) Of the 9 credit hours of non-Nursing electives, no more than 6 credit hours may be at the 100 (introductory) level. Students who graduated from Health Sciences Centre after 1981, or took N311 Microbiology at Red River College after 1989, should contact the BPRN student advisor if they are considering registration in MBIO 1220 (formerly 060.122) Essentials of Microbiology as a non-Nursing elective. Students who completed Anatomy and Physiology at a university level (equivalent to ZOOL 1320 (formerly 022.132) and ZOOL 1330 (formerly 022.133) in their diploma program should not take any further introductory-level anatomy and physiology courses as their non-Nursing electives. See section 6.5 for suggestions re: Non-Nursing Electives for the BPRN.

5) Credit may not be held for both NURS 3440 (formerly 049.344) and the former 090.324.

6.4 Clinical Courses for the BPRN

Review section 4.3 Regulations for All Students which contains information regarding the Personal Health Information Act (PHIA), immunization and CPR regulations, and other information specific to clinical practice.

A clinical course (normally designated by the fact that it is a 4 credit hour project based course) will involve a heavier workload and time commitment than a 3 credit hour course. For most of these courses, clinical placements/assignments will be arranged between the course leader and student at or prior to the start of a term. However, for courses NURS 3200 (formerly 049.320) and NURS 4210 (formerly 049.421), students must contact the course leader at least three months prior to the start of classes to state their intention to register for these courses and to discuss preference of clinical sites. Placement sites will be arranged as requested by the student on a first-come, first-served basis according to the availability of the agency. Failure to contact the course leader as noted above may result in the student being placed in a site determined by the Faculty of Nursing.

NURS 4210 (formerly 049.421) Independent Study in Nursing

The student is responsible for choosing an area for completion of the practicum experience. The choice of subject, the proposed plan for completion of the study, and the faculty advisor selected by the student must all be approved by the Faculty of Nursing. In addition, the location of the practicum must be approved by the Faculty of Nursing.

There may be organizations which require contractual arrangements with the student and/ or the University of Manitoba prior to permitting the student to enter the practicum experience. There is no guarantee that the University of Manitoba will enter into a particular agreement and, if an agreement is not approved, the student would have to select an alternate practicum site. Any costs incurred in completing this course are the responsibility of the student.

Information sessions for NURS 4210 (formerly 049.421) are held twice yearly, in October and in March. Refer to the BPRN News website for dates. **Any student who is unable to attend the information session should contact the Course Leader at least 3 months prior to the start of the term in which the course is offered in order to discuss the proposal.**

6.5 Courses Which May be Used as Non-Nursing Electives in the BPRN

Courses may be selected from any faculty or school of the University, subject to faculty/department regulations and subject to the student's meeting any prerequisite requirements. Some suggestions follow:

Faculty of Arts courses - e.g. anthropology, native studies, psychology, sociology, religion

Faculty of Human Ecology - e.g. foods and nutrition, Family Social Sciences

Asper School of Business (Management) - e.g. courses in business administration, management, organizational behaviour

Faculty of Physical Education and Recreation Studies

Faculty of Science - e.g. biology, chemistry, computer science, microbiology, zoology

Faculty of Social Work - e.g. courses in social welfare policy, communication skills

6.6 Adult Intensive Care Courses

Consult the Assistant for the Collaborative Adult Intensive Care Nursing (CAICN) courses at 474-6266.

- At St. Boniface General Hospital or the Health Sciences Centre

Students intending to take all four collaborative adult intensive care courses must apply through the CAICN Assistant, Adult Intensive Care Courses, Faculty of Nursing.

Students in the Baccalaureate Program for Registered Nurses may register without special permission for NURS 3440 (formerly 049.344) and/or NURS 3240 (formerly 049.324).

For students in the Baccalaureate Program for Registered Nurses, course NURS 3240 (formerly 049.324) may be used as a Nursing clinical elective (4 credit hours), courses NURS 3250 (formerly 049.325) and NURS 3260 (formerly 049.326) may be used in lieu of NURS 4210 (formerly 049.421) Independent Study in Nursing Practice, and NURS 3440 (formerly 049.344) may be used as a Nursing elective. The former 090.324 may be used as either a Nursing or non-Nursing elective.

SECTION 7: Inter-Faculty Option in Aging

An Inter-Faculty Option in Aging is offered by the following faculties: Architecture (Interior and Environmental Design), Arts, Human Ecology, Nursing, Physical Education and Recreation Studies, and Social Work. To complete the Inter-Faculty Option in Aging, students will complete a total of 18 credit hours including each of the following:

- Required Courses (six credits). See the Registration Guide for the current course number being offered.

a) IDES 2650 (formerly 051.265)/HMEC 2650 (formerly 028.265)/REC 2650 (formerly 123.265)/SWRK 2650 (formerly 047.265) The Social Aspects of Aging (3 credit hours)

b) NURS 2610 (formerly 049.261)/PHED 2610 (formerly 057.261) Health and Physical Aspects of Aging (3 credit hours)

- Electives (12 credit hours).

a) At least three credits of professional/discipline-specific applied work on aging within the student's faculty of registration; and

b) An additional nine credit hours in aging electives from the participating faculties. Students can take nine credit hours from their own faculty but are encouraged to select offerings from other faculties. Lists of eligible elective courses are available from the student advisors.

- The nursing option in aging elective is NURS 2200 (formerly 049.220) Topics in Aging.

Upon completion of these requirements, the "Option in Aging" comment will be recorded on the student's transcript. Information on the Inter-Faculty Option in Aging is available from a student advisor.

SECTION 8: Course Descriptions

8.1 Four-Year Baccalaureate Nursing Program

NOTE: As a general principle all courses from any given year are to be completed before proceeding to the next year. Specific pre or corequisites for courses are listed below. A minimum grade of "C" is required in all courses.

U1 NURS 1260 Human Growth and Development Cr.Hrs.3 (Formerly 049.126) Study of the normal growth and development across the lifespan, with consideration of current physiological and psychological knowledge.

U1 NURS 1280 Introduction to Nursing Cr.Hrs.3 (Formerly 049.128) The student is introduced to the profession of nursing and to some basic concepts relevant to nursing practice, education and research. Past, present and future roles and functions of the nurse will be explored.

NURS 2120 Nursing Health Assessment Cr.Hrs.4 (Formerly 049.212) This course focuses on the development of nursing theory and skills required to assess and record the physical and psychosocial status of healthy individuals. Age and cultural variations are identified. A basic level of assessment of the family and community will be introduced.

NURS 2130 Nursing Skills Laboratory Cr.Hrs.2 (Formerly 049.213) Students will learn skills required to assist healthy clients to maintain or improve health. Modifications to the skills required because of age and cultural differences of clients will be identified. Strategies for assisting family care givers to perform selected skills will be incorporated.

NURS 2140 Health Promotion of Individuals Cr.Hrs.4 (Formerly 049.214) Concepts of bio/psychosocial/spiritual wellness of individuals of all ages are described in the context of a family and community. Nursing roles in health promotion are compared critically to those of other health team members. Related issues and research are examined. May not hold for credit with NURS 2240 (or 049.224).

NURS 2150 Facilitation of Self Care Cr.Hrs.3 (Formerly 049.215) This course focuses on the concept of self care and related issues and research. Behavioural and environmental factors that influence self care, theories, principles and strategies for assessing and meeting the learning needs of clients and their families, and the nurse's role in facilitating self care will be discussed. May not hold for credit with NURS 2230 (or 049.223).

NURS 2160 Introduction to Legal and Ethical Foundations of Nursing Practice Cr.Hrs.3 (Formerly 049.216) This course will examine the legal and ethical foundations that guide nursing practice. The processes of critical analysis and reasoning will be applied to common legal and ethical dilemmas. May not hold for credit with NURS 3450 (or 049.345).

NURS 2170 Prevention of Illness Cr.Hrs.3 (Formerly 049.217) This course focuses on the nurse's role in the prevention of dysfunction and the early detection of health risks in the individual, family and community. Issues and research relevant to illness prevention are incorporated. Must be Pre- or corequisite with NURS 2180 (formerly 049.218). May not hold for credit with NURS 4440 (or 049.444).

NURS 2180 Clinical Nursing Practice 1 Cr.Hrs.3 (Formerly 049.218) Students will apply concepts of health promotion and illness prevention to the care of infants, children, adolescents and young adults. The focus is on health related nursing phenomena and the development of assessment, communication, teaching/facilitative and basic psychomotor skills. Pre- or corequisites: NURS 1280 (or 049.128); NURS 2120 (or 049.212); NURS 2130 (or 049.213); NURS 2140 (or 049.214) or NURS 2240; NURS 2170 (or 049.217).

NURS 2190 Clinical Nursing Practice 2 Cr.Hrs.3 (Formerly 049.219) Students will apply concepts of health promotion and illness prevention to the care of healthy and at risk middle aged and elderly adults. The focus is on health risk phenomena and the development of assessment, communication, teaching/facilitative, and basic psychomotor skills. Pre- or corequisites: NURS 1280 (or 049.128); NURS 2120 (or 049.212); NURS 2130 (or 049.213); NURS 2150 (or 049.215) or NURS 2230.

NURS 2220 Pharmacology in Nursing Practice Cr.Hrs.3 (Formerly 049.222) Course introduces students to basic concepts and principles related to pharmacology (pharmacokinetics, pharmacodynamics, pharmacotherapeutics) and the nurses' role in drug therapy. The major classifications of drugs will be examined along with issues arising from the use of drug therapy in contemporary society. Prerequisites: ZOO 1320 (or 022.132); ZOO 1330 (or 022.133).

NURS 2230 Health Promotion of Older Adults and their Families Cr.Hrs.4 Focuses on the aging changes that occur in older adults and the interaction between aging changes and illness and the resultant presentation of symptoms and functional consequences. Health promotion strategies, including health teaching are highlighted to encourage, maintain and enhance independence, based on the older adult's abilities. Selected teaching/learning models, barriers and motivators, and their application to older adults are discussed.

NURS 2240 Health Promotion of Child Bearing & Child Rearing Families Cr.Hrs.6 This course provides an overview of health promotion of infants, children, adolescents, and parents within the family context. The focus is on theories, concepts, nursing research, evidence-based nursing practice, and nursing care related to children and families. Pre- or corequisite: NURS 2120 (or 049.212). May not hold for credit with NURS 2140 (or 049.214) or NURS 3270 or 049.327).

NURS 3210 Nursing Research Methods Cr.Hrs.3 (Formerly 049.321) This course provides an overview of research strategies in nursing with a focus on the acquisition of concepts in order to appraise critically nursing research. Strongly recommended that students complete STAT 1000 (or 005.100) (formerly 005.220) prior to NURS 3210 (or 049.321).

NURS 3270 Health Promotion in Families Cr.Hrs.3 (Formerly 049.327) This course focuses on an advanced level of family assessment and integration of family theory into nursing practice. Skills required to assist families to increase control over and to

improve their health are explored. May not hold for credit with NURS 2240 (or 049.224).

NURS 3280 Nursing Skills Laboratory Cr.Hrs.2 (Formerly 049.328) This course focuses on the development of clinical nursing skills required to assist ill or dying clients. Modifications to the skills required because of age, cultural differences or client preference are identified.

NURS 3290 Health Restoration in Nursing Cr.Hrs.6 (Formerly 049.329) This course focuses on concepts, issues and research related to nursing care of clients across the lifespan in the acute phase of disease. The impact on the family and community will be explored.

NURS 3300 Clinical Nursing Practice 3 Cr.Hrs.3 (Formerly 049.330) Students will apply concepts of health restoration to the care of ill clients of all ages and their families in the acute stage of disease. The focus is on illness related phenomena, critical thinking, the development of the care provider and communicator roles, application of research findings and identification of practice issues. Pre- or corequisites: NURS 3280 (or 049.328); NURS 3290 (or 049.329).

NURS 3310 Health Maintenance in Nursing Cr.Hrs.6 (Formerly 049.331) This course focuses on concepts, issues and research related to nursing care of individuals across the lifespan who require health maintenance for long term illnesses. The impact on the family and community will be explored.

NURS 3320 Clinical Nursing Practice 4 Cr.Hrs.3 (Formerly 049.332) Students will apply concepts of health maintenance to the care of clients of all ages with long term illness and their families. The focus is on illness related phenomena, analytical thinking, the development of the care provider and communicator roles, application of research findings and identification of practice issues. Pre- or corequisites: NURS 3270 (or 049.327); NURS 3280 (or 049.328); NURS 3310 (or 049.331).

NURS 3450 Introduction to Legal and Ethical Foundations of Nursing Practice Cr.Hrs.3 This course will examine the legal and ethical foundations that guide nursing practice. The processes of critical analysis and reasoning will be applied to common legal and ethical dilemmas. May not hold for credit with NURS 2160 (or 049.216).

NURS 4170 Issues and Trends in Nursing and Health Care Cr.Hrs.3 (Formerly 049.417) Study of the forces shaping nursing education, service and research and analysis of current issues in nursing and health care. The learner will develop awareness of professional nursing roles and responsibilities.

NURS 4190 Leadership in Nursing Practice Cr.Hrs.3 (Formerly 049.419) Focuses on selected theories of leadership and management. Effective interpersonal behaviour in health care organizations will be examined. The learner will explore own potential to effect change in the health care system.

NURS 4240 Health Promotion in the Community Cr.Hrs.4 (Formerly 049.424) This course will provide the opportunity to examine concepts, theories, research and nursing roles as they apply to the promotion of health in communities. Relevant theories and research about group process will be incorporated in the analysis of community health issues.

NURS 4250 Palliative Nursing Care Cr.Hrs.3 (Formerly 049.425) This course focuses on concepts, issues, research and skills related to the nursing care of individuals across the lifespan who are experiencing irreversible loss. The impact on the family and the community will be emphasized.

NURS 4260 Nursing Care in Mental Health and Illness Cr.Hrs.3 (Formerly 049.426) This course deals with the concept of mental health and illness as it applies to individuals across the lifespan. The effect on the individual, the family and the community will be stressed. The student will gain a greater awareness of the self and the therapeutic use of self in the providing of nursing care.

NURS 4270 Clinical Nursing Practice 5 Cr.Hrs.4 (Formerly 049.427) Students will apply nursing concepts and relevant theories and research in the care of clients and their families who are experiencing psychological stress and to those who are dying. The focus is on critical thinking, the development of the communicator, advocate and collaborator roles. Corequisites: NURS 4250 (or 049.425); NURS 4260 (or 049.426).

NURS 4280 Theories in Nursing Practice Cr.Hrs.3 (Formerly 049.428) This course will enable the student to develop skill in the critical analysis of theories proposed by theorists in nursing and other disciplines. The utility of these theories for nursing practice, education and research will be examined.

NURS 4290 Clinical Practicum Cr.Hrs.10 (Formerly 049.429) This course enables students to integrate and critically apply concepts, theories and relevant research to an area of practice and a client group of their choice. Care will address all levels of health, reflect application of a focused body of theory, and consider concepts of leadership, research, ethics, family and community care. Prerequisites: all courses in the program.

NURS 4310 Nursing Leadership: Practice and Issues Cr.Hrs.4 (Formerly 049.431) The study of the forces shaping nursing leadership and analysis of current issues and trends in nursing and health care. Emphasis will be placed on leadership development within the context of the health care environment now and into the future. May not hold for credit with NURS 4170 (or 049.417) or NURS 4190 (or 049.419).

NURS 4420 Health Promotion in the Community Cr.Hrs.3 This course will provide the opportunity to examine concepts, theories, research and nursing roles as they apply to the promotion of health in communities. Relevant theories and research about group process will be incorporated in the analysis of community health issues.

NURS 4430 Clinical Nursing Practice 6 Cr.Hrs.3 Students will apply relevant concepts, theories, and research in primary health care, population health, and prevention of illness. The focus is on nursing practice at the aggregate level with a focus on the development of skills necessary to work effectively with at risk populations and communities. Prerequisites: NURS 2180 (or 049.218); NURS 2190 (or 049.219); NURS 3300 (or 049.330); and NURS 3320 (or 049.332). Corequisites: NURS 4440 and NURS 4420.

NURS 4440 Prevention of Illness Cr.Hrs.3 This course focuses on the nurse's role in the prevention of dysfunction and the early detection of health risks in the individual, family and community. Issues and research relevant to illness prevention are incorporated. May not hold for credit with NURS 2170 (or 049.217).

8.2 Baccalaureate Program for Registered Nurses

NURS 2110 Health Assessment of Individuals Cr.Hrs.3 (Formerly 049.211) The focus is on health assessment of adults including the normal changes which occur in childhood and aging. The course will provide opportunity to learn the health history and physical examination skills essential to health assessment.

NURS 3200 Nursing of Individuals and Families with Long-Term Illness and Disability Cr.Hrs.4 (Formerly 049.320) Nursing of individuals and families of all age groups who require palliative nursing measures or need assistance in adapting to long-term illness. The learner will participate in planning relevant clinical experiences to meet own learning objectives.

NURS 3210 Nursing Research Methods Cr.Hrs.3 (Formerly 049.321) This course provides an overview of research strategies in nursing with a focus on the acquisition of concepts in order to appraise critically nursing research. Strongly recommended that students complete STAT 1000 (or 005.100) (formerly 005.220) prior to NURS 3210.

NURS 3220 Community Health Nursing 1 Cr.Hrs.4 (Formerly 049.322) An analysis of concepts of prevention of disease/dysfunction and promotion of health in community based populations. Focus is on primary and secondary prevention and the promotion of health with identified risk groups. Population groups are assessed for risks to their physical and psychosocial health and current preventive and promotive measures analyzed and critiqued. The impact of macro systems in promoting health is discussed. May not hold for credit with NURS 3360 (or 049.336).

NURS 3230 Perspectives on Mental Health Nursing Cr.Hrs.4 (Formerly 049.323) Emphasis will be placed on the mental health needs of individuals and their families who are experiencing mental health problems and/or mental illness. Diverse perspectives on mental health and illness will be explored. A clinical practicum will provide an opportunity to apply mental health nursing principles in community settings.

NURS 3360 Assessing the Health of Communities Cr.Hrs.4 (Formerly 049.336) An analysis of concepts of prevention of disease and dysfunction in aggregate and community-based populations in First Nations Communities. May not hold for credit with NURS 3220 (or 049.322).

NURS 3390 Nursing in Rural Environments Cr.Hrs.4 (Formerly 049.339) Emphasis will be placed on the health needs of residents in a rural environment. The nature of nursing and issues encountered in a rural setting, whether in a health care institution or a community health nursing practice are explored. A clinical practicum is an integral part of the course.

NURS 3430 Seminar in Professional Nursing Foundations Cr.Hrs.2 (Formerly 049.343) The study and application of academic skills, nursing informatics and theoretical foundations, designed to assist diploma-prepared registered nurses to successfully transition to university and the Baccalaureate Program for Registered Nurses. May not hold for credit with NURS 3190 (or 049.319).

NURS 4160 Community Health Nursing 2 Cr.Hrs.4 (Formerly 049.416) Application, integration and synthesis of knowledge and skills in the utilization of the nursing process with families. Development of skills in the process of change with families. Orientation to the concept of prevention and health promotion as focal concepts in the practice of nursing with families in communities. Pre- or corequisite: NURS 3220 (or 049.322). May not hold for credit with NURS 4300 (or 049.430).

NURS 4200 The Teaching-Learning Process in Nursing Practice Cr.Hrs.3 (Formerly 049.420) Focuses on theories and models of teaching and learning. Principles and strategies for assessing the health/illness learning needs of individuals, groups and communities and for planning, implementing and monitoring the process in nursing situations will be examined. The nursing research base for the process will be explored. Linkages with related nursing concepts will also be demonstrated.

NURS 4210 Independent Study in Nursing Cr.Hrs.4 (Formerly 049.421) The learner will have an opportunity to formulate a learning contract to explore, in depth, an area of nursing. This learning contract is to include a major emphasis on the theoretical basis of the selected topic. Prerequisite: 35 credit hours of completed study in the program.

NURS 4220 Law and Ethics in Nursing Practice Cr.Hrs.3 (Formerly 049.422) A study of the legal and philosophical bases of the nursing profession and the legal and bioethical issues confronting the professional nurse primarily in the practice setting. A major goal of the course is to draw upon material specific to the professional nurse.

NURS 4300 Promoting Health of Communities Cr.Hrs.4 (Formerly 049.430) Theoretical and practical application regarding the promotion of health in First Nations Communities. May not hold for credit with NURS 4160 (or 049.416).

NURS 4310 Nursing Leadership: Practice and Issues Cr.Hrs.4 (Formerly 049.431) The study of the forces shaping nursing leadership and analysis of current issues and trends in nursing and health care. Emphasis will be placed on leadership development within the context of the health care environment now and into the future. May not hold for credit with NURS 4170 (or 049.417) or NURS 4190 (or 049.419).

8.3 Nursing Electives

NURS 2200 Selected Topics in Aging and Health Cr.Hrs.3 (Formerly 049.220) Emphasis will be placed on theory and research related to a current topic in aging and health. Special attention will be directed to integrating concepts and processes of aging. A practicum/field work component will be an integral part of the course. Prerequisites: core courses in the Inter-faculty Option in Aging or permission from the course leader.

NURS 2610/PHED 2610 Health and Physical Aspects of Aging Cr.Hrs.3 (Formerly 049.261/057.261) An introduction to health, well-being and aging. Emphasis on health as multidimensional including physical, social and mental health. Integration of theory and research in examining selected issues related to health and physical aspects of aging. Students may not hold credit for both NURS 2610 (or 049.261) and PHED 2610 (or 057.261). (A required Option in Aging course.)

NURS 3330 Women and Health Cr.Hrs.3 (Formerly 049.333) Introduction to health concepts and issues as they relate to women from a woman's health perspective. Emphasis on enhancing self-care and prevention. Studies the relationship between a woman and the Canadian Health Care System, and appropriate methodology for self-care, vis-a-vis nutrition, reproduction, menarche, menopause, etc. May not hold for credit with former 049.423. Caution: This course is not intended for 1st year students.

NURS 3340 Providing Care in a Culturally Diverse Society Cr.Hrs.3 (Formerly 049.334) This course fosters skills in recognizing and understanding the impact of culture on health related values, beliefs and practices. A culture-general approach is used to develop skills in the provision of nursing care within a culturally diverse society.

NURS 3350 Counselling Skills for Nurses Cr.Hrs.3 (Formerly 049.335) Builds on the significance of interpersonal skills in nursing practice in health and illness. Examines theoretical basis and practical application of a counselling approach with clients. Students will have the opportunity for experiential learning.

NURS 3400 Men's Health: Concerns, Issues and Myths Cr.Hrs.3 (Formerly 049.340) An exploration and examination of concerns, issues and myths surrounding men's health and men's health related behaviours. Students will develop a knowledge base for promoting health and preventing illness in men.

SWRK 2650/IDES 2650/HMEC 2650/REC 2650 Cr.Hrs.3 (Formerly 047.265/051.265/028.265/123.265) An examination of the social aspects of aging. Emphasis on understanding the aging process as a life transition involving adaptation through interaction with social and physical environments. Students may not hold credit for SWRK 2650 and IDES 2650 or HMEC 2650 or REC 2650, or the former 047.265 or 057.265 or 028.265 or 123.265. (A required Option in Aging course.)

8.4 Nursing Electives: Baccalaureate Program for Registered Nurses Only

Collaborative Adult Intensive Care Courses

NURS 3240 Adult Intensive Care Nursing 1 Cr.Hrs.4 (Formerly 049.324) Focus is on the knowledge, integration and application of major intensive care nursing concepts and theories. Pre- or corequisite: NURS 3440 (or 049.344) (formerly 090.324).

NURS 3250 Laboratory Practice in Adult Intensive Care Nursing Cr.Hrs.2 (Formerly 049.325) Laboratory course focusing on the acquisition of selected skills associated with the nursing care of critically ill adult patients. Pre- or corequisites: NURS 3240 (or 049.324); NURS 3440 (or 049.344) (formerly 090.324).

NURS 3260 Clinical Practice in Adult Intensive Care Nursing Cr.Hrs.3 (Formerly 049.326) Selective clinical experience, in adult intensive care settings, is designed to enable the learner to apply critical care theory. Prerequisites: NURS 3240 (or 049.324); NURS 3250 (or 049.325); NURS 3440 (or 049.344) (formerly 090.324).

NURS 3440 Principles of Disease Related to Adult Intensive Care Cr.Hrs.3 (Formerly 049.344) Course focuses on advanced physiology and pathophysiology of the following body systems: cardiovascular, respiratory, neurological, renal and endocrine. May not hold for credit with the former 090.324.

Primary Care Skills Courses (Currently Not Offered)

NURS 2210 Primary Care Skills: Comprehensive Health Assessment Cr.Hrs.3 (Formerly 049.221) Students will engage in comprehensive data collection through obtaining a health history and performing a complete physical exam on newborn, pediatric, obstetric and adult clients.

NURS 3370 Primary Care Skills: Clinical Consolidation Cr.Hrs.6 (Formerly 049.337) Students will be provided with opportunities to integrate and consolidate clinical nursing skills. Clinical sites include: medicine, emergency, L & D, pediatric E.R.

NURS 3380 Primary Care Skills: Clinical Interventions Cr.Hrs.6 (Formerly 049.338) Acute and chronic health conditions throughout the lifespan, and as identified in First Nations and Inuit Health Branch's "Scope of Practice" will be addressed through lectures, case studies, student presentations, internet technology and independent learning, basic trauma life support and pediatric life support courses.

Community Health Courses

NURS 3360 Assessing the Health of Communities Cr.Hrs.4 (Formerly 049.336) An analysis of concepts of prevention of disease and dysfunction in aggregate and community-based populations in First Nations Communities. May not hold for credit with NURS 3220 (or 049.322).

NURS 4300 Promoting Health of Communities Cr.Hrs.4 (Formerly 049.430) Theoretical and practical application regarding the promotion of health in First Nations Communities. May not hold for credit with NURS 4160 (or 049.416).

Faculty of Pharmacy

General Office

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Dean: David M. Collins

Associate Dean (Academic): Sheryl Zelenitsky

Associate Dean (Research) and Graduate Chair: Keith Simons

Assistant to the Associate Dean (Academic) & (Research):
Lisa Wolfe-Ulrich

Faculty Manager: Janice Bailey

Assistant to the Dean: Joanne Ogilvie

Office Assistant: Terri Martin

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Pharmacy Education

SECTION 3: Admission to Pharmacy

- 3.1 Degree Offered
- 3.2 Course Requirements

SECTION 4: Academic Regulations

- 4.1 Scholastic Progress
- 4.2 Appeals concerning Scholastic Progress
- 4.3 Transfer of Credit Earned Elsewhere
- 4.4 Residence Requirements
- 4.5 Attendance at Class
- 4.6 Voluntary Withdrawal
- 4.7 Deferred Examinations
- 4.8 Incompletes
- 4.9 Eligibility for Medals, Scholarships, Awards and Prizes
- 4.10 Immunization
- 4.11 Academic Honesty
- 4.12 Professional Unsuitability By-Law
- 4.13 Completion of the Bachelor Program

SECTION 5: Bachelor of Science in Pharmacy Program

SECTION 6: Course Descriptions

SECTION 1: Academic Staff

Dean Emeritus

Steele, J.W., B.Sc. (Pharm.), A.R.S.C., Ph.D. (Glasgow).

Professor Emeritus

Templeton, J.F., B.Sc., M.Sc. (Memorial), D.I.C. (Imperial Coll.), Ph.D., D.Sc., (London), F.R.S.C., C. Chem., (UK).

Senior Scholar

Briggs, C.J., B.Pharm., Ph.D. (London), F.R.Pharm.S.

Professors

Burczynski, F., B.Sc. (Pharm.), M.Sc., Ph.D. (Manitoba); Collins, D.M., Dipl. Pharm. (NZL), M.Sc., Ph.D. (Minnesota); Grymonpre, R., B.Sc.

(Pharm.) (Manitoba), Pharm.D. (Minnesota); Han, J., B.Sc., M.Sc. (Korea), Ph.D., (Purdue); Hasinoff, B., B.Sc.(Hons.), Ph.D. (Alberta); Pierce, G., Ph.D., (Manitoba), FACC, FAHA; Simons, K.J., B.Sc. (Pharm.), M.Sc. (Manitoba), Ph.D. (Washington); Sitar, D., B.Sc. (Pharm.), M.Sc., Ph.D. (Manitoba); Zhanel, G., B.Sc. (Pharm.), Ph.D., (Manitoba), Pharm.D., (Minnesota); Zelenitsky, S., B.Sc. (Pharm.) (Manitoba), Pharm.D. (SUNY Buffalo).

Associate Professors

Ariano, R., B.Sc. (Pharm.) (Manitoba), Pharm.D. (Minnesota), B.C.P.S., Gong, Y., B.M. (Beijing), M.Sc. (China), Ph.D., (Manitoba); Gu, X. (B.Sc.) (Pharm.), M.Sc., Ph.D., (Nanjing); Kozyrskyj, A., B.Sc.(Hons.), (Pharm.), (Toronto), M.Sc., Ph.D., (Man.); McIntosh, A.R., B.Sc. (Chem.) (Calgary), Ph.D. (Queen's); Metge, C., B.Sc. (Pharm.) (Alberta), Ph.D. (MD); Vercaigne, L., B.Sc. (Pharm.), (Manitoba), Pharm.D. (Toronto).

Assistant Professors

Alessi-Severini, S., B.Sc. (Pharm.) (Parma), B.Sc. (Pharm Chem and Tech) (Parma), Ph.D., (Alta.); Anderson, H., B.Sc, Ph.D., (Manitoba); Coulter, A., B.Sc. (Pharm.) (Manitoba), Pharm.D. (Cincinnati); Davis, C., B.Sc. (Pharm.) (Manitoba), Pharm.D. (B.C.); Strijack, C., B.Sc. (Pharm.) (Manitoba), B.Sc. (Manitoba); Friesen, M., B.Sc. (Pharm.), M.Sc. (Manitoba), Pharm.D. (Toronto); Gin, A., B.Sc. (Pharm.) (Manitoba), Pharm. D. (SUN-YAB); Hall, K., B.Sc. (Pharm.) Dalhousie, Pharm.D. (SUNYAB); Honcharik, N., B.Sc. (Pharm.), Pharm.D. (SUNYAB); Honcharik, P., B.Sc. (Pharm.) (Manitoba), Pharm.D. (SUNYAB); Namaka, M., B.Sc. (Pharm.), M.Sc., Ph.D., (Manitoba); Patel, P, B.Sc. (Pharm), Pharm.D. (B.C.); Thomson, P., B.Sc. (Pharm.) (UBC), Pharm.D. (Wayne State); Thurmeier, R., B.Sc., (Pharm.) (Manitoba); Trozzo, B.Sc. (Pharm.) (Manitoba); Watral, W, B.S. (Pharm.)(Man.), Pharm.D., (Minn.); Wazny, L, B.Sc. (Pharm.), Pharm.D. (CDE); Woloschuk, D., (B.Sc.) (Pharm.), (Saskatchewan), Pharm.D., (Cincinnati).

Lecturers

Boyd, D., B.Sc. (Pharm.) (Manitoba); Forsyth, R., B.Sc. (Pharm.) (Manitoba); Guse, R., B.Sc. (Pharm.) (Manitoba); Lessard-Friesen, S., B.Sc. (Pharm.) (Manitoba).

Instructors

Brink, K., B.Sc. (Pharm.) (Manitoba); Cote, D., B.Sc. (Pharm.), M.Sc. (Manitoba); Durocher, R., Dip. Pharm. (Guyana), B.Sc., B.Sc. (Pharm.) (Manitoba); Guse, R., B.Sc. (Pharm.) (Manitoba); Khoe, S, B.Sc. (Pharm.) (Man.); Kremers, M., B.Sc. (Pharm.) (Manitoba); Raymond, C, B.Sc. (Pharm.) (Alta.), Pharm.D. (B.C.); Thadani, M., B.Sc. (Pharm.), M.Sc. (Manitoba); Treacy, S., M.Sc. (Saskatchewan).

Adjunct Professors

Bras, A., B.Sc. (Chem.) (Manitoba), Ph.D., (Manitoba); Friesen, A., B.Sc., M.Sc., Ph.D., (Manitoba); Leslie, W, B.Sc.(Hons.), M.Sc., MD (Manitoba); Murray, H.E., M.D. (Manitoba).

SECTION 2: Pharmacy Education

Pharmacy is the profession concerned with the art and science of preparing from natural and synthetic sources suitable and convenient dosage forms for distribution and use in the treatment and prevention of disease. Pharmacy embraces knowledge of the identification, selection, pharmacologic action, preservation, combination, analysis, and standardization of drugs and medicines. It also includes their proper and safe distribution and use, whether dispensed on the prescription of a physician, dentist, or veterinarian, or when it is dispensed directly to the consumer. As part of a knowledge system in which drugs and people interact, pharmacy also embraces an understanding of social and behavioural aspects of the use of medicines.

The pharmacist is a specialist in drug therapy and is expected to provide adequate pharmaceutical care for patients. This includes evaluating the pa-

patient's drug therapy record; ensuring safe procurement, storage, preparation and dispensing of pharmaceutical products; discussing actual or potential drug-related problems with patients, their physicians and caregivers; monitoring drug therapy to identify drug-related problems; advising patients on selection and use of non-prescription drugs, directing patients to consult physicians for diagnosis and treatment when required; notifying physicians of actual or suspected adverse reactions to drugs and providing specific information to patients.

SECTION 3: Admission to Pharmacy

3.1 Degree Offered

Bachelor of Science in Pharmacy

Minimum time to graduation: Five years (University 1 plus four years).

All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

3.2 Course requirements

Chemistry CHEM 1300 and CHEM 1310

Biology BIOL 1250 or BIOL 1020 & BIOL 1030

Mathematics MATH 1500M, or MATH 1510M or MATH 1520M, or MATH 1530M

6 credit hours of Arts electives

9 credit hours of open electives

The electives must include a 3 credit hour course which will meet the University's Written English (W) requirement. 90 level courses are NOT acceptable.

Other requirements

High school prerequisites: Math 40S (pre-calculus) with minimum grade of 60%, and Chemistry 40S, English 40S or 40G.

Minimum GPA for consideration: 3.5. To be competitive, under the academic category the AGPA should be a minimum of 3.60.

The admission process includes a written essay/problem solving exercise.

Selection criteria: 70% grades, 30% written essay/problem solving exercise. Only students with an essay score of five or more (of a possible ten) will be ranked for admission.

Professional Registration

Manitoba Pharmaceutical Association

Students who are accepted for admission to the Faculty of Pharmacy and have commenced classes in the faculty shall, before October 31 in the year in which they are admitted to the faculty, file an application for registration as a student of the Manitoba Pharmaceutical Association. Application forms are obtainable from The Registrar, Manitoba Pharmaceutical Association, 187 St. Mary's Road, Winnipeg, Manitoba R2H 1J2; telephone, (204) 233 1411 or also available in the Faculty General Office. The necessary documents which must accompany the application are indicated on the form.

Full information on the requirements for licensure in the Province of Manitoba are available from the registrar of the Manitoba Pharmaceutical Association.

Pharmacy Examining Board of Canada

All applicants for licensure must pass the qualifying examinations of the Pharmacy Examining Board of Canada. The board requires proof of language proficiency. Applicants who did not attend primary and secondary educational institutions where English or French was the principal language of instruction must provide evidence of successful completion of designated language proficiency tests before sitting for the qualifying examinations. Full information is available at the general office.

SECTION 4: Academic Regulations

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Pharmacy has regulations and requirements, published below, that apply specifically to its students.

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

4.1 Scholastic Progress

For course progression in the Faculty of Pharmacy students must achieve a minimum combined fall and winter term GPA of 2.0, and attain the minimum passing grade of "C" in each course.

A student in any of the first three years of the pharmacy program who records no more than two grades of "D" during the academic year, and who achieves a minimum combined fall and winter term GPA of 2.00, may at the discretion of the dean be permitted to apply for a supplementary examination in those courses.

A student in the fourth year of the pharmacy program who records no more than one grade of "D" during the academic year, and who achieves a minimum combined fall and winter term GPA of 2.00, may at the discretion of the dean be permitted to apply for a supplementary examination in that course.

Application forms for supplementary examinations are available in the faculty office, and the examination is subject to a prescribed fee. Supplementary exams will normally take place in the following mid-summer examination session each year.

A student who has failed to record a minimum grade of "C" in more than two courses within years one to three of the pharmacy program, or in more than one course in the fourth year of the pharmacy program, or who records a grade of "F" during the academic year at any stage during their program may not be granted supplementary examinations unless the dean by reason of special circumstances applicable to the student's case otherwise decides.

A candidate who has been allowed to sit for a supplementary examination may not be awarded a grade higher than "C" in that course. Grade calculations for any course following supplementary examination will be inclusive of on-course assessment. Grades achieved following supplementary examination will replace those grades originally recorded on the student's academic record.

A student who fails to achieve a passing grade of "C" in one course, following supplementary examination if that option is offered, and who achieves a minimum combined fall and winter term GPA of 2.00, will be required to repeat that course and may at the discretion of the dean be required to repeat all, or a number of courses in that year.

A student whose combined fall and winter term GPA falls below 2.0, or who fails to achieve a minimum passing grade of "C" in two courses, following supplementary examination if that option is offered, and whose combined fall and winter term GPA remains above 1.75, will be considered to have failed that year, and will be required to repeat all subjects in the following academic year.

The records of all students who fail a year, and the disposition of the cases, shall be reported to Faculty Council for information, but not for debate. Students who have cause to disagree with the disposition may file an appeal against the decision.

A student who fails more than one year in the program, or who fails the same year twice, shall be required to withdraw from the Pharmacy program.

A student who fails to achieve a passing grade in more than two courses in the academic session, or whose combined fall and winter term GPA falls below 1.75, or who fails to achieve a passing grade in a repeated year, will be required to withdraw from the Pharmacy program.

4.2 Appeals Concerning Scholastic Progress

Should a student wish to appeal against any decision concerning scholastic progress, the following procedure should be followed:

The problem should be discussed with the dean of Pharmacy, who will supply information about the appeals procedure, academic regulations and related matters.

Students who still wish to proceed with an appeal should consult the Student Advocate for advice and assistance, and a letter of appeal must be sent to the dean within 21 days of receiving notification of the decision. The let-

ter should state the nature of the decision being appealed and the alternative that is being requested.

The dean will respond in writing to notify the appellant of the date and time the student should attend a meeting of the Faculty Appeals Committee.

The Appeals Committee will comprise: the dean of the Faculty (or designate) as chair; one senior support staff member as secretary; three members of the full-time faculty appointed by the full-time faculty; a representative of the profession appointed by the Manitoba Pharmaceutical Association; one student member of Faculty Council appointed by the Faculty Council. The chair and senior support staff member are non-voting members.

Appellants have the right to attend the hearing of their appeal and may have a representative to assist them at the appeal hearing. This representative may be the Student Advocate or a fellow student or other full-time member of the university community not receiving payment for appearing, or working for Legal Aid. In addition, if the student wishes, one member of his or her immediate family, and also if desired a lawyer, may be present, but as observers who do not participate. The decision of the Appeals Committee will be conveyed to the student as soon as possible after the hearing.

If the appellant is still dissatisfied they may wish to discuss the issue further with the Student Advocate and/or the university Ombudsman. Student appellants should not expect a favourable decision when their appeal is based on grounds related to external factors such as employment, sports, or hobbies.

4.3 Transfer of Credit Earned Elsewhere

Pharmacy students transferring credit from any faculty or school in the University of Manitoba or from other universities or colleges will have each course acceptable for transfer purposes noted on the student record with the course classification of "TR" (transfer). The relevance of courses completed to the student's educational objective at the University of Manitoba and the quality of academic achievement as evidenced by the student's grades will be determining factors in assessing acceptability of credits earned elsewhere. No transfer of credit will be given for courses taken ten years or more prior to application date. No transfer of credit will be permitted for courses where a "D" grade (or its percentage equivalent) has been awarded.

4.4 Residence Requirements

A minimum of two years attendance at the university within the Faculty is required for the Bachelor of Science in Pharmacy, except with the permission of the faculty.

4.5 Attendance at Class

Regular attendance is required of all students in all courses. Students who are absent from class for a period of three days or more due to illness must present a certificate from a physician to the office of the dean upon their return. An instructor may initiate procedures to debar a student from attending classes and from final examinations where unexcused absences exceed three continuous sessions. Students must obtain prior approval from the dean for an absence exceeding one day for reasons other than illness.

4.6 Voluntary Withdrawals

Any student seeking to withdraw from a portion of, or all of their courses must provide written notification to the dean's office of the reasons for this request. Re-entry to Pharmacy by students who voluntarily withdraw, will be dependent on the availability of space and external rotation facilities. Any student who has voluntarily withdrawn from a portion of, or all of their courses in Pharmacy on more than one occasion will not be permitted re-entry into the program. Withdrawals for medical or compassionate reasons will not contribute toward this maximum. Students who, for medical reasons, withdraw from the program may not re-register until they have established, through proper medical consultation, their fitness to resume studies.

4.7 Deferred Examinations

Students may file an application for a deferred final examination with the dean for reasons of illness or other disability, or for compassionate reasons, setting out the reasons for the deferral. The application must be filed within

seven working days of the end of the examination series in which the examination was scheduled to be written and must be accompanied by a medical certificate or otherwise appropriate documentation certifying the reason for the deferral, the inability of the student to write the examination at the regular scheduled time and, where possible, indicating the period of disability. Based on the evidence provided, the dean shall decide whether the application is approved. Students who, for medical reasons receive deferred examination privileges for all final examination series may not re-register until they have established, through proper medical consultation, their fitness to resume studies. Any students requesting a deferred examination on the grounds that they are participating in an inter-university, provincial, inter-provincial, national or international scholastic or athletic event shall be granted said deferral, provided an application is filed with the dean of the faculty well in advance (normally 20 working days) of the scheduled examination; and that the dean is satisfied, based on the evidence provided, that the application should be approved and that an appropriate time, and acceptable invigilator is not otherwise available to the student. Any student requesting deferred examination(s) (hereinafter, the "deferred examination") will be required to sign an undertaking that the student has not discussed, reviewed, had access to, or otherwise become aware of the contents of the deferred examination except as expressly authorized by the Instructor or Professor for the course in which the deferred examination is being undertaken. "

4.8 Incompletes

A student who is unable to complete the term work prescribed in a course may apply to the instructor prior to the end of lectures for consideration of a grade classification of 'Incomplete.' Should an 'incomplete' be granted the student will still be required to write the final examination, if one is scheduled for the course, and a temporary grade of 'IF' will be submitted. In addition to the grade, the recommendation for an 'incomplete' should indicate the reason(s) for consideration being given, a description of the outstanding work to be completed, and the date by which the work must be submitted. If a final grade is not reported by the above maximum extension deadlines, the letter 'I' will be dropped and the grade of 'F' will remain as awarded, unless where specific circumstances warrant, the dean extends the date by which an Incomplete must be cleared. Instructors must formally request such an extension prior to the elapse of the maximum deadline date. In addition, the Registrar's Office must be notified of the extension.

4.9 Eligibility for Medals, Scholarships, Awards and Prizes

Eligible students who achieve a combined fall and winter term GPA of 4.0 or better will be included in the Dean's Honours List. Eligible students must have to complete a prescribed number of required courses. The number of required courses will be determined in 07R and is pending Senate approval.

4.10 Immunization

All students enrolled in the Faculty of Pharmacy must be immunized against the following diseases: diphtheria/tetanus, polio, rubella, measles, mumps and chickenpox and hepatitis B. Students who cannot be immunized because of allergies or for other reasons must provide a physician's certificate to verify these reasons. Students admitted to first year Pharmacy will be provided with an Immunization package at the time of acceptance into the Faculty and will be required to provide their Immunization Record Form at the beginning of classes. Students will not be able to attend clinical rotation until all immunization requirements are up-to-date. Students are responsible for updating their immunizations as needed.

4.11 Academic Honesty

Many courses in the Faculty of Pharmacy require group projects and students should be aware that these are subject to the same rules regarding academic honesty as individual projects. Because of the unique nature of group work, all members of the group should exercise special care to insure that work completed does not violate academic integrity. Should a violation occur, group members will be held jointly accountable unless the violation can be attributed to a specified individual, or group of individuals.

In the Faculty of Pharmacy all suspected cases of academic dishonesty will be passed to the dean's office for evaluation.

4.12 Professional Unsuitability By-Law

The Senate has approved a by-law granting authority to the faculty to require a student to withdraw for reasons of professional unsuitability. Copies of this by-law may be obtained from the Pharmacy Office.

4.13 Completion of the Bachelor Program

The maximum time allowable for completion of the Bachelor of Science, Pharmacy degree is seven years. Students must successfully complete all of the course work associated with a year in the program prior to being allowed to register for courses in the next year. In certain cases, the Dean may grant exceptions to this requirement.

SECTION 5: Program Requirements

Course No.		Credit Hours
First Year		
CHEM 2210	Organic Chemistry	3
CHEM 2360	Intermediate Biochemistry	3
CHEM 2370	Intermediate Biochemistry	3
PHRM 1000	Introduction to Pharmacy	1
PHRM 1100	Pharmacy Skills Laboratory (PSL-1)	5
PHRM 1300	Fundamentals of Pharmaceutics	4
PHRM 1430	Applied Pathophysiology for Pharmacy Students	3
PHRM 1700	Structured Practical Experiential Program 1 (SPEP-1)	1
MBIO 2100	General Microbiology	3
ANAT 1030	Human Anatomy	3
PHGY 1030	Fundamentals of Medical Physiology	6
Total credit hours		35
Second Year		
PHRM 2100	Pharmacy Skills Lab 2 (PSL-2)	3
PHRM 2220	Medicinal Chemistry 1	6
PHRM 2270	Pharmaceutics/Biopharmaceutics	6
PHRM 2280	Pharmacokinetics	3
PHRM 2310	Clinical Pharmacy 1	4
PHRM 2420	Applied Nutrition for Health Professionals	3
PHRM 2700	Structured Practical Experiential Program 2	2
MBIO 3010	Microbiology	3
PHAC 2100	Pharmacology	6
Total credit hours		36
Third year		
PHRM 3100	Pharmacy Skills Lab 3 (PSL-3)	2
PHRM 3210	Principles of Professional Practice	3
PHRM 3220	Medicinal Chemistry 2	3
PHRM 3310	Clinical Pharmacy 2	10
PHRM 3320	Pharmaceutical Analysis Lab	3
PHRM 3430	Natural Products	3
PHRM 3500	Clinical Pharmacokinetics	4
PHRM 3510	Principles of Scientific Literature	2
PHRM 3640	Principles of Biotechnology	3
PHRM 3700	Structured Practical Experiential Program 3	4
Total credit hours		37
Fourth Year		
Required Courses		
PHRM 4230	Pharmacy Practice Management	4
PHRM 4310	Clinical Pharmacy 3	4
PHRM 4450	Toxicology	3
PHRM 4470	Current Topics	3
PHRM 4700	SPEP - 4	10
PHRM 4800	Electives Program	10
Total Credit Hours		34
Total credit hours in all four years:		142

NOTES:

Students may not obtain any grade lower than "C" in all required courses.

A decision will be made annually on whether these courses will be taught in first or second term, or both.

Course descriptions of the Organic Chemistry (CHEM 2210) and Biochemistry courses (CHEM 2360/2370) will be found under the Department of Chemistry.

SECTION 6: Course Descriptions

Course scheduling conflicts will not be permitted without the express permission of the dean.

PHRM 1000 Introduction to Pharmacy Cr.Hrs.1 (Formerly 046.100) This course provides an orientation to pharmacy and to the application of medicines within the context of today's dynamic medical care system. It has been designed to highlight professionalism early in the Pharmacy curriculum and will provide the opportunity for students to interact with pharmacy professionals "at the cutting edge" of pharmacy practice.

PHRM 1100 Pharmacy Skills Laboratory 1 Cr.Hrs.5 (Formerly 046.110) This is a multifaceted course using an integrated skills laboratory format to develop essential skills that students require for pharmacy practice. These skills primarily involve communication, problem solving and critical thinking that form the foundation for lifelong learning. Exploring ethical principles and professionalism are also essential components of this course.

PHRM 1300 Fundamentals of Pharmaceutics Cr.Hrs.4 (Formerly 046.130) In a classroom and laboratory setting, this course provides an introduction to the compounding of pharmaceutical products and the physicochemical basis of product formulation. Practical aspects of formulation and an introduction to the dispensing function are also explored.

PHRM 1430 Applied Pathophysiology for Pharmacy Students Cr.Hrs.3 (Formerly 046.143) A comprehensive theoretical foundation of the phenomena that produce alterations in human physiology function across the lifespan. Course content will prepare the student for subsequent courses related to diagnosis and management of disease processes associated with pathophysiologic dysfunction/alterations.

PHRM 1700 Structured Practical Experiential Program 1 (SPEP-1) Cr.Hrs.1 (Formerly 046.170) This program provides students with experiential rotations in the hospital/community settings. It serves to familiarize students with the health care setting and the pharmacist's role. It involves 13 half-day experiential rotations throughout the second term. Students will be graded on a pass/fail/ basis.

PHRM 2100 Pharmacy Skills Lab 2 Cr.Hrs.3 (Formerly 046.210) This course develops essential skills required for pharmacy practice. Focus is on drug distribution, pharmacy law, communication with "standardized patients" and drug information.

PHRM 2220 Medicinal Chemistry 1 Cr.Hrs.6 (Formerly 046.222) This course explores the physicochemical aspects of drug structure in absorption, distribution, metabolism, excretion and receptor interaction as they relate to the biochemical, pharmacological, and therapeutic actions of medicinal compounds.

PHRM 2270 Pharmaceutics/Biopharmaceutics Cr.Hrs.6 (Formerly 046.227) This course introduces principles of formulation and good pharmaceutical manufacturing practice, including aspects of product development and assessment, stability testing, and quality control. It also explores the application of dosage forms to clinical situations.

PHRM 2280 Pharmacokinetics Cr.Hrs.3 (Formerly 046.228) This course introduces principles of pharmacokinetics to predict how drugs will be absorbed, distributed, metabolized and excreted from the body. Practical application of concepts and calculations will be emphasized.

PHRM 2310 Clinical Pharmacy 1 Cr.Hrs.4 (Formerly 046.231) The course introduces principles of drug therapy to manage uncomplicated disease states. Aspects of drug therapy including efficacy, dosage requirements, adverse effects, compliance, drug interactions, and follow-up monitoring will be emphasized. The course also introduces principles of using "Over the Counter (OTC)" medications as therapeutic alternatives.

PHRM 2420 Applied Nutrition for Health Care Professionals Cr.Hrs.3 (Formerly 046.242) The application of the scientific principles underlying nutrient function and dietary requirements to questions of health.

PHRM 2700 Structured Practical Experiential Program 2 (SPEP-2) Cr.Hrs.2 (Formerly 046.270) This course offers experiential learning in both community and hospital pharmacy practice. It consists of a 1 week rotation in a community pharmacy and a 1 week rotation in a hospital pharmacy. This course builds on skills learned in SPEP 1 and focuses on the practice of drug preparation and distribution, OTC counselling, and jurisprudence. Students will be graded on a pass/fail basis.

PHRM 3100 Pharmacy Skills Lab 3 Cr.Hrs.2 (Formerly 046.310) The course develops essential skills required for pharmacy practice. The focus is on interaction with patients and other health care professionals and the application of essential knowledge, skills and values required for the provision of pharmaceutical care.

PHRM 3210 Principles of Professional Practice Cr.Hrs.3 (Formerly 046.321) This course offers the opportunity to explore professionalism, ethics and socio-economic aspects of the health care system.

PHRM 3220 Medicinal Chemistry 2 Cr.Hrs.3 (Formerly 046.322) This course builds on Medicinal Chemistry 1, exploring the detailed interactions between drugs and their receptors which give rise to specific biochemical and therapeutic responses.

PHRM 3310 Clinical Pharmacy 2 Cr.Hrs.10 (Formerly 046.331) This course builds on principles of drug therapy introduced in Clinical Pharmacy 1. Aspects of providing direct patient care are emphasized to identify, solve and prevent actual or potential drug-related problems. The course also expands knowledge of "Over the Counter (OTC)" medications as therapeutic alternatives and introduces home diagnostic testing.

PHRM 3320 Pharmaceutical Analysis Lab Cr.Hrs.3 (Formerly 046.332) This course offers the opportunity to prepare pharmaceutical dosage forms and perform analytical testing on the products. Qualitative and quantitative instrumental assay techniques are introduced.

PHRM 3430 Natural Products Cr.Hrs.3 (Formerly 046.343) Medicinal products of natural origin; introduction to systems of complementary medicine. Therapeutic aspects and products are emphasized.

PHRM 3500 Clinical Pharmacokinetics Cr.Hrs.4 (Formerly 046.350) This course explores the practical application of pharmacokinetic concepts, calculations, and pa-

tient factors which effect pharmacokinetics in the clinical setting. Emphasis is on selected medications that require closer monitoring to ensure efficacy and patient safety.

PHRM 3510 Principles of Scientific Literature Evaluation Cr.Hrs.2 (Formerly 046.351) Primary literature is critically analyzed. Discussion of how study results impact on treatment strategies are emphasized.

PHRM 3640 Principles of Biotechnology Cr.Hrs.3 (Formerly 046.364). Introduction of biotechnology in pharmaceutical sciences and pharmacy. Students will be introduced to concepts from molecular biology, immunology, biotechnology and pharmacogenomics.

PHRM 3700 Structural Practical Experiential Program 3 (SPEP-3) Cr.Hrs.4 (Formerly 046.370) This is a course offering experiential learning opportunities in the hospital/ community settings. Students participate in a one month experiential block in hospital or community at the end of the third year of the program. This course builds on SPEP-2 in the second year of the program. Students will be graded on a pass/fail/ basis.

PHRM 4230 Pharmacy Practice Management Cr.Hrs.4 (Formerly 046.460) An Introduction to administrative and behavioural sciences as they relate to planning, organization and operation of pharmacy practice, and to the control of human and financial resources.

PHRM 4310 Clinical Pharmacy 3 Cr.Hrs.4 (Formerly 046.444) A problem-based therapeutics course that builds on PHRM 3310. The emphasis is on the provision of pharmaceutical care to enhance students' ability to identify, resolve and prevent drug-related problems in given clinical scenarios.

PHRM 4450 Toxicology Cr.Hrs.3 (Formerly 046.445) Toxicological aspects of drug usage with emphasis on the assessment and management of accidental exposure, and ingestion of drugs of abuse.

PHRM 4470 Current Topics Cr.Hrs.3 (Formerly 046.447) A discussion of topics of immediate interest to the profession. Subject to satisfactory completion of required projects and presentations. Attendance of 80% is mandatory. Students will be graded pass/fail.

PHRM 4700 Structural Practical Experiential Program 4 (SPEP-4) Cr.Hrs.10 (Formerly 046.461) Twelve weeks (480 hours) practice experience in an assigned hospital and community pharmacy under the supervision of licensed pharmacists. Subject to satisfactory completion and submission of required reports; students will be graded on a pass/fail basis.

PHRM 4800 Electives Program Cr.Hrs.10 This program offers students the opportunity to explore areas in research and professional practice that are not part of the required undergraduate courses. Students have the option of applying to conduct projects at sites pre-approved by the Faculty or to propose alternative avenues for self-directed learning. All project proposals need to obtain final approval from the Faculty of Pharmacy which facilitates students' placement. Assessment will be based on written reports submitted by individual students to the Faculty of Pharmacy. Students will be graded on a pass/fail/ basis.

Faculty of Physical Education and Recreation Studies

General Office

102 Frank Kennedy Building

Telephone: (204) 474 9747

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Website: www.umanitoba.ca/physed/

Dean: Dennis Hrycaiko

Associate Dean (Academic): Elizabeth Ready

Coordinator, Physical Education/Kinesiology: Elizabeth Ready

Coordinator, Recreation Management and Community Development:
Jack Harper

Director, Athletic Therapy Program: Jackie Elliott

Confidential Secretary to the Dean: Agnès Gagné

Undergraduate Program Administrator/Advisor: Kate Swallow Yee

Student Advisor: Patti Dickieson

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Physical Education and Recreation Studies

SECTION 3: Admission to the Faculty of Physical Education and Recreation Studies

3.1 Degrees Offered

3.2 Course Requirements

SECTION 4: Academic Regulations

SECTION 5: Program Requirements for Bachelor of Physical Education

5.1 Requirements for Graduation

5.2 Scholastic Standards

5.3 Program Requirements

SECTION 6: Program Requirements for Bachelor of Kinesiology

6.1 Requirements for Graduation

6.2 Scholastic Standards

6.3 Program Requirements

SECTION 7: Physical Education Course Descriptions

7.1 Theory Course Descriptions

7.2 Activity Course Descriptions

SECTION 8: Program Requirements for Bachelor of Recreation Management and Community Development

8.1 Scholastic Standards

8.2 Course Requirements

SECTION 9: Recreation Management and Community Development Course Descriptions

SECTION 10: Interfaculty Option in Aging

SECTION 1: Academic Staff

Director Emeritus

MacDiarmid, J.A., B.P.E. (Manitoba), M.P.E. (Minnesota).

Professor Emeritus

Hrenchuk, E., B.P.H.E. (Toronto), M.A. (Minnesota).

Professors

Alexander, M.J.L., B.P.E. (British Columbia), M.Sc. (Washington), Ph.D. (Alberta); Chipperfield, J., B.A., M.A., Ph.D. (Manitoba); Gardiner, P.F., B.P.H.E., M.P.E. (Windsor), Ph.D. (Alberta); Giesbrecht, G., B.P.E., M.P.E., Ph.D. (Manitoba); Harper, J., Dip.Ed., B.Sc., M.Sc. (North Dakota); Hrycaiko, D.W., B.P.E., Cert.Ed. (Manitoba), M.P.E., Ph.D. (Alberta); Iwasaki, Y., B.Sc. (Maryland), M.A., Ph.D. (Waterloo); Janzen, H.F., B.Sc. (North Dakota), M.P.E., Ed.D. (Colorado); Kerr, R., B.Sc., M.Sc., Ph.D. (Oregon), Cert. Ed. (Exeter), Dip. P.E. (Saint Luke's College); MacKay, K., B.A. (Acadia), M.Sc. (Texas A and M), Ph.D. (Illinois); Porter, M. B.P.H.E. (Laurentian), M.Sc. (Toronto); Ph.D. (Western); Ready, A.E., B.A.(Hons.), M.A. (Western), Ph.D. (Alberta).

Associate Professors

Butcher, J., B.P.E., Cert. Ed. (Manitoba), M.Sc. (Dalhousie), Ph.D. (Alberta); Campbell, M., B.A., M.A. (Manitoba), Ph.D. (Waterloo); Gannon, G.A., HBOR, B.Sc., M.Sc. (Lakehead), Ph.D. (Toronto); Halas, J., B.P.E. (Manitoba), M.Sc. (Ottawa), Ph.D. (Alberta); Mactavish, J., B.P.E. (British Columbia), M.Sc. (Manitoba), Ph.D. (Minnesota).

Assistant Professors

Forsyth, J. B.A., M.A., Ph.D. (Western Ontario); Heine, M., Staatsexamen (Rhur-Universitat Bochum, Germany), M.A. (Western Ontario), Ph.D. (Alberta).

Instructors

Bentley, K., B.A. (Manitoba); Bérubé, C., B.es A., B.en. Ed. (Manitoba); Danis, P., B.A., B.Ed. (Winnipeg); Dobie, B., B.P.E., Cert. Ed. (Manitoba); Elliott, J., B.P.E., B.Ed., M.Sc. (Manitoba); Hayward, J. B.P.E. (Manitoba), DAT&M (Sheridan College); Pischke, G., B.A. (Manitoba); Rempel, J., B.A., B.R.S. (Manitoba); Sirant, M., B.A., B.R.S. (Manitoba); Suffield, R., Dip.P.E. (McGill), B.A. (Concordia), B.Ed. (Manitoba), M.Ed. (Lakehead).

SECTION 2: Physical Education and Recreation Studies

The mission of the faculty is to create, expand and disseminate knowledge, to prepare professionals, and to provide service to the community in the areas of human movement and leisure, thus contributing to health and well-being. The goals of the academic program provide direction to the faculty's initiatives in teaching.

Academic Program Strategic Goals:

To provide high quality, evidence-based degree programs that prepare students academically and professionally to create and disseminate knowledge in areas related to human movement and leisure.

To offer undergraduate degree programs in areas broadly related to physical activity, recreation, and applied health.

Undergraduate Program Goals:

To deliver sound undergraduate curricula to students in areas broadly related to physical activity, recreation, and applied health, who by the completion of their undergraduate degrees will:

- have general knowledge and specific knowledge in their fields, including knowledge of current research;
- be able to use critical thinking skills across a broad range of issues in their fields;
- be able to communicate effectively (orally, in writing, and technologically);
- be competent in relevant skills and practices;
- be literate in common information technology;
- be advocates for healthy living;
- respect diversity;
- be prepared for future employment and/or study in their fields.

SECTION 3: Admission to Physical Education and Recreation Studies

3.1 Degrees offered

Bachelor of Physical Education

Minimum time to graduation: Three years (University 1 plus two years).

Note: No minor is offered in the Physical Education program.

Bachelor of Kinesiology

Minimum time to graduation: Four years (University 1 plus three years).

Bachelor of Recreation Management and Community Development

Minimum time to graduation: Four years (University 1 plus three years).

Master of Science (in Kinesiology) and Master of Arts (in Recreation Studies)

Please see the 2006-2007 Graduate Calendar for further information.

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. Applicants who are members of traditionally disadvantaged groups (i.e., Aboriginal peoples, persons with disabilities, visible minorities, recent immigrants, etc.) may apply under a Special Consideration Category. Further information on the criteria is available by contacting the faculty. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website in January each year.

3.2 Course Requirements for Admission:

Bachelor of Physical Education

Minimum 24 credit hours in University 1. The following courses are suggested in order to complete the degree in the shortest time:

ZOOL 1320 and ZOOL 1330 or BIOL 1020 and BIOL 1030 or BIOL 1000 and BIOL 1010 (students with a teachable minor in Biology should take BIOL 1020 and BIOL 1030 or BIOL 1000 and BIOL 1010) (pending Senate approval)

English Literature (6 credit hours from ENGL 1200, ENGL 1300 (or the former 004.126W), ENGL 1310, and/or ENGL 1340)

Physical Education PHED 1500

Psychology PSYC 1200

A course that satisfies the mathematics requirement from Mathematics or Statistics

6 credit hours of electives (in area of teachable minor)

Bachelor of Kinesiology

Minimum 24 credit hours in University 1. The following courses are suggested in order to complete the degree in the shortest time:

BIOL 1020 and BIOL 1030 (with a minimum grade of "C") or BIOL 1000 and BIOL 1010 (with a minimum grade of "C+") is required (pending Senate approval)

English Literature (6 credit hours from ENGL 1200, ENGL 1300 (or the former 004.126W), ENGL 1310, and/or ENGL 1340)

Physical Education PHED 1500 and PHED 1200

Psychology PSYC 1200

A course that satisfies the mathematics requirement from Mathematics or Statistics.

3 credit hours of electives

NOTE: Students who are transferring credits from another university may apply a maximum of 50 credit hours to the Bachelor of Physical Education degree and 60 credit hours may be transferred to the Bachelor of Kinesiology program.

Other Requirements for Bachelor of Physical Education and Bachelor of Kinesiology

High school prerequisites: Biology 40S, Chemistry 40S, Math 40S (pre-calculus), and Physics 40S, are all helpful but not required.

The written English requirement is satisfied by the English Literature requirement: ENGL 1200 or ENGL 1300 (or the former 004.126W), or ENGL 1310 and/or ENGL 1340. Mathematics MATH 1010, MATH 1200 or STAT 1000 Statistics are recommended to fulfil the mathematics requirement.

Minimum GPA for consideration: 2.0, but admission is competitive.

A valid CPR (Basic Rescuer Level) and standard first aid (Red Cross/St. John Ambulance) certification, is required for applicants to the Athletic Therapy program.

Bachelor of Recreation Management and Community Development

Minimum 24 credit hours in University 1. The following courses are suggested in order to complete the degree in the shortest time.

Psychology PSYC 1200

Recreation Studies REC 1200 and REC 1400 (strongly recommended)

Sociology SOC 1200

3 credit hours to fulfil the mathematics requirement

3 credit hours to fulfil the written English requirement

plus 6 credit hours of electives

Note: Students who are transferring credits from another university may apply a maximum of 63 credit hours to the Bachelor of Recreation Management and Community Development.

Other Requirements: Recreation Management and Community Development

Minimum GPA for consideration: 2.0, but admission is competitive.

SECTION 4: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Physical Education and Recreation Studies has regulations and requirements, published below, that apply specifically to its students.

Attendance and Withdrawal

Students absent from class for three days or more due to illness are required to present a certificate from a physician. Two and one-half hours or more of unexcused absences from a practical course will result in the student being required to withdraw from the course or will result in an "F" being assigned. Unexcused absence of more than three hours of class time in a theory course will result in the student being required to withdraw from the course or will result in an "F" grade being assigned.

Dean's Honour List

To qualify for this list a student must have completed 60 per cent of a full course load during the regular session, and attained a minimum Grade Point Average (GPA) of 3.50 on all courses taken during the session.

University Gold Medal and Program Medals

Gold Medal

The Faculty of Physical Education and Recreation Studies will award the University Gold Medal to the graduating student who:

1) has achieved the highest grade point average of all graduating students (minimum 3.75) on courses constituting the last two years of an eligible program (and including no transfer courses in the applicable years); and,

2) has completed at least 80 percent of what is considered to be the normal full course-load in each of the last two years of the eligible program.

For specific details on the tie-breaking mechanism, contact the Dean's Office.

Program Medals

There are to be two program medals awarded in any year in the Faculty of Physical Education and Recreation Studies and they are awarded to the two students with the highest standing (according to the University Gold Medal criteria) in the programs in which the winner of the University Gold Medal in Physical Education and Recreation Studies is not registered (the three programs are Physical Education, Recreation Management & Community Development, and Kinesiology). For specific details on the tie-breaking mechanism, contact the Dean's Office.

Time Limit for Completion of the Degrees

Students admitted to the Bachelor of Physical Education, Bachelor of Kinesiology, or Bachelor of Recreation Management and Community Development degree programs must complete all requirements to graduate within ten years of admission to the program. Students with questions relating to the time limit regulation should consult the Coordinator, Physical Education/Kinesiology or the Coordinator, Recreation Management and Community Development.

Challenge for Credit

PHED 1500 Foundations of Physical Education and Exercise Science is open to challenge for credit. Students must demonstrate their competence in this course before challenging (e.g., students with significant professional experience and training who may have the necessary knowledge; transfer students who may have completed several related courses at other institutions that are not directly equivalent to PHED 1500). The Academic Schedule in the front section of this Calendar contains the relevant registration deadline dates appropriate to challenge for credit. Any student wishing to challenge a course for credit should contact the Physical Education general office.

SECTION 5: Program Requirements for Bachelor of Physical Education

Students admitted between 1995 and 1998: Details of the pre-1999 program are available from the Physical Education general office.

The following requirements apply to students admitted in September 1999, and later:

5.1 Requirements for Graduation: Bachelor of Physical Education

To graduate with a three-year Bachelor of Physical Education degree, a student must have passed the 100 credit hours of the program outlined below and must have achieved a Cumulative Grade Point Average (CGPA) of 2.00 as well as a 2.00 Grade Point Average (GPA) in all Physical Education courses.

A maximum of 132 credit hours may be attempted in order to obtain the 100 credit hours required for graduation with the Bachelor of Physical Education degree.

5.2 Scholastic Standards: Bachelor of Physical Education

Please see Section 5.2 Scholastic Standards of the faculty's 2006-2007 General Calendar website for updated information

5.3 Program Requirements: Bachelor of Physical Education

For courses recommended in University 1, see Section 3, Admission to Physical Education and Recreation Studies. It is strongly recommended that ZOOL 1320 and ZOOL 1330 or BIOL 1020 and BIOL 1030 or BIOL 1000 and BIOL 1010 (pending Senate approval) be completed during University 1 to enable the student to complete the Bachelor of Physical Educa-

tion degree in three years, since it is a prerequisite to several required courses.

The minimum number of practical (activity) credit hours (includes required and elective courses) is 13. Within these credits, students must select a minimum of three credit hours of Individual/Group Activities, and a minimum of two credit hours of Team Sports for graduation purposes, (see Section 7.2 Activity Course Descriptions for a list of practical activity courses).

Year 1 – University 1: 30 credit hours

Year 2: 35 credit hours

Required Theory Courses

Course No.	Credit Hours
PHED 2310 Kinesiology	3
PHED 2320 Human Anatomy	3
PHED 2340 Philosophy of Physical Activity	3
PHED 2550 Growth and Motor Development	3
PHED 3100 Design and Assessment of Physical Activity	3
PHED 3440 Health Education	3
Non-Faculty Teaching Minor	6
Faculty Elective	3

Required Practical Courses

PHED 1420 Principles of Human Movement Education	2
PHED 2650 Early and Middle Years Physical Education (Required for students entering the Early and Middle Years after degree program in the Faculty of Education)	2
PHED 3120 Recreational Gymnastics	1
Elective Practical Courses	
Early and Middle Years Students	3
Senior Years Students	5

Year 3: 35 credit hours

Required Theory Courses

PHED 3080 Principles of Planning and Administration in Physical Education	3
PHED 3390 Adapted Physical Education	3
PHED 3410 Movement Principles and the Expressive Arts	3
PHED 3430 Exercise Physiology 1	3
PHED 3450 Motor Learning	3
Non-Faculty Teaching Minor	6

Required Practical Courses

PHED 1360 Aquatics (2 elective practical courses if student holds Bronze Medallion or equivalent)	2
PHED 3140 Creative Dance	1
Elective Practical Courses: Choose 2 or 5 practical credit hours.	

Elective Theory Courses

(choose one or two of the following five courses:)

PHED 3050 Principles of Coaching	
or	
PHED 3060 Principles of Athletic Therapy	
or	
PHED 3090 Principles of Fitness Training	
or	
PHED 3460 Sociology of Sport	3 or 6
Free Elective (theory)	3

SECTION 6: Program Requirements for Bachelor of Kinesiology

6.1 Requirements for Graduation: Bachelor of Kinesiology

Physical Health and Wellness stream or Exercise and Sport Science stream

To graduate with a four-year Bachelor of Kinesiology degree specializing in Physical Health and Wellness or Exercise and Sport Science, a student must have passed the 120 credit hours of the program outlined below and must have achieved a cumulative Grade Point Average (CGPA) of 2.00 as well as a 2.00 Grade Point Average (GPA) in all Physical Education courses.

A maximum of 158 credit hours may be attempted in order to obtain the 120 credit hours required for graduation with the Bachelor of Kinesiology degree (Physical Health and Wellness stream or Exercise and Sport Science stream).

Athletic Therapy stream

To graduate with a four-year Bachelor of Kinesiology degree specializing in Athletic Therapy, a student must have passed the 135 credit hours of the program outlined below and must have achieved a CGPA of 2.00 as well as a 2.00 GPA in all Physical Education courses. A minimum grade of "C" is required to pass all courses offered by the School of Medical Rehabilitation (REHB), and a minimum grade of "C+" is required to pass supplemental exams, or repeat courses in the School of Medical Rehabilitation.

A maximum of 178 credit hours may be attempted in order to obtain the 135 credit hours required for graduation with the Bachelor of Kinesiology (Athletic Therapy).

6.2 Scholastic Standards: Bachelor of Kinesiology

Please see Section 6.2 Scholastic Standards of the faculty's 2006-2007 General Calendar website for updated information

6.3 Program Requirements: Bachelor of Kinesiology

Physical Health and Wellness stream, and Exercise and Sport Science stream, Years 1 and 2

For courses recommended in University 1, see Section 3, Admission to Physical Education and Recreation Studies. It is strongly recommended that BIOL 1020 and BIOL 1030 be completed in University 1, to enable the student to complete the degree in the subsequent three years, since biology is a prerequisite to several required courses in the Bachelor of Kinesiology degree. A minimum grade of "C" is required in BIOL 1020 and BIOL 1030 for admission to ZOOL 2530 and ZOOL 2540. Courses required in Year 2 are common to both streams. All entering students will be placed in the Physical Health and Wellness stream; students who wish to select the Exercise and Sport Science stream must inform the Undergraduate Program Administrator normally by the end of second year. While it will be possible to move between streams after Year 2, additional course work may be required.

The required courses for the four-year degree appear below, under the recommended year for completing each course in each stream. Once admitted to the Bachelor of Kinesiology degree, students may take courses in any order, provided they have the necessary prerequisites.

The minimum number of practical (activity) credit hours is nine, and the maximum number is fifteen. PHED 1360 Aquatics (2) and PHED 1420 Principles of Human Movement Education (2) are required in both streams.

Year 1 – University 1: 30 credit hours

Year 2: 30 credit hours (common to both streams)

Course No.	Credit Hours
ZOOL 2530 Human Physiology 1	3
ZOOL 2540 Human Physiology 2	3
PHED 1420 Principles of Human Movement Education	2
PHED 2310 Kinesiology	3
PHED 2320 Human Anatomy	3
PHED 2340 Philosophy of Physical Activity	3
PHED 2550 Growth and Motor Development	3
COMP 1260 Introduction to Computer Usage	3
REC 2010 Measurement and Evaluation	3
Theory Elective	3
Practical Elective	1

Physical Health and Wellness stream, Years 3 and 4

Year 3: 30 credit hours

PHED 3060 Principles of Athletic Therapy	3
PHED 3090 Principles of Fitness Training	3
PHED 3390 Adapted Physical Education	3
PHED 3430 Exercise Physiology 1	3
PHED 3440 Health Education	3
PHED 3450 Motor Learning	3
*Theory/Practical Electives	12

Year 4: 30 credit hours

PSYC 3660 Sport Psychology	
or	
PHED 3050 Principles of Coaching	3
PHED 3460 Sociology of Sport	3
*Theory/Practical Electives	24

***NOTES:** A minimum of 15 credit hours of theory elective courses must be selected from within the faculty (PHED or REC). A maximum of 18 credit hours of non-faculty electives may be selected.

Theory Electives available include (among others):

PHED 4620 Supervised Fieldwork Experience (12 credit hours to be taken in Term 1 of Year 4). Admission to Fieldwork Experience is competitive; a description of the application and selection process is available in the general office.

Recreation courses (18 credit hours)

Option in Aging (18 credit hours)

Management Minor (18 credit hours). Details available in the general office. Minimum GPA of 3.0 required.

Lists of recommended theory electives are available from the Undergraduate Program Administrator.

Exercise and Sport Science stream, Years 3 and 4

Year 3: 30 credit hours

Course No.	Credit Hours
PSYC 3660 Sport Psychology	
or	
PHED 3050 Principles of Coaching	3
PHED 3060 Principles of Athletic Therapy	3
PHED 3090 Principles of Fitness Training	3
PHED 3390 Adapted Physical Education	3
PHED 3430 Exercise Physiology 1	3
PHED 3450 Motor Learning	3
PHED 4360 Biomechanics of Sport and Exercise	3
Theory Electives (Students may choose to select theory electives that enable them to specialize in one sub-discipline of sport science; see below)	6
Practical Electives	3

Year 4: 30 credit hours

STAT 1000 *Basic Statistical Analysis 1	3
STAT 2000 *Basic Statistical Analysis 2	3
HNSC 1210 Nutrition for Health and Changing Lifestyles	3
PHED 3460 Sociology of Sport	3
PHED 4410 Exercise Physiology 2	3
Theory Electives	12
(Students may choose to select theory electives that enable them to specialize in one sub-discipline of sport science; see below)	
Practical Electives	3

NOTES:

*Other courses which may fulfil the statistics requirements: SOC 2290 Introduction to Research Methods in Sociology (6), or PSYC 2250 Introduction to Psychological Research (3) and PSYC 2260 Introduction to Research Methods in Psychology (3).

Three credit hours of activity courses are required in Year 2 (including Principles of Human Movement Education), and a minimum of three credit hours per year in each of the two final years of the program.

Areas of Specialization

Students may specialize in a specific sub-discipline of exercise and sport science. Specialization requires successful completion of at least 12 credit hours of elective courses in a specific discipline from other departments. Possible areas of specialization include:

- Biomechanics
- Exercise Physiology
- Sport Psychology
- Sociology of Sport
- Adapted Physical Education

A list of recommended elective courses for each area of specialization is available from the Undergraduate Program Administrator.

Athletic Therapy stream

For courses recommended in University 1, see Section 3, Admission to Physical Education and Recreation Studies. Successful completion of BIOL 1020 and BIOL 1030, with a minimum grade of "C", is a requirement for admission to the Athletic Therapy program.

Students are expected to progress through the Athletic Therapy program as outlined below. Courses designated REHB and PT must be completed in the sequence and year indicated. It is strongly recommended that courses designated PHED also be completed in the sequence and year indicated, otherwise an additional year may be required. Prior to registering in each Practicum (PHED 2910, PHED 3910, PHED 4910) students must have successfully completed, or be registered in, all of that year's courses. Students must successfully complete the previous year's Practicum prior to registering in the following year's courses.

Six credit hours of activity courses are required including PHED 2620 Resistance Training (1), PHED 3180 Athletic Taping and Splinting Skills (1), and PHED 2020 Basic Massage Techniques (1). PHED 1360 Aquatics 1 is a strongly recommended elective for Athletic Therapy students.

Year 1 – University 1: 30 credit hours

Year 2: 34 credit hours

Course No.	Credit Hours
ZOOL 2530 Human Physiology 1	3
ZOOL 2540 Human Physiology 2	3
REHB 1480 Human Anatomy-Systems	3
REHB 1490 Musculoskeletal Anatomy 1	2
REHB 1500 Musculoskeletal Anatomy 2	3
PHED 2550 Growth and Motor Development	3
PHED 2620 Resistance Training (May have to be completed in Year 4 due to the program schedule)	1
PHED 3060 Principles of Athletic Therapy	3
PHED 3180 Athletic Taping and Splinting Skills	1
PHED 2020 Basic Massage Techniques	1
PHED 2910 Practicum: Field/Clinical	8
Faculty Electives (Theory/Practical)	3

Year 3: 36 credit hours

HNSC 1210 Nutrition for Health and Changing Lifestyles	3
PHED 2310 Kinesiology	3
PHED 3430 Exercise Physiology 1	3
PHED 3200 Basic Trauma and Emergency Support	3
REHB 2410 Pathology and Clinical Manifestations	4
PHED 3300 Functional Assessment & Restoration	6
PT 2720 Electro-Physical Agents in Physical Therapy Management	3
REC 2010 Measurement and Evaluation	3
PHED 3910 Practicum: Field/Clinical	8

Year 4: 35 credit hours

PSYC 3660 Sport Psychology	3
PHED 4050 Pathology and Clinical Manifestations 2: Cardiac, Respiratory, Neurologic	3
PHED 3090 Principles of Fitness Training	3
PHED 4360 Biomechanics of Sport and Exercise	3
PHED 4300 Health and Wellness Practices in Athletic Therapy	3
REHB 3930 Neuroanatomy	3
PHED 4910 Practicum: Field/Clinical	8

SECTION 7: Course Descriptions for Physical Education

All courses are not offered every year. The course schedule for the current academic session is available at website umanitoba.ca/regguide.

7.1 Theory Course Descriptions

U1 PHED 1200 Physical Activity, Health and Wellness Cr.Hrs.3 (Formerly 057.120) An examination of the importance of physical activity for health and wellness, theories and determinants of health promoting behaviours, and strategies for promoting health behaviours.

U1 PHED 1500 Foundations of Physical Education and Exercise Science Cr.Hrs.3 (Formerly 057.150) An introduction to physical education and exercise science as a profession and a discipline, including an overview of sub-disciplines, resources, and careers; a personal physical assessment; and principles for achieving physical fitness. Note: A fieldwork fee is attached to the course. May not be held for credit with the former 057.132.

PHED 2310 Kinesiology Cr.Hrs.3 (Formerly 057.231) The mechanical and anatomical analysis of human movement. *Prerequisite:* PHED 2320 (or 057.232) or REHB 1490 (or 068.149) or equivalent.

PHED 2320 Human Anatomy Cr.Hrs.3 (Formerly 057.232) Structure of the skeletal, articular, and muscular systems of the human body. *Prerequisite:* BIOL 1020 and BIOL 1030 or the former 071.125 or equivalent. May not be held for credit with REHB 1480 (or 068.148), REHB 1490 (or 068.149), or REHB 1500 (or 068.150).

PHED 2340 Philosophy of Physical Activity Cr.Hrs.3 (Formerly 057.234) Issues in sport, physical education and recreation will be examined from a philosophical perspective.

PHED 2550 Growth and Motor Development Cr.Hrs.3 (Formerly 057.255) Detailed study of physical growth and motor development from conception to adolescence, with implications for physical activity programs.

PHED 2610 Health and Physical Aspects of Aging Cr.Hrs.3 (Formerly 057.261) An introduction to health, well-being and aging. Emphasis on health as multidimensional including physical, social and mental health. Integration of theory and research in examining selected issues related to health and physical aspects of aging. This is an Option in Aging course and may not be held for credit with NURS 2610 (or 049.261).

PHED 2910 Athletic Theory Practicum Cr.Hrs.8 (Formerly 057.291) To provide clinical and on-field internship experiences on campus and in the community for prospective Athletic Therapy candidates. Evaluated pass-fail.

PHED 3050 Principles of Coaching Cr.Hrs.3 (Formerly 057.305) Philosophical and psychological components pertinent to coaching of sports.

PHED 3060 Principles of Athletic Therapy Cr.Hrs.3 (Formerly 057.306) Analysis of types of injuries and emergency procedures, and practical experience in first aid, taping and wrapping, massage, and various preventive techniques. *Prerequisite:* PHED 2320 (or 057.232) or REHB 1490 (or 068.149) or equivalent.

PHED 3070 Rise of Modern Sport and Physical Education Cr.Hrs.3 (Formerly 057.307) The course will emphasize the rise of modern sport in Canada and will reflect on the ways in which social change has influenced sport and physical activity.

PHED 3080 Principles of Planning and Administration in Physical Education Cr.Hrs.3 (Formerly 057.308) This course covers the administrative and organizational aspects of physical education, intramural and inter-school programs. *Prerequisite:* PHED 1500 (or 057.150) or 057.132.

PHED 3090 Principles of Fitness Training Cr.Hrs.3 (Formerly 057.309) Theoretical concepts of designing programs employing the principles of overload and adaptation for all components of fitness for all age groups. *Prerequisite:* PHED 3430 (or 057.343).

PHED 3100 Design and Assessment of Physical Activities Cr.Hrs.3 (Formerly 057.310) Practical and theoretical aspects of the design, implementation, and assessment of physical activities appropriate to early years through senior years physical education. *Prerequisite:* PHED 1410 (or 057.141) or PHED 1420 (or 057.142). *Corequisite:* PHED 2650 (or 057.265) (for Early and Middle Years students only). May not be held with the former 057.257.

PHED 3200 Basic Trauma and Emergency Support Cr.Hrs.3 (Formerly 057.320) Assessment and management of medical emergencies common to sports. Topics will include on-field primary and secondary surveys, airway management, assessment and management of head, spinal, chest, abdominal and extremity trauma. *Prerequisites:* PHED 3060 (or 057.306), REHB 1480 (or 068.148), REHB 1490 (or 068.149), and REHB 1500 (or 068.150). May not hold for credit with the former 057.319.

PHED 3300 Functional Assessment and Restoration Cr.Hrs.6 (Formerly 057.330) Assessment of acute and chronic musculo-skeletal injuries and rehabilitation techniques to ensure full restoration of function. *Prerequisites:* REHB 1490 (or 068.149), REHB 1500 (or 068.150), ZOOL 2530 (or 022.253) and ZOOL 2540 (or 022.254).

PHED 3390 Adapted Physical Education Cr.Hrs.3 (Formerly 057.339) Various adaptations of physical education for exceptional individuals. *Prerequisites:* completion of 59 credit hours of coursework. May not be held for credit with REC 3060 (or 123.306).

PHED 3410 Movement Principles and the Expressive Arts Cr.Hrs.3 (Formerly 057.341) Interrelationship between Laban's principles of movement, and art, music, drama, and poetry, with particular emphasis on the needs of children, ages two to twelve. Note: A fieldwork fee is attached to the course. *Prerequisite:* PHED 1410 (or

057.141) or PHED 1420 (or 057.142). PHED 3410 (or 057.341) must be taken during the same term as PHED 3140 (or 057.314).

PHED 3430 Exercise Physiology 1 Cr.Hrs.3 (Formerly 057.343) Physiological principles of physical training related to neuromuscular and physical development; immediate and long-term effects of various exercises on the human body. *Prerequisites:* ZOOL 1330 (or 022.133) (B.P.E.), ZOOL 2530 (or 022.253) and ZOOL 2540 (or 022.254) (B.Kin)(formerly ZOOL 2450 (or 022.245)).

PHED 3440 Health Education Cr.Hrs.3 (Formerly 057.344) An overview of contemporary topics on health education with the intention of upgrading knowledge in health education related to present-day needs.

PHED 3450 Motor Learning Cr.Hrs.3 (Formerly 057.345) Psychological components of human movement; human motor behaviour and the acquisition of motor skills. *Prerequisites:* ZOOL 1330 (or 022.133) (B.P.E.) or ZOOL 2530 (or 022.253) and ZOOL 2540 (or 022.254) (B.Kin) (formerly ZOOL 2450 (or 022.245)).

PHED 3460 Sociology of Sport Cr.Hrs.3 (Formerly 057.346) Sociological factors related to physical education and sport.

PHED 3830 Wilderness Leadership Cr.Hrs.3 (Formerly 057.383) Theoretical aspects of trip planning and administration; leadership development.

PHED 3910 Athletic Therapy Practicum Cr.Hrs.8 (Formerly 057.391) To provide clinical and on-field internship experiences on campus and in the community for prospective Athletic Therapy candidates. Evaluated pass-fail.

PHED 4050 Pathology and Clinical Manifestations 2: Cardiac, Respiratory, and Neurologic Disorders Cr.Hrs.3 (Formerly 057.405) Basic principles of pathology and clinical manifestations of cardiac, respiratory, and neurologic disorders. Preventative measures, assessments and treatment methods employed in care of patients with these disorders will also be examined. *Prerequisites:* REHB 1480 (or 068.148), REHB 1490 (or 068.149), REHB 1500 (or 068.150), ZOOL 2530 (or 022.253), and ZOOL 2540 (or 022.254), or permission of the Coordinator, Physical Education.

PHED 4060 Drugs and Ergogenic Aids in Sport Cr.Hrs.3 (Formerly 057.406) A multidisciplinary examination of drugs, hormones, dietary supplement and methods used by athletes in attempting to enhance athletic performance. Ethical concerns and mechanisms of action will be examined for steroids, stimulants, masking agents, blood doping, and hormonal and dietary supplements among others. ZOOL 1330 (or 022.133) or ZOOL 2530 (or 022.253) and ZOOL 2540 (or 022.254) are strongly recommended.

PHED 4300 Health and Wellness Practices in Athletic Therapy Cr.Hrs.3 (Formerly 057.430) Overview of health and wellness practices in Athletic Therapy with the focus on issues relevant to the development and management of an Athletic Therapy business/clinical practice. May not hold for credit with REHB 3460 (or 068.346). Open to Athletic Therapy students only or with departmental approval.

PHED 4350 Directed Studies Cr.Hrs.3 (Formerly 057.435) Completion of an independent study or fieldwork experience, including a major written submission, approved by the Coordinator, Physical Education and under the direction of a faculty member.

PHED 4360 Biomechanics of Sport and Exercise Cr.Hrs.3 (Formerly 057.436) A biomechanical analysis of the skills and techniques of the major sports, games, and exercises. *Prerequisite:* PHED 2310 (or 057.231) or equivalent.

PHED 4370 Directed Research Project Cr.Hrs.3 (Formerly 057.437) Completion of a research project including a major written submission, approved by the department and under the supervision of a faculty member.

PHED 4410 Exercise Physiology 2 Cr.Hrs.3 (Formerly 057.441) Physiological factors that affect human performance across a continuum from persons with disease to high performance athletes. Special emphasis on clinical and performance related uses of exercise testing and prescription for various populations. This will include exposure to related research and development of techniques for its critical assessment. *Prerequisite:* PHED 3430 (or 057.343). Note: Laboratory experiences may be used toward certification as "Professional Fitness and Lifestyle Consultant". Details available from the Coordinator, Physical Education.

PHED 4460 Fitness Appraisal and Lifestyle Counselling Cr.Hrs.3 (Formerly 057.446) Theoretical knowledge and practical training related to physical activity, fitness and lifestyle appraisal and counselling. *Prerequisite:* PHED 3430 (or 057.343). *Prerequisites or Corequisites:* PHED 1200 (or 057.120) and PHED 3090 (or 057.309). May not be held for credit with the former 057.443, 057.444, and 057.445. Note: Prepares students to certify as "Certified Fitness Consultant." B.Kin students who wish to prepare for Professional Fitness and Lifestyle Consultant (PFLC) Certification (Canadian Society for Exercise Physiology) should consult the Coordinator, Physical Education.

PHED 4500 Aging Adult Development, Health and Fitness Cr.Hrs.3 (Formerly 057.450) The study of the aging processes and the effects of exercise and lifestyle factors on the health and fitness of the aging adult. *Prerequisite:* PHED 2610 (or 057.261), or NURS 2610 (or 049.261), or permission of the instructor.

PHED 4620 Supervised Fieldwork Experience Cr.Hrs.12 (Formerly 057.462) The fieldwork practicum is a professionally supervised field experience that provides the B.Kin student an opportunity to apply knowledge gained in academic courses, and that provides exposure to new concepts of professional practice in the fields of physical activity, health and wellness. Evaluated pass-fail.

PHED 4910 Athletic Therapy Practicum Cr.Hrs.8 (Formerly 057.491) To provide clinical and on-field internship experiences on campus and in the community for prospective Athletic Therapy candidates. Evaluated pass-fail.

7.2 Activity Course Descriptions

Introductory sport activity courses cover the development of both skills and knowledge of techniques, rules, and strategy as they relate to the ac-

tivity. Advanced sport activity courses cover more advanced knowledge of coaching techniques and strategies. All one-credit hour practical courses are evaluated pass-fail. All two-credit hour practical courses are evaluated with a letter grade.

The Aquatics requirement (PHED 1360) must be met prior to graduation (Bachelor of Physical Education and Bachelor of Kinesiology – Physical Health and Wellness and Exercise and Sport Science stream). Some elective practical courses may not be offered every year.

PHED 1360 Aquatics 1 Cr.Hrs.2 (Formerly 057.136) An introduction to water safety skills, stroke techniques, and aquatic activities. Students possessing RLSS Bronze Medallion are exempted from the aquatics requirement for graduation.

PHED 1380 Track and Field 1 Cr.Hrs.2 (Formerly 057.138) An introduction to the basics of sprinting, jumping, throwing, and distance events.

PHED 1420 Principles of Human Movement Education Cr.Hrs.2 (Formerly 057.142) An introduction to movement education through physical activities and application of the concepts of body awareness, space, and qualities of movement. May not be held for credit with the former 057.141.

PHED 1640 Group Fitness Activities Cr.Hrs.1 (Formerly 057.164) An introduction to a variety of land and aquatic group fitness programs and equipment. Evaluated pass-fail.

PHED 2020 Basic Massage Techniques Cr.Hrs.1 (Formerly 057.202) *Prerequisite:* REHB 1490 (or 068.149). May not be held with 057.323. Evaluated pass-fail.

PHED 2420 Soccer 1 Cr.Hrs.1 (Formerly 057.242) Evaluated pass-fail.

PHED 2430 Basketball 1 Cr.Hrs.1 (Formerly 057.243) Evaluated pass-fail.

PHED 2440 Football 1 Cr.Hrs.1 (Formerly 057.244) Evaluated pass-fail.

PHED 2450 Folk and Social Dance Cr.Hrs.1 (Formerly 057.245) Evaluated pass-fail.

PHED 2460 Volleyball 1 Cr.Hrs.1 (Formerly 057.246) Evaluated pass-fail.

PHED 2470 Wrestling 1 Cr.Hrs.1 (Formerly 057.247) Evaluated pass-fail.

PHED 2490 Field Hockey 1 Cr.Hrs.1 (Formerly 057.249) Evaluated pass-fail.

PHED 2500 Skating Cr.Hrs.1 (Formerly 057.250) Evaluated pass-fail.

PHED 2520 Hockey 1 Cr.Hrs.1 (Formerly 057.252) Evaluated pass-fail.

PHED 2620 Resistance Training Cr.Hrs.1 (Formerly 057.262) Designing and teaching effective resistance training programs. *Prerequisite:* PHED 2320 (or 057.232) (or equivalent), pre- or co-requisite: PHED 2310 (or 057.231). Evaluated pass-fail.

PHED 2630 Aquafitness Cr.Hrs.1 (Formerly 057.263) Designing and teaching effective aquafitness programs. *Prerequisite:* PHED 1640 (or 057.164). Open to third- and fourth-year students only. Note: PHED 2630 and PHED 2640 are open to third and fourth year students only, as the subject matter requires knowledge of anatomy, physiology and fitness theory. Students should also have participated in fitness classes of this type prior to registering in these courses. Related classes are available as non-credit classes offered by Recreation Services in the faculty. These courses (as well as PHED 2620 and PHED 4640) are recognized by the Manitoba Fitness Council (MFC) to prepare individuals for MFC Fitness Leader Accreditation. Note that MFC accreditation is optional following completion of the courses, and requires an additional fee. A minimum 10-hour practicum, a practical evaluation, CPR and First Aid are also required prior to MFC accreditation in any of these areas. Students who wish to seek accreditation as MFC Personal Fitness Trainers should consult the Coordinator, Physical Education for a list of recommended electives. Evaluated pass-fail.

PHED 2640 Exercise to Music Cr.Hrs.1 (Formerly 057.264) Designing and teaching effective exercise to music programs. *Prerequisite:* PHED 1640 (or 057.164). Open to third- and fourth-year students only. * NOTE: PHED 2630 and PHED 2640 are open to third and fourth year students only, as the subject matter requires knowledge of anatomy, physiology and fitness theory. Students should also have participated in fitness classes of this type prior to registering in these courses. Related classes are available as non-credit classes offered by Recreation Services in the faculty. These courses (as well as PHED 2620 and PHED 4640) are recognized by the Manitoba Fitness Council (MFC) to prepare individuals for MFC Fitness Leader Accreditation. Note that MFC accreditation is optional following completion of the courses, and requires an additional fee. A minimum 10-hour practicum, a practical evaluation, CPR and First Aid are also required prior to MFC accreditation in any of these areas. Students who wish to seek accreditation as MFC personal fitness trainers should consult the Coordinator, Physical Education for a list of recommended electives. Evaluated pass-fail.

PHED 2650 Early and Middle Years Physical Education Cr.Hrs.2 (Formerly 057.265) May not be held for credit with the former 057.258. *Prerequisite:* PHED 1410 (or 057.141) or PHED 1420 (or 057.142), and corequisite PHED 3100 (or 057.310).

PHED 3010 Directed Activity Study Cr.Hrs.1 (Formerly 057.301) Completion of an independent study or fieldwork experience, approved by the Coordinator, Physical Education and under the direction of a faculty member. Evaluated pass-fail.

PHED 3040 Racquet Court Sports Cr.Hrs.1 (Formerly 057.304) Evaluated pass-fail.

PHED 3110 Apparatus Gymnastics Cr.Hrs.1 (Formerly 057.311) May not be held for credit with the former 057.137. Evaluated pass-fail.

PHED 3120 Recreational Gymnastics Cr.Hrs.1 (Formerly 057.312) May not be held for credit with the former 057.137. Evaluated pass-fail.

PHED 3130 Physical Activity Practicum Cr.Hrs.1 (Formerly 057.313) May not be held for credit with the former 057.442. Evaluated pass-fail.

PHED 3140 Creative Dance Cr.Hrs.1 (Formerly 057.314) May not be held for credit with the former 057.390. Must be taken during the same term as PHED 3410 (or 057.341). Evaluated pass-fail.

PHED 3150 Outdoor Activities Cr.Hrs.1 (Formerly 057.315) May not be held for

credit with the former 057.439. A fieldwork fee is attached to the course. Evaluated pass-fail.

PHED 3180 Taping and Splinting Cr.Hrs.1 (Formerly 057.318) *Prerequisite:* REHB 1490 (or 068.149). Evaluated pass-fail.

PHED 3510 Track and Field 2 Cr.Hrs.1 (Formerly 057.351) *Prerequisite:* PHED 1380 (or 057.138). Evaluated pass-fail.

PHED 3540 Basketball 2 Cr.Hrs.1 (Formerly 057.354) *Prerequisite:* PHED 2430 (or 057.243). Evaluated pass-fail.

PHED 3560 Hockey 2 Cr.Hrs.1 (Formerly 057.356) *Prerequisite:* PHED 2520 (or 057.252). Evaluated pass-fail.

PHED 3570 Soccer 2 Cr.Hrs.1 (Formerly 057.357) *Prerequisite:* PHED 2420 (or 057.242). Evaluated pass-fail.

PHED 3580 Volleyball 2 Cr.Hrs.1 (Formerly 057.358) *Prerequisite:* PHED 2460 (or 057.246). Evaluated pass-fail.

PHED 3590 Wrestling 2 Cr.Hrs.1 (Formerly 057.359) *Prerequisite:* PHED 2470 (or 057.247). Evaluated pass-fail.

PHED 3610 Tennis Cr.Hrs.1 (Formerly 057.361) Evaluated pass-fail.

PHED 3620 Badminton Cr.Hrs.1 (Formerly 057.362) Evaluated pass-fail.

PHED 3630 Softball Cr.Hrs.1 (Formerly 057.363) Evaluated pass-fail.

PHED 3650 Golf Cr.Hrs.1 (Formerly 057.365) A fieldwork fee is attached to the course. Evaluated pass-fail.

PHED 3670 Cross Country Skiing Cr.Hrs.1 (Formerly 057.367) A fieldwork fee is attached to the course. Evaluated pass-fail.

PHED 3700 Modern Gymnastics (Rhythmic) Cr.Hrs.1 (Formerly 057.370) Evaluated pass-fail.

PHED 3820 Team Handball Cr.Hrs.1 (Formerly 057.382) Evaluated pass-fail.

PHED 3840 Wilderness Skills Cr.Hrs.2 (Formerly 057.384) A five-day wilderness camping experience; which may also include canoeing activities. Note: A fieldwork fee is attached to the course. Students are required to transport themselves to the site. *Prerequisite* or corequisite: PHED 3830 (or 057.383) or REC 3090 (or 123.309) or 123.330.

PHED 3880 Camping 1 Cr.Hrs.1 (Formerly 057.388) A three-day wilderness camping experience. Note: A fieldwork fee is attached to the course. Students are required to transport themselves to the site. *Prerequisite* or corequisite: PHED 3830 (or 057.383) or REC 3090 (or 123.309) or the former 123.330. Evaluated pass-fail.

PHED 3890 Winter Camping Cr.Hrs.1 (Formerly 057.389) A three-day wilderness camping experience. Note: A fieldwork fee is attached to the course. Students are required to transport themselves to the site. *Prerequisite* or corequisite: PHED 3830 (or 057.383) or REC 3090 (or 123.309) or the former 123.330. Evaluated pass-fail.

PHED 3970 Beginning Kayaking Cr.Hrs.1 (Formerly 057.397) This course usually includes an overnight campout. A fieldwork fee is attached to the course. Students are required to transport themselves to the site. Evaluated pass-fail.

PHED 3980 Rock Climbing Cr.Hrs.1 (Formerly 057.398) A fieldwork fee is attached to the course. Evaluated pass-fail.

PHED 3990 Rowing Cr.Hrs.1 (Formerly 057.399) A fieldwork fee is attached to the course. Evaluated pass-fail.

PHED 4640 Exercise for Older Adults Cr.Hrs.1 (Formerly 057.464) Design and implementation of exercise programs for older adults. *Prerequisite:* PHED 1640 (or 057.164), PHED 2620 (or 057.262), PHED 2640 (or 057.264), corequisite: PHED 4500 (or 057.450). Evaluated pass-fail.

SECTION 8: Program Requirements for Bachelor of Recreation Management and Community Development

8.1 Scholastic Standards

Please see Section 8.1 Scholastic Standards of the faculty's 2006-2007 General Calendar website for updated information

8.2 Course Requirements for the Bachelor of Recreation Management and Community Development

The Bachelor of Recreation Management and Community Development degree program (including University 1) consists of six curriculum components as follows:

- The Core Curriculum: 33 credit hours
 - General Education: 48 credit hours
 - Supporting Minor: 18 credit hours
 - Fieldwork Practicum: 15 credit hours
 - Activity Options: * 3 or 6 credit hours
 - Recreation Options (Approved by Advisor):** 9 or 12 credit hours
- Total credit hours: 129

NOTES:

* Activity courses are selected from those listed in the Bachelor of Physical Education curriculum, the Faculty of Education, Faculty of Arts, Faculty of Music, or School of Art and approved by the Coordinator of the degree program.

** May include other courses as approved by Coordinator, Recreation Management and Community Development.

While course sequencing will vary based on transfer credits, a **sample** three-year program following 30 credit hours (minimum 24) in University 1 would be:

Year 2 (Sample): 33 credit hours

Course No.	Credit Hours
REC 2010	Measurement and Evaluation in Leisure Services 3
REC 2530	Recreation Program Planning Principles 3
REC 2540	Major Recreation Program Areas 3
REC 3870	Human Resources Development in Leisure Services 3
PHED 2550	Growth and Motor Development or PSYC 2290 Child Development or PSYC 2310 Adolescent Development or PSYC 2370 Developmental Psychology from Adolescence to Old 3 Age
PSYC 2410	Social Psychology 1 or PSYC 2420 Social Psychology 2 or SOC 2330 Social Psychology in Sociological Perspective 3
	Supporting Minor 6
	Options (General Education) 3 or 6
	Activity Options 3 or 0

Year 3 (Sample): 33 credit hours

REC 3060	Introduction to Recreation and Special Populations 3
REC 3070	Fieldwork Seminar 3
REC 3080	Supervised Fieldwork Experience 12
REC 3090	Foundations of Sustainable Nature-Based Tourism and 3 Outdoor Recreation
REC 3850	The Planning of Recreation Areas and Facilities 3
REC 3860	The Administration of Leisure Services 3
	Options (General Education) 0-3
	Supporting Minor 0-3
	Activity/Recreation Options 0-3

Year 4 (Sample): 33 credit hours

REC 4070	Community Development and the Leisure Delivery 3 System
	Supporting Minor 9
	Options (General Education) 9-15
	Activity/Recreation Options 9-15

SECTION 9: Course Descriptions for Recreation Management and Community Development

All courses are not offered every year. The course schedule for the current academic session is available at website umanitoba.ca/regguide.

Courses with asterisk (*) compose the core curriculum.

U1 REC 1200 Introduction to Leisure Travel Cr.Hrs.3 (Formerly 123.120) To provide an introduction to tourist behaviour and the tourism system through an overview of: why people travel; the components of tourism; the scope and organization of tourism in Canada; and the interrelationship between recreation and tourism.

U1 REC 1400 Concepts of Recreation and Leisure Cr.Hrs.3 (Formerly 123.140) The nature and scope of recreation and leisure, the past influences and implications for the future. An overview of the types and roles of various components of the leisure service delivery system.

REC 2010 Measurement and Evaluation in Leisure Services Cr.Hrs.3 (Formerly 123.201) The nature of valid measurement and evaluation including research methods, and the specific techniques used to survey and assess needs, personnel, physical resources, services, etc.

REC 2530 Recreation Program Planning Principles Cr.Hrs.3 (Formerly 123.253) An examination of the rationale for the provision of program services and program planning systems. Specific topics include staging the major events, unit planning, program needs, and master planning. *Prerequisite:* REC 1400 (or 123.140).

REC 2540 Major Recreation Program Areas Cr.Hrs.3 (Formerly 123.254) Planning

considerations including outdoor programs, physical and social recreation, facility programming, creative arts programs and programming for specific age groups. *Prerequisites:* REC 2530 (or 123.253).

REC 2650 The Social Aspects of Aging Cr.Hrs.3 (Formerly 123.265) An examination of the social aspects of aging. Emphasis on understanding the aging process as a life transition involving adaptation through interaction with social and physical environments. This is an Option in Aging course and may not be held for credit with IDES 2650 (or 051.265) or HMEC 2650 (or 028.265) or SWRK 2650 (or 047.265).

REC 3010 Directed Activity Study Cr.Hrs.1 (Formerly 123.301) Completion of an independent study or fieldwork experience, approved by the Coordinator, Recreation Management and Community Development, and under the direction of a faculty member.

REC 3060 Introduction to Recreation and Special Population Cr.Hrs.3 (Formerly 123.306) The nature of the provision of recreation services for specific populations (e.g., aging, physically disabled, socio-economically disadvantaged). Characteristics of special population groups, the settings for therapeutic recreation, service delivery systems models, and program planning are examined. *Prerequisite:* REC 1400 (or 123.140).

REC 3070 Fieldwork Seminar Cr.Hrs.3 (Formerly 123.307) This course is 39 hours of classroom orientation to the field experience. Students apply, interview, and select field situation.

REC 3080 Supervised Fieldwork Experience Cr.Hrs.12 (Formerly 123.308) Supervised field study (14 weeks; 35–40 hours per week) within a leisure service agency. Field exposure will be jointly supervised by an agency official and a Recreation Management and Community Development staff member. *Prerequisite:* REC 3070 (or 123.307) and successful completion of 70% of the core curriculum in Recreation Management and Community Development. Evaluated pass-fail.

REC 3090 Foundations of Sustainable Nature-Based Tourism and Outdoor Recreation Cr.Hrs.3 (Formerly 123.309) Analysis of the growth and development of sustainable nature-based tourism as a global and regional phenomenon. Particular emphasis will be placed upon the fundamental principles of sustainability, natural resource and visitor management for recreation, and the role of outdoor recreation and education in Sustainable Tourism Planning and Management. *Prerequisite:* REC 1200 (or 123.120), REC 1400 (or 123.140). May not be held with 123.330 and 123.402.

REC 3850 The Planning of Recreation Areas and Facilities Cr.Hrs.3 (Formerly 123.385) The process used to plan both recreational open spaces and facilities. Special consideration is given to the role of the recreation professional in relationship to other planners. *Prerequisite:* REC 1400 (or 123.140).

REC 3860 The Administration of Leisure Services Cr.Hrs.3 (Formerly 123.386) Basic management principles and practices and their applicability to the delivery of leisure services. Topics include management styles and systems, legal aspects, the financial base, budgeting, planning, etc. *Prerequisite:* REC 1400 (or 123.140).

REC 3870 Human Resource Development in Leisure Services Cr.Hrs.3 (Formerly 123.387) The purpose of this course is to develop personal interaction skills with respect to personnel management techniques. Basic concepts of leadership and leadership training, and volunteer development and use. *Prerequisite:* REC 1400 (or 123.140).

REC 4060 Person Centred Leisure Education Cr.Hrs.3 (Formerly 123.406) A detailed examination of person centred leisure education with an emphasis on both theoretical and practice models and their application to the recreation service delivery system. *Prerequisites:* REC 1400 (or 123.140) and REC 3060 (or 123.306).

REC 4070 Community Development and the Leisure Service Delivery System Cr.Hrs.3 (Formerly 123.407) The nature of community and the unique role that leisure service organizations play in the complex process of community development. *Prerequisites:* must have completed 70 percent of the core courses in Recreation Management and Community Development. May not be held for credit with 123.404.

REC 4090 Sustainable Nature-Based Tourism Planning, Management and Research Cr.Hrs.3 (Formerly 123.409) Building upon the changes to REC 3090 this course examines planning and management frameworks as they relate to sustainable nature-based tourism. The course examines the expansion of tourism as a global phenomenon and considers sustainable nature-based tourism as a community development process. In addition the role and importance of research in informing the tourism planning and management decision making processes is examined. *Prerequisites:* REC 3090 or the former 123.330. May not be held for credit with 123.430 and 123.432.

REC 4100 Major Essay Readings or Creative Work Cr.Hrs.3 (Formerly 123.410) *Prerequisite:* REC 1400 (or 123.140) and department approval. May not be held for credit with REC 4110 (or 123.411) or other REC 4100 (or 123.410).

REC 4110 Directed Studies Cr.Hrs.3 (Formerly 123.411) Research, independent study or special experience approved by the department and under the direction of an instructor. *Prerequisite:* REC 1400 (or 123.140) and department approval. May not be held for credit with REC 4100 (or 123.410) or other REC 4110 (or 123.411).

REC 4120 Recreational Travel and Tourism Cr.Hrs.3 (Formerly 123.412) The purpose of this course is to provide students with a better understanding of the travel and tourism industry through an examination of its history, service systems and issues. *Prerequisites:* REC 2010 (or 123.201) and REC 1200 (or 123.120).

REC 4130 Leisure Services for the Aging Cr.Hrs.3 (Formerly 123.413) The nature of the aging process and its impact on leisure behaviour. The factors influencing leisure among older adults, policy issues, and program and service methods and implications will be examined. *Prerequisite:* REC 3060 (or 123.306).

REC 4140 Marketing Recreation and Park Services Cr.Hrs.3 (Formerly 123.414) A review of the general principles of marketing and an introduction to strategies for their implementation in public sector and not-for-profit recreation agency programs and services. *Prerequisites:* MKT 2210 (or 118.221) and REC 3860 (or 123.386).

REC 4150 Clinical Aspects of Therapeutic Recreation Cr.Hrs.3 (Formerly 123.415) An examination of the current principles of therapeutic recreation in relation to their practical application to individuals in clinical settings such as nursing homes, hospitals and other long-term care facilities. *Prerequisite:* REC 3060 (or 123.306).

REC 4170 Sport Management Cr.Hrs.3 (Formerly 123.417) The purpose of this course is to assist students in gaining an in-depth appreciation of national and provincial sport organizations. Topics include structure, policies, programs, marketing, funding and communications as they relate to Fitness and Amateur Sport Canada and governance in the Canadian Sport System. *Prerequisite:* REC 1400 (or 123.140) or PHED 1500 (or 057.150 or the former 057.132).

REC 4180 Social and Psychological Aspects of Leisure Cr.Hrs.3 (Formerly 123.418) An examination of leisure behaviour and experience of individuals in social and situational contexts, focusing on the role of leisure in the social psychological adjustment of the individual and implications for managing and delivering leisure services. *Prerequisite:* REC 1400 (or 123.140).

REC 4200 Special Topics Cr.Hrs.3 (Formerly 123.420) A theoretical and practical examination of a selected issue in the field of leisure studies. The topics will vary depending on faculty expertise and student need. *Prerequisites:* REC 1400 (or 123.140) and departmental approval.

REC 4310 The Administration of Leisure Services 2 Cr.Hrs.3 (Formerly 123.431) Advanced management principles and practices and their applicability to the delivery of leisure services. *Prerequisite:* REC 3860 (or 123.386).

REC 4340 The Planning of Recreation Areas and Facilities 2 Cr.Hrs.3 (Formerly 123.434) Advanced planning considerations with opportunity for application of planning process theories. *Prerequisite:* REC 3850 (or 123.385).

SECTION 10: Interfaculty Option in Aging

An Option in Aging is offered by and in the following faculties: Arts, Human Ecology, Nursing, Physical Education and Recreation Studies, Social Work and the Clayton H. Riddell Faculty of Environment, Earth, and Resources. To complete the option, students will need to complete each of the following requirements: a) or HMEC 2650 or REC 2650 or SWRK 2650, The Social Aspects of Aging; b) NURS 2610 or PHED 2610, Health and Physical Aspects of Aging; c) at least three credits of professional/discipline specific applied work on aging within the student's unit of registration; and d) an additional nine credits in aging from the participating units. Lists of courses are available in faculty general offices.

Upon completion of these requirements, a "Comment" will be added to the student's transcript. For further information concerning the option, interested students are directed to the general office of the Faculty of Physical Education and Recreation Studies.

Faculty of Science

General Office

239 Machray Hall

Telephone: (204) 474 8256

Fax: (204) 474 7618

Website: umanitoba.ca/science

E-mail: science_advisor@umanitoba.ca

Dean: Mark Whitmore

Associate Deans: Mark Abrahams, Roy Roshko, Elizabeth Worobec

Executive Assistant to the Dean: Trevor Schultz

Executive Assistant (Student Affairs): Joan McConnell

Administrative Assistant: Denise Alcox

Student Advisors: Val Matthes, Jill Ogston, Greg Sobie

Chapter Contents

SECTION 1: Preface

- 1.1 History of the Faculty of Science

SECTION 2: Admission to the Faculty of Science

- 2.1 Entrance to Science from University 1
- 2.2 Transfer Students
- 2.3 Special Students
- 2.4 Second Degree Students
- 2.5 Auditing Students

SECTION 3: Degree Programs in the Faculty of Science

- 3.1 Regulations Applicable to all Programs
- 3.2 Three Year General Degree: B.Sc. (General)
- 3.3 Four Year Major Degree: B.Sc. (Major)
- 3.4 B.Sc. Major Cooperative Option
- 3.5 Four Year Honours Degree: B.Sc. (Honours) and B.C.Sc. (Honours)
- 3.6 B.Sc. (Honours) and B.C.Sc. (Honours) Cooperative Option
- 3.7 Minor Program
- 3.8 School of Optometry, University of Waterloo

SECTION 4: Programs and Courses Offered by the Faculty of Science

- 4.1 Actuarial Mathematics
- 4.2 Biochemistry
- 4.3 Biology
- 4.4 Biotechnology
- 4.5 Botany
- 4.6 Chemistry
- 4.7 Computer Science
- 4.8 Ecology
- 4.9 Environmental Science (Enrolment restricted to continuing students. New students should refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources)
- 4.10 Genetics
- 4.11 Geological Sciences (Enrolment in the B.Sc. General Program restricted to continuing students. New students and continuing Majors and Honours students should refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources)
- 4.12 Mathematics
- 4.13 Microbiology
- 4.14 Physics and Astronomy
- 4.15 Psychology

4.16 Statistics

4.17 Zoology

4.18 Courses Offered by Other Faculties and Schools Acceptable for Credit in the Faculty of Science

SECTION 1: Preface

1.1 History of the Faculty of Science

The first four members of the Science faculty were appointed in 1904. In 1921, a combined Faculty of Arts and Science was formed and at that time provided instruction in undergraduate courses in both Arts and Science and, to a limited extent, in graduate studies.

The Faculty of Science became a separate faculty in 1970 and at present includes the departments of Botany, Chemistry, Computer Science, Mathematics, Microbiology, Physics and Astronomy, Statistics, Zoology, and interdisciplinary programs in Biology, Biochemistry, Biotechnology, Ecology, Genetics, Psychology and Actuarial Mathematics. With the creation of the Clayton H. Riddell Faculty of Environment, Earth, and Resources in September 2003, programs in Environmental Science and Geological Sciences are no longer offered by the Faculty of Science except to continuing students.

SECTION 2: Admission to the Faculty of Science

ALL STUDENTS ARE ASKED TO NOTE THAT SOME ACADEMIC POLICIES AND REGULATIONS ARE CURRENTLY UNDER REVIEW AND MAY CHANGE. PLEASE CHECK THE WEB CALENDAR AFTER JULY 1, 2006 FOR UPDATED INFORMATION

2.1 Entrance to Science from University 1

Most students newly admitted from high school and those who have completed less than 24 credit hours at another post-secondary institution will complete the first year of their degree programs in University 1. After completion of University 1, students may apply for admission to their desired faculty or school or transit to Arts or Science for further study. Upon completion of 30 credit hours of courses, students **must** exit University 1 prior to their next registration. For information see the chapters for Admission and University 1 in this *Calendar*.

To enter the Faculty of Science a student must have completed a minimum of 24 credit hours of courses. Students entering the Faculty of Science are placed in the three year General degree program, unless they have applied to enter a specific four year Major or Honours program. Entrance to a four year Major or Honours program requires that students have successfully completed the specific courses for the intended program, and that an application be approved by the department or program coordinator and a Faculty of Science student advisor prior to registration. See Section 3, below, Degree Programs in the Faculty of Science. Students intending to enter a specific four year Major or Honours program should refer to the program charts in Section 4, Programs and Courses Offered by the Faculty of Science, for courses required for entry into each program. Completion of these courses in University 1 will ensure that a student may complete a four year Major or Honours program in four calendar years.

2.2 Transfer Students

Students who wish to transfer to the Faculty of Science must have completed a minimum of 24 credit hours of post-secondary courses to be eligible for consideration. External transfer students with 24 credit hours or more of transfer credit are assessed upon admission to the Faculty of Science.

Students who have completed less than 24 credit hours may be admitted to University 1 or the Continuing Education Division.

Students on academic suspension as a result of work completed at another post-secondary institution will not normally be considered for admission to the University of Manitoba until the suspension has been served.

Transfer of Credit

Internal: See General Academic Regulations and Policy, Transfer of Credit in this *Calendar*.

External: See Admissions section of this *Calendar*. Courses completed at an external institution ten years prior to registration in the Faculty of Science are not considered for transfer credit. Students should contact a Science student advisor regarding departmental transfer credit policies. All courses acceptable to the Faculty of Science must be transferred, and will bear the grade and course classification of "TX" (transfer).

2.3 Special Students

After Degree Special Students

Students who have successfully completed a first degree from a recognized university program with a cumulative Grade Point Average of 2.00 or better are eligible for admission as Special Students.

Undergraduate Special Students

Undergraduate Science students may take extra courses as Special Students (course classification "SS") but these courses do not count towards the degree nor in the student's Grade Point Average. The marks will appear on the student's history and courses taken as a Special Student do count in the student's sessional load. Students may change their course classification from that of a "Regular Student" to a "Special Student" (and vice versa) only until the end of the registration revision period. Courses classified as "special" do not have to be courses that are acceptable for credit in the Faculty of Science, however, registration in such courses cannot be authorized without the written permission of the department and faculty offering the course. Students registering in "SS" courses must register for those courses after the initial access period.

2.4 Second Degree Students

Students possessing a first degree from a recognized university program and who have a minimum cumulative Grade Point Average of 2.00 (or a 2.30 adjusted Grade Point Average) on all previous university work are eligible for admission as Second Degree students.

The Second Degree requirements may be shortened by up to 60 credit hours, and once admitted to a Second Degree Program, students will be expected to conform with all continuation, residency and graduation requirements as described in Section 3 below.

Specific information on requirements for a Bachelor of Science degree following a degree in another faculty or school, or at another university, is available in the general office.

2.5 Auditing Students

Students who wish to audit courses must have written permission from the instructor of the desired course before they can register. Auditing students must register in person in the Faculty of Science general office. The Faculty of Arts will prohibit auditors from registering in their courses until after the initial access period for registration.

SECTION 3: Degree Programs in the Faculty of Science

Degrees Offered

Bachelor of Science

Minimum time to graduation: Three years (University 1 plus two years). This degree is also called the General program.

Bachelor of Science (Major)

Minimum time to graduation: Four years (University 1, plus three years). This degree is also called the four year Major.

Bachelor of Science (Honours)

Minimum time to graduation: Four years (University 1, plus three years).

Bachelor of Computer Science (Honours)

Minimum time to graduation: Four years (University 1, plus three years).

Cooperative options are available to students in Biochemistry (Honours and Major), Chemistry (Honours and Major), Computer Science (Honours and Major), Ecology (Major), Environmental Science (Major) (continuing students only), Genetics (Honours), Microbiology (Honours and Major) and Zoology (Honours and Major).

All students are urged to examine their interests and future goals carefully to make a proper choice of program. Consultation with departments and with student advisors in the general office is encouraged.

Reminder

It is the student's responsibility to ensure that degree and program requirements are met. Science student advisors are available to clarify faculty and university regulations and degree requirements. A final and thorough program check is done after students have registered for their final year or course. The Faculty of Science is not responsible for those students who do not satisfy degree requirements.

3.1 Regulations Applicable to All Programs

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Science has regulations and requirements, published below that apply specifically to its students.

ALL STUDENTS ARE ASKED TO NOTE THAT SOME ACADEMIC POLICIES AND REGULATIONS ARE CURRENTLY UNDER REVIEW AND MAY CHANGE. PLEASE CHECK THE WEB CALENDAR AFTER JULY 1, 2006 FOR UPDATED INFORMATION

University Written English and Mathematics Requirement

Students are required to complete the University written English and Mathematics requirements as outlined in the Chapter, General Academic Regulations and Requirements, of this *Calendar*. The list of courses which satisfy the written English and Mathematics requirements appears in Appendix A of that chapter. The only course offered by the Faculty that satisfies the written English requirement is BOTN 1010.

In the course descriptions section of this *Calendar*, course numbers of designated **written English** courses are marked with a 'W' and designated **mathematics** courses are marked with an 'M.'

Prerequisite, Corequisite, and Recommended Courses: Definitions

Prerequisite: If a first course is prerequisite for a second course, a student must have credit in the first course before registering for the second course. The department giving the second course may require a minimum grade of "C" in the first course to register in the second course.

Corequisite: If a first course is a corequisite for a second course, the first course (unless previously completed) must be taken concurrently with the second course.

Recommended: If a course is strongly recommended as a pre- or corequisite, a student is advised to take it. The final decision as to whether or not to take the course rests with the student. Students are advised to consult with the department for specific instructions.

NOTES:

Students who are allowed to enrol in courses or programs provisionally pending satisfactory completion of pre- or corequisite must, if unsuccessful, withdraw or amend their registration accordingly within the stipulated deadline for adding courses. Those who do not may be withdrawn automatically and may relinquish the opportunity to add appropriate courses. The Faculty of Science reserves the right not to send reminders of the requirement to withdraw.

Any prerequisite or corequisite may be waived with written consent of the department.

Supplemental Examinations

There are no supplemental examinations in the Faculty of Science.

Repeating a Course

Science students are subject to the University of Manitoba regulations (see General Academic Regulations and Policy, Repeating a Course) and the

Faculty of Science degree regulations with regard to eligibility to repeat a course.

Repeating a course will **not** result in the removal of the first attempt and grade in that course from the student's record. The course will appear on the transcript as many times as it has been repeated. Only the grade from the last attempt will be included in the CGPA (Cumulative Grade Point Average) and any other GPAs calculated. There may be a limit on the number of 'F' grades permitted in any degree.

Students who wish to repeat a course in which they have a 'C' or better must contact the Faculty of Science for approval.

Voluntary Withdrawals

The responsibility for initiating withdrawals rests solely with the student. When eligible to do so, Voluntary Withdrawals must be done through Aurora Student, otherwise withdrawals must be authorized first by the Science general office and then through Registrar's Office. No withdrawals will be permitted after the deadlines posted in the Academic Schedule.

Effective September 2006, there is no limit on Voluntary Withdrawals. In exceptional circumstances, Authorized Withdrawals may be permitted on presentation of appropriate documentation. See the chapter, General Academic Regulations and Policy, section Voluntary Withdrawal from Programs and Courses or consult a Science student advisor for information.

Letter of Permission to Take Courses at Another University

Students wishing to complete courses at another institution for credit at this university must obtain written permission from the Registrar's Office prior to registering at the other institution or no credit will be permitted. Any grades earned are transferred in and form part of the Grade Point Average. Students who register for courses elsewhere without a Letter of Permission must reapply to the Faculty of Science before July 2.

Students who are on academic suspension may not elect courses at another institution for credit toward a Science degree at this university.

Students in an Honours program may not normally complete courses at another institution for credit at this university. Individual exceptions must be referred both to the Honours department concerned and the general office for consideration.

Attendance at Other Institutions

Students who attend other post-secondary institutions without a Letter of Permission must reapply for admission to the Faculty of Science before the application deadline and be academically competitive for admission. Similarly, students registered in Science here may not be registered at another academic institution at the same time unless they are registered elsewhere on a Letter of Permission. The penalty for unauthorized or undisclosed attendance may be disciplinary withdrawal or academic suspension.

Dean's Honour List

Students enrolled in 24 credit hours or more who achieve a sessional Grade Point Average of 3.50 or higher during a regular session will be placed on the Dean's Honour List.

Where the standard department program specifies a number of credit hours in excess of 30, the assessment for Dean's Honour List shall be based on completion of at least 80 per cent of that specified number of credit hours during the regular session.

The Dean's Honour List designation will appear on the student's transcript of marks.

For the additional requirements for Dean's Honour List in the Honours or Major Cooperative Option, see the regulations for these programs.

Academic Dishonesty

Academic dishonesty is intentional cheating, fabrication, impersonation, or plagiarism. It is also knowingly helping or attempting to help others to be dishonest. Academic dishonesty lowers scholastic quality and defrauds others who will eventually depend on their own knowledge and integrity.

Plagiarism or any other form of cheating on examinations, term tests, or assignments is subject to academic penalty as serious as suspension or expulsion from the faculty or university.

Students who are unsure of what constitutes academic dishonesty should refer to the regulations in General Academic Regulations and Policy, Pla-

giarism and Cheating and consult with a Science student advisor or a faculty member.

Termwork and Debarment

A student is responsible for the completion of laboratory work, assignments, tests and other class work as prescribed by departments. A student who does not meet termwork requirements to the satisfaction of a department will receive a warning to this effect from the department or the general office. If this warning is ignored, a student may be debarred from the course. Any student debarred from a course receives an automatic grade of "F" in that course.

Deferred Examinations

A student who is unable to write a final examination because of illness or other disability or compassionate reasons must file an application in the faculty general office for a deferred examination. The application must be filed within seven working days of the last examination in that series. Appropriate documentation must be provided that verifies that the incapacity existed at the time the examination was to be written.

A deferred examination is offered in a manner prescribed by the head of the department concerned. This would normally be written within 30 working days of the last examination in that series. Any other consideration would be determined by the department head.

Students requesting deferred examinations on the grounds that the examinations conflict with vacation or holiday plans shall not be granted deferrals.

A deferred examination is not normally granted to a student who has written the final examination.

Challenge for Credit

Any student wishing to challenge a course for credit should contact the Science General Office.

Appeals Involving Academic Regulations

The Committee on Student Standing in Science considers appeals from students who request special consideration in respect of rules and regulations governing their programs of study and qualification for graduation.

Appeals should be addressed to: The Secretary, Committee on Student Standing, General Office, Faculty of Science, 239 Machray Hall.

Incidental Fees

Incidental fees are assessed for some courses. Refer to department offices and the *Registration Guide* section of this publication for details.

3.2 Three Year General Degree:

B.Sc. (General)

The three year General program is intended to provide diversified training in Science. The design of the program is such that a student is exposed to several areas of science at an introductory level together with a requirement for more advanced study in at least two Science areas. These requirements will ensure that a student's program of study will have elements of breadth and depth.

This program is not intended for students who desire to practise in some field of specialization in the Sciences. Students with that intent are recommended to the Honours or the four year Major program. However, the three year General program is flexible enough in most departments to allow a student to choose courses that would facilitate transferring to the four year Major program should that become desirable.

B.Sc. (General): Academic Regulations

A student must complete 90 credit hours (equivalent to 15 full courses) with passing grades ("D" or better) in each course and with a minimum Grade Point Average of 2.00 on the 90 credit hours which constitute the degree to qualify for the degree of Bachelor of Science (General).

Hours of credit for which a student registers without subsequent withdrawal are called attempted credit hours (or simply, attempts). There is no limit on the number of attempts within the B.Sc. (General), provided a student does not exceed 48 credit hours of failed and/or repeated courses.

Twenty four credit hours must be chosen from the following list of introductory Science courses, with at least six credit hours from each of four subject areas:

- Astronomy: six hours chosen from: PHYS 1810, PHYS 1820, PHYS 1830
- Biology: BIOL 1020 and BIOL 1030
- Chemistry: CHEM 1300 and CHEM 1310
- Computer Science: COMP 1010 and COMP 1020
- Environmental Science: ENVR 1000 and ENVR 2000 (*Cannot be used to fulfil the introductory science requirement if taken after the 2003 Summer Session*)
- Geological Sciences: one of GEOL 1340 or GEOL 1440, and one of GEOL 1350, GEOL 1360 or GEOL 1370(*Permitted to be used to fulfil the introductory science requirement if taken before the September 2006*)
- Mathematical Sciences: six credit hours chosen from: MATH 1200, MATH 1300, MATH 1310, MATH 1500, MATH 1510, MATH 1520, MATH 1530, MATH 1680, MATH 1690, MATH 1700, MATH 1710, MATH 1730
- Physics: PHYS 1020 and PHYS 1030, or PHYS 1050 and PHYS 1070
- Statistics: STAT 1000 and STAT 2000

A minimum of 30 credit hours at the 2000 and/or 3000 level must be chosen from **two** Science departments with at least 12 credit hours from each department. Students should note prerequisite requirements for upper level courses when planning their program. Appropriate courses and combinations of courses are detailed in each department's section of this chapter. Other courses from that department may be taken with written authorization from that department.

NOTES:

1) CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370) may be held for credit in the B.Sc. General degree program, but may not be used to fulfil the minimum requirement of 12 credit hours in 2000-level Chemistry.

2) Students who wish to use Mathematics to satisfy this requirement should not elect MATH 1680 to satisfy the six credit hours of introductory mathematics above.

A maximum of seven full courses or equivalent (42 credit hours) from **one** department and a maximum of ten full courses or equivalent (60 credit hours) from **two** departments is allowed.

At least two full courses or equivalent (12 credit hours) from outside the Faculty of Science and acceptable in the Faculty of Science must be taken, of which six credit hours must be from the Faculty of Arts. A maximum of six full courses or equivalent (36 credit hours) may be taken from outside the Faculty of Science. See Section 4.18 below, Courses Offered by Other Faculties and Schools Acceptable for Credit in the Faculty of Science.

Students having difficulty with the interpretation of these regulations or the way in which they are applied, are urged to contact a Science student advisor in the general office. Students are responsible for their own degree progress and completion.

B.Sc. (General): Performance Regulations

ALL STUDENTS ARE ASKED TO NOTE THAT SOME ACADEMIC POLICIES AND REGULATIONS ARE CURRENTLY UNDER REVIEW AND MAY CHANGE. PLEASE CHECK THE WEB CALENDAR AFTER JULY 1, 2006 FOR UPDATED INFORMATION

A student's performance will be evaluated after each April and August examination series.

Minimum Performance Level

To remain in good standing, students must meet minimum performance levels as described in the table below. For the first 60 credit hours of coursework completed, a student must achieve a minimum Grade Point Average of 2.00 on half of their coursework. Between 60 and 120 credit hours, only the worst 30 credit hours are forgiven. Between 120 and 138 credit hours, the assessment of 2.00 is on the best 90 credit hours. After 138 credit hours, the worst 48 credit hours are forgiven.

Minimum Performance Table

Effective September 1998, this table applies to all students in the General degree program in the Faculty of Science. For students admitted to Science prior to the introduction of University 1, the first point of assessment occurs when a student has attempted 24 credit hours, as shown in Column 1. The number of credit hours on which the performance is to be assessed is described in Column 2. Column 3 indicates the required minimum Grade Point Average the student must achieve in order to remain in good standing. The first point of assessment for internal transfer students occurs upon admission to the Faculty of Science. External transfer students who have a

minimum of 24 credit hours of transferred courses are assessed upon admission.

Column 1	Column 2	Column 3
Total Number of Credit Hours Attempted at this point	Number of Credit Hours on which performance is to be assessed (Best grades included in assessment)	Required Minimum Grade Point Average
24	12	2.00
27	12	2.00
30	15	2.00
33	15	2.00
36	18	2.00
39	18	2.00
42	21	2.00
45	21	2.00
48	24	2.00
51	24	2.00
54	27	2.00
57	27	2.00
60	30	2.00
63	33	2.00
66	36	2.00
69	39	2.00
72	42	2.00
75	45	2.00
78	48	2.00
81	51	2.00
84	54	2.00
87	57	2.00
90	60	2.00
93	63	2.00
96	66	2.0
99	69	2.00
102	72	2.00
105	75	2.00
108	78	2.00
111	81	2.00
114	84	2.00
117	87	2.00
120	90	2.00
123	90	2.00
126	90	2.00
129	90	2.00
132	90	2.00
135	90	2.00
138	90	2.00
141	93	2.00
144	96	2.00
147	99	2.00
150	102	2.00
153	105	2.00
156	108	2.00
159	111	2.00
162	114	2.00
165	117	2.00
168	120	2.00
171	123	2.00
174	126	2.00
177	129	2.00
180	132	2.00
183	135	2.00
186	138	2.00
189	141	2.00
192	144	2.00
195	147	2.00
198	150	2.00
201	153	2.00

Students who fail to meet this standard will be placed on probation. The notation "On Probation" will be recorded on the transcript. Once on probation, a student will be allowed to register for **one** additional session (with intersession, summer evening and summer day being treated as one ses-

sion for the purpose of this regulation) to enable them to achieve the required Grade Point Average applicable to their **new** number of attempts. If the student succeeds in this he/she will be allowed to continue. If the student does not succeed, he/she will be placed on **academic suspension for one calendar year**. Because of the importance of the first session in which a student registers after being placed on probation, students must consult the Faculty of Science student advisors to ensure that this registration is able to make their removal from probation feasible. Students who have been suspended for one year as a result of their failure to clear their probationary status will subsequently be suspended for two calendar years if they fail to clear their probationary status during their first registration on their return to the Faculty of Science. Those serving two-year suspensions are required to start the degree afresh should they choose to return to the Faculty of Science.

Students who fail or repeat more than 48 credit hours will be placed on academic suspension for two calendar years. Students serving two-year suspensions are required to start the degree afresh should they choose to return to the Faculty of Science. Students may appeal for transfer credit of up to 30 credit hours in courses in which a minimum grade of "C" was achieved.

A student placed on academic suspension is not allowed to register in the Faculty of Science during the term of the suspension. Students wishing to return to the Faculty of Science are required to achieve certain academic standards upon their return. For information regarding these standards, consult a Science student advisor.

Residence Requirements for General Students

There are two ways in which the student may fulfil the minimum requirement of credit hours that must be taken at the University of Manitoba: by taking at least 48 credit hours (eight full courses) at the University of Manitoba; or by taking at least the final 30 credit hours (five full courses) here. The courses used to satisfy the residence requirement must be acceptable for credit in the Faculty of Science.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in 24 credit hours or more who achieve a sessional Grade Point Average of 3.50 or higher during a regular session will be placed on the Dean's Honour List. See Section 3.1 above.

Degree with Distinction

To obtain a Degree with Distinction a student must achieve a minimum cumulative Grade Point Average of 3.50 on all courses taken in the degree. The term "Degree with Distinction" will appear both on the parchment and on the student's transcript of marks.

3.3 Four Year Major Degree:

B.Sc. (Major)

The four year Major program provides in-depth study of a subject or subject areas and enables graduates to function competently in a career in their chosen subject area.

While this program is not intended for students who wish to pursue graduate study, most programs allow students to do so with a minimum of difficulty.

The four year Major program may be pursued on a part-time basis, although it must be recognized that under those conditions students would require more than four years to complete degree requirements.

To be eligible for any award granted exclusively on the basis of academic performance, a student normally must be enrolled in 100% of a full program as defined by the department.

Prior to entry to the four year Major or Honours program, a student is subject to the performance regulations of the B.Sc. (General) program.

B.Sc. (Major): Academic Regulations

ALL STUDENTS ARE ASKED TO NOTE THAT SOME ACADEMIC POLICIES AND REGULATIONS ARE CURRENTLY UNDER REVIEW AND MAY CHANGE. PLEASE CHECK THE WEB CALENDAR AFTER JULY 1, 2006 FOR UPDATED INFORMATION

To qualify for the degree Bachelor of Science (Major), a student must complete the equivalent of 20 full courses (120 credit hours) with passing

grades ("D" or better) in each course and with a minimum cumulative average of 2.00 on the 120 credit hours which constitute the degree.

Students must complete the university written English and Mathematics requirement as described in the chapter, General Academic Regulations and Policy, of this *Calendar*.

At least one course (six credit hours) **must** be taken from outside the Faculty of Science. As of the 1999-2000 regular session, students admitted to a Major program must complete six credit hours of courses from the Faculty of Arts. With the exception of students enrolled in Computer Science and Environmental Science, students may take a maximum of six courses (36 credit hours) from outside the Faculty of Science. For acceptable course choices see Section 4.18 below, Courses Offered by Other Faculties and Schools Acceptable for Credit in the Faculty of Science.

The course requirements of each department are listed under that department's heading.

Entrance to the Four Year Major

To enter a four year Major program, a student must normally have achieved a minimum grade of "C+" in at least one introductory course designated by the department(s). Departments may, however, specify higher performance levels in individual courses, or combinations of courses, for entry to their program. In addition, to enter a four year Major program a student shall normally have completed at least 30 credit hours, although a student may enter on the recommendation of the department with only 24 credit hours completed.

Any student who, prior to being admitted to a four year Major program, has completed more than 30 credit hours will be allowed to apply those excess credit hours which meet the specifications of the program to the four year Major program.

Students must attain a cumulative Grade Point Average of at least 2.00 regardless of the point of entry, and must meet continuation requirements as outlined below.

Continuation in the Four Year Major

To continue in the program, a student must maintain a cumulative Grade Point Average of 2.00 computed on all courses applied to, and attempted in, the program. Assessment for continuation in the program shall be carried out initially following the attempt of 54 credit hours; for Second Degree students the initial assessment shall be carried out following the attempt of 24 credit hours. After the initial assessment, until the completion of degree requirements, a student will be assessed for the 2.00 cumulative Grade Point Average *after each April and August examination series*. Students who do not meet this minimum will be required to withdraw from the Major program.

The continuation and (or) graduation requirement for the Major programs in Chemistry, Computer Science, Statistics and Zoology differ from the above. See the *Calendar* entry for these departments for clarification.

Failed courses: A student who receives failing grades in more than 18 credit hours following admission to the program will be required to withdraw from the Major program.

A student will be required to repeat those failed courses which are specified as required courses for the program; however, with the approval of the department the student may be allowed to substitute a new course for any elective course failed.

Program Approval: The department must approve a student's Major program each session. Students must also obtain departmental approval for any and all revisions to their program.

Major students reverting to the General program must fulfil all academic requirements of that degree.

Residence Requirement for Four Year Major Students

A student must successfully complete a minimum of 60 credit hours (10 full courses) at the University of Manitoba. The courses used to satisfy the requirement must be acceptable for credit in the Faculty of Science. Residence requirements apply both to first and second degree students.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in 24 credit hours or more who achieve a sessional Grade Point Average of 3.50 or higher during a regular session will be placed on the Dean's Honour List.

Degree with Distinction

To obtain a Degree with Distinction a student must achieve a minimum 3.50 Grade Point Average on the last 60 credit hours of the program. All sessions, regular and summer, will be considered in descending chronological order. When the last 60 credit hours are found in a session containing more hours than are needed, the best grades from that session will be used for the Grade Point Average calculation.

The term "Degree with Distinction" will appear both on the parchment and on the student's transcript of marks.

3.4 B.Sc. (Major) Cooperative Option

The Major programs that offer a Cooperative Option are Biochemistry, Chemistry, Computer Science, Ecology, Environmental Science (continuing students only), Microbiology and Zoology.

A cooperative education program is an arrangement whereby a student spends alternating periods in university and employment. There are several advantages to cooperative education programs for students. One benefit is that students are able to acquire both theoretical knowledge and practical experience. This experience assists them in selecting areas of specialization for their senior courses. During an employment period students can also typically earn enough to defray the total cost of their university education. The contacts developed with potential employers are also valuable to graduating students.

All regulations governing regular Major programs apply to the Cooperative Option. In addition, the following variations apply:

Entrance

To enter the Cooperative Option a student must be eligible to enter the Major program offered by the department.

The normal point of entry to a Major Cooperative Option is following the completion of second year in the Faculty of Science.

Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option in those departments where the demand for places exceeds the number of places available. In such situations the department reserves the right to determine and select the best qualified applicants.

Structure and Sequencing

The Cooperative Option consists of both academic terms and employment terms.

Each academic term can be either four months in duration or eight months in duration, as designated by the Major department.

Each employment term can be either four months in duration or eight months in duration, as designated by the Major department.

Each academic term and each employment term will commence in January, May or September.

The sequence of academic terms and employment terms is variable to suit the needs of each department, and is designated by each department.

Students are expected to follow the academic/employment term sequence defined by their department from admission through to graduation.

Employment Term Requirements

All Cooperative Options will include at least 12 months spent in employment terms with a department-approved employer. Normally, each employment term will be completed with one employer.

Students are required to register in the appropriate employment term course and pay the fee prior to starting their employment term. Cooperative Option students are required to submit three written employment reports on their employment term activities. These reports are due at times designated by the Major department. Each Major department will provide students with instructions regarding the content and format requirements of the employment reports.

Indications of unsatisfactory performance by a student on an employment term will be thoroughly investigated by the Major department. As a result of the investigation, if benefits from further professional training are questionable, the student may be required to withdraw from the Cooperative Option. The student would then be eligible to enter the regular four year Major program or the General program.

While on an employment term, a Cooperative Option student is not permitted to take more than six hours of academic credit, and may not take more than one course at a time.

Academic Term Requirements

Coursework requirements of the Cooperative Option are equivalent to the coursework requirements of the four year Major program with the exception of the Microbiology and Zoology programs.

Cooperative Option students are expected (but are not required) to maintain a full-time course load while registered for an academic term. The "normal full load" per four-month term is five half courses (15 credit hours), per eight-month term is five full courses or equivalent (30 credit hours).

To continue in a four year Major Cooperative Option a student must attain a minimum cumulative Grade Point Average of 2.00 at each point of assessment with the exception of the Computer Science program. A student's performance will be evaluated following each academic term. A student in the Major Cooperative Option in Computer Science must attain a 2.50 cumulative Grade Point Average in order to continue. Students in Zoology must obtain a sessional grade point of 2.00 and a grade of 'C' or better in each Zoology course required in the program in order to graduate. In addition the student must meet all individual course prerequisites for further study. Departments may designate courses within the four year Major Cooperative Option in which students are required to attain a grade above 'C'.

A student who receives failing grades in more than 18 credit hours following admission to the four year Major program will be required to withdraw from the Major program.

A student who does not meet the academic requirements for continuation in a four year Major Cooperative Option will be required to withdraw from it.

Continuation in a four year Major Cooperative Option is contingent upon satisfactory performance in employment terms.

Four year Major Cooperative Option students who are required to revert or voluntarily revert to an alternative degree program must fulfil all academic requirements of that degree.

Recognition of Academic Merit

Dean's Honour List

A student's eligibility for the Dean's Honour List designation is evaluated at the "points of assessment" of academic terms.

To qualify for the Dean's Honour List a student must complete a minimum of 12 credit hours in a four-month academic term, 24 credit hours in an eight-month academic term, and achieve a sessional Grade Point Average of 3.50 or higher. See Section 3.1 above.

Degree with Distinction

To obtain a Degree with Distinction a student must achieve a minimum 3.50 Grade Point Average on the last 60 credit hours of the program. All sessions, regular and summer, will be considered in descending chronological order. When the last 60 credit hours are found in a session containing more hours than are needed, the best grades from that session will be used for the Grade Point Average calculation.

The term "Degree with Distinction" will appear both on the parchment and on the student's transcript of marks.

3.5 Four Year Honours Degree:

B.Sc. (Honours) and B.C.Sc. (Honours)

The Honours programs in the Faculty of Science are the most heavily concentrated programs offered. These programs lead most directly to graduate study and are in most cases prescribed extensively by the departments. A student is required to pursue this degree full-time and may be required to achieve higher grade standards than in other degree programs. The programs are regarded as professional training.

Students graduating from the Honours program in Computer Science receive the degree designation Bachelor of Computer Science (Honours), also noted as B.C.Sc. (Honours).

A student electing an Honours program will normally begin Honours work in second year and must meet the entrance requirements set out below. Honours work will consist of three years of study in prescribed courses be-

yond the first year and will lead to the B.Sc. (Honours) or the B.C.Sc. (Honours).

To be eligible for any award granted exclusively on the basis of academic performance, a student normally must be enrolled in 100% of a full program as defined by the department.

See below for additional regulations of the Honours Cooperative Option.

Students must complete the university written English and Mathematics requirement as described in the chapter, General Academic Regulations and Policy, of this *Calendar*.

As of the 1999-2000 regular session, students admitted to Honours programs must complete six credit hours from the Faculty of Arts. Because many Honours programs in the Faculty of Science do not have room for electives in Years 2, 3 and 4 of the programs, these six credit hours, including the three credit hours of written English, should be completed in University 1.

Entrance to Honours

ALL STUDENTS ARE ASKED TO NOTE THAT SOME ACADEMIC POLICIES AND REGULATIONS ARE CURRENTLY UNDER REVIEW AND MAY CHANGE. PLEASE CHECK THE WEB CALENDAR AFTER JULY 1, 2006 FOR UPDATED INFORMATION

To enter an Honours degree program in Year 2, a student must have a grade of "B" or better in at least one introductory course designated by the department(s), and a Grade Point Average of not less than 2.50 on all courses completed at the end of Year 1 (minimum 24 credit hours).

Students who are ineligible to enter Honours after their first year may establish their eligibility to enter Honours in third year on the basis of their academic performance in second year. Students must take at least 18 credit hours in the regular session (or the minimum credit hours specified by the department where entrance is sought. See the sections of the departments in this chapter), and must achieve a minimum "B" average on 18 credit hours of the courses required in the Honours Program. Similarly, students who are ineligible to enter Honours after their second year may establish their eligibility to enter Honours in fourth year on the basis of their academic performance in third year. Students must take at least 18 credit hours in the regular session (or the minimum credit hours specified by the department where entrance is sought. See the sections of the departments in this chapter), and must achieve a minimum "B" average on the 18 credit hours of the courses required in the Honours Program. See a Science student advisor for further information.

Continuation in Honours

A minimum sessional Grade Point Average of 2.50 is required **after each assessment period (once per year each May)**. Students must meet all individual course prerequisites for further study. Departments may designate courses within the Honours program in which students are required to obtain a grade above "C".

NOTE:

The requirements of the Honours programs in Actuarial Mathematics, Biochemistry, Biotechnology, Botany, Chemistry, Computer Science, Ecology, Genetics, Mathematics, Microbiology, Physics and Astronomy, Psychology, Statistics and Zoology differ somewhat from the above and below regulations. See the sections of these departments in this chapter for applicable regulations.

Students who do not meet the minimum requirement will be required to withdraw from the Honours program.

Students who accumulate more than 6 credit hours of "F's" per regular session (or 3 credit hours per Coop term) or more than a maximum of 18 credit hours of "F's", including "F's" prior to entry, will be required to withdraw from Honours.

Honours students must complete a minimum of 18 credit hours during each regular session (9 credit hours per Coop term).

Program Approval

The department must approve a student's Honours program each session. Students must also obtain departmental approval for any and all revisions to their program.

Residence Requirement for Honours Students

A student must successfully complete a minimum of 60 credit hours (10 full courses) at the University of Manitoba. The courses used to satisfy the requirement must be acceptable for credit in the Faculty of Science. Residence requirements apply both to first and second degree students.

To graduate with an Honours degree, a student must obtain an annual Grade Point Average of 2.50 or higher in Year 4. Also, to qualify for the Honours degree, a student must have a minimum 2.50 cumulative Grade Point Average at the point of graduation, that is, on all courses taken in the degree.

NOTE:

The graduation requirements of the Honours program in Actuarial Mathematics, Biochemistry, Biotechnology, Botany, Chemistry, Computer Science, Ecology, Genetics, Mathematics, Microbiology, Physics and Astronomy, Psychology, Statistics and Zoology differ from the above. See the departmental sections of this chapter for clarification.

Withdrawal from Honours

A student who deletes a course or courses from the Honours program will be reverted to the four year Major program or a General degree program unless the Honours department has authorized the student's continuation in Honours. All Honours programs must contain a minimum of 18 credit hours during each regular session unless otherwise specified by the department. See the sections of the departments in this chapter for applicable regulations.

Honours students reverting to an alternative degree program must fulfil all academic requirements of that degree.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in 24 credit hours or more who achieve a sessional Grade Point Average of 3.50 or higher during a regular session will be placed on the Dean's Honour List. Where the standard department program specifies a number of credit hours in excess of 30, the assessment for the Dean's Honour List shall be based on completion of at least 80 per cent of that specified number of credit hours during the regular session. See Section 3.1 above.

First Class Honours

To graduate with First Class Honours the student must achieve a final cumulative Grade Point Average of 3.50.

The term "First Class Honours" will appear both on the parchment and on the student's transcript of marks.

Double Honours Programs

Double Honours programs may be available as specified under departmental headings. Other programs may be arranged in consultation with the departments concerned.

3.6 B.Sc. (Honours) and B.C.Sc. (Honours): Cooperative Option

The Honours programs which offer a Cooperative Option are Biochemistry, Chemistry, Computer Science, Genetics, Microbiology, Zoology and the Joint Computer Science-Mathematics Honours program.

A cooperative education program is an arrangement whereby a student spends alternating periods in university and employment. There are several advantages to cooperative education programs for students. One benefit is that students are able to acquire both theoretical knowledge and practical experience. This experience assists them in selecting areas of specialization for their senior courses. During an employment period students can also typically earn enough to defray the total cost of their university education. The contacts developed with potential employers are also valuable to graduating students. The Honours Cooperative Option therefore offers valuable work experience and simultaneously ensures an academic program of Honours calibre.

All regulations governing regular Honours programs apply to the Cooperative Option. In addition, the following variations apply:

Entrance

To enter the Cooperative Option a student must be eligible to enter the Honours program offered by the department.

The normal point of entry to an Honours Cooperative Option is following the completion of second year in the Faculty of Science. Following that point of entry all requirements of the Cooperative Option must normally be completed in no more than four years (48 months).

Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option in those departments where the demand for placements exceeds the number of places available. In

such situations the department reserves the right to determine and select the best qualified applicants.

Structure and Sequencing

The Cooperative Option consists of both academic terms and employment terms.

Each academic term can be either four months in duration or eight months in duration, as designated by the Honours department.

Each employment term can be either four months in duration or eight months in duration, as designated by the Honours department.

Each academic term and each employment term will commence in January, May or September.

The sequence of academic terms and employment terms is variable to suit the needs of each department, and is designated by each department.

Students are expected to follow the academic/employment term sequence defined by their department from admission through to graduation.

Employment Term Requirements

All Cooperative Options will include at least 12 months spent in employment terms with a department-approved employer. Normally, each employment term will be completed with one employer.

Cooperative Option students are required to submit at least three written employment reports on their employment term activities. These reports are due at times designated by the Honours department. Each Honours department will provide students with instructions regarding the content and format requirements of the employment reports.

Indications of unsatisfactory performance by a student on an employment term will be thoroughly investigated by the Honours department. As a result of the investigation, if benefits from further professional training are questionable, the student may be required to withdraw from the Cooperative Option. The student would then be eligible to enter the regular Honours program, the four year Major program or the General program.

While on an employment term, a Cooperative Option student is not permitted to take more than six hours of academic credit, and may not take more than one course at a time.

Academic Term Requirements

Coursework requirements of the Cooperative Option are equivalent to the coursework requirements of the Honours program with the exception of the Biochemistry, Genetics and Microbiology programs.

Cooperative Option students must maintain a full-time course load while registered for an academic term. The "normal full load" per four-month term is five half courses (15 credit hours), per eight-month term is five full courses or equivalent (30 credit hours).

With the permission of the Honours department the normal full load may be reduced by six credit hours per four-month term or twelve credit hours per eight-month term. In such situations, any coursework deficiencies must be made up prior to the start of the subsequent academic term.

To continue in an Honours Cooperative Option a student must attain a Grade Point Average of 2.50 or higher (without any failures) at each point of assessment. A student's performance will be evaluated following each academic term which precedes an employment term with the exception of the Computer Science program. An assessment of a Computer Science student's sessional Grade Point Average will only take place if two academic terms containing a minimum of 24 credit hours have been completed since the last assessment. In addition the student must meet all individual course prerequisites for further study and departmental continuation and graduation requirements. Departments may designate courses within the Honours Cooperative Option in which students are required to attain a grade above "C."

Continuation in an Honours Cooperative Option is contingent upon satisfactory performance on Employment Terms.

Honours Cooperative Option students who are required to revert or voluntarily revert to an alternative degree program must fulfil all academic requirements of that degree.

Recognition of Academic Merit

Dean's Honour List

A student's eligibility for the Dean's Honour List designation is evaluated at the points of assessment of Academic Terms.

To qualify for the Dean's Honour List, a student must complete a minimum of 12 credit hours in a four-month academic term, 24 credit hours in an eight-month academic term, and achieve a sessional Grade Point Average of 3.50 or higher. Where the standard department program specifies a number of credit hours in an academic term in excess of 15 credit hours in a four-month term or 30 credit hours in an eight-month term, the assessment for Dean's Honour List shall be based on completion of at least 80 per cent of that specified number of credit hours in the academic term. See Section 3.1 above.

NOTE: The requirements for Dean's Honour List in the Computer Science Cooperative Option differ somewhat from above. See the section of the department in this chapter for applicable regulations.

First Class Honours

To graduate with First Class Honours the student must achieve a final cumulative Grade Point Average of 3.50.

The term "First Class Honours" will appear both on the parchment and on the student's transcript of marks.

3.7 Minor

Students in B.Sc. Major and Honours programs may, if they wish, declare and complete a Minor from departments and interdisciplinary programs in which a Minor is offered. In the Faculty of Science these are listed in the program charts for each department or interdisciplinary program. Available Minors in the Schools of Music and Art and the Faculties of Arts, Environment and Management are to be found within the appropriate description of departmental/school/faculty/program offerings. Completion of a Minor is entirely optional. Students may **not**, however, declare both their Major and Minor from the same department/interdisciplinary program. It should be noted that for Honours students any consideration of completing a Minor should be made early due to restricted opportunities in later years of their programs. Completion of a Minor may, in fact, require that a student take more than the minimum number of credit hours for graduation.

The Minor is not available to students in the General degree program.

A Minor will normally consist of a minimum of 18 credit hours, with a minimum of 12 credit hours being at the 2000, 3000 and 4000 level (although there are some exceptions). It should be noted that no course can be used as part of a prescribed Honours or Major program and also be part of a prescribed Minor. An alternate course will have to be selected to satisfy the Minor requirement. For example: if a course in Economics is part of a student's Major or Honours program in Statistics, then that course may **not** be used as part of a Minor in Economics.

Important Course Selection Information

The courses required to complete the Honours, Major, General and Minor programs are listed in program charts in the department and program sections of this chapter.

Not all courses included in the course description sections are offered. The course schedule for the current academic session is published in the *Registration Guide* section of this publication and at www.umanitoba.ca.

3.8 School of Optometry, University of Waterloo

The Province of Manitoba has an agreement with the Province of Ontario for up to three places annually at the School of Optometry, University of Waterloo. Under this agreement students from Manitoba may apply toward the end of their pre-optometry program to the University of Waterloo which carries out the initial screening for admission.

Students eligible for admission must be *bona fide* residents of Manitoba. Students must pay their own tuition and other compulsory fees. They are eligible for full Manitoba student aid assistance subject to the usual needs assessment.

The pre-optometry program may be taken at the University of Manitoba. Interested students should contact the Faculty of Science general office, University of Manitoba for further information about course requirements.

SECTION 4: Programs and Courses Offered by the Faculty of Science

NOTE:

The letter "M" PRIOR TO the course number indicates that the course may be used to meet the university's mathematics requirement.

The letter "W" PRIOR to the course number indicates that the course may be used to meet the university's written English requirement. The only course offered by the Faculty that satisfies the written English requirement is BOTN 1010.

A course number ENDING IN THE NUMBER "1" indicates that the course is taught at Collège universitaire de Saint-Boniface. See the Collège calendar and timetable for information. These courses are equivalent to the English version of the course and may be used either for prerequisite purposes and to satisfy a degree/program requirement.

EXAMPLE:

M STAT 1000 Basic Statistical Analysis 1 CR.HRS.3

M STAT 1001 Analyse statistique de base 1 CR.HRS.3 (Labo requis)

IMMEDIATELY FOLLOWING THE COURSE TITLE, YOU WILL FIND THE CREDIT HOUR WEIGHT.

EXAMPLE:

M STAT 1000 Basic Statistical Analysis 1 CR.HRS.3 This course may be used to meet the university's mathematics requirement. This course has been assigned a three credit hour weight. There is no laboratory requirement on the Fort Garry Campus.

BIOL 1020 Biology 1: Principles and Themes CR.HRS.3L (Lab Required)

This course has been assigned a three credit hour weight. There is also laboratory work required.

NOTE:

Students should note that space in Honours and Major courses may be reserved for students in those programs.

Any prerequisite may be waived with written consent of the department

4.1 Actuarial Mathematics Program

Program Director: Kevin Shand

General Office: 268 Drake Centre

Telephone: 204 474 7426

Website: www.umanitoba.ca/actuarial

Email: kshand@cc.umanitoba.ca

4.1.1 Program Information

This is an interdisciplinary program leading to a Bachelor of Science (Honours) degree in Actuarial Mathematics that is offered in collaboration with the Warren Centre for Actuarial Studies and Research of the I.H. Asper School of Business. The program covers mathematical, statistical, financial and economic concepts required to develop skills in the modelling and management of financial risk and contingent events. In the Faculty of Science the program has a greater emphasis on the mathematical and statistical courses.

The Warren Centre and the departments of Statistics and Mathematics offer joint Honours programs (see Section 4.16 and Section 4.12).

To enter the program, a student must have STAT 1000, MATH 1500 and MATH 1700 (or MATH 1690) and MATH 1300 or any equivalent with a grade of at least "B" in MATH 1700 (or MATH 1690) and MATH 1300 and have satisfied the Faculty of Science requirements for entry to the Honours program. Courses COMP 1010, COMP 1260 and ECON 1200 are strongly recommended in University 1. Students must complete a minimum of 24 credit hours per regular session.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and from Year 3 to Year 4, and to successfully complete Year 4 of the Honours program and to graduate with the Honours degree, a student must have a sessional Grade Point Average of 3.00 or better, and a grade of 'C+' in each Actuarial Mathematics course in the program.

The department must approve a student's Honour program each session. Students must also obtain departmental approval for any and all revisions to their program.

4.1.2 Actuarial Mathematics, Department Code: 010

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS ACTUARIAL² 120 CREDIT (comprising courses listed in chart below, and electives)			
MATH 1690 (B), (or MATH 1500 ¹ and MATH 1700 ¹ (B)), MATH 1300 ¹ (B), and STAT 1000	ACT 2120, STAT 2000 ³ , MATH 2750 (or MATH 2720 and MATH 2730), MSCI 2150 ⁵	ACT 3130, ACT 3230, ACT 3330, ACT 3530, STAT 3050, STAT 3500 ⁶ , STAT 3600 ⁶ , MATH 3700	ACT 4140, ACT 4150, ACT 4240 or ACT 4000, ACT 4340, STAT 3470 ⁴ , STAT 3490 ⁴ , MATH 2300 ⁵
Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course			
30 Hours	30 Hours	30 Hours	30 Hours

JOINT MATHEMATICS-ACTUARIAL MATHEMATICS HONOURS: See Section 4.12, Mathematics

JOINT STATISTICS-ACTUARIAL MATHEMATICS HONOURS: See Section 4.16, Statistics

NOTES:

¹ MATH 1510, MATH 1520 or MATH 1530 may be taken instead of MATH 1500; MATH 1310 may be taken instead of MATH 1300; MATH 1710 or MATH 1730 may be taken instead of MATH 1700.

² The courses required in this program will satisfy the university mathematics requirement.

³ STAT 2000 may be taken in University 1 or Year 2.

⁴ MATH 3700, STAT 3470 and (or) STAT 3490 may be taken in Year 3 or 4.

⁵ MATH 2730 and MSCI 2150 may be taken in Year 2, 3 or 4.

⁶ STAT 3500 and STAT 3600 may be taken in Year 2 or 3.

(Letters in brackets indicate minimum prerequisite standing for further study.)

The electives in Year 3 and Year 4 are to be chosen from Actuarial Mathematics, approved Business courses, Computer Science, Economics, Mathematics (MATH 2200 and 3000 or 4000 level) and Statistics (STAT 3480 or 4000 level courses). Other electives may be selected through consultation with the program director.

Recommended Electives

Double Honours programs can usually be arranged.

University 1: Computer Science COMP 1010, COMP 1260; ECON 1200

Year 2: Accounting and Finance ACC 1100, FIN 2200;

Year 3: Accounting and Finance FIN 3410

Year 4: Accounting and Finance FIN 3270, Actuarial Mathematics ACT 4050, ACT 4060; Business Administration GMGT 2000, MSCI 4230; Statistics STAT 4140, STAT 4630.

4.2 Biochemistry

Program Coordinators:

Peter Loewen, Head, Department of Microbiology;

Norman R. Hunter, Head, Department of Chemistry

Program Office: 418 Buller Building, 350 Parker Building

Telephone: 204 474 9372 / 204 474 9321

Website: <http://www.umanitoba.ca/science/microbiology>

<http://www.umanitoba.ca/chemistry>

E-mail: peter_loewen@umanitoba.ca

hunter@ms.umanitoba.ca

4.2.1 Program Information

The program administrators must approve a student's Honour or Major program each session. Students must also obtain approval for any and all revisions to their program.

Honours Biochemistry Requirements

The requirements for entry to the joint Honours program are a minimum of "B" in each of CHEM 1300 and CHEM 1310, and a minimum of "C+" in BIOL 1030; or a minimum of "C+" in each of CHEM 1300 and CHEM 1310, and a minimum of "B" in BIOL 1030. Also, standing in PHYS 1070 or PHYS 1030, and MATH 1500 plus one of MATH 1200, MATH 1300 or MATH 1700 or equivalent is required. In addition, students must satisfy the general faculty requirements for entry to Honours programs. In order to satisfy prerequisite requirements for courses taken in Year 2 and subsequent years, students must take the courses indicated below in University 1.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and from Year 3 to Year 4, and to successfully complete Year 4 of the Honours program, a student must have an annual Grade Point Average of 2.50, and in addition, must have a 3.00 Grade Point Average on all Chemistry and Microbiology courses during that session. Students must complete 24 credit hours each regular session.

In Years 3 and 4, the optional 33 credit hours will be chosen from the lists of optional courses below in the following way: a minimum of 24 credit hours from the departments of Chemistry and Microbiology combined, with not less than six of these 24 credit hours from each department. The remaining optional nine credit hours may be chosen from any of the options listed. Other suitable optional courses may be selected through consultation with the heads of the departments of Chemistry and Microbiology.

Honours Biochemistry Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Honours Biochemistry program may enter the Cooperative Option in their third year. The five year program provides students with minimum 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and University units.

The course and grade requirements for entry and continuation in the Cooperative Option are the same as that for regular Honours program. Each academic term in the third and subsequent years must comprise 15 credit hours. Students are required to complete the first and second year requirements of the program and MBIO 3410 before they begin their first employment term. Students should refer to the general faculty regulations for B. Sc. (Honours) Cooperative Options in Section 3.6.

Students will apply for openings in the Cooperative Option in September of their third year in the Biochemistry Honours program. They will be notified of their provisional acceptance in the program by October. Acceptance into the program is dependent upon the students receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. The first work term can be taken in January or May. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.

Biochemistry Four Year Major Requirements

The requirements for entry to the joint four year Major program are a minimum of "C+" in each of CHEM 1300 and CHEM 1310, and a minimum of "C" in BIOL 1030; or a minimum of "C+" in BIOL 1030 and a minimum of "C" in each of CHEM 1300 and CHEM 1310; plus standing in PHYS 1070 or PHYS 1030, MATH 1500 plus one of MATH 1200, MATH 1300, MATH 1700 or equivalent. In addition, students must satisfy the general faculty requirements for entry to four year Major programs.

Students in this program should note the following:

Students must satisfy any course prerequisites and corequisites for courses selected. Care should be taken to select courses in their proper sequence, e.g., CHEM 2370 (MBIO 2370) should be taken in Year 2 as it is prerequisite to a number of subsequent required or optional courses.

Normally 4000 level courses are available only to students in their fourth year. MBIO 4530 and MBIO 4570 are not available to Major students.

Students are encouraged to elect other courses pertinent to the study of biochemistry although this is not required for completion of the degree. The departments of Microbiology and Chemistry will be glad to suggest such supplementary courses upon request by students.

Students who may wish to transfer to the Honours program in Biochemistry following Year 2 should be sure to complete all courses recommended in Year 2 (see chart below).

Major Biochemistry Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their program may enter the Major Biochemistry Cooperative Option in their third year. The five year program provides students with a minimum 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and University units.

The course and grade requirements for entry and continuation in the Cooperative Option are the same as that for the regular Major program. Students are encouraged, but not required, to take 15 credit hours in each academic term in the third and subsequent years. Students are required to complete the first and second year requirements of the program and MBIO 3410 before they begin their first employment term. Students should refer to the general faculty regulations for B. Sc. (Major) Cooperative Options in Section 3.4.

Students will apply for openings in the Cooperative Option in September of their third year in the Biochemistry Major program. They will be notified of their provisional acceptance in the program by October. Acceptance into the program is dependent upon the students receiving an employment placement. Employment term positions available to the students will be approved by the department and the employers will select the students they wish to employ. The first work term can be taken in January or May. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.

Optional Courses:

Chemistry: CHEM 3360, CHEM 3370, CHEM 3380, CHEM 3390, CHEM 3590, CHEM 4590, CHEM 3490, CHEM 3580, CHEM 4570, CHEM 4580, CHEM 4600, CHEM 4640, CHEM 4650, CHEM 4680, CHEM 4690, CHEM 4700¹, CHEM 4710¹.

Microbiology: MBIO 2280, MBIO 3010, MBIO 3410⁴, MBIO 3430, MBIO 3440, MBIO 3470, MBIO 3480, MBIO 4010, MBIO 4020², MBIO 4320, MBIO 4410, MBIO 4470, MBIO 4510, MBIO 4530¹, MBIO 4540³, MBIO 4570, MBIO 4580², MBIO 4600, MBIO 4610.

Other departments: BOTN 2460, BOTN 3010, BOTN 4120, STAT 1000, STAT 2000, PHYS 2200, PHYS 2270, PHYS 2280, ZOOL 2280, ZOOL 3530, ZOOL 3540, ZOOL 4150, ZOOL 4270, ZOOL 4600, COMP 1010, COMP 1020, COMP 1260, COMP 1270, MATH 2720, MATH 2730, MATH 2800, MATH 3820.

Other courses can be considered with the approval of the department.

¹Not available in the Honours and Major Cooperative Options

²Available only for Major and Major Cooperative Options

³Required in the Honours and Honours Cooperative Options

⁴Required in the Honours Cooperative and Major Cooperative Options

4.2.2 Microbiology - Chemistry Joint Programs in Biochemistry, Department Code: 060C			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS⁵ 123 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, PHYS 1050 and PHYS 1070, or PHYS 1020 and PHYS 1030, MATH 1500 ¹ Plus one of: MATH 1200, MATH 1300 ¹ , MATH 1700 ¹	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, and whichever two of MATH 1200, MATH 1300 ¹ , MATH 1700 ¹ not yet taken ²	CHEM 2380, CHEM 2470, MBIO 3450, MBIO 3460 Plus 18 credit hours from option list above	CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630, CHEM 4700, MBIO 4540 Plus 15 credit hours from option list above
In University 1 or Year 2 the following must be completed: 6 credit hours from the Faculty of Arts, which should include the required "W" course ⁴		The 33 credit hours of options must include 24 credit hours from Chemistry and Microbiology with at least 6 hours from each department. The remaining 9 credit hours may be from any of the options listed.	
30 Hours	30 Hours	30 Hours	33 Hours
JOINT HONOURS COOPERATIVE OPTION^{5,6} 123 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, PHYS 1050 and PHYS 1070, or PHYS 1020 and PHYS 1030, MATH 1500 ¹ Plus one of: MATH 1200, MATH 1300 ¹ , MATH 1700 ¹	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, and whichever two of MATH 1200, MATH 1300 ¹ , MATH 1700 ¹ not yet taken ²	CHEM 2380, CHEM 2470, MBIO 3410, MBIO 3450, MBIO 3460	CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630, MBIO 4540
In University 1 or Year 2 the following must be completed: 6 credit hours from the Faculty of Arts, which should include the required "W" course ⁴		MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990 Plus 33 credit hours from option list above which must include 24 credit hours from Chemistry and Microbiology with at least 6 hours from each department. The remaining 9 credit hours may be from any of the options listed.	
30 Hours	30 Hours	30 Hours	33 Hours
JOINT FOUR YEAR MAJOR^{5,7} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, PHYS 1050 and PHYS 1070, or PHYS 1020 and PHYS 1030, MATH 1500 ¹ Plus one of: MATH 1200, MATH 1300 ¹ , MATH 1700 ¹	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, and whichever two of MATH 1200, MATH 1300 ¹ , MATH 1700 ¹ not yet taken ²	CHEM 2380, CHEM 2470, MBIO 3450, MBIO 3460	Two of CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630 ³
In University 1 or Year 2 the following must be completed: 6 credit hours from the Faculty of Arts, which should include the required "W" course ⁴		Plus 24 credit hours of Chemistry and Microbiology courses. The 24 credit hours must include 12 credit hours at the 4000 level and at least 6 credit hours from each of Chemistry and Microbiology.	
JOINT MAJOR COOPERATIVE OPTION^{5,6,7} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, PHYS 1050 and PHYS 1070, or PHYS 1020 and PHYS 1030, MATH 1500 ¹ Plus one of: MATH 1200, MATH 1300 ¹ , MATH 1700 ¹	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, and whichever two of MATH 1200, MATH 1300 ¹ , MATH 1700 ¹ not yet taken ²	CHEM 2380, CHEM 2470, MBIO 3410, MBIO 3450, MBIO 3460	Two or more of CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630
In University 1 or Year 2 the following must be completed: 6 credit hours from the Faculty of Arts, which should include the required "W" course ⁴		MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990 Plus 21 credit hours of Chemistry and Microbiology courses. The 21 credit hours must include 12 credit hours at the 4000 level and at least 6 credit hours from each of Chemistry and Microbiology.	
NOTES:			
¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.			
² Other combinations of mathematics courses may be acceptable with the approval of the department heads.			
³ Only two of CHEM 4360, CHEM 4370, CHEM 4620 and CHEM 4630 are required, but all may be taken.			
⁴ As there are no electives in Year 2 of the program, students should complete the university written English requirement in University 1. If not completed in University 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.			
⁵ The courses required in this program satisfy the University mathematics requirement.			
⁶ IMPORTANT: Students in the cooperative programs must ensure that they are able to satisfy the prerequisites for all 3000 and 4000 level courses they plan to take.			
⁷ The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. (Letters in brackets indicate minimum prerequisite standing for further study.)			

4.3 Biology Program

Program Coordinator: Michael Sumner

Program Office: 208 Buller Building

Telephone: 204 474 9732

Web Site: www.umanitoba.ca/faculties/science/biological_science/

Email: daviesdl@ms.umanitoba.ca

4.3.1 Academic Staff

Associate Professor:

Sumner, M.J. B.Sc., M.Sc. (Alberta), Ph.D. (Manitoba).

Senior Instructor:

Shaw, M.P., B.Sc. (Calgary), M.Sc. (Manitoba)

4.3.2 Program Information

The Biology unit administers the Biology Four Year Major program and is responsible for teaching BIOL 1020 and BIOL 1030, which are required courses for further work in Botany, Microbiology and Zoology, and for teaching BIOL 1000, BIOL 1010, BIOL 1340. Students should contact U1 for information about the course BIOL 1110.

Biology Four Year Major Entry Requirements:

To enter the four year Major program, a student must have a "C+" in either BIOL 1030 or CHEM 1310 and not less than "C" in the other course. In addition, all other faculty requirements for entry to the four year Major program must be satisfied. Statistics STAT 1000 and the 3 credit hours of specified Mathematics or Physics courses can be completed in University 1 or Year 2.

The program administrator must approve a student's Major program each session. Students must also obtain approval for any and all revisions to their program.

4.3.3 Biology Program, Department Code: 071			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
FOUR YEAR MAJOR^{2,3} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, STAT 1000	Either: CHEM 2210 plus CHEM 2360 and CHEM 2370 (MBIO 2360 and MBIO 2370); or CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780) Plus BOTN 2460 and ZOOL 2280 3 credit hours from GROUP 1 (Botany): BOTN 2010, BOTN 2020, BOTN 2110, BOTN 2210, BOTN 2290 3 credit hours from GROUP 2 (Microbiology): MBIO 2100, MBIO 2110 3 credit hours from GROUP 3 (Zoology): ZOOL 2320, ZOOL 2600, ZOOL 2150, ZOOL 2530 3 credit hours from GROUP 4 (Ecology) MBIO 2280, BOTN 2370, ZOOL 2370 or AGECE 2370 Plus an additional 3 credit hours from either Group 1, 2, 3 or 4.	6 credit hours at the 2000, 3000 or 4000 level from each department (Botany, Microbiology and Zoology) with a maximum of 15 credit hours at the 2000 level	6 credit hours at the 3000 or 4000 level from each department (Botany, Microbiology and Zoology)
In University 1 or Year 2 the following must be completed: 3 credit hours from Mathematics or Physics from: MATH 1200, MATH 1300 ¹ or MATH 1500 ¹ , PHYS 1020 or PHYS 1050 Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course			
30 Hours	30 Hours	30 Hours	30 Hours
NOTES:			
1 MATH 1510, MATH 1520, MATH 1530, MATH 1680 or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.			
2 The courses in this program will satisfy the university mathematics requirement.			
3 IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program with a view to satisfying the prerequisites of the required courses.			

4.3.4 Biology Course Descriptions

U1 BIOL 1000 Biology: Foundations of Life Cr.Hrs.3 (Formerly 071.100) A course in unifying principles of biology including cell biology, bioenergetics, cell division, genetics and evolution. May not be used for credit in a Major or Honours program in the biological sciences. Not to be held with BIOL 1020, BIOL 1021, or the former 071.125, 071.201 or 071.123.

U1 BIOL 1001 Biologie: Les fondements de la vie Cr.Hrs.3 (L'ancien 071.100) Ce cours étudiera certains principes unificateurs de la vie. On portera une attention particulière à la biologie cellulaire, la bioénergétique, la division cellulaire, la génétique et l'évolution. Ne peut être utilisé dans un programme de majeure ou de spécialisation. On ne peut se faire créditer à la fois le BIOL 1000 (ou 071.100) et les BIOL 1020, ou BIOL 1021 ou les anciens 071.125, 071.201 ou 071.123. Donné seulement au Collège universitaire de Saint-Boniface.

U1 BIOL 1010 Biology: Biological Diversity and Interaction Cr.Hrs.3 (Formerly 071.101) An introduction to biological diversity including prokaryotes, protists, fungi, plants and animals; the form and function of plants and animals and basic concepts of ecology. May not be used for credit in a Major or Honours program in the biological sciences. Not to be held with BIOL 1030 or BIOL 1031 or the former 071.125, 071.201 or 071.123.

U1 BIOL 1011 Biologie: La diversité biologique et ses interactions Cr.Hrs.3 (L'ancien 071.101) Une introduction à la diversité (les procaryotes, les protistes, les champignons, les plantes et les animaux), à la forme et à la fonction des plantes et des

animaux ainsi qu'aux principaux concepts de l'écologie. Ne peut être utilisé dans un programme de majeure ou de spécialisation. On ne peut se faire créditer à la fois le BIOL 1010 (ou 071.101) et les BIOL 1030 ou BIOL 1031 ou les anciens 071.125, 071.201 ou 071.123. Donné seulement au Collège universitaire de Saint-Boniface.

U1 BIOL 1020 Biology 1: Principles and Themes Cr.Hrs.3 (Lab required) A laboratory-based course in unifying principles of biology including cell biology, bioenergetics, cell division, genetics and evolution. This course is intended for major and honours students in the biological sciences. Not to be held with BIOL 1021, BIOL 1000 or BIOL 1001 (or 071.100), BIOE 2590 (or 034.259), or the former 071.125, 071.123 or 071.201. *Recommended prerequisites:* Biology 405, and one of Chemistry 40S (or 002.090), or Physics 40S (or 016.090).

U1 BIOL 1021 Biologie 1: Thèmes et Principes Cr.Hrs.3 (Labo requis) Ce cours avec laboratoires présente les principes unificateurs à la base de la biologie dont la biologie cellulaire, la bioénergétique, la division cellulaire, la génétique et l'évolution. Ce cours est destiné aux étudiants qui veulent suivre un programme de sciences biologiques avec majeure ou spécialisation. On ne peut se faire créditer le BIOL 1020, BIOL 1001 ou BIOL 1000 (ou 071.100), BIOE 3590 ou les anciens 071.125, 034.259, 071.123 or 071.201. *Préalables recommandés:* Biologie 405, et un des deux cours suivants, Chimie 40S (ou 002.090), ou Physique 40S (ou 016.090).

U1 BIOL 1030 Biology 2: Biological Diversity, Function and Interactions Cr.Hrs.3 (Lab required) A laboratory-based course introducing biological diversity including prokaryotes, protists, fungi, plants and animals; the form and function of plants and animals and basic concepts of ecology. This course is intended for major and honours

students in the biological sciences. Not to be held with BIOL 1010 or BIOL 1011 (or 071.101), BIOE 2590 (or 034.259), or the former 071.125, 071.123 or 071.201. *Prerequisite:* BIOL 1020 or BIOL 1021(C).

NOTE: BIOL 1030 is a *prerequisite* to further courses in Microbiology and to most courses in Botany and Zoology. It is also intended for students proceeding to Agricultural and Food Sciences, Dentistry, Human Ecology, Medicine, Optometry, Pharmacy, Veterinary Science, Physical Education and Science.

U1 BIOL 1031 Biologie II: Diversité biologique, fonction et interactions Cr.Hrs.3 (Labo requis) Ce cours avec laboratoires présente une introduction à la biodiversité dont les eucaryotes, les protistes, les champignons, les plantes et les animaux, la forme et la fonction des plantes et des animaux et les principes de base de l'écologie. Ce cours est destiné aux étudiants qui veulent suivre un programme de sciences biologiques avec majeure ou spécialisation. On ne peut se faire créditer le BIOL 1010 ou BIOL 1011 (ou 071.101), BIOE 2590 (ou 034.259), ou les anciens 071.125, 071.123 or 071.201. *Préalables* BIOL 1021 ou BIOL 1020(C).

NOTE: BIOL 1031 est un cours préalable aux cours plus avancés de microbiologie, et pour la plupart des cours de botanique et de zoologie. Il est aussi destiné aux étu-

dants qui veulent continuer en agriculture, en science alimentaire, en dentisterie, en écologie humaine, en médecine, en optométrie, en pharmacie, en sciences vétérinaires, en éducation physique et en sciences.

U1 BIOL 1110 Health and Health Professions Cr.Hrs.3 (Formerly 071.111) Students discuss the inter-relationship between health, health determinants, and the impact that science, health-science, behavioural-social sciences, and technology, have on health care and the health professions. Participants will consider their own role as health care consumers. Open only to students who have completed less than six credit hours. For further information contact University 1.

U1 BIOL 1340 The State of the Earth's Environment: Contemporary Issues Cr.Hrs.3 (Formerly 071.134) A presentation of contemporary environmental issues focusing on the scientific basis of problems caused by the growth of human population, use and depletion of resources, pollution, and damage to the environment. The current state of our knowledge bases will be discussed, along with improvements in them that may be necessary. The course will consider needs for action, priorities, and opportunities. May not be used to meet a program requirement of an Honours or Major program in the Biological Sciences. Not to be held with ENVR 1000 (or 128.100).

4.4 Biotechnology

Program Coordinators:

Peter Loewen, Head, Department of Microbiology;
Norman R. Hunter, Head, Department of Chemistry

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<http://www.umanitoba.ca/chemistry>

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4.4.1 Program Information

Honours Biotechnology Requirements

The requirements for entry to the joint Honours program are a minimum of "B" in each of CHEM 1300 and CHEM 1310, and a minimum of "C+" in BIOL 1030; or a minimum of "C+" in each of CHEM 1300 and CHEM 1310, and a minimum of "B" in BIOL 1030. Also, standing in PHYS 1070 or PHYS 1030, MATH 1500¹ and MATH 1700¹ (or MATH 1690) is required. In addition, students must satisfy the general faculty requirements for entry to Honours programs. To satisfy prerequisite requirements for courses taken in Year 2 and subsequent years, students must take the courses indicated below in University 1.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and from Year 3 to Year 4, and to complete successfully Year 4 of the Honours program, a student must have an annual Grade Point Average of 2.50, and in addition, must have a 3.00 Grade Point Average on all Chemistry and Microbiology courses during that session. The program must approve a student's Honour program each session. Students must also obtain

approval for any and all revisions to their program. Students must complete 24 credit hours each regular session.

The optional courses are:

Chemistry: CHEM 3360, CHEM 3370, CHEM 3380, CHEM 3490, CHEM 3580, CHEM 4360, CHEM 4370, CHEM 4570, CHEM 4580, one of CHEM 4600 or CHEM 4700, whichever of CHEM 4620 or CHEM 4630 not yet taken, CHEM 4640, CHEM 4650, CHEM 4680, CHEM 4690, CHEM 4710.

Microbiology: MBIO 3010, MBIO 3430, MBIO 3450, MBIO 3460, MBIO 3480, MBIO 4010, MBIO 4320, MBIO 4410, MBIO 4530, MBIO 4540.

Other departments in Science: BOTN 2010, BOTN 2020, BOTN 3010, BOTN 3460, BOTN 4120, STAT 1000, STAT 2000, PHYS 2200, PHYS 2270, PHYS 2280, ZOOL 2150, ZOOL 2280, ZOOL 3530, ZOOL 3540, ZOOL 4150, ZOOL 4270, ZOOL 4600, COMP 1010, COMP 1020, COMP 1260, COMP 1270, MATH 1200, MATH 1300, MATH 1310, MATH 2010, MATH 2720, MATH 2730, MATH 2800, MATH 3530, MATH 3820.

Agricultural and Food Sciences: ANSC 3500, ANSC 4280, PLNT 2530, PLNT 3140, PLNT 3520, PLNT 4560, FOOD 3010, FOOD 4010, FOOD 4150, FOOD 4280.

Arts: ANTH 2860, ANTH 2890.

Medicine: BGEN 3020.

Other suitable courses may be selected through consultation with the department heads.

4.4.2 Microbiology - Chemistry Joint Program in Biotechnology, Department Code: 060T

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS² 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, PHYS 1050 and PHYS 1070 (or PHYS 1020 and PHYS 1030), MATH 1500 ¹ and MATH 1700 ¹ (or MATH 1690)	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, MBIO 2280, BOTN 2460	CHEM 2380, CHEM 2470, CHEM 3390, MBIO 3410, MBIO 3440, MBIO 3470, PLNT 4330 Plus 9 credit hours from option list above	CHEM 3590, CHEM 4590, CHEM 4620 or CHEM 4630, MBIO 4470, MBIO 4510, MBIO 4570, MBIO 4600, MBIO 4610 Plus 6 credit hours from option list above
In University 1 or Year 2 the following must be completed: 6 credit hours from the Faculty of Arts, which should include the required "W" course ³			
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

¹ MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² The courses required in this program will satisfy the university mathematics requirement.

³ As there are no electives in Year 2 of the program, students should complete the university written English requirement in University 1. If not completed in University 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

4.5 Department of Botany

Head: Thomas Booth

General Office: 505 Buller Building

Telephone: 204 474 9368

Website: umanitoba.ca/science/botany/

E-mail: booth@cc.umanitoba.ca

4.5.1 Academic Staff

Professor Emerita

Shay, J.M., B.Sc.(Hons.) (London), M.Sc., Ph.D. (Manitoba).

Senior Scholars

Punter, D., M.A., Ph.D. (Cambridge); VanCaesele, L., B.Sc., M.Sc., Ph.D. (Manitoba).

Professors

Booth, J.T., B.A. (Eastern University), M.Sc. (Ohio), Ph.D. (UBC); Ford, B.A., B.Sc.(Hons.) (Trent), Ph.D. (Toronto); Kenkel, N.C., B.Sc.(Hons.), M.Sc. (UBC), Ph.D. (Western); Robinson, G.G.C., B.Sc.(Hons.) (St. Andrew's), Ph.D. (UBC).

Associate Professors

Goldsborough, L.G., B.Sc., Ph.D. (Manitoba); Renault, S., B.Sc., M.Sc., Ph.D. (Poitiers); Sumner, M.J., B.Sc.(Hons.), M.Sc. (Alberta), Ph.D. (Manitoba).

Assistant Professors

Markham, J.H., B.Sc.(Hons.) (Guelph), B.Ed. (Dalhousie), Ph.D. (UBC); Piercey-Normore, M. D., B.Sc. (Gen.), B.Sc. (Hons.), M.Sc., Ph.D. (Memorial); Schroeder, D. F., B. Sc. (Simon Fraser), Ph.D. (Calgary); Worley, A.C., B.Sc. (Victoria), M.Sc. (Calgary), Ph.D. (Toronto).

Instructor

Waters, I., B.A., B.S.A., M.Sc., Ph.D. (Manitoba) (Senior Instructor).

4.5.2 Program Information

Botany involves the study of green plants - algae, mosses, ferns, conifers and flowering plants - and fungi. Plants are the primary producers that supply energy to all ecosystems. Fungi are important as parasites and, in their role as decomposers, recycle nutrients. Botanists examine plants at all levels from molecular to landscape and their findings are applied in agriculture, forestry, medicine, conservation of biodiversity and environmental studies. Opportunities exist in many botany courses for laboratory and field projects. The department fosters an informal atmosphere and free interaction between faculty and students.

Students are responsible for all prerequisites and corequisites of the courses required or selected in all programs below.

If listed as prerequisite for any Botany course, BIOL 1030 may be waived under special circumstances at the discretion of the department head. This waiver applies in all Botany programs. Students should contact the department head to arrange for substitutions for BIOL 1030. However, students who intend to seek admission to professional faculties which require BIOL 1020 and BIOL 1030 (such as Dentistry, Pharmacy, and Optometry) will not be eligible for admission to these faculties without credit in that course.

Students registering for 3000 and 4000 level courses in which prerequisites are not specified must have completed two years in a university program or have written permission of the department head.

Since CHEM 1300 and CHEM 1310 are required in both the four year Major and Honours programs, students should note the requirement of the Department of Chemistry that Senior 4 (Grade 12) mathematics and chemistry are prerequisites for these courses.

The department must approve a student's Honour or Major program each session. Students must also obtain departmental approval for any and all revisions to their program.

Honours

The Honours program is designed for students planning a professional career in Botany at the graduate level. Such students are strongly advised to enter the Honours program at the beginning of second year.

Appropriate courses will be arranged in consultation with the department head who may be contacted through the Botany department office, 505 Buller Building.

To enter the Botany Honours program a student must have a "B" in BIOL 1030 or CHEM 1310 and not less than a "C+" in the other course. In addition, a student is required to have a cumulative Grade Point Average of 2.50 on all courses completed at the end of Year 1 in order to enter Honours Botany in Year 2. If has been waived (see above), then the entrance requirement will be CHEM 1310 and the replacement for BIOL 1030, with a "B" in either course and not less than a "C+" in the other. Statistics STAT 1000 and the 3 credit hours of specified Mathematics or Physics courses can be completed in University 1 or Year 2.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and Year 3 to Year 4, a student must have a sessional Grade Point Average of 2.50 with no failures, and in addition, must have a 3.00 average on all Botany courses during that session and a grade of "C+" or better in each Botany course.

In Year 4, in order to graduate with an Honours degree, a student must obtain a Grade Point Average of 3.00 or better on the year's work, with no failures, and must have a grade of "C+" or better in all Botany courses.

Four Year Major

The four year Major program is also designed for students planning a professional career in Botany, but who may not be considering graduate training. It will provide intensive training in all areas of Botany comparable to that of the Honours program, but has less demanding performance requirements. Students who so wish, and who have an appropriate standing and course selection, may transfer to the Honours program at any time up to the commencement of Year 4.

Course BOTN 4600 is not normally available to students in this program.

To enter the four year Major program, a student must have BIOL 1030 and CHEM 1310, with a "C+" standing in one of these required courses and not less than "C" in the other, and have satisfied the faculty requirements for entry to the four year Major program. If BIOL 1030 has been waived (see above), then the entrance requirement will be CHEM 1310 and the replacement for BIOL 1030, with a "C+" standing in either course and not less than a "C" in the other. Statistics STAT 1000 and the 3 credit hours of specified Mathematics or Physics courses can be completed in University 1 or Year 2.

Three Year General

Courses taken for a General degree provide an introduction to the major fields of study in Botany. As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from two Science departments. To satisfy the requirement in the Department of Botany, students must take a minimum of 12 credit hours of 2000, 3000 and (or) 4000 level Botany courses as prescribed in the chart below. Course BOTN 4600 is not available to students in this program.

Students anticipating a transfer to either the four year Major or Honours program at the end of their second or third year should consult with the department head before registering.

Ecology Program

The Department of Botany, in conjunction with the Department of Zoology, offers a Joint Honours program, a Joint four year Major program and a Joint four year Major Cooperative Option program in Ecology. See Section 4.8 *Ecology Program* for full details.

4.5.3 Botany, Department Code: 001

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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HONOURS³ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	BOTN 2010, BOTN 2020, BOTN 2370 (ZOO 2370 or AGE 2370) ² , BOTN 2460, ZOO 2280 and Either: CHEM 2210 plus CHEM 2360 and CHEM 2370 (MBIO 2360 and MBIO 2370); or CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780)	BOTN 3010, BOTN 3070, BOTN 3570	BOTN 3190, BOTN 4600
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In University 1 or Year 2 the following must be completed:

3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

BOTN 2110

STAT 1000, STAT 2000

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

BOTN 3000 (ZOO 3000), plus 21 credit hours of 3000 or 4000 level Botany courses; plus 18 credit hours from Botany, Microbiology, Zoology or related fields

30 Hours	30 Hours	30 Hours	30 Hours
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HONOURS DOUBLE³ MINIMUM 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000	Upper year courses can be arranged in consultation with departments concerned
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Plus 3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

In University 1 or Year 2 the following must be completed:

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

FOUR YEAR MAJOR^{3,4} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310,	BOTN 2010, BOTN 2020, BOTN 2370 (ZOO 2370 or AGE 2370) ² , BOTN 2460, ZOO 2280 Either: CHEM 2210 plus CHEM 2360 and CHEM 2370 (MBIO 2360 and MBIO 2370); or CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780)	BOTN 3010, BOTN 3070	BOTN 3190
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In University 1 or Year 2:

3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

BOTN 2110

STAT 1000, STAT 2000

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

BOTN 3000 (ZOO 3000), plus 18 credit hours of 3000 or 4000 level Botany courses

THREE YEAR GENERAL

Minimum of 12 hours of Botany courses at the 2000, 3000 and (or) 4000 level

MINOR

BIOL 1020 and BIOL 1030	Minimum of 12 hours of Botany courses at the 2000, 3000 and (or) 4000 level
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JOINT BOTANY-ZOOLOGY HONOURS AND FOUR YEAR MAJOR ECOLOGY PROGRAMS See Section 4.8 Ecology Programs**NOTES:**

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520, MATH 1530, MATH 1680 or MATH 1690 may be taken in place of MATH 1500.

² BOTN 2370 (ZOO 2370 or AGE 2370) has STAT 1000 as corequisite.

³ The courses in this program will satisfy the university mathematics requirement.

⁴ IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program with a view to satisfying the prerequisites of the required courses.

4.5.4 Botany Course Descriptions

NOTE: To fulfil prerequisite requirements, a grade of "C" must be achieved in any Botany course stipulated as a prerequisite to a further course in Bot-

any. When BIOL 1030 is stipulated as a prerequisite to a Botany course, a minimum grade of "C" is required.

Students registering in certain courses may be required to pay a portion of the costs associated with field trips. For details, contact the department general office.

General Courses

W U1 BOTN 1010 Economic Plants Cr.Hrs.3 (Formerly 001.101) A survey of economically important plants and their products. The history of plant use, plants in folklore and medicine, fermentation and viticulture, domestication of plants, and forestry are the major topics covered. Chemical, structural, and nutritional aspects of plant products are also discussed. Not to be held with the former 001.206 or 001.233.

BOTN 2010 Plant Structure and Function 1 Cr.Hrs.3 (Lab Required) (Formerly 001.201) A study of the structure and function of the flowering plants. Part 1 will focus on vegetative organs at the cellular and tissue levels. Seed germination and seedling physiology will be included. Not to be held with the former 001.230. *Prerequisite:* BIOL 1010 (or 071.101 or the former 071.123) with a minimum grade of "B", or BIOL 1030 or BIOL 1031 or the former 071.125(C).

BOTN 2020 Plant Structure and Function 2 Cr.Hrs.3 (Lab Required) (Formerly 001.202) A study of the structure and function of the flowering plants. Part 2 will focus on photosynthesis, reproduction, and the role of hormonal and extrinsic factors in the regulation of plant development. Not to be held with the former 001.230. *Prerequisite:* BOTN 2010 (or 001.201) (C).

BOTN 2110 Mosses, Ferns and Conifers Cr.Hrs.3 (Lab Required) (Formerly 001.211) An introduction to the mosses and liverworts, ferns and their allies, and conifers, specifically treating their structure, reproduction, identification and ecological significance. Not to be held with the former 001.210. Pre- or corequisite: BIOL 1030 or BIOL 1031 or the former 071.125(C).

BOTN 2180 Introductory Toxicology Cr.Hrs.3 (Formerly 001.218) A survey of general principles underlying the effects of toxic substances on biological systems, including consideration of the history, scope and applications of toxicology, the mechanisms of toxic action, and some major types of toxicants. This course is also taught in the Department of Zoology as ZOOL 2180, in Environmental Science as ENVR 2180, and in Agriculture as AGRI 2180. Not to be held with BOTN 2190 (or 001.219), ENVR 2190 (or 128.219), ZOOL 2190 (or 022.219), AGRI 2190 (or 065.219) and the former 001.337. *Prerequisites:* BIOL 1030 or BIOL 1031 or the former 071.125 (C), and CHEM 1310 or CHEM 1311 (or 002.131) (C) or CHEM 1320 (or 002.132) (C).

BOTN 2190 Toxicological Principles Cr.Hrs.2 (Formerly 001.219) A survey of general principles underlying the effects of toxic substances on biological systems, including consideration of the history, scope and applications of toxicology, and the mechanisms of toxic action. This course is also taught in the Department of Zoology as ZOOL 2190, in Environmental Science as ENVR 2190, and in Agriculture as AGRI 2190. Not to be held with BOTN 2180 (or 001.218), ENVR 2180 (or 128.218), ZOOL 2180 (or 022.218), AGRI 2180 (or 065.218), and the former 001.337. *Prerequisites:* BIOL 1030 or BIOL 1031 or the former 071.125 (C) and CHEM 1310 or CHEM 1311 (or 002.131 or 002.128) (C) or CHEM 1320 (or 002.132) (C).

BOTN 2210 Biology of Fungi and Lichens Cr.Hrs.3 (Lab Required) (Formerly 001.221) An introduction to the fungi, both free living and lichenized, with emphasis on the major taxonomic groupings, their organization and structure, their life histories, identification and general economic significance. Not to be held with the former 001.321. *Prerequisite:* BIOL 1010 (or 071.101 or the former 071.123) with a minimum grade of "B", or BIOL 1030 or BIOL 1031 or the former 071.125 (C).

BOTN 2280 Introductory Ecology Cr.Hrs.3 (Formerly 001.228) The course involves a study of the interrelationships of living organisms (including human) with each other and with their environment. This course is also given in the Zoology department as ZOOL 2290. It is not normally acceptable as a prerequisite to other courses in ecology. Not to be held with BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237). *Prerequisite:* BIOL 1030 or BIOL 1031 or the former 071.125 (C).

BOTN 2290 Biology of Algae Cr.Hrs.3 (Lab Required) (Formerly 001.229) Lectures and laboratories dealing with the cellular features of major groups of algae and their phylogenetic and adaptive significance. The basics of algal taxonomy are also covered. Not to be held with the former 001.323 or 001.341. *Prerequisite:* BIOL 1030 or BIOL 1031 or the former 071.125 (C).

BOTN 2370 Principles of Ecology Cr.Hrs.3 (Lab Required) (Formerly 001.237) Principles of ecology at the individual, population, community, and ecosystems levels. This course is also given in the Zoology department as ZOOL 2370 and in the Faculty of Agricultural and Food Sciences as AGEC 2370. It is the normal prerequisite to other courses in ecology. Not to be held with BOTN 2280 (or 001.228) or ZOOL 2290 (or 022.229) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) or BOTN 2371. *Prerequisite:* BIOL 1030 or BIOL 1031 or the former 071.125 (C). *Pre or corequisite:* STAT 1000 or STAT 1001 (or 005.100) (C).

BOTN 2371 Principes d'écologie Cr.Hrs.3 (Labo Requis) (L'ancien 001.237) Principes d'écologie au niveau de l'individu, la population, la communauté et l'écosystème. Ce cours est également offert dans le Département de zoologie sous le numéro ZOOL 2371 et dans la Faculté de sciences de l'agriculture et de nutrition sous le numéro AGEC 2370. On ne peut se faire créditer à la fois le BOTN 2370 (ou 001.237), AGEC 2370 (ou 065.237) et le ZOOL 2370 (ou 022.237) ou ZOOL 2290 (ou 022.229) (BOTN 2280 (ou 001.228)). *Préalable/Préalable:* BIOL 1030 ou BIOL 1031 ou l'ancien 071.125 (C). *Pré-ou corequis:* STAT 1000 ou STAT 1001 (ou 005.100) (C). Donné seulement au Collège universitaire de Saint-Boniface.

BOTN 2460 Genetics 1 Cr.Hrs.3 (Lab Required) (Formerly 001.246) Principles of heredity, gametogenesis and the cytological basis of inheritance in plants and animals. The concepts of dominance and genetic interaction, sex and inheritance, linkage, chromosomal variations, quantitative and population genetics, the genetic code. Not to be held with BOTN 2461 or PLNT 2520 (or 039.252) or the former 039.209. *Prerequisite:* BIOL 1030 or BIOL 1031 or the former 071.125 (C).

BOTN 2461 génétique I Cr.Hrs.3 (Labo requis) (L'ancien 001.246) Les principes de l'hérédité, de la gamétogénèse et des fondements cytologiques de la transmission héréditaire chez les plantes et animaux. Les concepts de dominance et d'interaction génétique, de détermination du sexe, de la transmission des caractères liés au sexe et des gènes liés, les variations chromosomiques, la génétique des populations et le code génétique feront l'objet du cours. L'étudiant ou l'étudiante ne peut se faire créditer à la fois le BOTN 2460 (ou 001.246) et le PLNT 2520 (ou 039.252) ou l'ancien 039.209. *Préalable:* BIOL 1030 ou BIOL 1031 ou l'ancien 071.125 (C). Donné seulement au Collège universitaire de Saint-Boniface.

BOTN 3000 Evolutionary Biology Cr.Hrs.3 (Lab required) Evolution is the ultimate cause of biological diversity. This course introduces the major questions and research methods in evolutionary biology. Topics include evolutionary genetics, adaptation, speciation, and the reconstruction of evolutionary history. This course is also given in Zoology as ZOOL 3000. Not to be held with the former 022.400. *Prerequisites:* BOTN 2460 (or 001.246) and any one of the following: BOTN 2110 (or 001.211), BOTN 2210 (or 001.221), BOTN 2290 (or 001.229), ZOOL 2320 (or 022.232), ZOOL 2501 (or 022.250F), ZOOL 2600 (or 022.260), or consent of department.

BOTN 3010 Plant Ecological Physiology Cr.Hrs.3 (Lab Required) (Formerly 001.301) An integrated study of the major physiological processes in higher plants, and how these processes influence growth and development of plants in natural ecosystems. Stress responses of plants to water, light and nutrients will be emphasized. Not to be held with PLNT 3500 (or 039.350) or (001.317) or BOTN 4670 (or 001.467). *Prerequisite:* BOTN 2020 (or 001.202 or 001.230) (C) and CHEM 1310 or CHEM 1311 (or 002.131) (C).

BOTN 3070 Vascular Flora of Manitoba Cr.Hrs.3 (Lab Required) (Formerly 001.307) A survey of the vascular plants of Manitoba emphasizing identification, nomenclature and classification, and including brief accounts of the distribution and post-glacial history of the main floristic associations within the province. Students must submit a collection of at least 20 different vascular plants identified to species. A guide to the collection should be obtained from the Botany department office in the Spring/Summer prior to commencing the course. Not to be held with the former 001.207 or 001.231. *Prerequisite:* BIOL 1010 (or 071.101) with a minimum grade of "B", or BIOL 1030 or BIOL 1031 or the former 071.125 (C).

BOTN 3190 Plant Anatomy Cr.Hrs.3 (Lab Required) (Formerly 001.319) A study of the anatomical aspects of the growth and development of plants cells, tissues and organs. Laboratory exercises will complement material. Not to be held with the former 001.316 or 001.403. *Prerequisite:* BOTN 2010 (or 001.201) (C).

BOTN 3250 Fungal Ecology Cr.Hrs.3 (Lab Required) (Formerly 001.325) A description of fungal lifestyles, distribution and distributional dynamics in natural environments. Saprotrophic, biotrophic, and necrotrophic substratum exploitation and the role of fungi in nutrient cycling in various environments are discussed along with the fungal, plant and animal interactions. Topics in applied fungal ecology include: fungi and ecologically disturbed sites, poisonous and hallucinogenic fungi, food and fungi, and medical mycology. *Prerequisite:* BOTN 2210 (or 001.221 or the former 001.210 or 001.321) (C) or consent of the department head.

BOTN 3260 Bryology Cr.Hrs.3 (Lab Required) (Formerly 001.326) The biology, ecology, and evolution of bryophytes. Laboratory will consist of an examination of the diversity of bryophytes using morphological and molecular characters. *Prerequisite:* BOTN 2110 (or 001.211) (C).

BOTN 3270 Forest Botany Cr.Hrs.3 (Formerly 001.327) An examination of the structure and dynamics of plant communities in forested ecosystems. Topics include forest type classification, physiological and anatomical responses of representative forest species, decomposition and nutrient cycling, disturbance and forest succession. Not to be held with the former 001.402. *Prerequisites:* BOTN 2010 (or 001.201 or the former 001.230) (C) and BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) (C), or consent of the department.

BOTN 3280 Medicinal and Hallucinogenic Plants Cr.Hrs.3 (Formerly 001.328) A botanical and historical survey of medicinal, hallucinogenic and poisonous plants used in various cultures. *Prerequisite:* a minimum of 30 hours of university credit, or consent of the department.

BOTN 3420 Field Ecology Cr.Hrs.3 (Lab Required) (Formerly 001.342) Problems, techniques and assumptions involved in measuring parameters of biological populations and environmental variables. A field trip will be held prior to the start of classes. Students must register in the department office by August 5. This course is also given in Zoology as ZOOL 3450. *Prerequisites:* BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) (C), and STAT 2000 or STAT 2001 (or 005.200) (D).

BOTN 3460 Genetics 2 Cr.Hrs.3 (Lab Required) (Formerly 001.346) The course complements introductory genetics (BOTN 2460 (or 001.246)) and deals with various aspects of linkage and crossing over, gene function, allelism, mutation and repair, the use of bacteria and viruses as genetic tools, basics of developmental genetics and extra-nuclear inheritance. *Prerequisite:* BOTN 2460 or BOTN 2461 (or 001.246) (C) or PLNT 2520 (or 039.252 or 039.209) (C). Pre or corequisite: CHEM 2370 or CHEM 2371 (or 002.237) or MBIOL 2370 or MBIOL 2371 (or 060.237 or 002.235 or 060.235)

(C) or CHEM 2780 (or 002.278) or MBI0 2780 (or 060.278 or 002.240 or 060.240) (C), or consent of department head.

BOTN 3540 Community Ecology Cr.Hrs.3 (Lab Required) (Formerly 001.354) Lectures and laboratories emphasizing the structure and function of terrestrial biotic communities with emphasis upon selected Manitoba situations. *Prerequisite:* BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) (C) or consent of department head.

BOTN 3570 Directed Studies in Botany Cr.Hrs.3 (Lab Required) (Formerly 001.357) Each student will conduct a comprehensive review of the literature relating to a research topic chosen in consultation with the department head and an appropriate supervising faculty member. A written literature review and research proposal as well as an oral presentation of a selected topic will normally be required. The course is restricted to Major and Honours students in the biological sciences. Not to be held with the former 001.414 or 001.466.

BOTN 3580 Wetland Ecology Cr.Hrs.3 (Lab Required) (Formerly 001.358) Lectures and field exercises examine the biotic (algae, macrophytes, invertebrates, and vertebrates) and abiotic (hydrology, nutrient cycling) properties of Delta Marsh, a prairie lakeshore wetland. Other wetland types, including peatlands, will also be considered in lectures and field trips. The course is offered in Summer Session at the university Field Station (Delta Marsh). This course is also given in the Zoology department as ZOOL 3580. *Prerequisite:* BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) (C) or consent of instructor.

BOTN 3980 Work Term 1 Cr.Hrs.0 (Formerly 001.398) Work assignment in business, industry, or government for students registered in the Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Zoology as ZOOL 3980. (Pass/Fail grade only)

BOTN 3990 Work Term 2 Cr.Hrs.0 (Formerly 001.399) Work assignment in business, industry, or government for students registered in the Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Zoology as ZOOL 3990. (Pass/Fail grade only)

BOTN 4010 Aquatic Botany Cr.Hrs.3 (Lab Required) (Formerly 001.401) This course examines the relationship between algae, fungi and macrophytes, and the physical, chemical and biological properties of the aquatic environment. Specific adaptations to life in water, and patterns of distribution and succession in rivers, lakes and wetlands will be covered. *Prerequisite:* BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) (C) or consent of department.

BOTN 4040 Advanced Plant Systematics Cr.Hrs.3 (Lab Required) (Formerly 001.404) An examination of biosystematic principles and methods as they relate to all groups of plants. Not to be held with the former 001.231, 001.318 or 001.456. *Prerequisite:* BOTN 3070 (or 001.307 or the former 001.207 or 001.231) (C).

BOTN 4050 Lichen Symbioses Cr.Hrs.3 (Lab Required) (Formerly 001.405) The biology, diversity, systematics and evaluation of lichens including the molecular biology and coevolution of the algal and fungal symbionts. Offered in 2007-2008 and in alternate years thereafter. *Prerequisite:* BOTN 2210 (or 001.221) (C) or consent of department.

BOTN 4120 Advanced Plant Stress Physiology Cr.Hrs.3 (Lab Required) (Formerly 001.412) Selected topics on plant responses to environmental stress at the physiological and biochemical levels. Laboratory will consist of supervised projects in the above areas. Not to be held with the former 001.417. *Prerequisites:* BOTN 3010 (or 001.301 or the former 001.317) (C) or PLNT 3500 (or 039.350); CHEM 2210 or CHEM 2211 (or 002.221 or the former 002.220) (C) and CHEM 2370 or CHEM 2371 (or 002.237) or MBI0 2370 or MBI0 2371 (or 060.237 or the former 002.235 or 060.235) (C) or CHEM 2780 (or 002.278) or MBI0 2780 (or 060.278) or the former 002.240 or 060.240 (C).

BOTN 4130 The Evolution of Plant Structures and Systems Cr.Hrs.3 (Lab Required) (Formerly 001.413) A comparative study of the morphological and anatomical characteristics of extant and extinct plants in the context of current evolutionary theory. Next offered in 2007-2008 and in alternate years thereafter. *Prerequisite:* BOTN 2010 (or 001.201 or the former 001.230) (C) or consent of department head.

BOTN 4150 Plant Interactions Cr.Hrs.3 (Lab Required) (Formerly 001.415) This course examines the ecology of interactions between plants and their biotic environment - other plants, animals and soil microbes. Emphasis is placed on the ecology and evolution of individual and population responses. *Prerequisite:* BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) (C).

BOTN 4160 Advanced Mycology Cr.Hrs.3 (Lab Required) (Formerly 001.416) Emphasis is placed on the taxonomy, morphology and life histories of fungi, especially those that are important as pathogens. Other current topics in mycology will also be examined. Not to be held with the former 001.451. *Prerequisite:* BOTN 2210 (or 001.221 or the former 001.321) (C) or consent of the department head.

BOTN 4180 Molecular Genetics of Plant Development Cr.Hrs.3 (Formerly 001.418) Analysis of plant development at the molecular level. Recent advances in model system genetics will be highlighted including seedling, root, shoot, and flower development as well as environmental responses. Offered in 2007-2008 and in alternate years thereafter. *Prerequisite:* BOTN 2460 or BOTN 2461 (or 001.246) (C).

BOTN 4210 Principles of Plant Pathology Cr.Hrs.3 (Lab Required) (Formerly 001.421) A study of the interactions of causal agents, environment, and host plants in the development of disease. Special attention will be given to diseases of local and regional significance. Laboratory exercises will illustrate the basic techniques of plant pathology. Not to be held with the former 001.450. *Prerequisites:* BOTN 2020 (or 001.202 or the former 001.230) (C) and BOTN 2210 (or 001.221 or the former 001.321 or 001.322) (C), or consent of department head.

BOTN 4600 Project in Botany Cr.Hrs.6 (Formerly 001.460) A research project chosen in consultation with the department head and an appropriate supervising Faculty member. A written report will normally be required. The course is restricted to final year Honours students in Botany or Ecology. Not to be taken concurrently with BOTN 4880 or ZOOL 4880. *Prerequisite:* BOTN 3570 (or 001.357) (C) or consent of department head.

BOTN 4650 Analysis of Biological Communities Cr.Hrs.3 (Lab Required) (Formerly 001.465) Methods and approaches to the analysis of biological communities are reviewed. Emphasis is placed on planning the steps of a biological investigation. *Prerequisites:* BOTN 2370 or BOTN 2371 (or 001.237) or ZOOL 2370 or ZOOL 2371 (or 022.237) or AGEC 2370 (or 065.237) (C), and STAT 2000 or STAT 2001 (or 005.200) (C).

BOTN 4800 Special Topics in Field Biology Cr.Hrs.3 (Formerly 001.480) Lectures, field studies and research projects on a selected topic. Course content to vary from year to year depending on instructor. Usually offered during the summer months. *Prerequisite:* At discretion of instructor.

BOTN 4880 Analysis of Ecological Problems Cr.Hrs.3 (Lab Required) (Formerly 001.488) Teams of students will analyze emerging regional ecological problems and present results or solutions in a written report and oral presentation. This course is also offered by the Department of Zoology as ZOOL 4880. Due to advance preparation necessary for this course, students will not be permitted to register after October 31. Not to be taken concurrently with BOTN 4600 or ZOOL 4110. *Prerequisites:* BOTN 3420 (or 001.342) (C) or ZOOL 3450 (or 022.345) (C), BOTN 3540 (or 001.354) (C), ZOOL 3680 (or the former 022.348) (C), ZOOL 3750 (or 022.375) (C) and eligibility for graduation in the current academic year.

BOTN 4890 Special Topics in Biology Cr.Hrs.3 (Formerly 001.489) Biology encompasses a broad array of ideas and special topic areas. In this course, students can pursue a specific topic in detail through lectures, seminars and research projects. Normally restricted to third and fourth year Honours and Major students. This course is also offered by Zoology as ZOOL 4890. *Prerequisite:* Consent of department.

BOTN 4980 Work Term 3 Cr.Hrs.0 (Formerly 001.498) Work assignment in business, industry, or government for students registered in the Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Zoology as ZOOL 4980. (Pass/Fail grade only)

BOTN 4990 Work Term 4 Cr.Hrs.0 (Formerly 001.499) Work assignment in business, industry, or government for students registered in the Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Zoology as ZOOL 4990. (Pass/Fail grade only)

4.6 Department of Chemistry

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Academic Staff

Distinguished Professor Emeritus

Schaefer, T., B.Sc. (Hons.), M.Sc. (Manitoba), D.Phil. (Oxford), F.R.S.C.

Professors Emeriti

Gesser, H.D., B.Sc. (Loyola), Ph.D. (McGill); Schaefer, T., B.Sc. (Hons.), M.Sc. (Manitoba), D.Phil. (Oxford), F.R.S.C.

Senior Scholars

Charlton, J.L., B.Sc. (Hons.), Ph.D. (Western); Chow, A., B.Sc., M.A., Ph.D. (Toronto); Jamieson, J.C., B.Sc. (Heriot Watt), Ph.D. (Aberdeen); Janzen, A.F., B.Sc. (Hons.) (McMaster), Ph.D. (Western); Kruczynski, L., B.Sc. (Hons.), Ph.D. (Manitoba); Queen, A., B.Sc. (Hons.), M.Sc., Ph.D. (Durham); Westmore, J.B., B.Sc. (Hons.), Ph.D. (London).

Professors

Baldwin, W.G., B.Sc.(Hons.), M.Sc. (Manitoba), Ph.D. (Melbourne); **Duckworth**, H.W., B.Sc.(Hons.) (McMaster), Ph.D. (Yale); **Gough**, K.M., B.Sc.(Hons.) (Loyola), M.Sc., Ph.D. (Manitoba); **Hruska**, F.E., B.Sc.(Hons.), M.Sc., Ph.D. (Manitoba); **Hunter**, N.R., B.Sc., M.Sc. (Carleton), Ph.D. (New Brunswick); **O'Neil**, J.D.J., B.Sc., Ph.D. (Toronto).

Associate Professors

Cullen, J.M., B.Sc., M.Sc. (Windsor), M.Sc., Ph.D. (Guelph); **Freund**, M.S., B.S. (Florida Atlantic), Ph.D. (Florida), *Canada Research Chair in Conducting Polymers and Electronic Materials*; **Hultin**, P.G., A.B. (Dartmouth), M.Sc., Ph.D. (Toronto); **Kroeker**, S., B.Sc. (Winnipeg), M.Sc. (Manitoba), Ph.D. (Dalhousie); **Perreault**, H., B.Sc., M.Sc. (Montreal), Ph.D. (Dalhousie), *Canada Research Chair in Bioanalytical Mass Spectrometry*; **Wang**, F., B.S. (Wuhan), Ph.D. (Peking).

Assistant Professors

Bieringer, M., Dipl.-Chem. (Duisburg), Ph.D. (McMaster); **Budzelaar**, P., B.Sc., M.Sc., Ph.D. (Utrecht); **Hegmann**, T., M.Sc., Ph.D. (Martin-Luther-Universität); **Schreckenbach**, H.G., Dipl.-Phys. (Technische Universität Dresden), Ph.D. (Calgary); **Schweizer**, F., Dipl.-Chem. (Freiburg), Ph.D. (Alberta).

Instructors

Gauvin, F., B.Sc. (Sherbrooke), M.Sc. (Laval), Ph.D. (McGill) (Instructor II); **Hickling**, G., B.Sc., B.Ed., M.Sc. (Manitoba), Ph.D. (McMaster) (Senior Instructor); **Scoot**, A., B.Sc.(Hons.) (Newcastle, UK), M.Sc., Ph.D. (Saskatchewan) (Senior Instructor); **Smirnova**, E., Ph.D. (Moscow State) (Senior Instructor); **Wayborn**, H., B.Sc., B.Ed., M.Sc. (Manitoba) (Senior Instructor); **Xidos**, J., B.Sc., Ph.D. (Memorial) (Instructor II).

4.6.2 Program Information

Chemistry is the science concerned with the properties of atoms and molecules, of which all matter is composed. Chemistry is important for all aspects of the material world - food production; the manufacture of medicines, textiles, and plastics; energy production; identifying environmental problems and remedies; and understanding the workings of living organisms. The department offers study in analytical, inorganic, organic and physical chemistry, and in biochemistry.

Chemistry Club: The Chemistry Club is the University of Manitoba Student Chapter of the Chemical Institute of Canada. The aim of the organization is to advance interest in chemistry. All students engaged in chemical studies are eligible for membership in the chapter and are encouraged to apply. Regular meetings, tours, publications, etc., are planned by each year's membership.

Scholarships and Awards: Several scholarships and awards are granted each year to Honours and Major students in Chemistry, Biochemistry, and Biotechnology on the basis of outstanding academic performance. To be eligible for these awards for any regular session, students are normally required to have completed a full program with a minimum of 18 credit hours of Chemistry in that session. They must also be registered for a full program with a minimum of 18 credit hours of Chemistry in the next regular session. Additional information is available from the Chemistry general office.

The department must approve a student's Honour or Major program each session. Students must also obtain departmental approval for any and all revisions to their program.

Honours Requirements

To enter the Honours program in Chemistry, students must have CHEM 1300 (B) and CHEM 1310 (B); PHYS 1050 (C) (or PHYS 1020 (C+)) and PHYS 1070 (C); MATH 1500 (C) and MATH 1700 or any equivalent with a grade of "C"; and have satisfied all faculty requirements for entry to the Honours program.

To continue in and graduate from the Honours program, i.e., to proceed from Year 2 to Year 3 and from Year 3 to Year 4 and successfully complete Year 4 of the Honours program, a student must have an annual Grade Point Average of 2.50 and in addition, must have a 3.00 average on all Chemistry courses during that session and a grade of "C+" or better in each Chemistry course. Students must complete 24 credit hours each regular session.

Honours Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Honours Chemistry program may enter the Cooperative Option in their third year in Honours Chemistry. This program

provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and university units.

The course and grade requirements for entry to this option are the same as those required for entry to the regular Honours program, as indicated in the chart. Students are required to complete 24 credit hours of Chemistry (including CHEM 2470 and either CHEM 2280 or CHEM 2290) before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Honours) Cooperative Options in Section 3.6.

Students should note that the grade requirements for the Cooperative Option are the same as that for the regular Honours program. To continue in and graduate from the Honours Cooperative program (e.g. to proceed from Year 2 to Year 3), a student must have an annual Grade Point Average of 2.50 and in addition, must have a 3.00 average on all Chemistry courses during that session and a grade of "C+" or better in each Chemistry course. Each academic term in the third and subsequent years must comprise a minimum of 12 credit hours.

Students will apply for openings in the Cooperative Option in September of their third year in the Honours program. They will be notified of their provisional acceptance in the program by October. Acceptance into the program is dependent upon the student receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. The first work term can be taken in January or May. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.

Four Year Major Requirements

To enter the four year Major in Chemistry, students must have CHEM 1300 (C+) and CHEM 1310 (C+); PHYS 1050 (or PHYS 1020) and PHYS 1070; MATH 1500 and MATH 1700 or any equivalent and have satisfied all faculty requirements for entry to the four year Major program.

To continue in and graduate from the Major program, a student must have a sessional Grade Point Average of 2.00 in the regular session. To graduate with the Major degree, students must present a grade of "C" or better on the 57 credit hours of Chemistry required in the degree.

Students who, at the end of University 1, are undecided between the four year Major and Honours programs should note that the prescription for Honours Year 2 satisfies both the Honours and Major programs.

Major Cooperative Option

Students interested in alternating employment terms and academic terms as part of their Major Chemistry program may enter the Cooperative Option in their third year in Chemistry. This program provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and University units.

The course and grade requirements for entry to this option are the same as those required for entry to the regular Major program. Students are required to complete 24 credit hours of Chemistry (including CHEM 2470 and either CHEM 2280 or CHEM 2290) before they begin their first employment term.

To continue in and graduate from the Major program, a student must have a sessional Grade Point Average of 2.00 in the regular session. To graduate with the Major degree, students must present a grade of "C" or better on the 57 credit hours of Chemistry required in the degree. See the general faculty regulations for B.Sc. (Major) Cooperative Option in Section 3.4.

Students will apply for openings in the Cooperative Option in September of their third year in the Major program. They will be notified of their provisional acceptance in the program by October. Acceptance into the program is dependent upon the student receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. The first work term can be taken in January or May. Students are advised that satisfying the entrance requirements does not guarantee a place

in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.

Three Year General Requirements

As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from two Science departments. To satisfy the requirement in the department of Chemistry, students must select a minimum of 12 credit hours

from: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2380, CHEM 2470. Additional courses may be selected from CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), CHEM 2550 (ENVR 2550), CHEM 4360, CHEM 4370 and 3000 level courses, with permission of the department.

Biochemistry and Biotechnology Programs

The Department of Chemistry, in conjunction with the Department of Microbiology, offers a Joint Honours program, a Joint Honours Cooperative Option, a Joint four year Major program and a Joint four year Major Cooperative Option program in Biochemistry. See Section 4.2 *Biochemistry Program* for full details. They also offer a Joint Honours program in Biotechnology. See Section 4.4 *Biotechnology Program* for full details.

4.6.3 ³ Chemistry, Department Code: 002			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS 123 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300(B), CHEM 1310(B), PHYS 1050(C) (or PHYS 1020(C+)) and PHYS 1070(C), MATH 1500 ¹ (C), MATH 1700(C) ¹	At least 15 credit hours from: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (CHEM 2360) ⁵ Plus MATH 1200, MATH 1300 ^{1,2}	At least 18 credit hours from: any of CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (CHEM 2360) ⁵ not yet taken, and CHEM 3360, CHEM 3370, CHEM 3380, CHEM 3390, CHEM 3580, CHEM 3590, CHEM 4570, CHEM 4590, CHEM 4680, CHEM 4690	CHEM 4600 and CHEM 4710 Plus sufficient credit hours from Chemistry courses not yet taken ⁵ to total a minimum of 63 credit hours Plus sufficient electives ⁴ to total a minimum of 33 credit hours
Plus 6 credit hours of electives ²	Plus 9 credit hours of electives ⁴ which may include 6 credit hours of Chemistry ⁵	Plus 12 credit hours of electives ⁴ which may include 6 credit hours of Chemistry ⁵	
In University 1 or Year 2 the following must be completed:			
6 credit hours from the Faculty of Arts, which should include the required "W" course.			
30 Hours	30 Hours	30 Hours	33 Hours
HONOURS COOPERATIVE OPTION 123 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300(B), CHEM 1310(B), PHYS 1050(C), (or PHYS 1020(C+)) and PHYS 1070(C) MATH 1500 ¹ (C), MATH 1700(C) ^{1,2}	At least 15 credit hours from: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (CHEM 2360) ⁵ Plus MATH 1200, MATH 1300 ^{1,2} Plus 9 credit hours of electives ⁴ which may include 6 credit hours of Chemistry ⁵	At least 18 credit hours from: any of CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (CHEM 2360) ⁵ , not yet taken, and CHEM 3360, CHEM 3370, CHEM 3380, CHEM 3390, CHEM 3580, CHEM 3590, CHEM 4570, CHEM 4590, CHEM 4680, CHEM 4690 Plus 12 credit hours of electives ⁴ which may include 6 credit hours of Chemistry ⁵ CHEM 3980, CHEM 3990, CHEM 4980 and/or CHEM 4990	CHEM 4600 and CHEM 4710 Plus sufficient credit hours from Chemistry courses not yet taken ⁵ to total a minimum of 63 credit hours Plus sufficient electives ⁴ to total a minimum of 33 credit hours
Plus 6 credit hours of electives			
In University 1 or Year 2 the following must be completed:			
6 credit hours from the Faculty of Arts, which should include the required "W" course.			
30 Hours	30 Hours	30 Hours	33 Hours
MAJOR ⁶ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300(C+), CHEM 1310(C+), PHYS 1050 (or PHYS 1020) and PHYS 1070, MATH 1500 ¹ , MATH 1700 ¹	At least 15 credit hours from: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (or CHEM 2360) ⁵ Plus MATH 1200 and MATH 1300 ^{1,2} Plus 9 credit hours of electives ⁴ which may include 6 credit hours of Chemistry	At least 18 credit hours from: any of CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (CHEM 2360) ⁵ , not yet taken, and CHEM 3360, CHEM 3370, CHEM 3380, CHEM 3390, CHEM 3580, CHEM 3590, CHEM 4570, CHEM 4590, CHEM 4680, CHEM 4690 Plus 12 credit hours of electives ⁴ which may include 6 credit hours of Chemistry ⁵	CHEM 4600 Sufficient credit hours from Chemistry courses not yet taken ⁶ to total a minimum of 57 credit hours Plus sufficient electives ⁴ to total a minimum of 30 credit hours

continued on next page

In University 1 or Year 2 the following must be completed:

6 credit hours from the Faculty of Arts, which should include the required "W" course.

MAJOR COOPERATIVE OPTION⁶ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

CHEM 1300(C+), CHEM 1310(C+), PHYS 1050 (or PHYS 1020) and PHYS 1070, MATH 1500 ¹ , MATH 1700 ¹	At least 15 credit hours from: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (or CHEM 2360) ³ Plus MATH 1200 and MATH 1300 ^{1,2} Plus 9 credit hours of elective ⁴ which may include 6 credit hours of Chemistry	At least 18 credit hours from: any of CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2370 (MBIO 2370), CHEM 2380, CHEM 2470, CHEM 2860 (CHEM 2360) ³ , not yet taken, and CHEM 3360, CHEM 3370, CHEM 3380, CHEM 3390, CHEM 3580, CHEM 3590, CHEM 4570, CHEM 4590, CHEM 4680, CHEM 4690 Plus 12 credit hours of electives ⁴ which may include 6 credit hours of Chemistry ⁵	CHEM 4600 Sufficient credit hours from Chemistry courses not yet taken ⁶ to total a minimum of 57 credit hours Plus sufficient electives ⁴ to total a minimum of 30 credit hours
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In University 1 or Year 2 the following must be completed:

CHEM 3980, CHEM 3990, CHEM 4980 and/or CHEM 4990

6 credit hours from the Faculty of Arts, which should include the required "W" course.

THREE YEAR GENERAL

CHEM 1300(C) and CHEM 1310(C)	A minimum of 12 credit hours from: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2380, CHEM 2470
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MINOR

CHEM 1300(C) and CHEM 1310(C)	Normally CHEM 2210 and CHEM 2220, plus an additional 6 credit hours
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JOINT MICROBIOLOGY-CHEMISTRY HONOURS AND FOUR YEAR MAJOR IN BIOCHEMISTRY: See Section 4.2 Biochemistry Program

JOINT MICROBIOLOGY-CHEMISTRY HONOURS IN BIOTECHNOLOGY: See Section 4.4 Biotechnology Program

NOTES:

¹ MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 or MATH 1730 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.

² Other combinations of mathematics courses may be acceptable with the approval of the department head.

³ The courses required in this program will satisfy the university mathematics requirement.

⁴ Electives chosen during Years 2, 3 and 4 must include at least nine credit hours of Science courses other than Chemistry at the 2000 level or higher.

⁵ Students must complete a minimum of six credit hours in each of the following subject areas:

Analytical: CHEM 2470, CHEM 3590, CHEM 4590

Inorganic: CHEM 2380, CHEM 3380, CHEM 4570, CHEM 4680

Organic: CHEM 2210, CHEM 2220, CHEM 3390, CHEM 3580, CHEM 4580, CHEM 4690,

and three credit hours of *Biochemistry:* CHEM 2860 (CHEM 2360 may be used with an appropriate Biology prerequisite)

and nine credit hours of *Physical/Polymer:* CHEM 2280, CHEM 2290, CHEM 3360, CHEM 3370, CHEM 3490, CHEM 4640, CHEM 4650

⁶ IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.6.4 Chemistry Course Descriptions

To fulfil prerequisite requirements, a grade of "C" must be achieved, unless otherwise stated, in any Chemistry course stipulated as a prerequisite to a further course in Chemistry.

General Courses

U1 CHEM 0900 Preparatory Chemistry Cr.Hrs.0 (Formerly 002.090) A course designed for students with little or no background in chemistry who wish to achieve the prerequisites for advanced courses, or for students who require a refresher course in basic chemistry. Graded Pass/Fail. Concurrent registration in CHEM 0900 and any of CHEM 1300, CHEM 1301, CHEM 1310, CHEM 1311 or CHEM 1320 is not permitted.

U1 CHEM 1000 Understanding the World through Chemistry Cr.Hrs.3 (Formerly 002.100) This course introduces students to the principles of chemistry necessary for an understanding of contemporary issues in agriculture, the environment, industry, medicine, and the economy. High school chemistry is not required. May be used as a prerequisite (minimum grade "B") for CHEM 1300 or CHEM 1301 (or 002.130) (Opportunity section). Not to be held with CHEM 1001 or the former 002.125. May not be used to fulfill chemistry requirements in a Chemistry Honours, Major, General or Minor program. Not available to students who have previously obtained credit in, or are concurrently registered in, any 2000 level university Chemistry course.

U1 CHEM 1001 Comprendre le monde par le biais de la chimie Cr.Hrs.3 (L'ancien 002.100) Ce cours présente à l'étudiante et à l'étudiant les principaux principes de la chimie nécessaires pour comprendre les problèmes contemporains de l'agriculture, l'environnement, l'industrie, la médecine et l'économie. La chimie du secondaire n'est pas requise. Peut être utilisé comme prérequis au CHEM 1300 ou CHEM 1301 (ou 002.130) (note minimale de "B"). Ne peut être utilisé dans un programme général, de spécialisation, de majeure ou de mineure en chimie. Une personne ayant déjà

des crédits ou qui est présentement inscrite à un cours de chimie de niveau 2000 n'est pas admissible à ce cours. On ne peut se faire créditer à la fois le CHEM 1000 (ou 002.100) et l'ancien 002.125. Donné seulement au Collège universitaire de Saint-Boniface.

U1 CHEM 1030 Carbon Chemistry in Nature and Society Cr.Hrs.3 (Formerly 002.103) This course introduces organic molecules and illustrates the principles of organic chemistry with topics from cosmetics and personal care products, the petroleum industry, food preparation chemistry, polymers and plastics, poisons and biological toxins, and risk assessment. May not be used to fulfill chemistry requirements in a Chemistry Honours, Major, General or Minor program. Not available to students who have previously obtained credit in, or are concurrently registered in, any 2000 level university Chemistry course. Not to be held with CHEM 1031 or the former 002.125. *Prerequisite:* CHEM 1000 or CHEM 1001 (or 002.100) (C) or CHEM 1300 or CHEM 1031 (or 002.130) (C) or Chemistry 40S (or equivalent) or CHEM 0900 (or 002.090).

U1 CHEM 1031 La chimie du carbone dans la nature et la société Cr.Hrs.3 (L'ancien 002.103) Ce cours présente certains principes de la chimie organique au moyen de molécules choisies dans différents domaines tels que l'industrie des cosmétiques et des produits des soins personnels, l'industrie pétrochimie, la préparation des produits alimentaires, les polymères et les plastiques, les poisons, les toxines biologiques, et la terminaison de leur facteur de risque. Ne peut être utilisé dans un programme général, de spécialisation, ou de majeure ou de mineure en chimie. Une personne ayant déjà des crédits ou qui est présentement inscrite à un cours de chimie de niveau 2000 n'est pas admissible à ce cours. On ne peut se faire créditer à la fois le CHEM 1030 (ou 002.103) et l'ancien 002.125. Préalables: CHEM 1000 ou CHEM 1001 (ou 002.100) (C) ou CHEM 1300 ou CHEM 1301 (ou 002.130) (C) ou Chimie 40S (ou son équivalent) ou CHEM 0900 (002.090) Donné seulement au Collège universitaire de Saint-Boniface.

U1 CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.130) Atomic and molecular models and their applications to chemistry, including a discussion of solid, liquid, and gaseous states, and of mixtures. Not to be held with CHEM 1301 or the former 002.123 or 002.127. *Prerequisites:* Applied Mathematics 40S or Pre-calculus Mathematics 40S, or the former Mathematics 40S (300), and Chemistry 40S (or equivalent) or CHEM 0900 (or 002.090) (P) or a minimum grade of "B" in CHEM 1000 or CHEM 1001 (or 002.100 or the former 002.125).

U1 CHEM 1301 Université I Chimie: La structure et la modélisation chimique Cr.Hrs.3 (Labo requis) (L'ancien 002.130) La structure et les modèles atomiques, leurs applications à la chimie incluant une étude des états solide, liquide et gazeux des substances chimiques et des mélanges. On ne peut se faire créditer à la fois le CHEM 1300 (ou 002.130) et les anciens 002.123 ou 002.127. *Préalables:* Mathématiques appliquée 40S ou Mathématiques 40S (pré-calcul), ou les anciens Mathématiques 40S (300), chimie 40S (ou son équivalent) ou le CHEM 0900 (ou 002.090) ou le CHEM 1000 ou CHEM 1001 (ou 002.100) (ou l'ancien 002.125) (avec la note minimale de "B"). Donné seulement au Collège universitaire de Saint-Boniface.

U1 CHEM 1310 University 1 Chemistry: An Introduction to Physical Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.131) Thermochemistry, chemical thermodynamics, and chemical kinetics. Not to be held with the former 002.124, 002.123 or 002.128. *Prerequisite:* CHEM 1300 or CHEM 1301 (or 002.130 or the former 002.127) (C).

U1 CHEM 1311 Université I Chimie: Une introduction à la chimie physique Cr.Hrs.3 (Labo requis) (L'ancien 002.131) La thermochimie, la thermodynamique chimique, la cinétique chimique. On ne peut se faire créditer à la fois le CHEM 1310 (ou 002.131) et les anciens 002.124, 002.123, ou 002.128. *Préalable:* CHEM 1300 ou CHEM 1301 (ou 002.130) (ou l'ancien 002.127) (C). Donné seulement au Collège universitaire de Saint-Boniface

U1 CHEM 1320 University 1 Chemistry: An Introduction to Organic Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.132) Structures, properties and reactions of organic molecules. Not to be held with CHEM 2210 or CHEM 2211 (or 002.221) or the former 002.123 or 002.220). *Prerequisite:* CHEM 1300 or CHEM 1301 (or 002.130 or the former 002.127) (C).

CHEM 2210 Introductory Organic Chemistry 1: Structure and Function Cr.Hrs.3 (Lab Required) (Formerly 002.221) An introduction to the concepts of organic reactivity and bonding in organic molecules. Preparation and properties of functionalized organic molecules. Not to be held with CHEM 1320 (or 002.132) or CHEM 2211 (or the former 002.220). *Prerequisite:* CHEM 1310 or CHEM 1311 (or 002.131 or the former 002.128) (C).

CHEM 2211 Introduction à la chimie organique I: Structure et fonction Cr.Hrs.3 (Labo requis) (L'ancien 002.221) Une introduction aux concepts de réactivité organique et de liaison chez les molécules organiques. Préparation et propriétés de molécules organiques renfermant un groupe fonctionnel. On ne peut se faire créditer à la fois le CHEM 2210 (ou 002.221) et le CHEM 1320 (ou 002.132) (ou l'ancien 002.220). *Préalable:* CHEM 1310 CHEM 1311 (ou 002.131) (ou l'ancien 002.128) (C). Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 2220 Introductory Organic Chemistry 2: Reactivity and Synthesis Cr.Hrs.3 (Lab Required) (Formerly 002.222) An introduction to the reactivity of organic compounds and organic spectroscopy. The application of functional group interconversions to syntheses. Not to be held with the former 002.220. *Prerequisite:* CHEM 2210 or CHEM 2211 (or 002.221) (C).

CHEM 2221 Introduction à la chimie organique II: Réactivité et synthèse Cr.Hrs.3 (Labo requis) (L'ancien 002.222) Une introduction à la Réactivité des composés organiques et à la spectroscopie organique. L'application de l'interchangeabilité des groupes fonctionnels dans les synthèses de composés. On ne peut se faire créditer à la fois le CHEM 2220 (ou 002.222) et l'ancien 002.220. *Préalable:* CHEM 2210 ou CHEM 2211 (ou 002.221) (C). Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 2280 Physical Chemistry: Microscopic Descriptions of Matter Cr.Hrs.3 (Lab Required) (Formerly 002.228) Molecular based approach to understanding physical behaviour of matter. Introduction to principles of quantum mechanics, electronic structure and bonding, molecular spectroscopy. Not to be held with CHEM 2281 or the former 002.230. *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131 or the former 002.128) (C), PHYS 1030 or PHYS 1031 (or 016.103) (C) or PHYS 1070 or PHYS 1071 (or 016.107) (C), plus six credit hours of 1000 level mathematics (preferably calculus) with the exception of (136.100), MATH 1010 (or 136.101), MATH 1190 or MATH 1191 (or 136.119) or MATH 1020 (or 136.102 or 054.102).

CHEM 2281 Chimie physique: étude microscopique de la matière Cr.Hrs.3 (Labo requis) (L'ancien 002.228) Une approche basée sur le plan moléculaire pour comprendre les propriétés physiques de la matière. Une introduction aux principes de la mécanique quantique, de la structure électronique et de la liaison, de la spectroscopie moléculaire. On ne peut se faire créditer à la fois le CHEM 2280 (ou 002.228) et l'ancien 002.230. *Préalables:* CHEM 1310 ou 1311 (ou 002.131) (ou l'ancien 002.128) (C), plus PHYS 1030 phys 1031 (ou 016.103) (C) ou PHYS 1070 or PHYS 1071 (ou 016.107) (C), et 6 heures-crédits de niveau 100 en mathématiques (de préférence Calcul) exceptes (136.100), MATH 1010 (ou 136.101), MATH 1190 ou MATH 1191 (ou 136.119), et MATH 1020 (ou 136.102) (ou le FA 1020 (ou 054.102)). Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 2290 Chemical Energetics and Dynamics: Macroscopic Descriptions Cr.Hrs.3 (Lab Required) (Formerly 002.229) Chemical energetics, entropy and the second law of thermodynamics, chemical dynamics. Not to be held with CHEM 2291 or the former 002.230. *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131 or the

former 002.128) (C), PHYS 1030 or PHYS 1031 (or 016.103) (C) or PHYS 1070 or PHYS 1071 (or 016.107) (C), plus six credit hours of 1000 level mathematics (preferably calculus) with the exception of (136.100), MATH 1010 (or 136.101), MATH 1190 or MATH 1191 (or 136.119) or MATH 1020 (or 136.102) or FA 1020 (or 054.102).

CHEM 2291 L'énergétique et la dynamique chimique: Description macroscopique Cr.Hrs.3 (Labo requis) (L'ancien 002.229) L'énergétique chimique, l'entropie et la deuxième loi de la thermodynamique, la dynamique chimique. On ne peut se faire créditer à la fois le CHEM 2290 (ou 002.229) et l'ancien 002.230. *Préalables:* CHEM 1310 ou CHEM 1311 (ou 002.131) (ou l'ancien 002.128) (C), plus PHYS 1030 ou PHYS 1031 (ou 016.103) (C) ou PHYS 1070 ou PHYS 1071 (ou 016.107) (C), et 6 heures-crédits de niveau 100 en mathématiques (de préférence Calcul) exceptes (136.100), MATH 1010 (ou 136.101), MATH 1190 ou MATH 1191 (ou 136.119), et MATH 1020 (ou 136.102) ou FA 1020 (ou 054.102). Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy Cr.Hrs.3 (Lab Required) (Formerly 002.236) An introductory course dealing with kinds of molecules encountered in biochemistry, and the concept of metabolic energy as a product of catabolism and a requirement for biosynthesis. This course is also given in Microbiology as MBIO 2360. Not to be held with CHEM 2361 or CHEM 2770 (or 002.277 or the former 002.240), or MBIO 2360 or MBIO 2361 (or 060.236), or MBIO 2770 (or 060.277) (or the former 060.240, 002.235 or 060.235). *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131 or the former 002.128) and BIOL 1030 or BIOL 1031 or the former 071.125, both courses with a minimum grade of (C). NOTE: Students may hold this course for credit in the B.Sc. General degree program, but may not use it to fulfill the minimum requirement of 12 credit hours in 2000 level Chemistry.

CHEM 2361 Biochimie I: Les molécules biochimiques et une introduction à l'énergie métabolique Cr.Hrs.3 (Labo requis) (L'ancien 002.236) Une introduction aux différents types moléculaires rencontrés en biochimie ainsi qu'au concept d'énergie métabolique comme produit du catabolisme nécessaire à la biosynthèse. Ce cours est aussi offert par le Département de microbiologie sous la cote MBIO 2361. On ne peut se faire créditer à la fois les CHEM 2360 or CHEM 2770 (ou 002.277) (ou l'ancien 002.240), ou le MBIO 2360 ou MBIO 2361 (ou 060.236), ou le MBIO 2770 (ou 060.277) (ou les anciens 060.240, 002.235 ou 060.235). *Préalables:* une note de "C" dans le CHEM 1310 ou CHEM 1311 (ou 002.131) (ou l'ancien 002.128) et le BIOL 1030 ou BIOL 1031 ou l'ancien 071.125. NOTE: On peut utiliser ce cours dans son Baccalauréat _s sciences général. Par contre, ce cours ne peut pas être utilisé pour satisfaire les exigences de 12 heures-crédits aux niveaux 2000 et 3000 en chimie. Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways Cr.Hrs.3 (Lab Required) (Formerly 002.237) An introductory course dealing with the basic metabolic processes that occur in living cells, including the production and use of metabolic energy, the breakdown and synthesis of biomolecules; the synthesis of DNA, RNA and proteins; and the regulation of these processes. This course is also given in Microbiology as MBIO 2370. Not to be held with CHEM 2780 (or 002.278 or the former 002.240), or MBIO 2370 or MBIO 2371 (or 060.237), or MBIO 2780 (or 060.278 or the former 060.240, or 002.235 or 060.235). *Prerequisites:* CHEM 2360 or CHEM 2361 (or 002.236) or MBIO 2360 or MBIO 2361 (or 060.236) and CHEM 2210 or CHEM 2211 (or 002.221 (or the former 002.220), both courses with a minimum grade of (C). NOTE: Students may hold this course for credit in the B.Sc. General degree program, but may not use it to fulfill the minimum requirement of 12 credit hours in 2000 level Chemistry.

CHEM 2371 Biochimie II: Catabolisme, synthèse et les voies d'information Cr.Hrs.3 (Labo requis) (L'ancien 002.237) Une introduction aux processus métaboliques cellulaires de base incluant la production et l'utilisation de l'énergie métabolique, la gradation et la synthèse des molécules biochimiques, la synthèse de l'ADN, de l'ARN et des protéines et la régulation de ces processus. Ce cours est aussi offert par le Département de microbiologie sous la cote MBIO 2371. On ne peut se faire créditer à la fois le CHEM 2370 ou CHEM 2780 (ou 002.278) (ou l'ancien 002.240), ou le MBIO 2370 MBIO 2371 (ou 060.237), ou le MBIO 2780 (ou 060.278) (ou les anciens 060.240, 002.235 ou 060.235). *Préalables:* une note de "C" dans le CHEM 2360 ou CHEM 2361 (ou 002.236) ou le MBIO 2360 ou MBIO 2361 (ou 060.236) et le CHEM 2210 ou CHEM 2211 (ou 002.221) (ou l'ancien 002.220). NOTE: On peut utiliser ce cours dans son Baccalauréat _s sciences général. Par contre, ce cours ne peut pas être utilisé pour satisfaire les exigences de 12 heures-crédits aux niveaux 2000 et 3000 en chimie. Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 2380 Chemistry of the Main Group Elements Cr.Hrs.3 (Lab Required) (Formerly 002.238) Descriptive chemistry of the main group elements including explanation of their chemical and physical properties using current theories of structure and bonding. May not be held for credit with CHEM 2381. *Prerequisite:* CHEM 1310 or CHEM 1311 (or 002.131 or the former 002.128) (C).

CHEM 2381 Chimie des Éléments représentatifs Cr.Hrs.3 (Labo requis) (L'ancien 002.238) Chimie descriptive des éléments représentatifs et interprétation de leurs propriétés physiques et chimiques d'après les théories habituelles de structure et de liaison. *Préalable:* CHEM 1310 ou CHEM 1311 (ou 002.131) (ou l'ancien 002.128) (C). Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 2470 Introductory Analytical Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.247) An introduction to common laboratory techniques of chemical analysis including gravimetric, volumetric and selected instrumental methods. *Prerequisites:* CHEM 2380 or CHEM 2381 (or 002.238) (C) and three credit hours of Introductory Mathematical Sciences.

CHEM 2471 Introduction à la chimie analytique Cr.Hrs.3 (Labo requis) (L'ancien 002.247) Une introduction aux techniques courantes de laboratoire en analyse chimique comprenant les méthodes gravimétriques, volumétriques et quelques autres méthodes instrumentales. Préalables: CHEM 2380 ou CHEM 2381 (ou 002.238) (C) et un cours de 3 heures-crédits de Mathématiques scientifiques de niveau 100. Donnée seulement au Collège universitaire de Saint-Boniface

CHEM 2550 Environmental Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.255) An introduction to the chemistry of the environment. Emphasis will be on the composition of the natural environment and the processes of natural and human-introduced chemical species that take place within it. The course will provide students with the chemical basis for understanding the environment and environmental problems. This course is also taught in Environmental Science as ENVR 2550. *Prerequisite:* CHEM 1310 or CHEM 1311 (or 002.131) (C).

CHEM 2860 Chemistry of Biomolecules Cr.Hrs.3 (Lab Required) (Formerly 002.286) The chemistry of molecules encountered in biochemistry, including their structures, reactions, and physical properties. The concept of metabolic energy in biochemistry. Not to be held with CHEM 2360 or CHEM 2361 (or 002.236) or CHEM 2770 (or 002.277) or the former 002.240, MBI0 2360 or MBI0 2361 (or 060.236) or MBI0 2770 (or 060.277) or the former 060.240, 002.235 or 060.235. *Prerequisite:* CHEM 1310 or CHEM 1311 (or 002.131) or the former 002.128 with a minimum grade of "C". This course is available only to students registered in the Chemistry Honours or Four Year Major program.

CHEM 3360 Elementary Quantum Chemistry and Molecular Bonding Cr.Hrs.3 (Lab Required) (Formerly 002.336) Elementary quantum chemistry and its applications to structure and bonding in molecules and solids. *Prerequisite:* CHEM 2280 or CHEM 2281 (or 002.228 or the former 002.230) (C).

CHEM 3370 Symmetry, Spectroscopy and Structure Cr.Hrs.3 (Lab Required) (Formerly 002.337) Applications of symmetry in chemistry; molecular spectroscopy; structure of solids. *Prerequisite:* CHEM 2280 or CHEM 2281 (or 002.228 or the former 002.230) (C).

CHEM 3380 Inorganic Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.338) A continuation of the chemistry of the elements, with emphasis on the transition metals. The laboratory will include preparation of inorganic compounds and their characterization by spectroscopic and chemical means. *Prerequisite:* CHEM 2380 or CHEM 2381 (or 002.238) (C).

CHEM 3390 Structural Transformations in Organic Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.339) An intermediate course dealing with the reactions of organic chemistry involving functional group transformations and carbon-carbon bond forming reactions. *Prerequisite:* CHEM 2220 (or 002.220) (C). CHEM 2290 or CHEM 2291 (or 002.229) is recommended.

CHEM 3490 Introduction of Polymers Cr.Hrs.3 (Formerly 002.349) An introduction to the formation, structure, physical properties, and degradation of polymers. *Prerequisites:* CHEM 2220 or CHEM 2221 (or 002.222 or the former 002.220) (C) and CHEM 2290 or CHEM 2291 (or 002.229 or the former 002.230) (C).

CHEM 3580 Methods in Physical Organic Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.358) A course dealing with the application of physical chemical principles to organic reaction mechanisms. *Prerequisite:* CHEM 2220 or CHEM 2221 (or 002.222 or the former 002.220) (C). *Corequisite:* CHEM 2290 or CHEM 2291 (or 002.229).

CHEM 3590 Instrumental Analysis Cr.Hrs.3 (Lab Required) A course dealing with the theory and use of standard instruments used for chemical and biochemical analyses. An introduction to the interpretation of data obtained from such analyses. This course is designed to follow a classical analytical chemistry course. Not to be held with ENVR 3550 (or 128.355) or the former 002.347 or the former 002.355. *Prerequisite:* CHEM 2470 (or 002.247) (C).

CHEM 3980 Work Term 1 Cr.Hrs. 0 Work assignments in business, industry or government for students registered in the Chemistry Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only)

CHEM 3990 Work Term 2 Cr.Hrs. 0 Work assignments in business, industry or government for students registered in the Chemistry Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only)

CHEM 4360 Signalling and Regulation of Gene Expression Cr.Hrs.3 (Formerly 002.436) The biochemistry of cell response to external stimuli, with emphasis on animals. Cell surface receptors and ligands; signalling to the nucleus; phosphorylation and proteolysis; transcription; gradients in cell patterning. *Prerequisite:* CHEM 2370 or CHEM 2371 (or 002.237) or MBI0 2370 or MBI0 2371 (or 060.237) or the former 002.235 or 060.235 (C).

CHEM 4361 Signalisation et régulation de l'expression génétique Cr.Hrs.3 (L'ancien 002.436) La biochimie de la réponse cellulaire aux stimuli externes, en mettant l'accent sur les animaux. Les récepteurs à la surface des cellules ainsi que les ligands, la signalisation au noyau, la phosphorylation et la protéolyse; la transcription; les gradients dans le tapage cellulaire. *Préalable:* CHEM 2370 ou CHEM 2371 (ou 002.237) ou MBI0 2370 ou MBI0 2371 (ou 060.237), (ou les anciens 002.235 ou 060.235) (C). Donnée seulement au Collège universitaire de Saint-Boniface.

CHEM 4370 Glycobiology and Protein Activation Cr.Hrs.3 (Formerly 002.437) The role of carbohydrate containing biomolecules in biochemistry and their importance for understanding some genetic diseases. The importance of limited proteolysis in ac-

tivation of biomolecules. Not to be held with the former 002.449. *Prerequisite:* CHEM 2370 or CHEM 2371 (or 002.237) or MBI0 2370 or MBI0 2371 (or 060.237) (or the former 002.235 or 060.235) (C).

CHEM 4371 Glycobiologie et activation des protéines Cr.Hrs.3 (L'ancien 002.437) Le rôle des biomolécules contenant des glucides en biochimie et leur importance dans la connaissance des maladies génétiques. L'importance de la protéolyse limitée dans l'activation des biomolécules. On ne peut se faire créditer à la fois le CHEM 4370 ou l'ancien 002.449. *Préalable:* CHEM 2370 ou CHEM 2371 (ou 002.237) ou MBI0 2370 ou MBI0 2371 (ou 060.237) (ou l'ancien 002.235 ou 060.235) (C). Donnée seulement au Collège universitaire de Saint-Boniface.

CHEM 4550 Aquatic Chemistry Cr.Hrs.3 (Formerly 002.455) An examination of biogeochemical processes affecting the distribution, speciation and bioavailability of chemical substances in the aquatic environment. The theoretical basis for the chemical behaviour of natural water systems is discussed, as well as the description of processes involved in wastewater treatment. Offered in 2006-2007 and in alternate years thereafter. This course is also taught in Environmental Science as ENVR 4550 (or 128.455). *Prerequisite:* A grade of "C" in one of CHEM 3590 (or the former 002.347 or 002.355), or ENVR 3550 (or 128.355) or permission of the department.

CHEM 4570 Topics in Inorganic Chemistry Cr.Hrs.3 (Formerly 002.457) A variety of topics from recent literature. *Prerequisite:* CHEM 3380 (or 002.338) (C).

CHEM 4580 Topics in Organic Chemistry Cr.Hrs.3 (Formerly 002.458) Selected topics dealing with the structure and reactivity of organic compounds. *Prerequisite:* CHEM 3390 (or 002.339) (C) or CHEM 3580 (or 002.358) (C).

CHEM 4590 Bioanalytical Methods Cr.Hrs.3 (Lab Required) This course introduces different methods used currently for the analysis of biological materials. Qualitative and quantitative aspects are explored. Instrumentation is described and practical methods are designed. Not to be held with the former 002.347. *Prerequisite:* a grade of "C" in CHEM 3590 or ENVR 3550 (or 128.355) or the former 002.355.

CHEM 4600 Advanced Chemical Techniques Cr.Hrs.3 (Formerly 002.460) A workshop course consisting of lectures, problem solving, and advanced instrumental techniques. The course is designed to train potential research students in techniques like NMR, mass spectroscopy, and chromatography. This course is required of all final year Honours students in Chemistry. *Prerequisite:* one of CHEM 3360 (or 002.336) (C), CHEM 3380 (or 002.338) (C), CHEM 3390 (or 002.339) (C) or CHEM 3580 (or 002.358) (C).

CHEM 4620 Biochemistry of Nucleic Acids Cr.Hrs.3 (Formerly 002.462) The structure of nucleic acids; synthesis and sequence determination; interaction with drugs and protein. *Prerequisite:* CHEM 2370 or CHEM 2371 (or 002.237) or (MBIO 2370 or MBI0 2371 (or 060.237) or the former 002.235 or 060.235) (C).

CHEM 4621 Biochimie des acides nucléiques Cr.Hrs.3 (L'ancien 002.462) La structure des acides nucléiques; synthèse et terminaison des séquences; interactions avec les protéines et les médicaments. *Préalable:* CHEM 2370 ou CHEM 2371 (ou 002.237) ou MBI0 2370 ou MBI0 2371 (ou 060.237) (ou les anciens 002.235 ou 060.235) (C). Donnée seulement au Collège universitaire de Saint-Boniface.

CHEM 4630 Biochemistry of Proteins Cr.Hrs.3 (Formerly 002.463) The structure and function of proteins, their physical and chemical properties and methods for studying them. *Prerequisite:* CHEM 2370 or CHEM 2371 (or 002.237) or MBI0 2370 or MBI0 2371 (or 060.237) (or the former 002.235 or 060.235) (C).

CHEM 4631 Biochimie des protéines Cr.Hrs.3 (L'ancien 002.463) Les structures et fonctions des protéines, leurs propriétés physiques et chimiques et les méthodes utilisées pour les étudier. *Préalable:* CHEM 2370 ou CHEM 2371 (ou 002.237) ou MBI0 2371 ou MBI0 2370 (ou 060.237) (ou les anciens 002.235 ou 060.235) (C). Donnée seulement au Collège universitaire de Saint-Boniface.

CHEM 4640 Spectroscopy, Relaxation and Structure Cr.Hrs.3 (Formerly 002.464) A course dealing with quantum mechanical manipulations and illustrations from magnetic resonance and other spectroscopies; relaxation and polarization phenomena. Not to be held with the former 002.456. *Prerequisite:* CHEM 3370 (or 002.337) (C).

CHEM 4650 Molecular States and Processes Cr.Hrs.3 (Formerly 002.465) A course dealing with various aspects of molecular states and processes including student selected topics. *Prerequisite:* CHEM 3370 (or 002.337) (C).

CHEM 4680 Organometallic Chemistry Cr.Hrs.3 (Formerly 002.468) Chemistry of organometallic compounds of the transition metals and representative elements. *Prerequisite:* CHEM 3380 (or 002.338) (C).

CHEM 4690 Specific Methods in Organic Synthesis Cr.Hrs.3 (Formerly 002.469) Advanced methods and principles of organic synthesis of complex molecules. *Prerequisite:* CHEM 3390 (or 002.339) (C).

CHEM 4700 Advanced Biochemistry Laboratory Cr.Hrs.3 (Lab Required) (Formerly 002.470) A laboratory and workshop consisting of lectures, problem solving, and advanced instrumental techniques such as magnetic resonance spectroscopy, mass spectrometry, circular dichroism, x-ray crystallography, fluorescence spectroscopy and computer analysis of protein sequences. This course is required for all final year Honours students in Biochemistry. *Corequisite:* CHEM 4620 or CHEM 4621 and CHEM 4630 or CHEM 4631.

CHEM 4710 Research Project in Chemistry or Biochemistry Cr.Hrs.6 (Formerly 002.471) A research project in any aspect of chemistry or biochemistry, chosen in consultation with the course administrator and an appropriate supervising faculty member. Written reports and oral presentation at the end of the project will be re-

quired. The course is normally available only to final year students in chemistry programs. Not to be held with MBIO 4530 (or 060.453). *Prerequisite:* Permission of the course administrator.

CHEM 4980 Work Term 3 Cr.Hrs.0 Work assignments in business, industry or government for students registered in the Chemistry Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

CHEM 4990 Work Term 4 Cr.Hrs.0 Work assignments in business, industry or government for students registered in the Chemistry Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

Service Courses

CHEM 2240 Applied Chemistry for Engineers Cr.Hrs.3 (Lab Required) (Formerly 002.224) Bonding, surface chemistry, phase rule, electrochemistry, materials and descriptive inorganic chemistry of selected elements. *Prerequisite:* CHEM 1300 or CHEM 1301 (or 002.130) (or the former 002.124 or 002.127) (C).

CHEM 2770 Elements of Biochemistry 1 Cr.Hrs.3 (Lab Required) (Formerly 002.277) Basic concepts of biochemistry including the properties of biomolecules (amino acids and proteins, enzymes, carbohydrates, lipids, and nucleic acids) and aspects of ener-

gy production in cells. For students in Agricultural and Food Sciences, Human Ecology, and Botany or Zoology programs in Science. May not be used as part of an Honours, Major, General, or Minor program in Chemistry or in Microbiology. This course is also given in Microbiology as MBIO 2770. Not to be held with CHEM 2360 or CHEM 2361 (or 002.236), or MBIO 2360 or MBIO 2361 (or 060.236) (or the former 002.235, or 002.240, 060.235) or CHEM 2860 (or 002.286), or MBIO 2770 (or 060.277) (or the former 060.240). *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) (C) or CHEM 1320 (or 002.132) (or the former 002.123 or 002.128) (C), plus six credit hours of university level biological sciences.

CHEM 2780 Elements of Biochemistry 2 Cr.Hrs.3 (Lab Required) (Formerly 002.278) The continuation of CHEM 2770 or MBIO 2770, dealing with nitrogen and lipid metabolism, representative biosynthetic pathways, and synthesis and importance of DNA, RNA and proteins. For students in Agricultural and Food Sciences, Human Ecology, and Botany or Zoology programs in Science. May not be used as part of an Honours, Major, General, or Minor program in Chemistry or Microbiology. This course is also given in Microbiology as MBIO 2780. Not to be held with CHEM 2370 or CHEM 2371 (or 002.237) MBIO 2370 or MBIO 2371 (or 060.237) (or the former 002.235, or 002.240, or 060.235) or MBIO 2780 (or 060.278) (or the former 060.240). *Prerequisites:* CHEM 2770 (or 002.277), or MBIO 2770 (or 060.277) (C) or CHEM 2360 or CHEM 2361 (or 002.236) or MBIO 2360 or MBIO 2361 (or 060.236) (C).

4.7 Department of Computer Science

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4.7.1 Academic Staff

Distinguished Professor

Stanton, R.G., B.A.(Hons.) (Western), M.A., Ph.D. (Toronto), Cert.Ling.Port. (Rio de Janeiro), Hon.D.Sc. (Newcastle, NSW), F.S.S., F.I.M.A., Killam Laureate, Hon.D.Sc. (Queensland), Hon.D.Sc. (Natal), Hon.D.Math. (Waterloo).

Professors

Arnason, A.N., B.Sc., M.Math. (Waterloo), Ph.D. (Edinburgh); **Hoskins, J.A.,** B.E.S., M.Sc., Ph.D. (Manitoba); **King, P.R.,** B.Sc., Ph.D. (Nottingham), I.S.P.; **Kocay, W.L.,** B.Sc.(Hons.) (Manitoba), M.Math., Ph.D. (Waterloo); **Meek, D.S.,** B.Math. (Waterloo), M.Sc. (Toronto), Ph.D. (Manitoba); **Scuse, D.H.,** B.A. (York), M.Sc., Ph.D. (Manitoba); **van Rees, G.H.J.,** B.Math., M.Math., Ph.D. (Waterloo); **Walton, D.J.,** B.Sc.(Hons.) (South Africa), M.S.Math (Illinois), M.Sc., Ph.D. (Manitoba).

Associate Professors

Anderson, J.E., B.Sc.(Hons.), M.Sc., Ph.D. (Manitoba); **Baltes, H.,** B.Sc., Ph.D. (Calgary); **Bate, J.A.,** B.Sc.(Hons.), M.Sc., Ph.D. (Manitoba); **Cameron, H.A.,** B.Sc., M.Sc. (Manitoba), Ph.D. (Waterloo); **Eskicioglu, M.R.,** B.Sc. (Istanbul Technical), M.Sc. (Middle East Technical), Ph.D. (Alberta); **Graham, P.,** B.C.Sc.(Hons.), M.Sc., Ph.D. (Manitoba); **Laucht, C.M.,** B.Sc., M.Sc., Ph.D. (Manitoba); **Misic, J.,** BSEE, MSEE, Ph.D. (Belgrade); **Misic, V.,** B.Sc., M.Phil., Ph.D. (Belgrade); **Thulasiram, R.,** B.Sc., M.Sc. (Madursi-Kamaraj), M.Sc., Ph.D. (Indian Inst. Of Science); **Thulasiraman, P.,** B.Eng., M.A.Sc. (Concordia), Ph.D. (McGill), Ph.D. (Delaware);

Assistant Professors

Irani, P. B.Sc, Ph.D. (New Brunswick); **Jin, D.,** BA, B.Sc.(Hons.), M.Sc., Ph.D. (Queen's); **Kemke, C.,** B.Sc. (Dortmund), B.Sc. (Open U.), Ph.D. (Bielefeld); **Leung, K.S.,** B. Sc.(Hons.), M.Sc., Ph.D. (British Columbia); **Li, P.,** B.Sc.(Hons.), M.Sc., Ph.D. (Manitoba); **Liu, Y.,** B. Eng. (Beijing U of Posts & Telecommunications), M. Math., Ph.D. (Waterloo); **Zhang, H.,** B.Eng, M.Eng. (Anhui), M.Sc. (SFU), Ph.D. (Waterloo).

Instructors

Andres, T. B.Sc (Hon), MSc. (Manitoba) (Instructor II), **Boyer, G.,** B.Sc.(Hons.), M.Sc. (Manitoba) (Instructor I); **Marshall, A.,** B.C.Sc.(Hons.) (Manitoba), B.Ed. (Winnipeg) (Instructor II); **Penner, C.,** B.Sc. (Manitoba) (Instructor I); **Zapp, M.** B.Sc., M.Sc. (Manitoba) (Instructor I).

4.7.2 Program Information

Computer technology continues to advance and computer applications are being applied in situations previously considered impossible. As new applications proliferate, opportunities for careers in computing will continue to be strong. Both the Major and the Honours programs offer a co-op option so students may combine education with employment experience.

The department must approve a student's Honour or Major program each session. Students must also obtain departmental approval for any and all revisions to their program.

The Computer Science Honours and Major programs, including the Coop programs, are accredited by the Computer Science Accreditation Council.

Honours

The Honours program in Computer Science at the University of Manitoba was the first Honours program in Canada to be given professional accreditation by the Canadian Information Processing Society. The program provides an opportunity to study the subject in greater depth than the other programs in Computer Science and leads to an Honours Bachelor of Computer Science degree (B.C.Sc.). In addition, this program gives professional preparation for careers in areas such as software engineering, system design or project management.

An outline of the Honours program is provided below. MATH 1700 or equivalent is strongly recommended as an option. Optional courses are selected in consultation with the department advisor.

To enter the Computer Science Honours program, a student must have a "B" in COMP 1020 and a "C" average in Mathematics MATH 1300 and MATH 1500 or any equivalent. In addition, a student is required to have a Grade Point Average of 2.50 on all courses completed at the end of Year 1. To continue in the Honours program, the student must, by the end of second year, receive a grade of "C" or better in STAT 1000. Students ineligible to enter after Year 1 can establish eligibility in Year 2, see Section 3.5 Entrance to Honours. For additional information on the second year entry route contact a program advisor.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and from Year 3 to Year 4, and to complete Year 4 of the Honours program successfully, a student must have an annual Grade Point Average of 2.50, and in addition, must have a 3.00 cumulative Grade Point Average. Students must complete 24 credit hours each regular session.

To graduate with the Honours degree, a student must present a minimum grade of "C" in each of COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280, COMP 3030, COMP 3170, COMP 3350, COMP 3430 and COMP 3370 and each Computer Science Course that applies to the Computer Science component of their degree program.

Students can take at most 90 credit hours of computer science, statistics and mathematics courses. Outside of computer science and mathematics courses, students are encouraged to select courses such that their programmes include at least 15 credit hours of study in science, engineering, or business, and at least 9 credit hours of study in the humanities or social sciences.

Honours Cooperative Option

The first class of students graduated from the Cooperative program in October 1983. This program provides students with a total of 12 months of paid employment by the time they graduate. It enables them to obtain work experience with participating firms in Winnipeg as well as other parts of Canada. For example, students have, in the past, found employment in Cal-

gary, Edmonton, Toronto, Vancouver and Ottawa, and they have found the program an invaluable preparation for their working lives.

Students interested in alternating employment terms and academic terms as part of their Honours Computer Science program may apply to enter the Cooperative Option in their third year in Honours Computer Science. The course and grade requirements for entry to this option are the same as those required for entry to the regular Honours program, as indicated in the chart below.

Students should refer to the general faculty regulations for Cooperative Options in Section 3.6, especially for information on performance requirements.

Students should note that the course and grade requirements for the Cooperative Option are the same as that of the regular Honours program but the assessment of a Sessional Grade Point Average is computed differently. To continue in the Honours Cooperative program, i.e., to proceed from Year 3 to Year 4, and to complete Year 4 of the Honours Cooperative program successfully, a student must have a Grade Point Average of 2.50 on the combined 3A and 3B academic terms (24 credit hours) in Year 3 and on the combined 4A and 4B academic terms (24 credit hours) in Year 4, and in addition, must have a 3.00 cumulative Grade Point Average. An assessment of a student's sessional Grade Point Average will only take place if two academic terms containing a minimum of 24 credit hours have been completed since the last assessment. REMINDER: Students must complete at least 24 CH to remain in the Honours program.

In addition to the above, assessment will take place not only on the combined A and B academic terms, that is, the academic terms for each of Year 3 and Year 4, but also on the student's combined course load. Over the combined 3A and 3B, and combined 4A and 4B academic terms, students must complete 80% of a course load per session, not necessarily 80% of a course load per term.

To graduate with the Honours degree, a student must present a minimum grade of "C" in each of COMP 2080, COMP 2130, COMP 2140, COMP 2160, COMP 2280, COMP 3030, COMP 3170, COMP 3430, COMP 3350 and COMP 3370 and each Computer Science course that applies to the Computer Science component of their degree program.

Students can take at most 90 credit hours of computer science, statistics and mathematics courses. Outside of computer science and mathematics courses, students are encouraged to select courses such that their programmes include at least 15 credit hours of study in science, engineering, or business, and at least 9 credit hours of study in the humanities or social sciences.

Students in this program will normally graduate following the completion of the Year 4 academic requirements in December, will receive their degree in February, and will be eligible to attend the May Convocation.

Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. Students will apply for openings in the Cooperative Option in April of their second year in the Honours program. They will be notified of their provisional acceptance in the program in September. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

The employment terms will be designed to provide students with the opportunity to acquire practical experience in a computer installation site and to acquire insight into areas of specialization within the computing field. Students can also typically earn enough to defray the cost of their university education.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each of their three employment terms.

Recognition of Academic Merit

Dean's Honour List

To qualify for the Dean's Honour List a student must complete a minimum of 12 credit hours in a four-month academic term, 24 credit hours in an eight-month academic term, and achieve a sessional Grade Point Average of 3.50 or higher. Assessment will take place not only on the combined A and B academic terms, that is, the academic terms for each of Year 3 and Year 4, but also on the student's combined course load. Over the com-

bined 3A and 3B, and combined 4A and 4B academic terms, students must complete 80% of a course load per session, not necessarily 80% of a course load per term with a sessional Grade Point Average of 3.50 or higher.

Four Year Major

Refer to the chart below for entrance requirements to this program.

To continue in the Major program a student must have a minimum sessional Grade Point Average of 2.00. To graduate with the Major degree, a student must present a minimum grade of "C" in each of 5.100, COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280, 075.335, COMP 3370, COMP 3430 and in each of the 24 credit hours of 3000 and 4000 level Computer Science courses that apply to the Computer Science component of their degree program.

Students who achieve less than a 2.00 sessional Grade Point Average in summer session will be allowed to continue in the Major program if they maintain a 2.00 cumulative Grade Point Average.

This program is suitable for those students interested in combining a fairly extensive program in Computer Science with broad coverage of another subject or subjects of their choice (Science or non-Science). The program offers greater scheduling flexibility, more relaxed entrance requirements, and a wider range for the inclusion of electives from other disciplines than the Honours program, but it is not considered to offer the same professional training as the Honours program. Admission to graduate programs may be conditional upon completion of additional courses. Students intending to proceed to a master's degree from the four year Major program must consult with the department at the beginning of their second year of undergraduate study and in each subsequent year.

The student will be able to transfer to the Honours program at the end of the second year, provided that departmental and faculty requirements for the Honours program at that stage are satisfied.

Students, who at the end of University 1, are undecided between the four year Major program and the Honours program should note that the required courses in Year 2 Honours satisfy the requirements for both the Honours and Major programs. It is suggested that students with the necessary prerequisite standing in University 1 may wish to register in the courses listed for Year 2 of the Honours program, and thus keep both options open.

Students can take at most 90 credit hours of computer science, statistics and mathematics courses. Outside of computer science and mathematics courses, students are encouraged to select courses such that their programmes include at least 15 credit hours of study in science, engineering, or business, and at least 9 credit hours of study in the humanities or social sciences. Students may be allowed to take up to 48 credit hours of courses outside the Faculty of Science with departmental permission, despite the faculty maximum of 36 credit hours. The permission would typically be granted if a student is completing a minor outside of Science and may have completed a variety of electives outside the Faculty prior to declaring a minor in one department.

Four Year Major Cooperative Option

To continue in the Major program a student must have a cumulative Grade Point Average of 2.50. To graduate with the Major degree, a student must present a minimum grade of "C" in each of 5.100, COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280, COMP 3350, COMP 3370, COMP 3430 and in each of the 24 credit hours of 3000 and 4000 level Computer Science courses that apply to the Computer Science component of their degree program.

Students can take at most 90 credit hours of computer science, statistics and mathematics courses. Outside of computer science and mathematics courses, students are encouraged to select courses such that their programmes include at least 15 credit hours of study in science, engineering, or business, and at least 9 credit hours of study in the humanities or social sciences. Students may be allowed to take up to 48 credit hours of courses outside the Faculty of Science with departmental permission, despite the faculty maximum of 36 credit hours. The permission would typically be granted if a student is completing a minor outside of Science and may have completed a variety of electives outside the Faculty prior to declaring a minor in one department.

This program provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience with participating firms in Winnipeg as well as other parts of Canada.

Students interested in alternating employment terms and academic terms as part of their four year Major program in Computer Science may apply to enter the Cooperative Option in their third year of the four year Major program in Computer Science. The course and grade requirements for entry to this option are the same as those required for entry to the regular four year Major program, as indicated in the chart above. Students should refer to the general faculty regulations for Cooperative Options in Section 3.4.

Students should note that the course and grade requirements for the Cooperative Option are the same as that for the regular Major program but the sessional and cumulative Grade Point Average assessments are different. Students in this program will normally graduate following the completion of the Year 4 academic requirements in December, will receive their degree in February, and will be eligible to attend the May Convocation.

Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. Students will apply for openings in the Cooperative Option in April of their second year in the Major program. They will be notified of their provisional acceptance in the program in September. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places

available. The department reserves the right to determine and select the best qualified applicants.

The employment terms will be designed to provide students with the opportunity to acquire practical experience in a computer installation site and to acquire insight into areas of specialization within the computing field. Students can also typically earn enough to defray the cost of their university education.

Students are required to register in, and pay fees for, each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each of their three employment terms.

Three Year General

As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from **two** Science departments. To satisfy the requirement in the Computer Science department, students must select COMP 2140 and a minimum of nine credit hours from the 2000 and (or) 3000 level courses offered by the department.

Area Specializations

For students who wish to increase their specialization within certain areas of Computer Science, below are recommended courses for each area.

Numerical Computing

COMP 2190, COMP 3120, COMP 3140, COMP 3490, COMP 4490, COMP 4530. Also, MATH 1700 is a useful option.

Computational Discrete Mathematics

COMP 3120, COMP 3130, COMP 4140, COMP 4220, COMP 4270, COMP 4340.

Theoretical Computer Science

Especially recommended: COMP 3720 COMP 4220, COMP 4310, COMP 4340, COMP 4420. The following courses are also recommended: COMP 3120, COMP 3130, COMP 4140.

Artificial Intelligence

COMP 3190, COMP 3440, COMP 4190, one or both of COMP 4200, COMP 4360. Related courses: COMP 3120, COMP 3350, COMP 3380, COMP 3620, COMP 4420.

Computer Systems

COMP 3090, COMP 3370, COMP 3430, COMP 3720, COMP 4510. Related courses: COMP 3290, COMP 3380, COMP 4290, COMP 4380, COMP 4530.

Human Interfaces

COMP 2190, COMP 3020, COMP 3490, COMP 4020. Related courses: COMP 3380, COMP 3620, COMP 4490.

Software Engineering

COMP 2160, COMP 3010, COMP 3020, COMP 3040, COMP 3350, COMP 3370, COMP 3380, COMP 3620, COMP 4050, and one of COMP 4350, COMP 4380, COMP 4020, COMP 4560.

4.7.3 Computer Science, Department Code: 074

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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HONOURS ^{4,5,8} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

COMP 1010 and COMP 1020 (B) Plus MATH 1300 ¹ and MATH 1500 ¹ , with a (C) average	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3030, COMP 3170, COMP 3350, COMP 3370, COMP 3430 Plus 3 credit hours of 3000 level Computer Science courses	21 credit hours of 4000 level Computer Science courses
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In University 1 or Year 2 the following must be completed:

STAT 1000 (C)²

6 credit hours from the Faculty of Arts, which should include the required "W" course.

30 Hours	30 Hours	30 Hours	30 Hours
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HONOURS COOPERATIVE OPTION ^{3,4,5,8} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

COMP 1010 and COMP 1020(B) MATH 1300 ¹ and MATH 1500 ¹ , with a (C) average	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3030, COMP 3170, COMP 3350, COMP 3370, COMP 3430 Plus 3 credit hours of 3000 level Computer Science courses	21 credit hours of 4000 level Computer Science courses
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In University 1 or Year 2 the following must be completed:

STAT 1000 (C)²

6 credit hours from the Faculty of Arts, which should include the required "W" course.

30 Hours	30 Hours	30 Hours	30 Hours
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FOUR YEAR MAJOR ^{4,5,7,8} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

COMP 1010 and COMP 1020(C+)	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3350, COMP 3370, COMP 3430
MATH 1300 ¹ and MATH 1500 ¹ , with a (C) average		Plus 21 credit hours of 3000 or 4000 level Computer Science courses of which 6 credit hours must be at the 4000 level
		Plus 9 credit hours approved by the department ⁸

In University 1 or Year 2 the following must be completed: STAT 1000(C).

6 credit hours from the Faculty of Arts, which should include the required "W" course.

MAJOR COOPERATIVE OPTION^{3,4,5,7,8} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

COMP 1010 and COMP 1020(C+)	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3350, COMP 3370, COMP 3430
MATH 1300 ¹ and MATH 1500 ¹ , with a (C) average		Plus 21 credit hours of 3000 or 4000 level Computer Science courses of which 6 credit hours must be at the 4000 level
		COMP 2980, COMP 3980, COMP 4980 must be completed prior to the last academic term
		Plus 9 credit hours approved by the department ⁸

In University 1 or Year 2 the following must be completed: STAT 1000 (C).

6 credit hours from the Faculty of Arts, which should include the required "W" course.

THREE YEAR GENERAL

COMP 1010 and COMP 1020 ⁶	COMP 2140
	Plus a minimum of 9 credit hours from 2000 and (or) 3000 level Computer Science courses

MINOR

COMP 1010 and COMP 1020 ⁶	COMP 2140
	Plus a minimum of 9 credit hours from 2000 and (or) 3000 level Computer Science courses

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520, MATH 1530 or MATH 1690 may be taken in place of MATH 1500.

² It is recommended that STAT 2000 be taken as an elective.

³ Entry to the Honours Cooperative Option and four year Major Cooperative Option is in third year. Employment terms follow 3A (September-December), 3B (May-August) and 4A (January-April). Students in the Cooperative Option must complete three employment terms and receive a passing grade in COMP 2980, COMP 3980 and COMP 4980 prior to the last academic term.

⁴ The courses required in this program will satisfy the university mathematics requirement.

⁵ Additional information on how students may select their courses can be found at the beginning of this section.

⁶ Note that COMP 1020 has a corequisite requirement of MATH 1300¹ and MATH 1500¹.

⁷ IMPORTANT: The four year Major need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. Students in the Cooperative Option should be aware that while other arrangements are possible, they may jeopardize their chances of obtaining employment by selecting such arrangements. Students should discuss their planned sequence of courses with the department prior to making adjustments to the sequence above.

⁸ IMPORTANT: at most 90 credit hours of computer science, statistics and mathematics courses can be included in a majors or honours program.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.7.4 Computer Science - Mathematics Joint Program, Department Code: 074M

The departments of Computer Science and Mathematics offer a joint Honours program for in-depth study in both Computer Science and Mathematics.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS ² 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
COMP 1010 and COMP 1020(B), MATH 1300 ¹ (B), MATH 1690 (B), (or MATH 1500 ¹ and MATH 1700 ¹ (B)), STAT 1000(C)	COMP 2080 ⁴ , COMP 2140, COMP 2160, COMP 2280, MATH 2200, MATH 2350, MATH 2750 plus one of MATH 2600 or MATH 2800	COMP 3030, COMP 3170, COMP 3370, COMP 3430, COMP 4310 (or COMP 4420) Three of COMP 3020, COMP 3290, COMP 3350, COMP 3380, COMP 3720 Two of COMP 4020, COMP 4050, COMP 4290, COMP 4350, COMP 4380, COMP 4720 MATH 3740 or MATH 3760, MATH 3350 (or MATH 3300 and MATH 3310), MATH 3400, which ever of MATH 2600 or MATH 2800 not yet taken Plus 12 credit hours of 3000 or 4000 level Mathematics courses, of which 3 credit hours must be at the 4000 level	
Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course ³			
30 Hours	30 Hours	30 Hours	30 Hours

JOINT HONOURS COOPERATIVE OPTION² 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

COMP 1010 and COMP 1020 (B), MATH 1300 ¹ (B), MATH 1690 (B), (or MATH 1500 ¹ and MATH 1700 ¹ (B)), STAT 1000 (C) Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course ³	COMP 2080 ⁴ , COMP 2140, COMP 2160, COMP 2280, MATH 2200, MATH 2350, MATH 2750 plus one of MATH 2600 or MATH 2800	COMP 3030, COMP 3170, COMP 3370, COMP 3430, COMP 4310 (or COMP 4420) Three of COMP 3020, COMP 3290, COMP 3350, COMP 3380, COMP 3720 Two of COMP 4020, COMP 4050, COMP 4290, COMP 4350, COMP 4380, COMP 4720 MATH 3740 or MATH 3760, MATH 3350 (or MATH 3300 and MATH 3310), MATH 3400, which ever of MATH 2600 or MATH 2800 not yet taken Plus 12 credit hours of 3000 or 4000 level Mathematics courses, of which 3 credit hours must be at the 4000 level COMP 2980, COMP 3980, COMP 4980 must be completed prior to the last academic term	
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

¹ It is suggested that MATH 1530 be taken in place of MATH 1500; any of MATH 1510, MATH 1520, MATH 1530, or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² The courses required in this program will satisfy the university mathematics requirement.

³ As there are no electives in Year 2 of the program, students should complete the written English requirement in University 1. If not completed in University 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

⁴ Students in this program will not take COMP 2130 or COMP 3130. COMP 2130 is waived as a prerequisite for students in this program.

⁵ The work terms COMP 2980, COMP 3980 and COMP 4980 will be completed in the summers following Year 2, Year 3 and Year 4, respectively. (Letters in brackets indicate minimum prerequisite standing for further study.)

Honours Requirements

To enter the Joint Honours Computer Science-Mathematics program, the student must have a minimum grade of "B" in each of COMP 1020, MATH 1300 and MATH 1700 (or any equivalent), and have satisfied the Faculty of Science requirements for entry to the honours program. It is recommended that STAT 2000 be completed in University 1.

4.7.5 Computer Science – Physics & Astronomy Joint Program

The departments of Computer Science and Physics & Astronomy offer a joint Honours program for in-depth study in both Computer Science and Physics & Astronomy.

To enter the Joint Honours Computer Science-Physics program, the student must have a minimum grade of "B" in each of PHYS 1050 (or "B+" in PHYS 1020), PHYS 1070, MATH 1300, MATH 1530, MATH 1730 (or any equivalent), COMP 1010 and COMP 1020. Students must complete 21 credit hours each regular session.

To graduate with the Honours degree, a student must present a minimum grade of "C" in each of COMP 2080, COMP 2130, COMP 2140, COMP 2190, COMP 2280, COMP 3170, COMP 3430, PHYS 2260, PHYS 2390, PHYS 2490, PHYS 2380, PHYS 2600, PHYS 2610, PHYS 2650, PHYS 3670, PHYS 3680, PHYS 3380 and each Computer Science and Physics & Astronomy course that applies to the Computer Science and Physics & Astronomy component of their degree program.

The department must approve a student's Honour or Major program each session. Students must also obtain departmental approval for any and all revisions to their program.

4.7.6 Computer Science – Physics & Astronomy Joint Program Department Code: 074P

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS¹ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
PHYS 1050 (B) (or PHYS 1020 (B+) and PHYS 1070 ² (B), MATH 1300 ³ (B), MATH 1530 ³ (B), MATH 1730 ³ (B), COMP 1010, COMP 1020 (B) Plus 6 credit hours from the Faculty of Arts, which must include the required "W" course ⁴ Plus 3 credit hours of electives	PHYS 2260, PHYS 2380, PHYS 2390, PHYS 2490, PHYS 2650 ⁵ , COMP 2080, COMP 2130, COMP 2140, COMP 2160, COMP 2280	PHYS 2600, PHYS 2610, PHYS 3380, PHYS 3670, PHYS 3680, COMP 2190, COMP 3170, COMP 3430 Plus 6 credit hours of 3000 and 4000 level courses from Computer Science	15 credit hours of 3000 and 4000 level Honours Physics courses, with at least 6 credit hours at the 4000 level Plus 12 credit hours of 3000 or 4000 level courses from Computer Science, with at least 9 credit hours at the 4000 level by the end of Year 4 Plus 3 credit hours of electives
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

¹ The courses required in this program will satisfy the University mathematics requirement.

² PHYS 1030 is not suitable for entry to the Honours and four year Major program. Students must also take PHYS 1070 if they have already taken PHYS 1030. Students can hold credit for both PHYS 1030 and PHYS 1070.

³ MATH 1310 may be taken in place of MATH 1300; MATH 1500, MATH 1510 or MATH 1520 may be taken in place of MATH 1530; MATH 1700 or MATH 1710 may be taken in place of MATH 1730; MATH 1690 may be taken in place of MATH 1530 and MATH 1730.

⁴ As there are no electives in Year 2 of the program, students should complete the University written English requirement in University 1. If not completed in University 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

⁵ The corequisite of MATH 2720 is waived for students in this program.

4.7.7 Computer Science Course Descriptions

To fulfil prerequisite requirements, a grade of "C" must be achieved for any course stipulated as a prerequisite to a further course in Computer Science.

U1 COMP 1010 Introductory Computer Science 1 Cr.Hrs.3 (Lab Required) (Formerly 074.101) An introduction to computer programming using a procedural high level

language. Not to be held with COMP 1011 or the former 074.112, 074.121, 074.123, or 074.125.

U1 COMP 1011 Introduction à l'informatique I Cr.Hrs.3 (Labo requis) (L'ancien 074.101) Introduction à la programmation par un langage procédural évolué. On ne peut se faire créditer plus d'un cours parmi les suivants: le COMP 1010 et les anciens

074.112, 074.121, 074.123 ou 074.125. Donné seulement au Collège universitaire de Saint-Boniface.

U1 COMP 1020 Introductory Computer Science 2 Cr.Hrs.3 (Lab Required) (Formerly 074.102) More features of a procedural language, elements of programming. Not to be held with COMP 1021 or the former 074.121, 074.123 or 074.125. *Prerequisite:* COMP 1010 or COMP 1011 (or 074.101) (C). *Corequisites:* One of MATH 1300 or MATH 1301 or MATH 1310, and one of MATH 1500, MATH 1501, MATH 1510, MATH 1520, MATH 1530, or MATH 1690.

U1 COMP 1021 Introduction à l'informatique II Cr.Hrs.3 (Labo requis) (L'ancien 074.102) D'autres caractéristiques d'un langage procédural, les éléments de la programmation. On ne peut se faire créditer plus d'un des cours suivants: le COMP 1020 at les anciens 074.121, 074.123 074.125. *Préalable:* COMP 1010 ou COMP 1011 (ou 074.101) (C). *Concomitants:* Un de MATH 1300 ou MATH 1301, MATH 1310, et un de MATH 1500 ou MATH 1501, MATH 1510, MATH 1520, MATH 1530, or MATH 1690. Donné seulement au Collège universitaire de Saint-Boniface.

U1 COMP 1260 Introductory Computer Usage 1 Cr.Hrs.3 (Lab Required) (Formerly 074.126) This course offers an introduction to modern computer services. Areas covered will include word processing, spreadsheets, data management systems and graphics. No prior computer knowledge is necessary. May not be taken within the Computer Science Honours or Major program.

U1 COMP 1261 Introduction aux services informatiques modernes I Cr.Hrs.3 (Labo requis) (L'ancien 074.126) Entre autres, l'accent est mis le traitement de texte, les chiffreurs, les systèmes pour la gestion de données et le traitement graphique. Ce cours ne demande aucune connaissance *Préalable* en informatique. On inscrit(e) à un programme de majeure ou de spécialisation en Informatique ne peut s'inscrire à ce cours. Donné seulement au Collège universitaire de Saint-Boniface.

U1 COMP 1270 Introductory Computer Usage 2 Cr.Hrs.3 (Lab Required) (Formerly 074.127) This course continues the material from COMP 1260 (or 074.126). It will also explore program concepts by having the students create elementary interactive programs. May not be taken within the Computer Science Honours or Major program. *Recommended Prerequisite:* COMP 1260 or COMP 1261 (or 074.126) (or equivalent knowledge) is strongly recommended.

U1 COMP 1271 Introduction aux services informatiques modernes II Cr.Hrs.3 (Labo requis) (L'ancien 074.127) La suite du cours COMP 1260 (ou 074.126). Une attention particulière sera portée aux concepts de la programmation où l'étudiant sera appelé à créer des programmes interactifs élémentaires. On inscrit(e) à un programme de majeure ou de spécialisation en Informatique ne peut s'inscrire à ce cours. *Recommandé Préalable:* COMP 1260 ou COMP 1261 (ou 074.126) ou l'équivalent est fortement recommandé. Donné seulement au Collège universitaire de Saint-Boniface.

COMP 2061 Structures discrètes et programmation Cr.Hrs.6 (Labo requis) (L'ancien 074.206F) Introduction aux éléments de la représentation, de l'organisation et de la manipulation des données dans les systèmes informatisés. Méthodes permettant de concevoir et d'utiliser des logiciels d'envergure. On ne peut se faire créditer à la fois le 074.206 et le 074.214. *Préalables:* COMP 1021 or COMP 1020 (074.102) (ou l'ancien 074.123), un de MATH 1301 ou MATH 1300 (ou 136.130) (C) ou MATH 1310 (ou 136.131) (ou les anciens 010.114 ou 013.146), et un de MATH 1501 ou MATH 1500 (ou 136.150), MATH 1510 (ou 136.151), MATH 1530 (ou 136.153), ou MATH 1690 (ou 136.169) (ou les anciens 006.125, 010.115, 013.139 ou 013.159) (C). Donné seulement au Collège universitaire de Saint-Boniface.

COMP 2080 Analysis of Algorithms Cr.Hrs.3 (Formerly 074.208) Methods of analyzing the time and space requirements of algorithms. Average case and worst case analysis. Models of computation. *Prerequisites:* COMP 2130 (or 074.213) (C) and COMP 2140 (or 074.214) (or the former 074.206) or COMP 2061 (or 074.261F) (C). STAT 1000 (or 005.100) (or the former 005.101 or 005.221) is strongly recommended.

COMP 2130 Discrete Mathematics for Computer Science Cr.Hrs.3 (Formerly 074.213) An introduction to the set theory, logic, integers, combinatorics and functions for today's computer scientists. *Prerequisites:* COMP 1020 or COMP 1021 (or 074.102) (or the former 074.123) (C), and a "C" average in: one of MATH 1300 or MATH 1301 (or 136.130) or MATH 1310 (or 136.131) (or the former 010.114 or 013.146) and one of MATH 1500 or MATH 1501 (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153) or MATH 1690 (or 136.169) (or the former 006.125, 010.115, 013.139, or 013.159).

COMP 2140 Data Structures and Algorithms Cr.Hrs.3 (Lab Required) (Formerly 074.214) Introduction to the representation and manipulation of data structures. Topics will include lists, stacks, queues, trees, and graphs. Not to be held with COMP 2061 (or 074.206F) (or the former 074.206). *Prerequisites:* COMP 1020 or COMP 1021 (or 074.102) (or the former 074.123) (C).

COMP 2150 Object Orientation Cr.Hrs.3 (Lab Required) (Formerly 074.215) Design and development of object-oriented software. Topics will include inheritance, polymorphism, data abstraction and encapsulation. Examples will be drawn from several programming languages. Not to be held with the former 074.227. *Prerequisite:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C).

COMP 2160 Programming Practices Cr.Hrs.3 (Lab Required) (Formerly 074.216) Introduction to issues involved in "real-world" computing. Topics will include memory management, debugging, compilation, performance, and good programming practices. Not to be held with the former 074.225. *Prerequisite:* COMP 1020 or COMP 1021 (or 074.102) (or the former 074.123) (C).

COMP 2190 Introduction to Scientific Computing Cr.Hrs.3 (Formerly 074.219) An applied computational course introducing topics such as approximation by polyno-

mials, solution of non-linear equations, linear systems, simulation and computational geometry. *Prerequisites:* COMP 1020 or COMP 1021 (or 074.102) (or the former 074.123) (C), and one of MATH 1500 or MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C), MATH 1530 (or 136.153) (C) or MATH 1690 (or 136.169), (or the former 006.125, 010.115, 013.139, or 013.159) (C). *Corequisite:* One of MATH 1300 or MATH 1301 (or 136.130 or MATH 1310 (or 136.131)).

COMP 2191 Introduction au calcul scientifique Cr.Hrs.3 (L'ancien 074.219) Un cours en informatique appliquée introduisant des concepts tels que l'approximation par polynômes, la résolution d'équations non linéaires, les systèmes linéaires, la simulation et la géométrie analytique. *Préalables:* COMP 1020 ou COMP 1021 (ou 074.102) (ou l'ancien 074.123) (C), et un de MATH 1500 ou MATH 1501 (ou 136.150) (C), MATH 1510 (ou 136.151) (C), MATH 1520 (ou 136.152) (C), MATH 1530 (ou 136.153) (C) ou MATH 1690 (ou 136.169) (ou les anciens 006.125, 010.115, 013.139, 013.159) (C). *Concomitant:* Un de MATH 1300 ou MATH 1301 (ou 136.130) MATH 1310 (ou 136.131). Donné seulement au Collège universitaire de Saint-Boniface.

COMP 2261 Concepts appliqués en informatique Cr.Hrs.3 (Lab Required) (L'ancien 074.226) Une discussion de plusieurs applications importantes des ordinateurs. Entre autres, l'attention sera portée à l'édition assistée par ordinateur, les réseaux et la communication. Ce cours n'est pas disponible aux étudiants qui auraient préalablement obtenu des crédits ou qui sont concurremment inscrits dans un des cours suivants: COMP 1010 ou COMP 1011 (ou 074.101), COMP 1020 ou COMP 1021 (ou 074.102), (ou les anciens 074.111, 074.112, 074.121, 074.123 074.125). *Préalable:* COMP 1260 ou COMP 1261 (ou 074.126) (C) ou le consentement du département. Donné seulement au Collège universitaire de Saint-Boniface.

COMP 2280 Introduction to Computer Systems Cr.Hrs.3 (Formerly 074.228) Data representation and manipulation, machine-level representation of programs, assembly language programming, and basic computer architecture. Not to be held with the former 074.222 or 074.240. *Prerequisites:* COMP 2140 (or 074.214) (C) and COMP 2160 (or 074.216) (C).

COMP 2980 Workterm 1 Cr.Hrs.0 (Formerly 074.298) Work assignment in business, industry, or government for students registered in the Computer Science Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail)

COMP 3010 Distributed Computing Cr.Hrs.3 (Formerly 074.301) Introduction to distributed computing. Topics include task models, server-side computing, database connectivity, information sharing. *Prerequisite:* COMP 2140 (or 074.214) (or the former 074.206) or COMP 2061 (or 074.206F) (C).

COMP 3020 Human-Computer Interaction 1 Cr.Hrs.3 (Formerly 074.302) Human-computer interaction: human factors and usability, user-centered design, prototyping, usability evaluation. Not to be held with the former 074.371. *Prerequisite:* COMP 2140 (or 074.214) (or the former 074.206) or COMP 2061 (or 074.206F) (C). A course in cognitive psychology such as PSYC 2480 (or 017.248) is recommended.

COMP 3030 Automata Theory and Formal Languages Cr.Hrs.3 (Formerly 074.303) An introduction to automata theory, grammars, formal languages and their applications. Topics: finite automata, regular expressions and their properties; context-free grammars, pushdown automata and properties of context-free languages; Turing machines. Applications: lexical analysis, text editing, machine design, syntax analysis, parser generation. Not to be held with the former 074.327. *Prerequisites:* COMP 2140 (or 074.214) (or the former 074.206) or COMP 2061 (or 074.206F) (C) and COMP 2080 (or 074.208) (C).

COMP 3040 Technical Communication in Computer Science Cr.Hrs.3 (Formerly 074.304) This course is designed to help students become more effective and confident writers in the context of the computing profession. Students will be introduced to a broad range of written and oral presentation styles used in the computing workplace. *Prerequisite:* Students must be enrolled in third year (or higher) of a majors or honours programme in the Department of Computer Science.

COMP 3090 Digital Logic 2 Cr.Hrs.3 (Formerly 074.309) Design and implementation of digital circuits. Minimization and state reduction, asynchronous circuits, arithmetic circuits, implementation using modern hardware techniques. Not to be held with the former 074.342, 074.447 or 024.422. *Prerequisite:* COMP 3370 (or 074.337) (or the former 074.240) (C).

COMP 3120 Computational Linear Algebra Cr.Hrs.3 (Formerly 074.312) Methods of computational linear algebra such as linear spaces, determinants, algorithms for bases, algorithms for eigenvalues and eigenvectors. Not to be held with the former 074.389. *Prerequisite:* COMP 2130 (or 074.213) (C).

COMP 3130 Discrete Math 2 Cr.Hrs.3 (Formerly 074.313) A study of various mathematical structures of importance to computer scientists. Topics include: permutations, groups, rings, fields, and some coding theory. Stress will be placed on algorithmic and computational methods. *Prerequisite:* COMP 2130 (or 074.213) (C).

COMP 3140 Numerical Analysis Cr.Hrs.3 (Formerly 074.314) Numerical methods for a selection of topics such as interpolation, optimization, integration, non-linear systems, differential equations. *Prerequisite:* COMP 2190 or COMP 2191 (or 074.219) (C).

COMP 3170 Analysis of Algorithms and Data Structures Cr.Hrs.3 (Formerly 074.317) Fundamental algorithms for sorting, searching, storage management, graphs, databases and computational geometry. Correctness and analysis of those algorithms using specific data structures. An introduction to lower bounds and intracta-

bility. *Prerequisites:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C), and COMP 2080 (or 074.208) (C).

COMP 3190 Introduction to Artificial Intelligence Cr.Hrs.3 (Formerly 074.319) Principles of artificial intelligence: problem solving, knowledge representation and manipulation; the application of these principles to the solution of 'hard' problems. *Prerequisite:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C).

COMP 3290 Introduction to Compiler Construction Cr.Hrs.3 (Formerly 074.329) Introduction to the standard compiler phases: scanning, parsing, symbol-table management, code generation, and code optimization. The emphasis is on the simpler techniques for compiler construction such as recursive descent. *Prerequisites:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C), and COMP 2280 (or 074.228) (or the former 074.222) (C). COMP 2160 (or 074.216) is recommended.

COMP 3350 Software Engineering 1 Cr.Hrs.3 (Lab Required) (Formerly 074.335) Introduction to software engineering. Software life cycle models, system and software requirements analysis, specifications, software design, testing and maintenance, software quality. *Prerequisites:* COMP 2150 (or 074.215) (C) or COMP 2061 (or 074.206F) (or the former 074.206) (C).

COMP 3370 Computer Organization Cr.Hrs.3 (Formerly 074.337) Principles of computer systems architecture, organization and design. Performance, instruction sets, processors, input/output, memory hierarchies. *Prerequisite:* COMP 2280 (or 074.228) (or the former 074.222) (C).

COMP 3380 Databases Concepts and Usage Cr.Hrs.3 (Lab Required) (Formerly 074.338) An introduction to database systems including the relational, hierarchical, network and entity-relationship models with emphasis on the relational model and SQL. *Prerequisite:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C).

COMP 3430 Operating Systems Cr.Hrs.3 (Lab Required) (Formerly 074.343) Operating systems, their design, implementation, and usage. Not to be held with the former 074.450 or 074.460. *Prerequisites:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C), and COMP 2220 (or 074.222) (C). COMP 2160 (or 074.216) is recommended.

COMP 3440 Programming Language Concepts Cr.Hrs.3 (Formerly 074.344) An introduction to major concepts involved in the design of modern programming languages. The imperative, functional, and logical families and differences between them. Facilities for high level data and control structures, modular programming, data typing, and other topics will be covered. Not to be held with the former 074.310 or 074.348. *Prerequisite:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C).

COMP 3490 Computer Graphics 1 Cr.Hrs.3 (Formerly 074.349) An introductory course in computer graphics including topics such as raster graphics, two and three dimensional transforms, and simple rendering. *Prerequisite:* COMP 2190 or COMP 2191 (or 074.219) (C) or a calculus or algebra course at the 2000 level or higher (C).

COMP 3620 Professional Practice in Computer Science Cr.Hrs.3 (Formerly 074.362) Ethical, moral, and legal issues in the development and use of computer systems; standards of practice; implications of advanced computer systems. *Prerequisite:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C).

COMP 3720 Computer Networks 1 Cr.Hrs.3 (Lab Required) (Formerly 074.372) This course examines the principles of computer networks, including network architectures, algorithms, and performance. Not to be held with the former 074.430. *Prerequisites:* COMP 2140 (or 074.214) (C) and COMP 2280 (or 074.228) (or the former 074.222) (C).

COMP 3980 Workterm 2 Cr.Hrs.0 (Formerly 074.398) Work assignment in business, industry, or government for students registered in the Computer Science Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail). *Prerequisite:* COMP 2980 (or 074.298) (P).

COMP 4020 Human-Computer Interaction 2 Cr.Hrs.3 (Formerly 074.402) Advanced issues in the field of human-computer interaction. Topics will be selected from current research and development issues in the field of HCI. *Prerequisite:* COMP 3020 (or 074.302) (or the former 074.371) (C). A course in cognitive psychology (such as PSYC 2480 (or 017.248)) is recommended.

COMP 4050 Project Management Cr.Hrs.3 (Formerly 074.405) Introduction to the issues involved in managing large, complex software projects. *Prerequisite:* COMP 3350 (or 074.335) (C).

COMP 4060 Topics in Computer Science Cr.Hrs.3 (Formerly 074.406) This course will examine topics of interest at the fourth-year level. Specific topics will vary from year to year. Topics will be selected from current research in computer science. *Prerequisite:* Departmental permission.

COMP 4140 Introduction to Cryptography and Cryptosystems Cr.Hrs.3 (Formerly 074.414) Description and analysis of cryptographic methods used in the authentication and protection of data. Classical cryptosystems and cryptoanalysis, the Data Encryption Standard (DES) and Public-key cryptosystems. Not to be held with the former 074.361. *Prerequisite:* COMP 2130 (or 074.213) (C). Students must be registered in fourth year of a Major or Honours programme in the Department of Computer Science.

COMP 4190 Artificial Intelligence Cr.Hrs.3 (Formerly 074.419) Reasoning with temporal knowledge; causal reasoning; plausible reasoning; nonmonotonic reasoning; abductive reasoning. *Prerequisite:* COMP 3190 (or 074.319) (C).

COMP 4200 Expert Systems Cr.Hrs.3 (Formerly 074.420) Organization of expert systems; knowledge representation in expert systems; inference; knowledge engineering; tools for building expert systems; limitations of expert systems. *Prerequisite:* COMP 3190 (or 074.319) (C).

COMP 4220 Graph Theory Algorithms 2 Cr.Hrs.3 (Formerly 074.422) Maximum bipartite and non-bipartite matching, selection and analysis of efficient data structures, network flows, connectivity, edge-colourings, Hamilton cycles, NP-completeness. *Prerequisite:* COMP 3120 (or 074.312) (or the former 074.389) (C) and COMP 4340 (or 074.434) (C).

COMP 4270 Design Theory and Coding Theory Cr.Hrs.3 (Formerly 074.427) Latin squares, finite geometries, BIBD's and linear and non-linear codes, dual codes, weight distribution and finite fields are studied. Not to be held with the former 074.439. *Prerequisite:* COMP 3120 (or 074.312) (C).

COMP 4290 Compiler Construction 2 Cr.Hrs.3 (Formerly 074.429) A detailed examination of compiler construction techniques for modern imperative languages. Symbol tables, scanners, parsers, type checking, code generation, procedure linkage, diagnostics, code optimization. Includes the actual implementation of a useful subset of a modern language as a course project. *Prerequisites:* COMP 2150 (or 074.215) (C) and COMP 3290 (or 074.329) (C). COMP 2160 (or 074.216) is recommended.

COMP 4310 Computability Theory Cr.Hrs.3 (Formerly 074.431) Introduction to theory of computable functions. Turing machines and transducers, undecidability, universal Turing machines, recursive function theory, Turing machines with oracles, reducibility, and arithmetic hierarchy. Introduction to complexity theory. *Prerequisites:* COMP 2080 (or 074.208) (C) and COMP 3030 (or 074.303) (or the former 074.327) (C). *Corequisite:* COMP 3170.

COMP 4340 Graph Theory Algorithms 1 Cr.Hrs.3 (Formerly 074.434) Spanning trees, connectivity, planar graphs, directed graphs, networks, colouring problems and tours are studied and their applications to computer science will be highlighted. *Prerequisite:* COMP 3170 (or 074.317) (C).

COMP 4350 Software Engineering 2 Cr.Hrs.3 (Formerly 074.435) Advanced treatment of software development methods. Topics will be selected from requirements gathering, design methodologies, prototyping, software verification and validation. *Prerequisite:* COMP 3350 (or 074.335) (C).

COMP 4360 Machine Learning Cr.Hrs.3 (Formerly 074.436) Learning strategies; evaluation of learning; learning in symbolic systems; neural networks, genetic algorithms. *Prerequisite:* COMP 3190 (or 074.319) (C).

COMP 4380 Database Implementation Cr.Hrs.3 (Formerly 074.438) Implementation of modern database systems including query modification/optimization, recovery, concurrency, integrity, and distribution. *Prerequisite:* COMP 3380 (or 074.338) (C).

COMP 4420 Advanced Design and Analysis of Algorithms Cr.Hrs.3 (Formerly 074.442) Algorithm design with emphasis on formal techniques in analysis and proof of correctness. Computational geometry, pattern matching, scheduling, numeric algorithms, probabilistic algorithms, approximation algorithms and other topics. *Prerequisites:* COMP 3170 (or 074.317) (C) and STAT 1000 or STAT 1001 (or 005.100) (or the former 005.101) (C).

COMP 4430 Operating Systems 2 Cr.Hrs.3 (Formerly 074.443) Design and implementation of modern operating systems. Detailed analysis of an open source modern operating system and hands-on experience with its kernel and major components. *Prerequisites:* COMP 2160 (or 074.216) (C) and COMP 3430 (or 074.343) (C).

COMP 4490 Computer Graphics 2 Cr.Hrs.3 (Formerly 074.449) Methods in computer graphics including topics such as representation of curves and surfaces, viewing in three dimensions, and colour models. *Prerequisite:* COMP 3490 (or 074.349) (C).

COMP 4510 Introduction to Parallel Computation Cr.Hrs.3 (Lab Required) (Formerly 074.451) An overview of the architectures of current parallel processors and the techniques used to program them. Not to be held with the former 024.446. *Prerequisites:* COMP 3370 (or 074.337) (or the former 074.341) (C) and COMP 3430 (or 074.343) (C).

COMP 4520 Undergraduate Honours Project Cr.Hrs.3 (Formerly 074.452) A research based project on a specific area of computer science. Students must find a faculty supervisor and write a proposal in their penultimate term. If acceptable, the defined research is to be carried out in the student's final term. Permission to take the course is given on an individual basis. Available to Year 4 students only. *Prerequisite:* departmental permission.

COMP 4530 Introduction to Simulation and Model Building Cr.Hrs.3 (Formerly 074.453) Representation of systems by deterministic and stochastic models. Algorithms, data structures, and high-level languages for model manipulation and performance measurement. Methods for random number and variate generation. Not to be held with the former 074.423 or 024.447. *Prerequisites:* COMP 2140 (or 074.214) or COMP 2061 (or 074.206F) (or the former 074.206) (C), STAT 1000 or STAT 1001 (or 005.100) (or the former 005.101 or 005.221) (C) and one of MATH 1690 (or 136.169) (C), MATH 1700 (or 136.170) (C), MATH 1710 (or 136.171) (C) or MATH 1730 (or 136.173), (or the former 006.126, 013.149 or 013.159)(C).

COMP 4550 Real-Time Systems Cr.Hrs.3 (Formerly 074.455) An introduction to the theory and practice of real-time systems. Topics include the design of real-time systems, scheduling, event based processing, and real-time control. *Prerequisites:* COMP 3430 (or 074.343) (C) and COMP 3370 (or 074.337) (C).

COMP 4560 Industrial Project Cr.Hrs.3 (Formerly 074.456) Students will work in teams on an industrial project. Projects are supplied by the Department. *Prerequisites:* COMP 3350 (or 074.335) (C) and departmental permission.

COMP 4580 Computer Security Cr.Hrs.3 (Formerly 074.458) Computer security and information management. This course will examine state-of-the-art knowledge about the issues relevant to data and computer security. *Prerequisite:* COMP 3430 (or 074.343) (C).

COMP 4690 Computer Systems and Architecture Cr.Hrs.3 (Formerly 074.469) Investigation of today's modern computer architecture and system design concepts, including requirements, specifications, and implementation. Instruction sets, instruction-level parallelism, speculative execution, multi-threaded architectures, memory hierarchy, multiprocessors, storage design and implementation, and inter-connection networks. *Prerequisite:* COMP 3370 (or 074.337) (C).

COMP 4710 Introduction to Data Mining Cr.Hrs.3 Introduction to data mining concepts and their applications. *Prerequisite:* COMP 3380 (or 074.338) or consent of department.

COMP 4720 Computer Networks 2 Cr.Hrs.3 (Formerly 074.472) This course examines advanced topics in computer networks, including network security, network management, performance, and multimedia networking. *Prerequisite:* COMP 3720 (or 074.372) (or the former 074.430) (C). *Corequisite:* COMP 3430 (or 074.343) (C).

COMP 4740 Advanced Databases Cr.Hrs.3 (Formerly 074.474) Parallel, distributed, object-oriented, object-relational, and XML databases; other emerging database technologies. *Prerequisite:* COMP 3380 (or 074.338) (C).

COMP 4980 Workterm 3 Cr.Hrs.0 (Formerly 074.498) Work assignment in business, industry, or government for students registered in the Computer Science Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail). *Prerequisite:* COMP 3980 (or 074.398) (P).

4.8 Ecology Program

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4.8.1. Program Information

The departments of Botany and Zoology offer a joint Honours program and a joint four year Major in Ecology. The programs involve scientific examinations of the interactions among living organisms and with their environment as individuals, as members of a population, and as components in an ecosystem. Students can combine an interest in living organisms with field studies. The Honours program gives students the opportunity to do independent ecological research, while the Major program offers a co-op option combining education with employment experience.

Ecology Program Prerequisite Information

Though normally a prerequisite for all Zoology and some Botany courses, BIOL 1030 may be waived under special circumstances at the discretion of the department head. Students who qualify should contact the department head to arrange for substitutions for BIOL 1030. However, students seeking admission to professional faculties which require BIOL 1020 and BIOL 1030 (such as Dentistry, Pharmacy, Optometry, Veterinary Science) will not be eligible for admission to those faculties without credit in BIOL 1020 and BIOL 1030.

Students registering for 3000 and 4000 level Botany courses in which prerequisites are not specified must have completed two years in a university program or have written permission of the department head.

The program must approve a student's Honour or Major program each session. Students must also obtain approval for any and all revisions to their program.

Honours

To enter the Honours program, students must have a "B" in BIOL 1030 or CHEM 1310 and not less than "C+" in the other course. In addition, all other faculty requirements for entry to the Honours program must be satisfied. If BIOL 1030 has been waived (see above), then the entrance requirement will be CHEM 1310 and the replacement for BIOL 1030, with a "B" standing in either course and not less than a "C+" in the other. Statistics STAT 1000 and the 3 credit hours of specified Mathematics of Physics courses can be completed in University 1 or Year 2.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and Year 3 to Year 4, a student must have an annual Grade Point Average of 2.50, with no failures, and in addition, must have a 3.00 average on all Botany and Zoology courses during that session and a grade of "C+" or better in each Botany and Zoology course. Individual courses may be designated in which a grade of "B" or better is required. Students must complete 24 credit hours each regular session.

In Year 4, in order to graduate with an Honours degree, a student must obtain a Grade Point Average of 3.00 or better on the year's work, with no failures, and must have a grade of "C+" or better in all Botany and Zoology courses.

Four Year Major

To enter the four year Major program, a student must have a "C+" in either BIOL 1030 or CHEM 1310 and not less than a "C" in the other course. In addition, all other faculty requirements for entry to the four year Major program must be satisfied. If BIOL 1030 has been waived (see above), then the entrance requirement will be CHEM 1310 and the replacement for BIOL 1030, with a "C+" standing in either course and not less than a "C" in the other. Statistics STAT 1000 and the 3 credit hours of specified Mathematics of Physics courses can be completed in University 1 or Year 2.

Students who so wish, and who have an appropriate standing and course selection may transfer to the Honours program at any time up to the commencement of Year 4.

Four Year Major Cooperative Option

To be eligible to enter the Cooperative Option, students must have met the requirements for entry to the program and have successfully completed 60 credit hours including the following courses: BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BOTN 2010, BOTN 2020, BOTN 2370 (ZOOL 2370 or AGE 2370), ZOOL 2320, ZOOL 2600 and 3 credit hours from MATH 1200, MATH 1300, MATH 1500, PHYS 1020 or PHYS 1050 or any equivalent.

Entry into the Cooperative Option is competitive and may be based on academic performance. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. Acceptance into the program is dependent upon the student receiving a job placement through the cooperative option coordinator. Students will be required to submit work reports upon the completion of each employment term. In order to stay in the Cooperative program, a student must obtain a grade of "pass" for each work term report. Students must register in and pay fees for the appropriate employment term course prior to the commencement of that employment term. Students may complete four work terms but must complete a minimum of three. Work terms may commence in the winter term of Year 3.

First work term	BOTN 3980/ZOOL 3980
Second work term	BOTN 3990/ZOOL 3990
Third work term	BOTN 4980/ZOOL 4980
Fourth work term	BOTN 4990/ZOOL 4990

The summer after Year 2 may be used to clear academic deficiencies or for additional employment purposes.

Students should refer to the general faculty regulations for Cooperative Options in Section 3.4.

4.8.2 Ecology Program, Department Code: 001E

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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JOINT HONOURS⁴ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	BOTN 2010, BOTN 2020, BOTN 2370 (ZOOLOGY 2370 or AGECE 2370) ² , BOTN 2460, ZOOLOGY 2280, ZOOLOGY 2320, ZOOLOGY 2600 Either: CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780); or CHEM 2210 plus CHEM 2360 and CHEM 2370 (MBIO 2360 and MBIO 2370)	BOTN 3010 or ZOOLOGY 3540 ³ , BOTN 3070, ZOOLOGY 3750	
In University 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , PHYS 1020 or PHYS 1050 STAT 1000 and STAT 2000 6 credit hours from the Faculty of Arts, which should include the required "W" course.		Plus BOTN 3000/ZOOLOGY 3000, BOTN 3420 (ZOOLOGY 3450), BOTN 3540, and ZOOLOGY 3680 which may be taken in Year 3 or 4	
		Plus additional courses from the approved option list for a total of 30 credit hours in each of Year 2, 3 and 4. Included in these additional courses must be a minimum of 12 credit hours at the 4000 level in Botany and/or Zoology in Year 3 or 4	

30 Hours	30 Hours	30 Hours	30 Hours
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JOINT FOUR YEAR MAJOR^{4,5} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	BOTN 2010, BOTN 2020, BOTN 2370 (ZOOLOGY 2370 or AGECE 2370) ² , BOTN 2460, ZOOLOGY 2280, ZOOLOGY 2320, ZOOLOGY 2600	BOTN 3010 or ZOOLOGY 3540 ³ , BOTN 3070 Plus BOTN 3420 (ZOOLOGY 3450), BOTN 3540 and ZOOLOGY 3680 which may be taken in Year 3 or 4	
In University 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , PHYS 1020 or PHYS 1050. STAT 1000 and STAT 2000 6 credit hours from the Faculty of Arts which should include the required "W" course.		Either: CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780); or CHEM 2210 plus CHEM 2360 and CHEM 2370 (MBIO 2360 and MBIO 2370); Plus an additional 30 credit hours to be chosen from the approved option list, a minimum of 12 credit hours of which must be at the 4000 level in Botany and/or Zoology	

JOINT FOUR YEAR MAJOR^{4,5} COOPERATIVE OPTION 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	BOTN 2010, BOTN 2020, BOTN 2370 (ZOOLOGY 2370 or AGECE 2370) ² , BOTN 2460, ZOOLOGY 2280, ZOOLOGY 2320, ZOOLOGY 2600	BOTN 3010 or ZOOLOGY 3540 ³ , BOTN 3070, BOTN 3980/ZOOLOGY 3980, BOTN 3990/ ZOOLOGY 3990	BOTN 4980/ZOOLOGY 4980, BOTN 4990/ ZOOLOGY 4990
In University 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , PHYS 1020 or PHYS 1050 STAT 1000 and STAT 2000 6 credit hours from the Faculty of Arts which could include the required "W" course.		Plus BOTN 3420 (ZOOLOGY 3450), BOTN 3540 and ZOOLOGY 3680 which may be taken in Year 3 or 4	
		Either: CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780); or CHEM 2210 plus CHEM 2360 and CHEM 2370 (MBIO 2360 and MBIO 2370); Plus an additional 30 credit hours to be chosen from the approved option list, a minimum of 12 credit hours of which must be at the 4000 level in Botany and/or Zoology	

MINOR

BOTN 2370 (or ZOOLOGY 2370 or AGECE 2370), BOTN 3540 and ZOOLOGY 3680

continued on next page

Plus a minimum of 9 credit hours from the following list: BOTN 2110, BOTN 2210, BOTN 2290, BOTN 3010, BOTN 3070, BOTN 3250, BOTN 3260, BOTN 3270, BOTN 3420, BOTN 3580, BOTN 4010, BOTN 4050, BOTN 4650, ZOO 3100, ZOO 3380, ZOO 3450, ZOO 3500, ZOO 3540, ZOO 3580, ZOO 3610, ZOO 4200, ZOO 4210, ZOO 4220, ZOO 4230, ZOO 4240, ZOO 4250, ZOO 4280, ZOO 4840, ZOO 4880.

NOTE: BIOL 1030, BOTN 2010, BOTN 2020, BOTN 2110, BOTN 3010 (or PLNT 3500), CHEM 1310, CHEM 1320, CHEM 2210, CHEM 2370 (or CHEM 2780), STAT 1000, STAT 2000, ZOO 2320, ZOO 2530, ZOO 2600, ZOO 3100, ZOO 3530 and ZOO 3750 are listed as prerequisites for some courses.

NOTES:

¹ MATH 1510, MATH 1520, MATH 1530, MATH 1680 or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.

² BOTN 2370 (ZOO 2370 or AGE 2370) has STAT 1000 as corequisite.

³ For students who completed ZOO 2530 and ZOO 2540 before entering the Honours or four year Major program, the ZOO 3540 requirement will be waived if they received a minimum grade of "B" in ZOO 2540 and complete and pass the laboratory component of ZOO 3540.

⁴ The courses in this program will satisfy the university mathematics requirement.

⁵ IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

Approved Option List

The approved optional courses for both the four year Major and Honours programs are:

BOTN 2110, BOTN 2180, BOTN 2210, BOTN 2290, BOTN 3250, BOTN 3260, BOTN 3270, BOTN 3580, BOTN 4010, BOTN 4040, BOTN 4050, BOTN 4120, BOTN 4150, BOTN 4210, BOTN 4650, BOTN 4800, BOTN 4880, CHEM 2380, CHEM 2470, CHEM 2550, CHEM 4550, STAT 3120, STAT 3130, GEOL 2390, GEOL 3310, GEOL 4310, GEOL 4630, ZOO 2150, ZOO 2180, ZOO 3100, ZOO 3380, ZOO 3460, ZOO 3500, ZOO 3580, ZOO 3610, ZOO 4170, ZOO 4200, ZOO 4210, ZOO 4220, ZOO 4230, ZOO 4240, ZOO 4250, ZOO 4280, ZOO 4580, ZOO 4710, ZOO 4720, ZOO 4800, ZOO 4820, ZOO 4840, ZOO 4880, ENTM 2050, ENTM 4250, ENTM 4280, ENTM 4360, ENTM 4500, ENTM 4520, PLNT 3540, PLNT 4270, PLNT 4360, PLNT 4410, SOIL 3060, SOIL 3500, SOIL 3510, SOIL 3520, SOIL 4060, SOIL 4090, SOIL

4120, SOIL 4130, SOIL 4500, SOIL 4510, GEOG 3730, MBIO 2100, MBIO 2110, MBIO 2230, MBIO 2280, MBIO 3440, MBIO 3480, MBIO 4320, AGRI 2180, AGE 2500, ENVR 2180, ENVR 2550, ENVR 3110, ENVR 3250, ENVR 3550, ENVR 4110, ENVR 4550.

The following course is optional for the four year Major program: ZOO 3750

BOTN 4600 and ZOO 4110 are only available to Honours Ecology students.

Other courses not on the option list may be selected with the approval of the program director.

By an appropriate selection of courses from this list, students can obtain a particular program emphasis in either terrestrial or aquatic ecological systems.

4.9 Environmental Science Program, Department of Environment and Geography

Head: Mary Benbow

General Office: 211 Isbister

Telephone: 204 474 9081

4.9.1 Program Information

Effective September 2003, the newly formed Clayton H. Riddell Faculty of Environment, Earth, and Resources began offering interdisciplinary programs leading to a B.Env.Sc. and B.Env.St. The Faculty of Science will permit students already registered in the B.Sc. Major degree in Environmental Science to complete their degree in the Faculty of Science. Students completing their degree in Science would normally do so no later than the 2007 - 2008 Regular Session.

No new students are admitted to the Faculty of Science Environmental Science program. Students may transfer to the new Clayton H. Riddell Faculty of Environment, Earth, and Resources and complete the new degree requirements if they choose. See the Clayton H. Riddell Faculty of Environment, Earth, and Resources section for further information.

Environmental Courses

All Clayton H. Riddell Faculty of Environment, Earth, and Resources courses are available to Science students; for a complete course listing see the Clayton H. Riddell Faculty of Environment, Earth, and Resources section.

4.10 Genetics Program

Program Coordinator: Peter Loewen

Program Office: 418 Buller Building

Telephone: 204 474 9372

Website: umanitoba.ca/science/microbiology

E-mail: peter_loewen@umanitoba.ca

4.10.1 Program Information

The Faculty of Science offers an interdisciplinary program leading to a B.Sc. (Honours) degree in Genetics. Genetics is the science of heredity dealing with the mechanisms of inheritance and has generated concepts basic to modern biology. Three areas are represented in this program: classical genetics, population genetics, and molecular genetics. Courses from Arts, Agricultural and Food Sciences and Medicine are included in this program.

Genetics Entry Requirements and Optional Courses

The requirements for entry to the Genetics Honours program are a "B" in each of CHEM 1300 and CHEM 1310, and not less than a "C+" in BIOL 1030; or a "B" in BIOL 1030 and a "C+" in each of CHEM 1300 and CHEM 1310; plus a grade of "C" in STAT 1000 and standing in MATH 1500 and one of MATH 1200, MATH 1300, MATH 1700 or any equivalent. In addition, students must satisfy the general faculty requirements for entry to Honours programs. The Genetics Program Coordinator must approve a student's Honour program each session. Students must also obtain approval for any and all revisions to their program.

To proceed from Year 2 to Year 3, and Year 3 to Year 4, and to complete Year 4 of the program successfully, students must have an annual Grade Point Average of 2.50. Students must complete 24 credit hours each regular session.

Honours Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Honours Genetics program may enter the Cooperative Option in their third year in Genetics Honours. This five year program provides students with minimum 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and University units.

The course and grade requirements for entry and continuation in the Cooperative Option are the same as that for regular Honours program. Each academic term in the third and subsequent years must comprise 15 credit hours. Students should refer to the general faculty regulations for B. Sc. (Honours) Cooperative Options in Section 3.6.

Students will apply for openings in the Cooperative Option in September of their third year in the Genetics Honours program. They will be notified of their provisional acceptance in the program by October. Acceptance into the program is dependent upon the students receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. The first work term can be taken in January or May. Stu-

dents are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each 4-month employment term.

4.10.2 Genetics Program, Department Code: 060G			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS¹ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, STAT 1000, MATH 1500 ² Plus either MATH 1200, MATH 1300 ² , or MATH 1700 ² 6 credit hours of electives or from the list of optional courses In University 1 or Year 2: 6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement. ³	BOTN 2460, CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), STAT 2000, ZOOL 2280, MBIO 2100, MBIO 2110	BOTN 3460, PLNT 3140, MBIO 3410, ANTH 2890, BGEN 3020 Plus 42 credit hours from list of optional courses, a minimum of 18 of which must be at the 4000 level	
30 Hours	30 Hours	30 Hours	30 Hours
HONOURS COOPERATIVE OPTION^{1,5} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, STAT 1000, MATH 1500 ² Plus either MATH 1200, MATH 1300 ² or MATH 1700 ² and 6 credit hours of electives or from the list of optional courses In University 1 or Year 2: 6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement. ³	BOTN 2460, CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), STAT 2000, ZOOL 2280, MBIO 2100, MBIO 2110	BOTN 3460, PLNT 3140, MBIO 3410, ANTH 2890, BGEN 3020 ⁴ MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990 Plus 42 credit hours from list of optional courses, a minimum of 18 of which must be at the 4000 level	
30 Hours	30 Hours	30 Hours	30 Hours
NOTES:			
¹ The courses in this program will satisfy the university mathematics requirement.			
² MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.			
³ As there are no electives in Year 2 of the program, students should complete the University written English requirement in University 1. If not completed in University 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.			
⁴ Students that begin their first work term in May must take BGEN 3020 in Year 3, while students that begin their first work term in January must take BGEN 3020 in Year 4.			
⁵ IMPORTANT: Students in the cooperative program are advised to ensure that they are able to satisfy the prerequisites for all 3000 and 4000 level courses they plan to take.			

The optional courses are:

- Botany:* BOTN 4180
- Chemistry:* CHEM 2280, CHEM 2290, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630
- Zoology:* ZOOL 2150, ZOOL 2530, ZOOL 2540, ZOOL 3060, ZOOL 4140, ZOOL 4150, ZOOL 4270
- Microbiology:* MBIO 3010, MBIO 3430, MBIO 3440, MBIO 3450, MBIO 3460, MBIO 4010, MBIO 4410, MBIO 4530*, MBIO 4540, MBIO 4570, MBIO 4600, MBIO 4610.
- Computer Science:* COMP 1010, COMP 1020, COMP 1260, COMP 1270
- Physics:* PHYS 1020, PHYS 1030, PHYS 1050, PHYS 1070
- Animal Science:* ANSC 3500, ANSC 4280
- Plant Science:* PLNT 2530, PLNT 3500, PLNT 3520, PLNT 4330
- Human Genetics:* BGEN 4010*

By an appropriate selection of courses from this list, students can obtain particular program emphasis in either plant, human or molecular genetics.

All programs must contain a minimum of 18 credit hours of 4000 level courses as options in Years 3 and 4.

Other suitable optional courses may be arranged through consultation with the Genetics program committee.

NOTE: * MBIO 4530 is a project course. A research project is chosen in consultation with the Microbiology department and the Genetics program committee, and is supervised by a staff member. Only one of MBIO 4530 and BGEN 4010 may be elected in this program. MBIO 4530 and BGEN 4010 are not available to students in the Cooperative Option.

4.10.3 Course Descriptions

BGEN 3020 Introduction to Human Genetics CrHrs.6 (formerly 137.302) Topics to be included are the chromosomal level of genetic inheritance, Mendelian genetics, gene mutation and its consequences, the problems of multiple loci, and genetic environmental interaction as these areas apply to human beings; the application of human genetics in medicine.

BGEN 4010 Project Course in Human Genetics Cr.Hrs.6 (formerly 137.402) A research project chosen in consultation with and supervised by a faculty member. A written report is required. The course is available primarily to final year Honours students in the Honours Genetics program. Selection of project and supervision to be arranged prior to September 30 and submitted in writing to department head. Deadline for submission of first draft to supervisor by March 1. Deadline for submission of final draft to department head is March 31.

4.11 Department of Geological Sciences

Head: Nancy Chow
General Office: 240 Wallace Building
Telephone: 204 474 9371

Website: umanitoba.ca/science/geological_sciences/
 As of September 2003, courses and programs in Geological Sciences are offered by the newly formed Clayton H. Riddell Faculty of Environment,

Earth, and Resources; refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources section for further information. Students already completing a three year General program in which they have chosen

Geology as a subject area should consult a Science student advisor. All Clayton H. Riddell Faculty of Environment, Earth, and Resources courses, including Geology courses, are available to Science students.

4.12 Department of Mathematics

Head: Guenter Krause

General Office: 342A Machray Hall

Telephone: 204 474 8703

Website: umanitoba.ca/science/mathematics/

E-mail: mathematics_dept@umanitoba.ca

4.12.1 Academic Staff

Emeritus Professors

Cohen, H., B.Sc. (Hons.) (Manitoba), M.Sc. (Brown), Ph.D. (Minnesota), P.Eng. F.A.A.M.; **Gupta**, N.D., B.A. (Kashmir), LL.B., M.A. (Aligarh), Ph.D. (Australian National), F.R.S.C.; **Mendelsohn**, N.S., B.A., M.A., Ph.D. (Toronto), F.R.S.C.

Distinguished Professors

Gratzer, G., B.Sc. (Eötvös), Ph.D. (Hungarian Academy of Sciences), Dr. Rerum Naturalis (Eötvös), D.Sc. (Hungarian Academy of Sciences), F.R.S.C.; **Gupta**, C.K., B.A. (Kashmir), M.A. (Aligarh), M.A.(Hons.), Ph.D. (Australian National), F.R.S.C.;

Senior Scholars

Aitchison, P.W., B.Sc.(Hons.) (London), M.A. (Colorado), Ph.D. (Australian National); **Clutton-Brock**, M., B.A. (Cambridge), M.Sc. (Victoria), Ph.D. (Washington); **Dowling**, R.J., B.Sc.(Hons.) (Manitoba), M.A. (Minnesota); **Finlayson**, H.C., B.Sc., M.Sc. (Alberta), Ph.D. (Minnesota); **Holens**, T.F., B.Sc.(Hons.), M.Sc. (Manitoba); **Lakser**, H., B.Sc.(Hons.) (Manitoba), A.M. (Princeton), Ph.D. (Manitoba); **Losey**, N.E., B.A.(Hons.) (Toronto), M.Sc., Ph.D. (Wisconsin), S.U.A.C; **McClure**, J.P., B.Sc., M.A. (Waterloo), Ph.D. (Newcastle, UK); **Parameswaran**, M.R., B.A., Dip. Ger. (Madras), B.Sc.(Hons.), M.A., M.Sc., D.Sc. (Annamalai), M.A. (Manitoba); **Quackenbush**, R.W., B.S. (M.I.T.), B.S., Ph.D. (Stevens Institute of Technology); **Rayburn**, M.C., B.A. (Evansville), M.S. (Auburn), Ph.D. (Kentucky); **Venkataraman**, R., B.A.(Hons.) (Loyola, India), Dip. French, M.Sc., Ph.D. (Madras).

Professors

Berry, T.G., B.Math.(Hons.), M.Math, Ph.D. (Waterloo); **Doob**, M., A.B. (Columbia), M.A., Ph.D. (CUNY); **Gerhard**, J.A., B.Sc., M.Sc., Ph.D. (McMaster); **Ghahramani**, F., B.Sc.(Hons.) (Tehran), M.Sc. (Tehran Teacher Training), Ph.D. (Edinburgh); **Gumel**, A.B., B.Sc. (Bayero), Ph.D. (Brunel); **Guo**, B., B.Sc. (Fudan), M.Sc., Ph.D. (Maryland); **Hoskins**, W.D., B. Tech., Ph.D. (Brunel); **Kelly**, D., B.A.Sc. (UBC), Ph.D. (Queen's); **Krause**, G.R., Dipl. Math., Dr. Phil. Nat. (Frankfurt); **Padmanabhan**, R., B.Sc., M.Sc. (Madras), Ph.D. (Madurai); **Platt**, C.R., B.Sc., M.Sc. (Iowa State), Ph.D. (Pennsylvania State); **Shivakumar**, P.N., B.Sc. (Mysore), M.Sc. (Baneras) (London), Ph.D., D.Sc. (London), C.Math., F.I.M.A.; **Sichler**, J.J., M.Sc., R.N.Dr., Ph.D. (Charles, Prague); **Thomas**, R.S.D., B.Sc.(Hons.) (Toronto), M.A. (Waterloo), Ph.D. (Southampton), C.Math., F.I.M.A.; **Trim**, D.W., B.Sc.(Hons.), M.Sc., Ph.D. (Waterloo); **Williams**, J.J., B.Sc.(Hons.), M.Sc., Ph.D. (Toronto); **Woods**, R.G., B.Sc.(Hons.), M.Sc. (Manitoba), Ph.D. (McGill); **Zorboska**, N., B.S., M.S. (Skopje), Ph.D. (Toronto).

Associate Professors

Craigen, R., B.Sc. (UBC), M.Math, Ph.D. (Waterloo); **Kopotun**, K., M.Sc. (Kiev), Ph.D. (Alberta); **Kucera**, T.G., B.Sc.(Hons.), M.Sc. (Manitoba), Ph.D. (McGill); **Lui**, S.H., B.Sc., M.Sc. (Toronto), Ph.D. (CA Inst. Of Technology); **Zhang**, Y., M.Sc. (Shandong), Ph.D. (Manitoba).

Assistant Professors

Arino, J. B.Sc. (Paris 5), M.Sc. (Paris 6), Ph.D. (Grenoble 1); **Chipalkatti**, J., B.Tech (IIT Bombay), M.Sc. Ph.D. (Purdue); **Gunderson**, D. B.Sc., M.Sc. (Calgary), Ph.D. (Emory); **Portet**, S. B.Sc., M.Sc., Ph.D. (Paris); **Schippers**, E. D., B.Sc., M.Sc., Ph.D. (Toronto).

Instructors

Kalajdzievski, S., B.Sc., M.S. (Cyril and Methodius), Ph.D. (Toronto) (Senior Instructor); **Penner**, P., B.Sc. (Hons.), M.Sc., Ph.D. (Manitoba) (Senior Instructor).

Adjunct Professors

Roddy, M., B.Sc. (Lakehead), M.Sc., Ph.D. (McMaster); **Stokke**, R., B.Sc.(Hons.), M.Sc. (Manitoba), Ph.D. (Alberta).

Mathematics provides the language, reasoning and analytic tools that many other disciplines use to investigate their areas. These include all the physical sciences, computer and engineering sciences, social sciences, and the biological and health sciences. A wide range of business, industrial, and government programs rely on mathematics to provide insight and analysis. Students may specialize in mathematics alone or in combinations with physics, computer science, economics, statistics, or actuarial mathematics.

The department must approve a student's Honour or Major program each session. Students must also obtain approval for any and all revisions to their program.

Mathematics Prerequisite Information

Unless otherwise specified, a minimum grade of "C" must be achieved for any course stipulated as prerequisite to a further course in Mathematics.

NOTE: Students entering either the Faculty of Arts or Science, and intending to take courses from the department, are strongly advised to speak to a Science student advisor or a faculty advisor in the department concerning an appropriate choice of mathematics courses. They may also consult the Department of Mathematics website at umanitoba.ca/science/mathematics/.

Honours Requirements

To enter the Honours program in Mathematics a student must have a minimum grade of "B" in MATH 1300 and either MATH 1700 or MATH 1690 or any equivalent. In addition, students must have satisfied the Faculty requirements for entry to the Honours program. Students must complete a minimum of 24 credit hours each regular session.

The Department of Mathematics will allow students in their graduating year to complete a minimum of 18 credit hours per regular session if they require 18 credit hours or less to graduate. In all other regular sessions, 24 credit hours are required.

The program for students who elect Honours in Mathematics is as follows:

Year 2 Mathematics courses as indicated in the chart below and 9 credit hours from such fields as physics, chemistry, actuarial mathematics, computer science, statistics, philosophy, or economics. Other fields may be elected with the approval of the department.

Year 3 Mathematics courses as indicated in the chart below and electives to be chosen from the subject fields below or a third year Mathematics course not already elected. Students performing satisfactorily in Year 2 may obtain permission to take an additional course.

Year 4 Mathematics courses as indicated in the chart below and electives to be chosen from the subject fields below or a Mathematics course not already elected. Students performing satisfactorily in Year 3 may obtain permission to take an additional course.

Electives normally allowed are:

Statistics: STAT 2000, STAT 3180, STAT 3470, STAT 3480, STAT 3500, STAT 3600, STAT 4140, STAT 4520, STAT 4530, STAT 4580, STAT 4590, STAT 4600, STAT 4620, STAT 4630, STAT 4690.

Physics: PHYS 2380, PHYS 2600, PHYS 2610, PHYS 2650, PHYS 3670, PHYS 3680, PHYS 3650, PHYS 3660, PHYS 3630, PHYS 3640, PHYS 3380, PHYS 4390, PHYS 4620, PHYS 4640, PHYS 4650.

Chemistry: CHEM 2280, CHEM 2290, CHEM 3360, CHEM 3370, CHEM 4640, CHEM 4650.

Economics: ECON 2530, ECON 2700, ECON 3700, ECON 3730, ECON 4120, ECON 4130.

Mechanical Engineering: MECH 3490.

Other courses may be elected with permission of the department. Students are required to obtain the approval of the department concerning their choice of electives.

A student may elect Honours in Mathematics and one other field, subject to the approval of both departments. The Mathematics prescription for a Double Honours program is as indicated in the table below.

Honours programs must be approved each year by the department.

Four Year Major Requirements

To enter the four year Major in Mathematics, a student must have a “C+” in either MATH 1690 or in two of MATH 1300, MATH 1500 and MATH 1700 or any equivalent and have satisfied all Faculty requirements for entry to the program.

It is suggested that among their electives, students might choose courses in which mathematics is extensively used, for example, courses in physics, chemistry and certain courses in economics. For advice on this point students should talk to a faculty member in the department.

Four Year Major in Applied Mathematics with Option (Computer Science, Economics, Management Sciences, Statistics)

These programs provide a sound general knowledge of applied mathematics together with a significant number of courses in the option area. Courses in the Computer Science option provide training in aspects of computer science which are most useful to the practicing mathematician. Courses in

the Computer Sciences, Economics, Management Sciences and Statistics options are fundamental to each area and provide a strong, mathematical basis for further study.

To enter the four year Major in Applied Mathematics with one of the above four options, a student must have a “C+” in either MATH 1690 or two of MATH 1200, MATH 1300, MATH 1500, or MATH 1700, one of which must be either MATH 1500, or MATH 1700, and have satisfied all faculty requirements for entry to the program. It is recommended that students take all 12 credit hours of 1000 level mathematics courses in their initial 30 credit hours; however, students should take at least MATH 1300, MATH 1500 and MATH 1700. See the individual charts below for additional requirements for each option.

Options List: MATH 2450, MATH 2500, MATH 2550, or any 3rd or 4th year Mathematics course.

Three Year General

As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from **two** Science departments. To satisfy the requirement in Mathematics, students must select a minimum of 12 credit hours of 2000 and/or 3000 level Mathematics courses.

See a Science student advisor or a faculty advisor in the department for information regarding entry to or completion of any of the programs outlined below.

4.12.3 Mathematics, Department Codes: 136			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
MATHEMATICS HONOURS⁴ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1300 ¹ (B), MATH 1690 (B), (or MATH 1500 ¹ and MATH 1700 ¹ (B)), STAT 1000 ² , COMP 1010 ²	MATH 2200, MATH 2350, MATH 2600, MATH 2750, MATH 2800	48 credit hours ³ of 3000 and 4000 level Mathematics ⁵ courses, which must include MATH 3230, MATH 3400, MATH 3760, MATH 3800 and one of two of the concentrations listed below:	
Plus 6 credit hours from the Faculty of Arts, which should include the required “W” course		Applied and Computational Mathematics Concentration: MATH 3300 or MATH 3350; MATH 3700 or MATH 3710; and at least 12 credit hours from MATH 3500, MATH 3510, MATH 3600, MATH 3810, MATH 3820, MATH 4610, MATH 4800 or MATH 4810 Pure Mathematics Concentration: MATH 3350, MATH 3710 and at least 12 credit hours from MATH 3240, MATH 4200, MATH 4350, MATH 4410 or MATH 4420, MATH 4710, MATH 4750	
30 Hours	30 Hours	30 Hours	30 Hours
MATHEMATICS HONOURS DOUBLE⁴ MINIMUM 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1300 ¹ (B), MATH 1690 (B) (or MATH 1500 ¹ and MATH 1700 ¹ (B)), STAT 1000 ² , COMP 1010 ²	MATH 2200, MATH 2350, MATH 2600, MATH 2750, MATH 2800	MATH 3230, MATH 3350, MATH 3710, MATH 3760	MATH 3800 Plus 12 credit hours from MATH 4200, MATH 4210, MATH 4350, MATH 4710, MATH 4720, MATH 4750 ³ Plus at least an additional 3 credit hours from among the above and MATH 3220, MATH 3240, MATH 3400, MATH 3430, MATH 3450, MATH 4250, MATH 4400, MATH 4410, MATH 4420, MATH 4430, MATH 4800, MATH 4920, MATH 4960
Plus 6 credit hours from the Faculty of Arts, which should include the required “W” course			
MATHEMATICS JOINT HONOURS COMPUTER SCIENCE-MATHEMATICS⁴ See Section 4.7 Computer Science			
MATHEMATICS JOINT HONOURS STATISTICS-MATHEMATICS⁴ See Section 4.16 Statistics			
MATHEMATICS FOUR YEAR MAJOR^{4,6} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1300 ¹ , MATH 1500 ¹ and MATH 1700 ¹ (or MATH 1690), STAT 1000 ² , COMP 1010 ²	MATH 2200, MATH 2350, MATH 2600, MATH 2750, MATH 2800	MATH 3300 or MATH 3350, MATH 3400, MATH 3700 or MATH 3710, MATH 3740 or MATH 3760, MATH 3800 and enough courses from MATH 2400, MATH 2500, STAT 2000 and all third and fourth year Mathematics courses to make 48 credit hours	
Plus 6 credit hours from the Faculty of Arts, which should include the required “W” course			

APPLIED MATHEMATICS FOUR YEAR MAJOR WITH COMPUTER SCIENCE OPTION^{4,6} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ and MATH 1700 ¹ (or MATH 1690), COMP 1010, COMP 1020	MATH 2300, MATH 2600, MATH 2720, MATH 2730, MATH 2800, COMP 2140	MATH 2400, MATH 3600, MATH 3700, MATH 3740, MATH 3800, MATH 3810, MATH 3820
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Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course

Plus STAT 1000 and STAT 2000; plus an additional 6 credit hours from options list; plus one of the following patterns:

Graphics: COMP 2190, COMP 3490, COMP 4490;

or Software: COMP 2150, COMP 3440, and one of COMP 2160, COMP 3380, or COMP 3020;

or Theoretical Computer Science: COMP 2080, COMP 2130, COMP 3170 or COMP 4530;

or Hardware: COMP 2160, COMP 2280, COMP 3370 or COMP 3430;

or Artificial Intelligence: COMP 3190, two of: COMP 4190, COMP 4200, COMP 4360

APPLIED MATHEMATICS FOUR YEAR MAJOR WITH ECONOMICS OPTION^{4,6} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

MATH 1200, MATH 1310 ¹ , MATH 1500 ¹ and MATH 1700 ¹ (or MATH 1690), ECON 1200 (or both ECON 1210 and ECON 1220)	MATH 2300, MATH 2600, MATH 2720, MATH 2730, MATH 2800	MATH 2400, MATH 3500, MATH 3600, MATH 3700, MATH 3740, MATH 3800, MATH 3810, MATH 3820
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Plus STAT 1000 and STAT 2000; COMP 1010; plus an additional 3 credit hours from options list; plus ECON 2530 and ECON 3730, and at least two of ECON 2450, ECON 2460, ECON 2470 and ECON 2480

A "W" course must be taken in University 1 or Year 2

APPLIED MATHEMATICS FOUR YEAR MAJOR WITH MANAGEMENT SCIENCES OPTION^{4,6} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

MATH 1200, MATH 1310 ¹ , MATH 1500 ¹ and MATH 1700 ¹ (or MATH 1690)	MATH 2300, MATH 2400, MATH 2600, MATH 2720, MATH 2730, MATH 2800, MATH 3500, MATH 3510, MATH 3600, MATH 3700, MATH 3740, MATH 3800, MATH 3810, MATH 3820, ECON 1200 (or both ECON 1210 and ECON 1220), STAT 1000, STAT 2000, COMP 1010
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Plus MSCI 2150, MSCI 3400 and six (6) credit hours Management Sciences Courses approved by the department

A "W" course must be taken in University 1 or Year 2

APPLIED MATHEMATICS FOUR YEAR MAJOR WITH STATISTICS OPTION^{4,6} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ and MATH 1700 ¹ (or MATH 1690), STAT 1000	STAT 2000, MATH 2300, MATH 2600, MATH 2720, MATH 2730, MATH 2800	MATH 2400, MATH 3600, MATH 3700, MATH 3740, MATH 3800, MATH 3810, MATH 3820, STAT 3120 (or STAT 3470), STAT 3130 (or STAT 3480), STAT 3500, STAT 3600
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Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course

COMP 1010, plus an additional 6 credit hours from the options list, plus 6 credit hours of 3000 or 4000 level Statistics courses

THREE YEAR GENERAL

A minimum of 12 credit hours from 2000 and (or) 3000 level Mathematics

MINOR

MATH 1300¹, MATH 1500¹ and MATH 1700¹ (or MATH 1690) plus a minimum of 9 credit hours from MATH 1200 and 2000 and (or) 3000 level Mathematics courses

NOTES:

¹ MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² STAT 1000 and COMP 1010 do not have to be taken in University 1, but they have to be taken by the end of Year 2.

³ Students considering graduate work in pure mathematics should note that many graduate schools may require a student to rectify any deficiencies in MATH 4200, MATH 4210, MATH 4350, MATH 4710, MATH 4720 and MATH 4750.

⁴ The courses required in this program will satisfy the University mathematics requirement.

⁵ MATH 3200, MATH 3210, MATH 3740 and MATH 3910 cannot be used in an Honours program.

⁶ **IMPORTANT:** The four year Major programs need not be completed in the manner prescribed in the charts above. Each chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their programs with a view to satisfying the prerequisites of the required courses. Please refer to the text above for the minimum requirements for entry to a four year Major.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.12.4 Mathematics - Actuarial Mathematics Joint Program, Department Code: 136M

The Department of Mathematics and the Warren Centre for Actuarial Studies and Research offer a joint Honours program for students wishing in-depth study in both Mathematics and Actuarial Mathematics.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS² 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1690 (B) (or MATH 1500 ¹ and MATH 1700 ¹ (B)), MATH 1300 ¹ (B), STAT 1000, STAT 2000 (B) Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course Plus 9 credit hours of electives	ACT 2120, STAT 3500, STAT 3600, MATH 2200, MATH 2350, MATH 2750, MATH 2800 Plus 3 credit hours of approved electives	ACT 3130, ACT 3230, ACT 3330, ACT 3530, MATH 3230, MATH 3710, MATH 3760, STAT 3050. Plus 6 credit hours of approved electives	ACT 4140, MATH 3350, MATH 3400, MATH 4750 Plus 12 credit hours of approved electives
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² The courses required in this program satisfy the University mathematics requirement. (Letters in brackets indicate minimum prerequisite standing for further study.)

Honours Requirements

To enter the Honours program in Mathematics-Actuarial Mathematics, a student must have satisfied the Faculty of Science requirements for entry to the program, and have completed STAT 1000, STAT 2000, MATH 1300¹, and either MATH 1690 or MATH 1500¹ and MATH 1700¹ with a minimum grade of "B" in each of STAT 2000, MATH 1300¹ and MATH 1690 or MATH 1700¹.

Recommended Electives:

Actuarial ACT 4240 or ACT 4000, ACT 4340; Accounting and Finance ACC 1100, FIN 2200; Computer Science COMP 1010, COMP 1260; Economics ECON 1200; Statistics STAT 3470, STAT 3490.

4.12.6 Mathematics - Physics and Astronomy Joint Program, Department Code: 136P

The Departments of Mathematics and Physics and Astronomy offer a joint Honours program for students wishing in-depth study in both Mathematics and Physics.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS⁴ 132 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1300 ¹ (B), MATH 1510 ¹ (B) and MATH 1710 ¹ (B) (or MATH 1690 (B)), PHYS 1050 (B) (or PHYS 1020 (B+)) ² and PHYS 1070 (B), STAT 1000, COMP 1010 Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course ⁵	PHYS 2260, PHYS 2380, PHYS 2600, PHYS 2610, PHYS 2650 ³ , MATH 2200, MATH 2350, MATH 2750, MATH 2800	MATH 3230, MATH 3350 (or MATH 3300 and MATH 3310), MATH 3700 or MATH 3710, MATH 3760, PHYS 3670, PHYS 3680, PHYS 3650, PHYS 3630, PHYS 3640 ⁶ , PHYS 3380	MATH 3800, MATH 4810 ⁷ Plus 9 credit hours of 3000 or 4000 level Mathematics courses, of which 3 credit hours must be at the 4000 level PHYS 3430, PHYS 3660, PHYS 4390 Plus 6 credit hours from 3000 and 4000 level Physics Honours courses
30 Hours	33 Hours	36 Hours	33 Hours

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1500, MATH 1520 or MATH 1530 may be taken in place of MATH 1510; MATH 1700 or MATH 1730 may be taken in place of MATH 1710.

² PHYS 1030 is not suitable for entry to the program. Students must also take PHYS 1070 if they have already taken PHYS 1030. Students can hold credit for both PHYS 1030 and PHYS 1070.

³ The corequisite of PHYS 2490 is waived. It is recommended that students audit PHYS 2390 and PHYS 2490 in second year.

⁴ The courses required in this program will satisfy the University mathematics requirement.

⁵ As there are no electives in Year 2 of the program, students should complete the university written English requirement in University I. If not completed in University I, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

⁶ The prerequisite of PHYS 2490 is waived.

⁷ The prerequisite of MATH 3810 has been waived for students who have completed PHYS 3630, PHYS 3640 and PHYS 3380.

(Letters in brackets indicate minimum prerequisite standing for further study.)

Honours Requirements

To enter the Joint Honours Mathematics-Physics program the student must have a minimum grade of "B" in MATH 1300¹, MATH 1510¹ and MATH 1710¹ (or MATH 1690), PHYS 1050 (or "B+" in PHYS 1020) and PHYS 1070.

4.12.7 Mathematics – Economics Joint Honours Program, Department Code 136E

The Department of Mathematics along with the Department of Economics (Faculty of Arts) offer a joint Honours program for students wishing in depth study in Mathematics and Economics. For Economics course listings, refer to the Faculty of Arts chapter in the Calendar.

To enter the Joint Honours Mathematics – Economics program, the student must have a minimum grade of “B” in ECON 1200 (or ECON 1210 and ECON 1220), MATH 1300¹, MATH 1700¹ and have satisfied the Faculty of Science requirements for entry to the honours program.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
ECON 1200, (or ECON 1210 and ECON 1220) MATH 1300 ¹ , MATH 1500 ^{1,2} , MATH 1700 ^{1,2} , STAT 1000 ³ , COMP 1010 ³ Plus 9 credit hours of electives ⁶ , which should include the required “W” course	ECON 2700, ECON 2800, MATH 2200, MATH 2350, MATH 2750, MATH 2800 Plus 6 credit hours of approved electives ⁶	ECON 3700, ECON 3800, ECON 3180 ⁷ (or STAT 2000) ³ , MATH 2600 ³ , MATH 3230, MATH 3300 ⁵ , MATH 3400, MATH 3700 (or MATH 3710), MATH 3740 (or MATH 3760) Plus 24 credit hours of approved Economics courses ⁴	Plus 6 credit hours of Mathematics courses at the 3000 or 4000 level, which must include at least one of MATH 3500, MATH 3510, MATH 3600, MATH 3810, MATH 3820, or any Mathematics course at the 4000 level.
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² The combination of MATH 1500¹ and MATH 1700¹ may be replaced by MATH 1690.

³ Some courses may be taken in a different year than indicated; STAT 1000, COMP 1010, MATH 2600 and ECON 3180 (or STAT 2000) may be taken in Year 2.

⁴ Of the 24 credit hours of electives in Economics in Years 3 and 4, no more than 6 credit hours may be at the 2000 level (with the exception of ECON 2530) and at least 6 credit hours must be at the 4000 level.

⁵ MATH 3300, plus 3 of the 6 unallocated credit hours in Mathematics in Years 3 and 4, may be replaced by MATH 3350.

⁶ Student are encouraged to consider useful courses in Computer Science and Statistics as electives.

⁷ The prerequisite of ECON 3170 is waived for students in this program.

4.12.8 Mathematics Course Descriptions

Unless otherwise specified, a minimum grade of “C” must be achieved for any course stipulated as prerequisite to a further course in Mathematics.

U1 M MATH 1010 Applied Finite Mathematics Cr.Hrs.3 (Lab Required) (Formerly 136.101) For students needing to fill the requirement of a university level mathematics course. Introduces students to modern applications of discrete mathematics. Topics include: mathematics of finance, linear programming, graph theory, and game theory. Cannot be held with any current (1000 level) or previously offered (100 level) Mathematics course with the exception of MATH 1190 or MATH 1191 (or 136.119). This course cannot be used as part of an Honours, Major, General or Minor program in the mathematical sciences. No *prerequisite*.

U1 M MATH 1020 Mathematics in Art Cr.Hrs.3 (Formerly 136.102) Specific theory, structuring systems, and mathematical methods and principles used in works of art from various historical periods and contexts will be explored in relation to Euclidean and non-Euclidean geometries. Topics include: linear perspective; shapes, patterns, balance and symmetry; ratio, proportion and harmony; and order, dynamics, and chaos. The course will be one half art and one half mathematics, team-taught by faculty from the School of Art and the Department of Mathematics. This course is also given in the School of Art as FA 1020. This course cannot be used as part of an Honours, Major, General, or Minor program in the mathematical sciences. Not to be held with FA 1020 (or 054.102). No *prerequisite*.

U1 M MATH 1190 Topics in Mathematics Cr.Hrs.6 (Formerly 136.119) This course is designed to give students in various faculties a measure of insight into modern mathematics. Topics are taken from number systems, geometry, and combinatorics. This is a terminal course and may not be used as a *prerequisite* for other Mathematics courses. It may not be used as part of an Honours, Major, General, or Minor program in the mathematical sciences. Not to be held with (136.100), MATH 1200 or MATH 1201 (or 136.120), MATH 1300 or MATH 1301 (or 136.130), MATH 1310 (or 136.131), MATH 1500 or MATH 1501 (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153), MATH 1680 (or 136.168), MATH 1690 (or 136.169), (or the former, 006.120, 013.123, 006.121, 006.125, 013.238, 006.144, 006.147, 010.115, 013.128, 013.129, 013.139, 013.146, or 013.159). No *prerequisite*.

U1 M MATH 1191 Sujets choisis en Mathématiques Cr.Hrs.6 (L'ancien 136.119) Ce cours offre à l'étudiant un aperçu superficiel des mathématiques modernes. Les sujets étudiés sont tirés des systèmes de nombres, de la géométrie et de la combinatoire. Ce cours est terminal et sert comme *Préalable* à aucun autre cours universitaire en mathématiques. Il peut être comptabilisé dans aucun programme spécialisé ou général, majeure ou mineure en sciences mathématiques. On ne peut se faire créditer à la fois le MATH 1190 (ou 136.119) et les anciens 013.123 et 013.238. On ne peut pas s'inscrire à ce cours s'il a reçu des crédits pour l'un des cours suivants ou s'il y est déjà inscrit: (136.100), MATH 1200 ou MATH 1201 (ou 136.120), MATH 1300 ou MATH 1301 (ou 136.130), MATH 1310 (ou 136.131), MATH 1500 ou MATH 1501 (ou 136.150), MATH 1510 (ou 136.151), MATH 1520 (ou 136.152), MATH 1530 (ou 136.153), MATH 1680 (ou 136.168), MATH 1690 (ou 136.169) et les anciens 006.120, 006.121, 006.125, 006.144, 006.147, 010.115, 013.128, 013.129, 013.139,

013.146, ou 013.159. Donné seulement au Collège universitaire de Saint-Boniface. Aucun de *Préalable*.

U1 M MATH 1200 Elements of Discrete Mathematics Cr.Hrs.3 (Lab Required) (Formerly 136.120) Sequences and series, trigonometry, complex numbers, algebra of polynomials, approximation of zeros of functions, linear difference equations. Not to be held with MATH 1201, MATH 1210 or the former 006.120, 006.144 or 006.147. *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus 40S or the former Mathematics 40S (300), or a grade of “C” or better in either (136.100) or the Mathematical Skills course taught by the Continuing Education Division.

U1 M MATH 1201 Éléments de mathématiques discrètes Cr.Hrs.3 (Labo Requis) (L'ancien 136.120) Suites et séries, trigonométrie, nombres complexes, algèbre de polynômes, approximation des zéros de fonctions, équations aux différences. On ne peuvent se faire créditer à la fois le MATH 1200 (ou 136.120), MATH 1210 et les anciens 006.120, 006.144 ou 006.147. *Préalable*: mathématiques 40S (pré-calcul) ou l'ancien mathématiques 40S (300) avec une note minimum de 60 pour cent, ou une note de “C” dans le cours (136.100) ou le cours “Mathematical Skills” enseigné par la Division de l'éducation permanente. Donné seulement au Collège universitaire de Saint-Boniface.

U1 M MATH 1300 Vector Geometry and Linear Algebra Cr.Hrs.3 (Lab Required) (Formerly 136.130) An introduction to vectors, matrices, systems of linear equations and three-dimensional geometry. Not to be held for credit with MATH 1210, MATH 1310 (or 136.131), MATH 1680 (or 136.168), (or the former, 006.121, 013.128, 013.129, or 013.146). *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of “C” or better in either (136.100) or the Mathematical Skills course taught by the Continuing Education Division. NOTE: A minimum grade of 70 per cent in Applied Mathematics 40S may be used as a *prerequisite* to this course.

U1 M MATH 1301 Géométrie vectorielle et algèbre linéaire Cr.Hrs.3 (Labo Requis) (L'ancien 136.130) Une introduction aux vecteurs, matrices, systèmes d'équations linéaires et Géométrie à trois dimensions. On ne peut se faire créditer plus d'un des cours suivants: MATH 1300 (ou 136.130), MATH 1310 (ou 136.131), MATH 1680 (ou 136.168) MATH 1210 ou les anciens 006.121, 013.128, 013.129 ou 013.146). *Préalable*: Mathématiques 40S (pré-calcul) ou l'ancien Mathématiques 40S (300) avec une note minimum de 60 per cent, ou une note de “C” dans le cours (136.100) ou le cours “Mathematical Skills” enseigné par la Division de l'éducation permanente. Donné seulement au Collège universitaire de Saint-Boniface. NOTE: Une note minimum de 70 pour cent en Mathématiques appliquées 40S peut servir de prérequis pour ce cours.

U1 M MATH 1310 Matrices for Management and Social Sciences Cr.Hrs.3 (Lab Required) (Formerly 136.131) Matrix methods with examples relevant to the Management and Social Sciences. Topics include vectors, matrices, systems of linear equations, and determinants; applications include economic models, the simplex method for linear programming, Markov chains, and game theory. Not to be held with MATH 1210, MATH 1300 or MATH 1301 (or 136.130), MATH 1680 (or 136.168), (or the former 006.121, 013.128, 013.129 or 013.146). *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of “C” in either (136.100) or the Mathematical Skills course

taught by the Continuing Education Division. NOTE: A minimum grade of 70 per cent in Applied Mathematics 40S may be used as a *prerequisite* to this course.

U1 M MATH 1500 Introduction to Calculus Cr.Hrs.3 (Lab Required) (Formerly 136.150) Differentiation and integration of elementary functions, with applications to maxima and minima, rates of change, area, and volume. Not to be held with MATH 1501, MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153), MATH 1680 (or 136.168), MATH 1690 (or 136.169), (or the former 006.125, 010.115, 013.128, 013.129, 013.139, or 013.159). *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of "C" or better in either (136.100) or the Mathematical Skills course taught by the Continuing Education Division.

U1 M MATH 1501 Introduction au calcul Cr.Hrs.3 (Labo Requis) (L'ancien 136.150) Différentiation et intégration des fonctions élémentaires avec application à la théorie des extrêmes, aux taux de changements ainsi qu'aux aires et aux volumes. On ne peut se faire créditer plus d'un des cours suivants: MATH 1500 (ou 136.150), MATH 1510 (ou 136.151), MATH 1520 (ou 136.152), MATH 1530 (ou 136.153), MATH 1680 (ou 136.168), MATH 1690 (ou 136.169), ou les anciens 006.125, 010.115, 013.128, 013.129, 013.139, ou 013.159. *Préalable*: Mathématiques 40S (pré-calcul) ou l'ancien Mathématiques 40S (300) avec une note minimum de 60 pour cent, ou une note de "C" dans le cours (136.100) ou le cours "Mathematical Skills" enseigné par la Division de l'éducation permanente. Donné seulement au Collège universitaire de Saint-Boniface.

U1 M MATH 1510 Applied Calculus 1 Cr.Hrs.3 (Lab Required) (Formerly 136.151) Functions and graphs; limits and continuity; differentiation of functions defined explicitly, implicitly and parametrically; applications of derivatives to velocity and acceleration, related rates, maxima and minima; differentials, indefinite and definite integrals, application of integration to area. Physical applications in this course make it especially suitable for students intending to take programs in engineering. Not to be held with MATH 1500, MATH 1501 (or 136.150), MATH 1520 (or 136.152), MATH 1530 (or 136.153), MATH 1680 (or 136.168), MATH 1690 (or 136.169), (or the former 006.125, 010.115, 013.128, 013.129, 013.139, or 013.159). *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of "C" or better in either (136.100) or the Mathematical Skills course taught by the Continuing Education Division, and Physics 40S (300) or a "P" in PHYS 0900 (or 016.090).

U1 M MATH 1520 Introductory Calculus for Management and Social Sciences Cr.Hrs.3 (Lab Required) (Formerly 136.152) Differentiation and integration of functions of one variable and partial differentiation of functions of several variables. Emphasizes applications in the areas of management and social science. Not to be held with MATH 1500, MATH 1501 (or 136.150), MATH 1510 (or 136.151), MATH 1530 (or 136.153), MATH 1680 (or 136.168), MATH 1690 (or 136.169), (or the former 006.125, 010.115, 013.128, 013.129, 013.139, or 013.159). *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300) or equivalent or a grade of "C" in either (136.100) or the Mathematical Skills course taught by the Continuing Education Division.

U1 M MATH 1530 Calculus with Computers Cr.Hrs.3 (Lab Required) (Formerly 136.153) Differentiation of elementary functions with applications to maxima and minima and rates of change. Curve sketching, antidifferentiation and applications to area. Software with symbolic manipulation capability will be used. This course is particularly well-suited for students planning to Major in Computer Science. Not to be held with MATH 1500, MATH 1501 (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1680 (or 136.168), MATH 1690 (or 136.169), (or the former 006.125, 010.115, 013.128, 013.129, 013.139, or 013.159). *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of (C) or better in either (136.100) or the Mathematical Skills course taught by the Continuing Education Division. *Corequisite*: COMP 1010 or permission of the instructor.

U1 M MATH 1680 Mathematics for Agriculture and Related Sciences Cr.Hrs.6 (Lab Required) (Formerly 136.168) Differentiation and integration of elementary functions, a brief introduction to vectors, matrices, systems of linear equations in two and three dimensions. Applications to maxima and minima, rates of change, areas and volumes. The balance of topics has been chosen to suit the particular needs of students proceeding in agricultural and related sciences; for that reason there is somewhat less emphasis on linear algebra. Not to be held with MATH 1210, MATH 1300, MATH 1301 (or 136.130), MATH 1310 (or 136.131), MATH 1500, MATH 1501 (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153), MATH 1690 (or 136.169), (or the former 006.121, 010.115, 013.128, 013.129, 013.139, 013.146 or 013.159). *Prerequisite*: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of "C" or better in either (136.100) or the Mathematical Skills course taught by the Continuing Education Division.

U1 M MATH 1690 Calculus Cr.Hrs.6 (Lab Required) (Formerly 136.169) An introduction to the calculus of functions of one variable. This course covers the same material as MATH 1500 (or 136.150) and MATH 1700 (or 136.170) together, but in greater depth. Exposure to high school calculus (45S) is desirable, but not essential. Recommended for students with a strong aptitude for and interest in Mathematics. Not to be held with MATH 1500, MATH 1501 (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153), MATH 1680 (or 136.168), MATH 1700 (or 136.170), MATH 1710 (or 136.171), MATH 1730 (or 136.173) (or the former 006.125, 006.126, 010.115, 013.128, 013.129, 013.139, 013.149, or 013.159). *Prerequisite*: a minimum grade of 80 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300).

U1 M MATH 1700 Calculus 2 Cr.Hrs.3 (Lab Required) (Formerly 136.170) Theory and techniques of integration, curve sketching, volume, arc length, surface area and partial derivatives. Not to be held with MATH 1690 (or 136.169), MATH 1710 (or 136.171), MATH 1730 (or 136.173) (or the former 006.126, 013.149, or 013.159). *Prerequisite*: MATH 1500, MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C), MATH 1530 (or 136.153) (C) or MATH 1680 (or 136.168) (C), or a grade of "C" in the former 006.125, 010.115, 013.128, 013.129, or 013.139.

U1 M MATH 1701 Calcul II Cr.Hrs.3 (Labo Requis) (L'ancien 136.170) Théories et techniques d'intégration, tracés de courbes, calculs de volume, de longueurs d'arc, d'aires et des dérivés partiels. On ne peut se faire créditer plus d'un des cours suivants: MATH 1690 (ou 136.169), MATH 1700 (ou 136.170), MATH 1710 (ou 136.171), MATH 1730 (ou 136.173) ou les anciens 006.126, MATH 1490 (ou 013.149), ou MATH 1590 (ou 013.159). *Préalable*: MATH 1500 (ou 136.150) (C), ou MATH 1510 (ou 136.151) (C), ou MATH 1520 (ou 136.152) (C), ou MATH 1530 (ou 136.153) (C) ou MATH 1680 (ou 136.168), (ou un des anciens 006.125, 010.115, 013.128, 013.129, ou 013.139) (C). Donné seulement au Collège universitaire de Saint-Boniface.

U1 M MATH 1710 Applied Calculus 2 Cr.Hrs.3 (Lab Required) (Formerly 136.171) Applications of integration to volumes, centres of mass, moments of inertia, work and fluid pressure; differentiation of trigonometric, inverse trigonometric, exponential, and logarithmic functions; techniques of integration; polar coordinates. Physical applications in this course make it especially suitable for students intending to take programs in engineering. Not to be held with MATH 1690 (or 136.169), MATH 1700 (or 136.170), MATH 1730 (or 136.173) or the former 006.126, 013.149, or 013.159. *Prerequisite*: MATH 1500 or MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C), MATH 1530 (or 136.153) (C) or MATH 1680 (or 136.168) (C), or the former 006.125, 010.115, 013.128, 013.129, or 013.139. *Corequisite*: PHYS 1050 or PHYS 1051.

U1 M MATH 1730 Calculus 2 with Computers Cr.Hrs.3 (Lab Required) (Formerly 136.173) Theory and techniques of integration with applications to curve sketching, volume, arc length, and surface area using different coordinate systems. Software with symbolic manipulation capability will be used. This course is particularly well-suited for students planning to Major in Computer Science. Not to be held with MATH 1690 (or 136.169), MATH 1700 (or 136.170), MATH 1710 (or 136.171) or the former 006.126, 013.149, 013.159). *Prerequisite*: MATH 1530 (or 136.153) (C) or one of MATH 1500 or MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C) and consent of department.

MATH 2200 Sets and Real Numbers Cr.Hrs.3 (Formerly 136.220) The language of mathematics: logic, methods of proof, elementary set theory. Foundations of calculus: the real numbers, continuity. Not to be held with the former 013.237. This course is taught at an Honours/Major level. *Prerequisites*: a grade of "C+" or better in MATH 1300 or MATH 1301 (or 136.130) or MATH 1310 (or 136.131) (or the former 013.146), and a grade of "C+" or better in one of MATH 1690 (or 136.169), MATH 1700 or MATH 1701 (or 136.170), MATH 1710 (or 136.171) or MATH 1730 (or 136.173) (or the former 013.149, 013.159, or 006.126).

MATH 2300 Linear Algebra 2 Cr.Hrs.3 (Formerly 136.230) A continuation of MATH 1300 or MATH 1310. Finite dimensional vector spaces; linear transformation and matrices; eigenvalues and eigenvectors; diagonalization and applications; inner product spaces. Not to be held with MATH 2350 (or 136.235) (or the former 013.235 or 013.246). *Prerequisites*: MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (or the former 013.146) (C), and one of MATH 1500 or MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C), MATH 1530 (or 136.153) (C) or MATH 1690 (or 136.169) (or the former 013.139, 013.159 or 006.125) (C).

MATH 2301 algèbre linéaire II Cr.Hrs.3 (L'ancien 136.230) Suite du cours MATH 1300 (ou 136.130) (MATH 1310 (ou 136.131) ou l'ancien 013.146). Espaces vectoriels à dimensions finies; transformations linéaires et matrices; vecteurs propres réels et valeurs propres réelles; la diagonalisation et ses applications; espaces avec produits scalaires. On ne pourra se faire créditer ce cours avec le MATH 2300 MATH 2350 (ou 136.235) (ou avec les anciens 013.235 ou 013.246). *Préalables*: MATH 1300 ou MATH 1301 (ou 136.130) (C) ou MATH 1310 (ou 136.131) (ou l'ancien 013.146) (C), et un de MATH 1500 ou MATH 1501 (ou 136.150) (C), MATH 1510 (ou 136.151) (C), MATH 1520 (ou 136.152) (C), MATH 1530 (ou 136.153) (C) ou MATH 1690 (ou 136.169) (ou les anciens 013.139, 013.159 ou 006.125) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2350 Linear Algebra with Applications Cr.Hrs.6 (Formerly 136.235) Vector spaces, linear transformations, inner product spaces, eigenvalues and eigenvectors, orthogonal and Hermitian matrices, and applications. This course is taught at an Honours/Major level. Not to be held with MATH 2300 or MATH 2301 (or 136.230) (or the former 013.246 or 013.235). *Prerequisites*: a grade of "C+" or better in MATH 1300 or MATH 1301 (or 136.130) or MATH 1310 (or 136.131) or 013.146), and a grade of "C+" or better in one of MATH 1690 (or 136.169), MATH 1700 MATH 1701 (or 136.170), MATH 1710 (or 136.171) or MATH 1730 (or 136.173) (or the former 013.149, 013.159 or 006.126).

MATH 2400 Applied Graph Theory Cr.Hrs.3 (Formerly 136.240) Graphs, planar graphs, directed graphs. Applications such as scheduling, assignments, timetabling, tournaments, networks with algorithms. Not to be held with the former 006.230. *Prerequisite*: MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (or the former 013.146) (C).

MATH 2450 Combinatorial Mathematics Cr.Hrs.6 (Formerly 136.245) An introduction to several areas of current interest in combinatorial mathematics, including tech-

niques of enumeration, graphs, block designs and generalizations, linear recursions. Not to be held with the former 013.247. This course is offered in alternating years. *Prerequisite:* An average of "C" or better in six credit hours of Year 1 Math courses with the exception of (136.100), MATH 1010 (or 136.101), MATH 1020 (or 136.102), FA 1020 (or 054.102) and MATH 1190 or MATH 1191 (or 136.119) (or the former 013.123), or consent of department.

MATH 2451 Mathématiques combinatoires Cr.Hrs.6 (L'ancien 136.245) Une introduction à certains sujets d'intérêt courant en Mathématiques combinatoires, c'est-à-dire les techniques d'énumération, les graphes, les dessins de blocs et les généralisations, les récursions linéaires. On ne peut se faire créditer le MATH 2450 (ou 136.245) à la fois avec l'ancien 013.247. *Préalable:* une moyenne de "C" ou plus dans un cours d'introduction en sciences Mathématiques à l'exception de (136.100), MATH 1010 (ou 136.101), MATH 1020 (ou 136.102), FA 1020 (ou 054.102), et MATH 1190 ou MATH 1191 (ou 136.119) (ou un cours de Mathématiques de l'ancien niveau 100 à l'exception de l'ancien 013.123), ou consentement du Département. Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2500 Introduction to Number Theory Cr.Hrs.3 (Formerly 136.250) Topics may include divisibility, unique factorization, linear and quadratic congruences, Fermat's theorem. Not to be held with the former 013.226. *Prerequisite:* An average of "C" or better in six credit hours of Year 1 Mathematics courses with the exception of (136.100), MATH 1010 (or 136.101), MATH 1020 (or 136.102), FA 1020 (or 054.102) and MATH 1190 or MATH 1191 (or 136.119) (or the former 013.123), or consent of department.

MATH 2501 Introduction à la théorie des nombres Cr.Hrs.3 (L'ancien 136.250) Les sujets étudiés pourront inclure la divisibilité, la factorisation unique, les congruences linéaire et quadratique, le théorème de Fermat. On ne peut se faire créditer le MATH 2500 (ou 136.250) à la fois avec l'ancien 013.226. *Préalable:* une moyenne de "C" ou plus dans un cours d'introduction en sciences Mathématiques à l'exception de (136.100), MATH 1010 (ou 136.101), MATH 1020 (ou 136.102) FA 1020 (ou 054.102), et MATH 1190 ou MATH 1191 (ou 136.119) (ou un cours de Mathématiques de l'ancien niveau 100 à l'exception de l'ancien 013.123) ou consentement du département. Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2550 Modern Geometry Cr.Hrs.6 (Formerly 136.255) A modern approach to geometry through the use of geometric transformations. Topics may include isometries, symmetries, similarities, circular inversion and groups. Not to be held with the former 013.224. Offered in 2006-2007 and alternating years thereafter. *Prerequisites:* MATH 1690 (or 136.169) (or the former 013.159) (C); or MATH 1500 or MATH 1501 (or 136.150), or MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153) (or the former 013.139, 006.125 or 010.115) (C), and one of MATH 1300 or MATH 1301 (or 136.130) (C), MATH 1310 (or 136.131) (C), MATH 1700 or MATH 1701 (or 136.170) (C), MATH 1710 (or 136.171) (C), or MATH 1730 (or 136.173) (or the former 013.146, 013.149, or 006.126) (C).

MATH 2551 Géométrie moderne Cr.Hrs.6 (L'ancien 136.255) Une approche moderne à la Géométrie à l'aide de transformations géométriques. Les sujets étudiés pourront inclure les isométries, les symétries, les similarités, l'inversion circulaire et les groupes. On ne peut se faire créditer le MATH 2550 (ou 136.255) à la fois avec l'ancien 013.224. *Préalables:* MATH 1690 (ou 136.169) (ou l'ancien 013.159) (C); un de MATH 1500 ou MATH 1501 (ou 136.150) (C), MATH 1510 (ou 136.151) (C), MATH 1520 (ou 136.152) (C), MATH 1530 (ou 136.153) (ou les anciens 013.139, 006.125, ou 010.115) (C), et un de MATH 1300 (ou 136.130) (C), MATH 1310 (ou 136.131) (C), MATH 1700 ou MATH 1701 (ou 136.170) (C), MATH 1710 (ou 136.171) (C), MATH 1730 (ou 136.173) (C) (ou les anciens 013.146, 013.149 ou 006.126) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2600 Numerical Mathematics 1 Cr.Hrs.3 (Formerly 136.260) Elementary techniques of numerical solution of mathematical problems: solution of equations, finite differences, interpolation, systems of equations, numerical differentiation and integration. Not to be held with the former 010.344, 006.220 or 006.331. *Prerequisites:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (or the former 013.146) (C), MATH 1690 (or 136.169) (C) or MATH 1700 or MATH 1701 (or 136.170) (C) or MATH 1710 (or 136.171) (C) or MATH 1730 (or 136.173) (or the former 006.126, 013.149 or 013.159) (C) and COMP 1010 or COMP 1011 (or 074.101) (C) or equivalent, or consent of instructor.

MATH 2601 Mathématiques numériques I Cr.Hrs.3 (L'ancien 136.260) Techniques élémentaire de solution numérique de problèmes Mathématiques: solution d'équations; différences finies; in-terpolation; systèmes d'équations; différentiation numérique, intégration numérique. On ne peut se faire créditer à la fois MATH 2600 (ou 136.260) et les anciens 010.344, 006.220 ou 006.331. *Préalables:* MATH 1300 ou MATH 1301 (ou 136.130) ou MATH 1310 (ou 136.131) (ou l'ancien 013.146) (C), MATH 1690 (ou 136.169) (C) ou MATH 1700 ou MATH 1700 (ou 136.170) (C) ou MATH 1710 (ou 136.171) (C) ou MATH 1730 (ou 136.173) (ou les anciens 006.126, 013.149, ou 013.159) (C), et COMP 1010 ou COMP 1011 (ou 074.101) (C) ou son équivalent, ou consentement du département. Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2720 Multivariable Calculus Cr.Hrs.3 (Formerly 136.272) Calculus of several variables. Not to be held with MATH 2750 (or 136.275) (or the former 136.270, 013.234, 006.227, 006.228, 006.243 or 013.239). *Prerequisites:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (C) (or the former 013.146) and one of MATH 1690 (or 136.169) (C), MATH 1700 or MATH 1701 (or 136.170) (C), MATH 1710 (or 136.171) (C), or MATH 1730 (or 136.173) (C) (or the former 013.149, 013.159 or 006.126).

MATH 2721 Calcul à plusieurs variables Cr.Hrs.3 (L'ancien 136.272) Calcul des variables multiples. On ne peut recevoir de crédits pour plus d'un des cours suivants:

MATH 2720 (ou 136.272), MATH 2750 (ou 136.275) (ou les anciens 136.270, 006.227, 006.228, 006.243, 013.239 ou 013.234). *Préalables:* MATH 1300 ou MATH 1301 (ou 136.130) (C) (ou MATH 1310 (ou 136.131) (ou l'ancien 013.146) (C) et un de MATH 1690 (ou 136.169) (C), MATH 1700 ou MATH 1701 (ou 136.170) (C), MATH 1710 (ou 136.171) (C) ou MATH 1730 (ou 136.173) (C) (ou les anciens 013.149, 013.159 ou 006.126). Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2730 Sequences and Series Cr.Hrs.3 (Formerly 136.273) Introductory analysis, sequences and series. Not to be held with MATH 2750 (or 136.275), (or the former 136.271, 013.234, 006.237, 006.238, 006.244, or 013.249). *Prerequisite:* one of MATH 1690 (or 136.169) (C), MATH 1700 or MATH 1701 (or 136.170) (C), MATH 1710 (or 136.171) (C) or MATH 1730 (or 136.173) (C) (or the former 013.149, 013.159, or 006.126). *Corequisite:* MATH 1300 or MATH 1301 (or 136.130) or MATH 1310 (or 136.131).

MATH 2731 Suites et séries Cr.Hrs.3 (L'ancien 136.273) Analyse, suites et séries. On ne peut recevoir de crédits pour plus d'un des cours suivants: MATH 2730 (ou 136.273), MATH 2750 (ou 136.275) (ou les anciens 136.271, 006.237, 006.238, 006.244, 013.249 ou 013.234). *Préalable:* un de MATH 1690 (ou 136.169) (C), MATH 1700 ou MATH 1701 (ou 136.170) (C), MATH 1710 (ou 136.171) (C) ou MATH 1730 (ou 136.173) (C) (ou les anciens 013.149, 013.159 ou 006.126). *Concomitants:* MATH 1300 ou MATH 1301 (ou 136.130) ou MATH 1310 (ou 136.131). Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2750 Intermediate Calculus Cr.Hrs.6 (Formerly 136.275) Sequences, series and power series. Differentiation and integration of real-valued functions of several real variables. Not to be held with MATH 2720 or MATH 2721 (or 136.272), MATH 2730 or MATH 2731 (or 136.273), or the former 013.239, 013.249, 013.234, 006.227, 006.237, 006.228, 006.238, 006.243 or 006.244). This course is taught at an Honours/Major level. *Prerequisites:* a grade of "C+" or better in MATH 1300 or MATH 1301 (or 136.130) or MATH 1310 (or 136.131) (or the former 013.146), and a grade of "C+" or better in one of MATH 1690 (or 136.169), MATH 1700 or MATH 1701 (or 136.170), MATH 1710 (or 136.171) or MATH 1730 (or 136.173) (or the former 013.149, 013.159 or 006.126).

MATH 2800 Ordinary Differential Equations with Applications 1 Cr.Hrs.3 (Formerly 136.280) An introduction to the theory of ordinary differential equations, and practical techniques of solution, principally relating to first order and linear higher order equations; linear systems. Applications to problems in science and other selected areas. Not to be held with the former 006.202, 006.226, 006.235. *Prerequisite:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (or the former 013.146) (C). *Corequisite:* MATH 2720 or MATH 2750.

MATH 2801 Équations différentielles ordinaires et leurs applications I Cr.Hrs.3 (L'ancien 136.280) Une introduction à la théorie des équations différentielles; techniques pratiques de solution, principalement en ce qui tient aux équations du premier ordre et aux équations linéaires d'ordre plus élevé; les systèmes linéaires. Applications à des problèmes en sciences ou à d'autres domaines. On ou l'étudiante ne peut se faire créditer à la fois le MATH 2800 (ou 136.280) (ou l'ancien 006.202, 006.226 ou 006.235). *Préalable:* MATH 1300 ou MATH 1301 (ou 136.130) (ou l'ancien 013.146) (C). *Concomitants:* MATH 2721 or MATH 2751. Donné seulement au Collège universitaire de Saint-Boniface.

MATH 3200 Set Theory and Logic Cr.Hrs.3 (Formerly 136.320) An introduction to set theory, relations and functions, arguments and proofs; the axiomatic nature of mathematics. Not to be held with the former 013.335. May not be used in an Honours program. *Prerequisite:* 12 credit hours of 2000 level mathematics courses or consent of department.

MATH 3210 Topology Cr.Hrs.3 (Formerly 136.321) An introduction to topology. Topological spaces, metric spaces; compactness, connectedness; continuity of mappings. May not be used in an Honours program. Not to be held with MATH 3240 (or 136.324 or 013.371), MATH 3230 (or 136.323 or 013.338) or 013.336. *Prerequisite:* MATH 3200 (or 136.320 or 013.335) (C) or consent of department.

MATH 3220 Set Theory Cr.Hrs.3 (Formerly 136.322) Axiom systems, cardinal and ordinal numbers, models of set theory, the axiom of choice, the generalized continuum hypothesis, etc. Not currently offered. Not to be held with the former 013.376. *Prerequisite:* MATH 2200 (or 136.220) (or the former 013.237) (C) or consent of department.

MATH 3230 Metric Spaces Cr.Hrs.3 (Formerly 136.323) Definition of metric spaces; examples. Compactness, connectedness and continuity in metric spaces. Applications to analysis. Not to be held with MATH 3210 (or 136.321) (or the former 013.336 or 013.338). *Prerequisites:* MATH 2750 (or 136.275) (or the former 013.234) (C) and MATH 2200 (or 136.220) (or the former 013.237) (C) or consent of department.

MATH 3240 Topology 1 Cr.Hrs.3 (Formerly 136.324) Topics include topologies, continuity, connectedness, compactness, and separation properties. Not to be held with MATH 3210 (or 136.321) (or the former 013.336 or 013.371). *Prerequisite:* MATH 3230 (or 136.323) (or the former 013.338) (C) or consent of department.

MATH 3300 Modern Algebra 1 Cr.Hrs.3 (Formerly 136.330) Introduction to the concepts and structures of modern algebra, including groups, rings and fields; substructure, isomorphism, quotients. Not to be held with MATH 3350 (or 136.335) the former 136.206, 013.229, 013.345 or 013.333). *Prerequisites:* MATH 2300 or MATH 2301 (or 136.230) (or the former 013.246) (C) or MATH 2350 (or 136.235) (or the former 013.235) (C) and an additional 6 credit hours of 2000 level mathematics courses, or consent of department.

MATH 3310 Modern Algebra 2 Cr.Hrs.3 (Formerly 136.331) Continuation of MATH 3300. Further study of rings and fields: integral domains, polynomial rings; ideals and quotient rings; rational function fields. Lattices and Boolean algebras may be included. Not to be held with MATH 3350 (or 136.335) (or the former 136.206, 013.229, 013.345, or 013.333). *Prerequisite:* MATH 3300 (or 136.330) (C).

MATH 3350 Advanced Algebra Cr.Hrs.6 (Formerly 136.335) An introduction to abstract algebra with topics taken from among the theories of groups, rings, modules, fields and lattices. This course is taught at an Honours/Major level. Not to be held with MATH 3300 (or 136.330), MATH 3310 (or 136.331) (or the former 136.206, 013.229, 013.333 or 013.345). *Prerequisites:* MATH 2350 (or 136.235) (or the former 013.235) (C) and MATH 2200 (or 136.220) (or the former 013.237) (C) or consent of department.

MATH 3400 Combinatorics 1 Cr.Hrs.3 (Formerly 136.340) Basic counting principles, pigeon-hole principle, recursion, graphs. This course is taught at an Honours/Major level. Not to be held with the former 013.347. *Prerequisites:* MATH 2200 (or 136.220) (C), MATH 2300 or MATH 2301 (or 136.230) (or the former 013.235) (C) or consent of department.

MATH 3430 Modern Geometry Cr.Hrs.3 (Formerly 136.343) Topics in modern euclidean geometry, affine and projective geometry, inversive geometry, etc. This course is taught at an Honours/Major level. Not to be held with the former 013.375. *Prerequisites:* MATH 2750 (or 136.275) (or the former 013.234) (C) and MATH 2350 (or 136.235) (or the former 013.235) (C) or consent of department.

MATH 3450 Theory of Numbers Cr.Hrs.6 (Formerly 136.345) Divisibility, congruences; quadratic residues and reciprocity; introduction to analytic and algebraic number theory. Not to be held with the former 013.349. *Prerequisites:* MATH 2750 (or 136.275) (or the former 013.234) (C) and MATH 2200 (or 136.220) (or the former 013.237) (C) or consent of department.

MATH 3500 Applied Linear Algebra Cr.Hrs.3 (Formerly 136.350) Topics in linear algebra and matrix methods with emphasis on applications such as eigenvalues, special matrices, error analysis, and iterative methods. Not to be held with the former 006.441 or 006.336. *Prerequisites:* MATH 2600 or MATH 2601 (or 136.260) (or the former 006.220) (C), MATH 2300 or MATH 2301 (or 136.230) (or the former 013.246) (C) or MATH 2350 (or 136.235) (or the former 013.235) (C).

MATH 3510 Mathematical Theory of Operational Research Cr.Hrs.3 (Formerly 136.351) Linear and non-linear optimization techniques of operational research such as linear systems, mathematical programming, networks, convexity, duality, classical optimization and non-linear programming; some assignments will be done using a computer. Not to be held with the former 006.329. *Prerequisites:* MATH 2300 or MATH 2301 (or 136.230) (or the former 013.246) (C), MATH 2350 (or 136.235) (or the former 013.235) (C) or consent of department.

MATH 3520 Mathematical Elements for Computational Graphics Cr.Hrs.3 (Formerly 136.352) Two- and three-dimensional transformations, affine and non-affine, descriptions of plane and space curves, and surfaces; development of Frenet-Serret frame; Gaussian curvature and surface fairness. Stress is placed on the mathematical and conceptual framework. May not be held with the former 006.333 or 006.334. *Prerequisites:* MATH 2720 (or 136.272) (or the former 013.239) (C) or MATH 2110 (or 136.211) (or the former 006.261) (C) or MATH 2750 (or 136.275) (or the former 013.234) (C) and MATH 2600 or MATH 2601 (or 136.260) (or the former 006.220) (C) or MATH 2120 (or 136.212) (or the former 006.270) (C) or COMP 2190 or COMP 2191 (or 074.219) (C) or consent of department.

MATH 3530 Mathematical Problems in the Biological Sciences Cr.Hrs.3 (Formerly 136.353) Circulatory system, flow of blood. Enzyme kinetics. Cell populations. Diffusion in biology. Some ecological systems. Not to be held with the former 006.328. *Prerequisites:* MATH 2300 or MATH 2301 (or 136.230) (or the former 013.246) (C), MATH 2730 (or 136.273) (or the former 013.249) (C) and MATH 3800 (or 136.380) (or the former 006.245 or 006.236) (C) or consent of department.

MATH 3540 Techniques of Applied Analysis Cr.Hrs.3 (Formerly 136.354) Applied mathematical topics such as asymptotics, transform theory and special functions. Not to be held with the former 006.332. *Prerequisites:* MATH 3700 (or 136.370) (or the former 006.325) (C) and MATH 3800 (or 136.380) (or the former 006.245 or 006.236) (C) or consent of department. *Corequisite:* MATH 3750.

MATH 3600 Numerical Mathematics 2 Cr.Hrs.3 (Formerly 136.360) Numerical differentiation and Gaussian quadrature; curve-fitting by splines; numerical methods for initial-value problems, boundary-value problems, and transforms; problems involving large, sparse or ill-conditioned linear systems. Not to be held with the former 006.320 or 006.331. *Prerequisites:* MATH 2600 or MATH 2601 (or 136.260) (or the former 06.220) (C), MATH 2800 or MATH 2801 (or 136.280) (or the former 006.235 or 006.226) (C), MATH 2720 (or 136.272) (or the former 013.239) (C) and MATH 2730 or MATH 2731 (or 136.271) (or the former 013.249) (C) or MATH 2750 (or 136.275) (or the former 013.234) (C), and either COMP 1010 or COMP 1011 (or 074.101) (or the former 074.123) (C), or consent of department.

MATH 3601 Mathématiques numériques II Cr.Hrs.3 (L'ancien 136.360) Différentiation numérique; quadrature Gaussienne; lissage à l'aide de splines; méthodes numériques pour les problèmes à valeurs initiales et problèmes aux frontières; transformations; problèmes où interviennent les systèmes de grande taille, pars ou mal conditionnés. On ou l'étudiante ne peut se faire créditer à la fois avec le MATH 3600 (ou 136.360) (ou les anciens 006.320 ou 006.331). Préalables: MATH 2600 ou MATH 2601 (ou 136.260) (ou l'ancien 006.220) (C), MATH 2800 ou MATH 2801 (ou 136.280) (ou les anciens 006.235 ou 006.226) (C), MATH 2720 ou MATH 2721 (ou 136.272) (ou l'ancien 013.239) (C) et MATH 2730 ou MATH 2731 (ou 136.271) (ou l'ancien 013.249) (C) (ou MATH 2750 (ou 136.275) (ou l'ancien 013.234) (C) et le

COMP 1010 ou COMP 1011 (ou 074.101) (ou l'ancien 074.123)(C) ou le consentement du professeur. Donné seulement au Collège universitaire de Saint-Boniface.

MATH 3700 Applied Complex Analysis Cr.Hrs.3 (Formerly 136.370) Concepts and techniques of complex variable theory in the context of applied mathematics. Not to be held with MATH 3110 (or 136.311), MATH 3710 (or 136.371), (or the former 006.343, 013.372 or 006.325. *Prerequisites:* MATH 2720 or MATH 2721 (or 136.272 or the former 136.270 or 013.239) (C) and either MATH 2730 or MATH 2731 (or 136.273) (or the former 136.271 or 013.249) (C) (or MATH 2750 (or 136.275) (or the former 013.234) (C) or PHYS 2490 (or the former 016.237) (C) or consent of department.

MATH 3710 Complex Analysis 1 Cr.Hrs.3 (Formerly 136.371) The geometry of the complex plane, analytic functions, contour integration. Cauchy's theorem and formula, the residue theorem, etc. Not to be held with MATH 3110 (or 136.311), MATH 3700 (or 136.370) (or the former 006.343, 006.325 or 013.372). *Corequisite:* MATH 3230.

MATH 3740 Methods of Advanced Calculus Cr.Hrs.6 (Formerly 136.374) Uniform convergence of series and integrals. Transformations, inverse and implicit function theorems. Vector analysis including Green's and Stokes' theorems. Not to be held with MATH 3760 (or 136.376) (or the former 013.340, 136.375 or 013.332). *Prerequisites:* MATH 2300 or MATH 2301 (or 136.230) (or the former 013.246) (C), MATH 2720 or MATH 2721 (or 136.272) (or the former 136.270 or 013.239) (C), MATH 2730 or MATH 2731 (or 136.273) (or the former 136.271 or 013.249) (C), or consent of department.

MATH 3760 Advanced Calculus Cr.Hrs.6 (Formerly 136.376) Vector analysis; The Riemann and Riemann-Stieltjes integral, uniform convergence of series and integrals, power series and Fourier series. This course is taught at an Honours/Major level. Not to be held with MATH 3750 (or 136.375) (or the former 013.332 or 013.340). *Prerequisites:* MATH 2750 (or 136.275) (or the former 013.234) (C), MATH 2350 (or 136.235) (or the former 013.235) (C) and MATH 2200 (or 136.220) (or the former 013.237) (C) or consent of department.

MATH 3800 Ordinary Differential Equations with Applications 2 Cr.Hrs.3 (Formerly 136.380) Laplace transforms, series solutions of ODEs, systems of linear ODEs, applications, introduction to dynamical systems. Not to be held with the former 006.236 or 006.245. *Prerequisite:* MATH 2800 or MATH 2801 (or 136.280) (or the former 006.226 or 006.235) (C). *Corequisite:* MATH 2730 or MATH 2731 or MATH 2750.

MATH 3810 Partial Differential Equations 1 Cr.Hrs.3 (Formerly 136.381) Fourier series and introductory Sturm-Liouville theory. Derivation of wave, diffusion and Laplace equations. Solution by separation of variables. Not to be held with the former 006.347 or 013.457. *Prerequisites:* MATH 2720 or MATH 2721 (or 136.270) (or the former 013.239 or 136.272) (C), and MATH 2730 or MATH 2731 (or 136.273) (or the former 136.271 or 013.249) (C) or MATH 2750 (or 136.275) (or the former 013.234) (C) and MATH 3800 (or 136.380) (or the former 006.245 or 006.236) (C) or consent of department.

MATH 3820 Introduction to Mathematical Modelling Cr.Hrs.3 (Formerly 136.382) An introduction to the principles and techniques involved in the design, development, solution, testing and revision of mathematical models of "real-world" phenomena illustrated through the discussion of case studies. Not to be held with the former 006.240, 006.250 or 006.337. *Prerequisites:* MATH 2600 or MATH 2601 (or 136.260) (or the former 006.220) (C) and MATH 2800 or MATH 2801 (or 136.280) (or the former 006.235) (C). *Corequisite:* STAT 1000 or STAT 1001.

MATH 3900 Problem Solving Seminar Cr.Hrs.3 (Formerly 136.390) Classical problem solving methods and heuristics; Pólya's method; assorted problems in geometry, algebra, combinatorics, analysis and logic; proof technique and presentation of mathematics. Students will be required to: i) participate in mathematical competitions; ii) present solutions to problems in class; iii) give in-class presentations about material based on readings. *Corequisites:* MATH 1700 or MATH 1701 and MATH 1300 or MATH 1301.

MATH 3910 Topics in General Mathematics Cr.Hrs.3 (Formerly 136.391) Topics of general interest in Mathematics or Applied Mathematics that will vary depending upon the interest and requirements of students and faculty, and may include specialized topics not available in regular course offerings. May not be used in an Honours program. *Prerequisite:* consent of department.

MATH 4200 Topology 2 Cr.Hrs.3 (Formerly 136.420) Topics include Tychonoff spaces, ordered spaces, arbitrary products, the Stone-Cech compactification, various types of disconnectedness, generalizations of compactness, paracompactness, and introductory homotopy theory. Not to be held with the former 013.463. *Prerequisite:* MATH 3240 (or 136.324) (or the former 013.371) (C).

MATH 4210 Topology 3 Cr.Hrs.3 (Formerly 136.421) A selection of intermediate and advanced topics in general topology. These may include: an introduction to geometric topology, an introduction to independence results in set-theoretic topology, Stone duality, metrization, compactification theory, uniformities, absolutes and perfect maps, and realcompactness. Not to be held with the former 013.463. *Prerequisite:* MATH 4200 (or 136.420) (C).

MATH 4230 Algebraic Topology Cr.Hrs.3 (Formerly 136.423) An introduction to Algebraic Topology. Topics include basic homotopy theory, fundamental groups of topological spaces, free groups and group presentations, classification of low dimensional manifolds, Seifert-Van Kampen theorem, covering spaces and homology theory. *Prerequisite:* MATH 3240 (or 136.324) (or *co-requisite* MATH 3240 with consent of department) (C) and MATH 3300 (or 136.330) (or *co-requisite* MATH 3350) (C).

MATH 4250 Mathematical Logic Cr.Hrs.6 (Formerly 136.425) The mathematical study of propositional and predicate logic; proof theory. Introduction to model theory (completeness, compactness, Lowenheim-Skolem theorems). Recursion theory, undecidability, incompleteness. Not to be held with the former 013.456. Offered in 2006-2007 and alternated years thereafter. *Prerequisite:* MATH 3350 (or 136.335) (or the former 013.345) (C) or consent of department.

MATH 4350 Modern Algebra Cr.Hrs.6 (Formerly 136.435) A continuation of the topics of MATH 3350, and an introduction to such further topics as category theory, universal algebra, multilinear algebra, and homological algebra. Not to be held with the former 013.448. *Prerequisite:* MATH 3350 (or 136.335) (or the former 013.345) (C).

MATH 4400 Combinatorics 2 Cr.Hrs.3 (Formerly 136.440) Generating functions, combinatorial geometry, symbolic dynamics, forbidden configurations, topics from combinatorial matrix theory. Not to be held with the former 013.465. *Prerequisites:* MATH 2750 (or 136.275) (or the former 013.234) (C), MATH 3400 (or 136.340) (or the former 013.347) (C) and MATH 3350 (or 136.335) (or the former 013.345) (C)

MATH 4410 Graphs, Codes and Designs Cr.Hrs.3 (Formerly 136.441) Graph decompositions, colourings, and applications, adjacency matrices, triple systems and generalizations, BIBD's, orthogonal designs, linear codes, Hamming codes, error-correction codes, public key cryptography, secret sharing. *Prerequisites:* MATH 3400 (or 136.340) (or the former 013.347) (C) and MATH 3350 (or 136.335) (or the former 013.345) (C).

MATH 4420 Finite Geometry Cr.Hrs.3 (Formerly 136.442) Finite fields, finite affine and projective planes, partial geometries and related configurations. *Prerequisite:* MATH 3350 (or 136.335) (or the former 013.345) (C) and MATH 3400 (or 136.340) (C).

MATH 4430 Introduction to Elliptic Curves Cr.Hrs.3 (Formerly 136.443) Homogeneous coordinates, non-singular cubic curves, cubic curves of finite fields. *Prerequisites:* MATH 2500 or MATH 2501 (or 136.250) (or the former 013.226) (C), MATH 2350 (or 136.235) (or the former 013.235) (C), and either MATH 3300 (or 136.330) (C) and MATH 3310 (or 136.331) (C), or MATH 3350 (or 136.335) (or the former 013.345) (C).

MATH 4600 Topics in Numerical Analysis Cr.Hrs.3 (Formerly 136.460) Mathematical approach to an in-depth study of two of the following topics: computational methods of linear algebra, numerical solution of ordinary differential equations, numerical solution of partial differential equations, numerical solution of integral equations, spline functions with applications, finite elements. Not to be held with the former 006.445. *Prerequisite:* MATH 3600 (or 136.360) (or the former 006.320) (C) or consent of department.

MATH 4610 Introduction to Finite Elements and Boundary Elements Cr.Hrs.3 (Formerly 136.461) Introduction to finite element and boundary element techniques for solving partial differential equations. Not to be held with the former 006.448. *Prerequisites:* MATH 3600 (or 136.360) (or the former 006.320) (C) and either MATH 3750 (or 136.375) (C) or MATH 3760 (or 136.376) (or the former 013.332 or 013.340) (C).

MATH 4700 Applied Functional Analysis Cr.Hrs.3 (Formerly 136.470) Elements of metric, normed and inner product spaces; operators and inverses; applications in analysis and numerical analysis. Not to be held with the former 006.446. *Prerequisite:* MATH 3750 (or 136.375) (or the former 013.332) (C).

MATH 4710 Complex Analysis 2 Cr.Hrs.3 (Formerly 136.471) Conformal mappings, space of analytic functions, space of meromorphic functions, harmonic functions. Not to be held with the former 013.462. *Prerequisites:* MATH 3240 (or 136.324) (or the former 013.371) (C), MATH 3710 (or 136.371) (or the former 013.372) (C) and MATH 3760 (or 136.376) (or the former 013.340) (C).

MATH 4720 Complex Analysis 3 Cr.Hrs.3 (Formerly 136.472) Subharmonic functions, infinite products, entire functions, analytic continuation. Not to be held with the former 013.462. *Prerequisite:* MATH 4710 (or 136.471) (C).

MATH 4730 Tensor and Variational Calculus Cr.Hrs.3 (Formerly 136.473) An introduction to tensor calculus, differential forms, and variational principles on differentiable and Riemannian manifolds. Not to be held with the former 006.442. *Prerequisites:* six credit hours of 2000 level calculus and MATH 2800 or MATH 2801 (or 136.280) (or the former 006.235) (C) or consent of department. *Corequisite:* MATH 3750 or MATH 3760.

MATH 4750 Real Variables Cr.Hrs.6 (Formerly 136.475) Measure and integration on the real line and on abstract spaces. Classical Banach spaces of functions, and basic functional analysis. Not to be held with the former 013.452. *Prerequisites:* MATH 2350 (or 136.235) (or the former 013.235) (C), MATH 3230 (or 136.323) (or the former 013.338) (C) and MATH 3760 (or 136.376) (or the former 013.340) (C) or consent of department.

MATH 4800 Dynamical Systems: Theory and Applications Cr.Hrs.3 (Formerly 136.480) Systems of differential equations, linear systems, applied dynamics, phase space, stability, introduction to chaos. *Prerequisites:* MATH 3600 (or 136.360) (or the former 006.320) (C) and MATH 3800 (or 136.380) (or the former 006.236 or 006.245) (C).

MATH 4810 Partial Differential Equations 2 Cr.Hrs.3 (Formerly 136.481) Partial differential equations and their classification. Special functions and generalized eigen function expansions. Solution by separation of variables, and transform methods. Not to be held with the former 006.447. *Prerequisite:* MATH 3810 (or 136.381) (or the former 006.347) (C).

MATH 4820 Advanced Mathematical Modelling Cr.Hrs.3 (Formerly 136.482) Interactive development of mathematical models for real life situations using more advanced mathematics; topics and methods used will vary from year to year. Not to be held with the former 006.444. *Prerequisite:* MATH 3820 (or 136.382) (or the former 006.337) (C) and consent of department.

MATH 4900 Project Course in Applied Mathematics 1 Cr.Hrs.3 (Formerly 136.490) A research project chosen by the student in consultation with the department head and an appropriate supervising Faculty member. A written report will be required, to be submitted by March 31. An oral examination may be required. This course is restricted to students in fourth year of the Honours program in Mathematics. *Prerequisite:* MATH 3820 (or 136.382) (or the former 006.337) (C).

MATH 4920 Topics in Mathematics 1 Cr.Hrs.3 (Formerly 136.492) Topics of current interest in Mathematics or Applied Mathematics upon the interests and requirements of students and faculty, and will include specialized topics not available in regular course offerings. *Prerequisite:* consent of department.

MATH 4950 Project Course in Applied Mathematics 2 Cr.Hrs.6 (Formerly 136.495) A research project chosen by the student in consultation with the department head and an appropriate supervising Faculty member. A written report will be required, to be submitted by March 31. An oral examination may be required. This course is restricted to students in fourth year of the Honours program in Mathematics. *Prerequisite:* MATH 3820 (or 136.382) (or the former 006.337) (C).

MATH 4960 Topics in Mathematics 2 Cr.Hrs.6 (Formerly 136.496) Topics will vary depending upon the interests and requirements of students and faculty, and will include specialized topics not available in regular course offerings. *Prerequisite:* consent of department.

Service Courses

Unless otherwise specified, a minimum grade of "C" must be achieved for any course stipulated as prerequisite to a further course in Mathematics.

MATH 1210 Techniques of Classical and Linear Algebra Cr.Hrs.3 (Lab Required) To introduce a variety of practical algebraic concepts and skills necessary for the study of calculus and advanced engineering mathematics. The emphasis of this course is in the development of methodology and algebraic skill necessary for successful completion of subsequent engineering mathematics courses. This course is intended for engineering and geophysics students only. Not to be held with MATH 1200 or MATH 1201 (136.120), MATH 1300 or MATH 1301 (136.130), MATH 1310 (136.131) (or the former 006.120, 006.144, 006.147 or 006.121, 013.128, 013.129 or 013.146). *Prerequisites:* a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of "C" or better in the Mathematical Skills course taught by the Continuing Education Division.

MATH 2100 Mathematical Methods for Engineers 1 Cr.Hrs.4 (Formerly 136.210) Fundamental techniques for solving engineering problems including series, elements of linear algebra, and ordinary differential equations. For Engineering and Geophysics students only. Not to be held with the former 006.237, 006.238, 006.244 or 006.260. *Prerequisite:* one of MATH 1690 (or 136.169) (C), MATH 1700 or MATH 1701 (or 136.170) (C), MATH 1710 (or 136.171) (C) or MATH 1730 (or 136.173) (or the former 006.126, 013.149 or 013.159) (C).

MATH 2110 Mathematical Methods for Engineers 2 Cr.Hrs.4 (Lab Required) (Formerly 136.211) Laplace transforms and calculus of several variables including partial differentiation, multiple integrals, and applications. For Engineering and Geophysics students only. Not to be held with the former 006.227, 006.228, 006.243 or 006.261. *Prerequisite:* MATH 2100 (or 136.210) (or the former 006.260) (C).

MATH 2120 Introductory Numerical Methods for Engineers Cr.Hrs.4 (Lab Required) (Formerly 136.212) Numerical methods applied to problems in engineering; roots of nonlinear equations and systems of linear equations, numerical differentiation and integration, initial-value problems. For Engineering students only. Not to be held with MATH 2600 or MATH 2601 (or 136.260) (or the former 006.220, 006.270 or 010.344). *Prerequisites:* COMP 1010 or COMP 1011 (or 074.101) (or the former 074.111 or 074.112) (C), and MATH 2100 (or 136.210) (or the former 006.260) (C).

MATH 3100 Mathematical Methods for Engineers 3 Cr.Hrs.3 (Lab Required) (Formerly 136.310) Vector integral calculus, series solutions of ordinary differential equations, Fourier series, and an introduction to partial differential equations. For Engineering and Geophysics students only. Not to be held with the former 006.324 or 006.360. *Prerequisites:* MATH 2100 (or 136.210) (or the former 006.260) (C) and MATH 2110 (or 136.211) (or the former 006.237, 006.238, 006.244 or 006.261) (C).

MATH 3110 Mathematical Methods and Complex Analysis Cr.Hrs.4 (Formerly 136.311) Theory and applications of complex function theory; complex Fourier series, Laplace transformation and its complex inversion; series solution of differential equations. For Engineering and Geophysics students only. Not to be held with MATH 3700 (or 136.370 or 006.325) or MATH 3710 (or 136.371 or 013.372) or 006.343. *Prerequisite:* MATH 3100 (or 136.310) (or the former 006.360) (C) or consent of department.

MATH 3120 Applied Discrete Mathematics Cr.Hrs.3 (Lab Required) (Formerly 136.312) Sets, groups, graphs, and Boolean algebra. For Engineering students only. Not to be held with COMP 2130 (or 074.213) or 074.212 and the former 006.371. *Prerequisites:* MATH 2100 (or 136.210) (or the former 006.260) (C) and MATH 2120 (or 136.212) (or the former 006.270) (C).

MATH 3130 Linear Spaces for Physicists Cr.Hrs.3 (Formerly 136.313) A course intended for honours/major students in Physics. Review of linear algebra (MATH 1300

(or 136.130)); vector spaces, linear transformations; eigenvalues and eigenvectors; inner product spaces; additional topics as time permits. Not to be held with MATH 2300 or MATH 2301 (or 136.230) (or the former 013.246) or MATH 2350 (or

136.235) (or the former 013.235 or 013.355). *Prerequisites:* MATH 2750 (or 136.275) (or the former 013.234) (C) or both MATH 2720 or MATH 2721 (or 136.270) (or the former 013.239) (C) and PHYS 2490 (or the former 016.237) (C).

4.13 Department of Microbiology

Head: Peter Loewen

General Office: 418 Buller Building

Telephone: 204 474 9372

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4.13.1 Academic Staff

Professor Emeritus

Suzuki, I., B.Sc. (Tokyo), Ph.D. (Iowa).

Senior Scholar

Klassen, G., B.Sc., M.Sc., Ph.D. (Manitoba); **Reid, J.**, B.Sc.(Hons.), M.Sc. (McMaster), Ph.D. (Toronto)

Professors

Butler, M., B.Sc. (Birmingham), M.Sc. (Waterloo), Ph.D. (King's College); **Loewen, P.C.**, B.Sc., Ph.D. (Alberta)

Associate Professors

Court, D.A., B.Sc.(Hons.) (Regina), Ph.D. (Guelph); **Dibrov, P.**, M.Sc., Ph.D. (Moscow State); **Hausner, G.**, B.Sc. (Winnipeg), M.Sc. (Manitoba) Ph.D. (Manitoba); **Londry, K.**, B.Sc.(Hons.), M.Sc. (Alberta), Ph.D. (Oklahoma); **Oresnik, I.J.**, B.Sc., M.Sc., (McMaster), Ph.D. (Queen's); **Sparling, R.R.M.**, B.Sc. (McGill), Ph.D. (Iowa); **Worobec, E.A.**, B.Sc. (Winnipeg), Ph.D. (Alberta); **Yurkov, V.**, M.Sc. (Moscow State), Ph.D. (Moscow Academy of Sciences).

Assistant Professors

Cardona, S.T., B.Sc.(Buenos Aires), Ph.D. (Chile); **de Kievit, T.**, B.Sc. (Waterloo), B.Sc. Specialized Hons. (Guelph), Ph.D. (Guelph); **Mark, B.**, B.Sc. (Winnipeg), M.Sc. (Manitoba), Ph.D. (Alberta).

Instructors

Cameron, L.E., B.Sc., Ph.D. (Manitoba) (Senior Instructor); **Kutcher, K.**, B.Sc., M.Sc. (Manitoba).

4.13.2 Program Information

Microbiology is the study of microorganisms such as bacteria, viruses, fungi, protozoa, and algae, and their interactions with the environment. It is also an area of study that plays a pivotal role in understanding other life science disciplines, such as medicine, agriculture, ecology, and pharmacy. Studies in cloning, recombinant DNA technology, and gene sequencing are part of the program. The departments of Microbiology and Chemistry offer a joint Honours program and a joint Four Year Major program in biochemistry and a joint Honours program in biotechnology (See Sections 4.2 and 4.4).

The department must approve a student's Honour or Major program each session. Students must also obtain approval for any and all revisions to their program.

Microbiology Prerequisite Information

Students are advised to take courses in the year suggested, otherwise difficulties may arise with timetabling and prerequisite requirements. Students are responsible for all prerequisites and corequisites of the courses required or selected in all programs below. Since Chemistry courses form an integral part of all Microbiology programs, students should note that Grade 12 mathematics and chemistry are prerequisite to CHEM 1300.

Honours Requirements and Options

To enter Honours Microbiology, students must have a minimum grade of "B" in each of CHEM 1300 and CHEM 1310, and a minimum of "C+" in BIOL 1030; or a minimum of "C+" in each of CHEM 1300 and CHEM 1310, and a minimum of "B" in BIOL 1030. Statistics STAT 1000 and the 3 credit hours of specified Mathematics or Physics courses can be completed in University 1 or Year 2.

To proceed from Year 2 to Year 3 and Year 3 to Year 4 and to complete Year 4 of the Honours program successfully, a student must have an annual Grade Point Average of 2.50, and in addition, must have a 3.00 Grade Point Average on all Microbiology courses during that session. Students must complete 24 credit hours each regular session.

Students who wish to elect CHEM 2280, CHEM 2290 or CHEM 2470 as options, should note the prerequisites in making a choice of mathematics courses.

By careful choice of electives, programs may be selected giving emphasis to various areas of Microbiology, e.g., Biochemistry and Molecular Biology or Environmental and Ecological Microbiology. In choosing optional courses, students should be aware of any prerequisite requirements.

Honours Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Honours Microbiology program may enter the Cooperative Option in their third year in Honours Microbiology. This program provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and university units.

The course and grade requirements for entry to this option are the same as those required for entry to the regular Honours program, as indicated in the chart. Students are required to complete the first and second year requirements of the program and MBIO 3410 before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Honours) Cooperative Options in Section 3.6.

Students should note that the grade requirements for the Cooperative Option are the same as that for the regular Honours program. To continue in the Honours Cooperative program, i.e., to proceed from Year 2 to Year 3 and from one academic term to the next and to complete the Honours Cooperative program successfully, a student must have an annual Grade Point Average of 2.50, and in addition, must have a 3.00 Grade Point Average on all Microbiology courses during that session. Each academic term in the third and subsequent years must comprise 15 credit hours.

Students will apply for openings in the Cooperative Option in September of their third year in the Honours program. They will be notified of their provisional acceptance in the program by October. Acceptance into the program is dependent upon the student receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. The first work term can be taken in January or May. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.

Four Year Major

The requirements for entry to the four year Major program in Microbiology are a minimum of "C+" in each of CHEM 1300 and CHEM 1310, and a minimum of "C" in BIOL 1030; or a minimum of "C+" in BIOL 1030 and a minimum of "C" in each of CHEM 1300 and CHEM 1310. Statistics STAT 1000 and the 3 credit hours of specified Mathematics or Physics can be completed in University 1 and Year 2. In addition, the faculty requirements for entry to the four year Major program must be satisfied.

Potential entrants to this program should note the following:

Students who wish to elect CHEM 2280, CHEM 2290 or CHEM 2470 as options should note the prerequisites in making a choice of mathematics courses.

Chemistry CHEM 2210 must be taken before MBIO 2370 (CHEM 2370). Courses MBIO 2360 and CHEM 2360, and MBIO 2370 and CHEM 2370 are the same and credit cannot be held for both. Microbiology students will normally register in MBIO 2360 and MBIO 2370, but CHEM 2360 and CHEM 2370 will be regarded as its equivalent in the four year Major program.

Students intending to apply for transfer to the Honours program after Year 2 should register for MBIO 2280 in Year 2.

Students must note course and grade prerequisites when selecting 3000 and 4000 level Microbiology courses.

Microbiology MBIO 4530 is not available in this program.

By careful choice of electives, programs may be selected giving emphasis to various areas of Microbiology, e.g., Biochemistry and Molecular Biology or Environmental and Ecological Microbiology. In choosing optional courses, students should be aware of any prerequisite requirements.

The listed requirements are minimum requirements. Students are reminded that should they wish to take further courses in Microbiology, they are at liberty to do so within the degree regulations.

Four Year Major Cooperative Option

Students interested in alternating employment terms and academic terms as part of their Major Microbiology program may enter the Cooperative Option in their third year in Microbiology. This program provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and University units.

The course and grade requirements for entry to this option are the same as those required for entry to the regular Major program. In this program, MBIO 3010 and MBIO 3410 are required in Year 3. Students are required to complete the first and second year requirements of the program and MBIO 3410 before they begin their first employment term. See the general faculty regulations for B.Sc. (Major) Cooperative Option in Section 3.4.

Students will apply for openings in the Cooperative Option in September of their third year in the Major program. They will be notified of their provisional acceptance in the program by October. Acceptance into the program is dependent upon the student receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. The first work term can be taken in January or May. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.

Option List* for All Microbiology Programs:

Botany:

BOTN 2010, BOTN 2020, BOTN 2180, BOTN 2210, BOTN 2290,

BOTN 2370, BOTN 3010, BOTN 3250, BOTN 3280, BOTN 3460, BOTN 4050, BOTN 4120, BOTN 4130, BOTN 4160, BOTN 4210

Chemistry:

CHEM 2280, CHEM 2290, CHEM 2380, CHEM 2470, CHEM 3390, CHEM 3590, CHEM 4590, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630

Environmental Science: ENVR 2180

Zoology:

ZOOL 2150, ZOOL 2180, ZOOL 2370, ZOOL 2530, ZOOL 2540, ZOOL 3060, ZOOL 3070, ZOOL 3500, ZOOL 3530, ZOOL 3540, ZOOL 4140, ZOOL 4150, ZOOL 4270, ZOOL 4600

Food Sciences: FOOD 4150, FOOD 4280

General Agriculture: AGRI 2180, AGECE 2370

Mathematics: MATH 2010

NOTE: * Other suitable options may be selected with permission of the department.

Three Year General

As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from **two** Science departments. To satisfy the requirement in the Department of Microbiology, students must take a minimum of 12 credit hours of Microbiology courses as prescribed in the chart below.

Students wishing to elect courses in Microbiology in fulfilment of the requirements for the B.Sc. (General) degree should note the following:

Students must have successfully completed BIOL 1020 and 1030 (C), and CHEM 1300 and CHEM 1310.

The regulations for the B.Sc. (General) degree allow election of up to 42 credit hours from a single department. Students are therefore encouraged to elect additional Microbiology courses above the required minimum.

Microbiology MBIO 2770 and MBIO 2780 (CHEM 2770 and CHEM 2780) are not available in this program.

Minor

Students must complete 12 credit hours at the 2000 and (or) 3000 level. Note that BIOL 1030 (C) and CHEM 1310 or CHEM 1320 are prerequisites to MBIO 2100.

Biochemistry and Biotechnology Programs

The Department of Chemistry, in conjunction with the Department of Microbiology, offers a Joint Honours program, a Joint Honours Cooperative Option, a Joint four year Major program and a Joint four year Major Cooperative Option program in Biochemistry. See Section 4.2 *Biochemistry Program* for full details. They also offer a Joint Honours program in Biotechnology. See Section 4.4 for full details.

4.13.3 Microbiology, Department Code: 060

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS³ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	MBIO 2100, MBIO 2110, MBIO 2280, MBIO 2360 (CHEM 2360), MBIO 2370 (CHEM 2370), BOTN 2460, CHEM 2210, CHEM 2220, ZOOL 2280	MBIO 3010, MBIO 3410, MBIO 3440, MBIO 3470, MBIO 3480	MBIO 4010, MBIO 4470, MBIO 4530, MBIO 4600, MBIO 4610
In University 1 or Year 2 the following must be completed:			
3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , PHYS 1020 or PHYS 1050			
STAT 1000			
6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.			
30 Hours	30 Hours	30 Hours	30 Hours

Plus 15 credit hours of Microbiology courses⁴ and 12 credit hours chosen from Microbiology courses⁴ or from the option list (see above)

HONOURS COOPERATIVE OPTION³ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	MBIO 2100, MBIO 2110, MBIO 2280, MBIO 2360 (CHEM 2360), MBIO 2370 (CHEM 2370), BOTN 2460, CHEM 2210, CHEM 2220, ZOOL 2280	MBIO 3010, MBIO 3410, MBIO 3440, MBIO 3470, MBIO 3480	MBIO 4010, MBIO 4470, MBIO 4600, MBIO 4610
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continued on next page

In University 1 or Year 2 the following must be completed:

3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

STAT 1000

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990

Plus 21 credit hours of Microbiology courses⁴ and 12 credit hours chosen from Microbiology courses⁴ or from the option list (see above)

30 Hours	30 Hours	30 Hours	30 Hours
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FOUR YEAR MAJOR^{3,5} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	MBIO 2100, MBIO 2110, MBIO 2360 (CHEM 2360), MBIO 2370 (CHEM 2370), BOTN 2460, CHEM 2210, CHEM 2220, ZOOL 2280	33 credit hours of Microbiology courses ² including 15 credit hours at the 4000 level ² Plus 9 credit hours from Microbiology courses ² or from the option list (see above)
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In University 1 or Year 2 the following must be completed:

3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

STAT 1000

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

MAJOR COOPERATIVE OPTION^{3,5} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	MBIO 2100, MBIO 2110, MBIO 2360 (CHEM 2360), MBIO 2370 (CHEM 2370), BOTN 2460, CHEM 2210, CHEM 2220, ZOOL 2280	MBIO 3010, MBIO 3410 27 credit hours of Microbiology courses ² including 15 credit hours at the 4000 level Plus 9 credit hours from Microbiology courses ² or from the option list (see above)
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In University 1 or Year 2 the following must be completed:

3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

STAT 1000

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990

THREE YEAR GENERAL

12 credit hours of Microbiology at the 2000 and (or) 3000 level

MINOR

CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030 (C) 12 credit hours of Microbiology at the 2000 and (or) 3000 level

JOINT MICROBIOLOGY-CHEMISTRY HONOURS AND FOUR YEAR MAJOR IN BIOCHEMISTRY: See Section 4.2 Biochemistry

JOINT MICROBIOLOGY-CHEMISTRY HONOURS IN BIOTECHNOLOGY: See Section 4.4 Biotechnology

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520, MATH 1530, MATH 1680 or MATH 1690 may be taken in place of MATH 1500.

² MBIO 4010, MBIO 4530 and MBIO 4570 may be selected only by special permission.

³ The courses in this program will satisfy the University mathematics requirement.

⁴ MBIO 4020 and MBIO 4580 cannot be selected.

⁵ IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. (Letters in brackets indicate minimum prerequisite standing for further study.)

4.13.4 Microbiology Course Descriptions

A grade of "C" or better in BIOL 1030 is a prerequisite for General, Major and Honours courses in Microbiology, with the exception of MBIO 1220. To fulfil prerequisite requirements, unless otherwise specified, a minimum grade of "C" must be achieved in any Microbiology course stipulated as a prerequisite to a further course in Microbiology.

General Courses

U1 MBIO 1220 Essentials of Microbiology Cr.Hrs.3 (Formerly 060.122) A review of the essential principles of microbiology including immunity, with emphasis on microbial disease. Not available to students who have previously obtained credit in or are currently enrolled in MBIO 3010 or MBIO 3011 (or 060.301). NOTE: MBIO 1220 is intended for students planning to enter the Faculty of Nursing or other health care or related programs, but may be used as an elective in an Arts or Science program. It may also be used to meet a program requirement for the Honours and Major programs in Microbiology.

MBIO 2100 General Microbiology A Cr.Hrs.3 (Lab Required) (Formerly 060.210) Fundamental principles of and methods used in microbiology. An introduction to the major groups of micro-organisms, their structure and function, growth, metabolism, physiology and regulatory systems. Not to be held with the former 060.220 or 060.222. *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C) and CHEM 1310 or CHEM 1311 (or 002.131) (C) or CHEM 1320 (or 002.132) (or the former 002.123 or 002.128) (C).

MBIO 2101 Microbiologie générale A Cr.Hrs.3 (Labo requis) (L'ancien 060.210) Principes fondamentaux de la microbiologie. Un cours d'introduction qui étudie les structures et leurs fonctions, la croissance, le métabolisme, la physiologie et les systèmes régulateurs des principaux groupes de microorganismes. On ne peut se faire créditer à la fois le MBIO 2100 (ou 060.210) et les anciens 060.220 ou 060.222. *Préalables:* CHEM 1310 ou CHEM 1311 (ou 002.131) (C) ou CHEM 1320 (ou 002.132) (ou les anciens 002.123 ou 002.128) (C) et le BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 2110 General Microbiology B Cr.Hrs.3 (Lab Required) (Formerly 060.211) Microbial synthesis of nucleic acids and proteins, introductions to bacterial and animal viruses, mutation, and bacterial genetics. Not to be held with the former 060.220 or 060.222. *Prerequisite:* MBIO 2100 or MBIO 2101 (or 060.210) (C).

MBIO 2111 Microbiologie générale B Cr.Hrs.3 (Labo requis) (L'ancien 060.211) Cours d'introduction aux bactéries, aux virus des animaux, aux mutations, à la génétique bactérienne, à la pathogénicité microbienne, à la résistance de l'hôte en y incluant le système immunitaire. On ne peut se faire créditer à la fois le MBIO 2110 (ou 060.211) et les anciens 060.220 ou 060.222. *Préalable:* MBIO 2100 ou MBIO 2101 (ou 060.210) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 2230 Introductory Biogeochemistry Cr.Hrs.3 (Lab Required) (Formerly 060.223) The roles and interactions of biological, chemical and geological reactions in determining the composition of the environment. Microorganisms as major agents of biogeochemical change and their roles in the element cycles will be especially emphasized. *Prerequisite:* CHEM 1310 or CHEM 1311 (or 002.131) (or the former 002.128) (C). It is recommended that 3 credit hours of 1000 level Geological Sciences be taken concurrently with or prior to MBIO 2230 (or 060.223). Not available to students who have previously obtained credit in, or are currently registered in MBIO 4320 (or 060.432).

MBIO 2280 Microbial Ecology Cr.Hrs.3 (Lab Required) (Formerly 060.228) A survey of methods used to study microbial associations and their behaviour. Not to be held with the former 060.226. *Prerequisite:* MBIO 2100 or MBIO 2101 (or 060.210) (or the former 060.220 or 060.222) (C).

MBIO 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy Cr.Hrs.3 (Lab Required) (Formerly 060.236) An introductory course dealing with kinds of molecules encountered in biochemistry, and the concept of metabolic energy as a product of catabolism and a requirement for biosynthesis. This course is also given in Chemistry as CHEM 2360. Not to be held with MBIO 2770 (or 060.277) (or the former 060.240), or CHEM 2360 or CHEM 2361 (or 002.236), CHEM 2860 (or 002.286) or CHEM 2770 (or 002.277) (or the former 002.240, or 060.235 or 002.235). *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) (or the former 002.128) and BIOL 1030 or BIOL 1031 (or the former 071.125), both courses with a minimum grade of "C." NOTE: Students may hold this course for credit in the B.Sc. General degree program, but may not use it to fulfill the minimum requirement of 12 credit hours in 2000 level Chemistry.

MBIO 2361 Biochimie I: Les molécules biochimiques et une introduction à l'énergie métabolique Cr.Hrs.3 (Labo requis) (L'ancien 060.236) Une introduction aux différents types moléculaires rencontrés en biochimie ainsi qu'au concept d'énergie métabolique comme produit du catabolisme nécessaire à la biosynthèse. Ce cours est aussi offert par le Département de chimie sous la cote CHEM 2361. On ne peut se faire créditer à la fois avec les MBIO 2360 (ou 060.236), MBIO 2770 (ou 060.277) (ou l'ancien 060.240), ou le CHEM 2360 ou CHEM 2361 (ou 002.236), le CHEM 2860 (ou 002.286) ou le CHEM 2770 (ou 002.277) (ou les anciens 002.240, 060.235 ou 002.235). *Préalables:* une note de "C" dans le CHEM 1310 ou CHEM 1311 (ou 002.131) (ou l'ancien 002.128) et le BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125). Donné seulement au Collège universitaire de Saint-Boniface. NOTE: On peut utiliser ce cours dans son Baccalauréat ès sciences général. Par contre, ce cours ne peut pas être utilisé pour satisfaire les exigences de 12 heures-crédits aux niveaux 2000 et 3000 en chimie.

MBIO 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways Cr.Hrs.3 (Lab Required) (Formerly 060.237) An introductory course dealing with the basic metabolic processes that occur in living cells, including the production and use of metabolic energy, the breakdown and synthesis of biomolecules; the synthesis of DNA, RNA and proteins; and the regulation of these processes. This course is also given in Chemistry as CHEM 2370. Not to be held with MBIO 2780 (or 060.278) (or the former 060.240), or CHEM 2370 or CHEM 2371 (or 002.237) or CHEM 2780 (or 002.278) (or the former 002.240, 060.235, or 002.235). *Prerequisites:* MBIO 2360 or MBIO 2361 (or 060.236 or 002.236) and CHEM 2210 or CHEM 2211 (or 002.221) (or the former 002.220) (C). NOTE: Students may hold this course for credit in the B.Sc. General degree program, but may not use it to fulfill the minimum requirement of 12 credit hours in 2000 level Chemistry.

MBIO 2371 Biochimie II: Catabolisme, synthèse et les voies d'information Cr.Hrs.3 (Labo requis) (L'ancien 060.237) Une introduction aux processus métaboliques cellulaires de base incluant la production et l'utilisation de l'énergie métabolique, la dégradation et la synthèse des molécules biochimiques, la synthèse de l'ADN, de l'ARN et des protéines et la régulation de ces processus. Ce cours est aussi offert par

le Département de chimie sous la cote CHEM 2371. On ne peut se faire créditer à la fois les MBIO 2370 (ou 060.237), MBIO 2780 (ou 060.278) (ou l'ancien 060.240), ou le CHEM 2370 ou CHEM 2371 (ou 002.237), ou le CHEM 2780 (ou 002.278) (ou les anciens 002.240, 060.235 ou 002.235). *Préalables:* une note de "C" dans le MBIO 2360 ou MBIO 2361 (ou 060.236) ou le CHEM 2360 ou CHEM 2361 (ou 002.236) et le CHEM 2210 ou CHEM 2211 (ou 002.221) (ou l'ancien 002.220). Donné seulement au Collège universitaire de Saint-Boniface. NOTE: On peut utiliser ce cours dans son Baccalauréat ès sciences général. Par contre, ce cours ne peut pas être utilisé pour satisfaire les exigences de 12 heures-crédits aux niveaux 2000 et 3000 en chimie.

MBIO 3010 Mechanisms of Microbial Disease Cr.Hrs.3 (Formerly 060.301) A consideration of host-parasite relationships, an introduction to the immune response, microbial pathogenesis, viral diseases, clinical microbiology and public health, and an introduction to antimicrobial agents. *Prerequisites:* MBIO 2100 or MBIO 2101 (or 060.210) (or the former 060.201, 060.220 or 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (or the former 060.235 or 002.235) (C).

MBIO 3011 Mécanismes des maladies microbiennes Cr.Hrs.3 (L'ancien 060.301) Ce cours a pour objet l'étude des éléments suivants: les relations hôtes-parasites, une introduction à la réponse immunitaire, la pathogénie microbienne, les maladies virales, la microbiologie clinique et la santé publique, ainsi qu'une introduction aux agents antimicrobiens. *Préalables:* MBIO 2100 ou MBIO 2101 (ou 060.210) (ou les anciens 060.201, 060.220, 060.222) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2371 ou CHEM 2370 (ou 002.237) (ou les anciens 060.235 ou 002.235) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 3410 Molecular Biology Cr.Hrs.3 (Formerly 060.341) A rigorous treatment of the foundations of modern day molecular biology as it pertains to molecular disease, gene and cell manipulation, and cellular controls. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.202, 060.220 or 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (or the former 060.235 or 002.235) (C).

MBIO 3411 Biologie moléculaire Cr.Hrs.3 (L'ancien 060.341) Un traitement rigoureux des bases de la biologie moléculaire moderne reliées à la maladie moléculaire, aux manipulations génétiques et cellulaires, ainsi qu'aux contrôles cellulaires. *Préalables:* MBIO 2110 ou MBIO 2111 (ou 060.211) (ou les anciens 060.202, 060.220 ou 060.222) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2370 ou CHEM 2371 (ou 002.237) (ou les anciens 060.235 ou 002.235) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 3430 Molecular Evolution Cr.Hrs.3 (Formerly 060.343) An analysis starting with prebiotic evolution, progressing through the elaboration of macromolecules and examining their adaptation to their function as cellular components. Proteins, carbohydrates, and nucleic acids as structural, catalytic, and genetic elements in evolution of living systems. *Prerequisite:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C) or consent of department head.

MBIO 3440 Microbial Physiology Cr.Hrs.3 (Lab Required) (Formerly 060.344) Physiology of microbial growth, metabolism development and differentiation. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.202, 060.220 or 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 CHEM 2370 (or 002.237) (or the former 060.235 or 002.235) (C).

MBIO 3450 Regulation of Biochemical Processes Cr.Hrs.3 (Formerly 060.345) Mechanisms of regulation of enzyme activity, including allostery, control of selected biosynthetic and degradative pathways and regulation of gene expression. Contact department regarding availability. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C) or consent of the department, and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (or the former 060.235 or 002.235) (C).

MBIO 3451 Régulation des processus biochimiques Cr.Hrs.3 (L'ancien 060.345) Mécanismes de régulation de l'activité enzymatique, incluant l'allostérie, le contrôle de certaines routes biosynthétiques ou dégradatives sélectionnées, ainsi que la régulation de l'expression génétique. *Préalables:* MBIO 2110 ou MBIO 2111 (ou 060.211) (ou les anciens 060.220 ou 060.222) (C) ou le consentement du département, et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2371 CHEM 2370 (ou 002.237) (ou les anciens 060.235 ou 002.235) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 3460 Membrane and Cellular Biochemistry Cr.Hrs.3 (Lab Required) (Formerly 060.346) Isolation, fractionation, structure and function of cellular membranes and subcellular components. The central role of these elements in the biochemistry of cellular processes will be stressed. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C) or consent of the department, and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (or the former 060.235 or 002.235) (C).

MBIO 3461 Biochimie membranaire et cellulaire Cr.Hrs.3 (Labo requis) (L'ancien 060.346) Isolement, fractionnement, structure et fonction des membranes cellulaires et des composés subcellulaires. Le rôle central joué par ces éléments dans la biochimie des processus cellulaires sera mis en évidence. *Préalables:* MBIO 2110 ou MBIO 2111 (ou 060.211) (ou les anciens 060.202, 060.220 ou 060.222) (C) ou le consentement du département, et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2371 CHEM 2370 (ou 002.237) (ou les anciens 060.235 ou 002.235) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 3470 Microbial Systematics Cr.Hrs.3 (Lab Required) (Formerly 060.347) Characterization and classification of the major group of micro-organisms. Bases for

divisions and the relatedness among organisms will be studied. Laboratory work on the identification of representative species. Not to be held with the former 060.331. *Prerequisite:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C).

MBIO 3480 Microbial Diversity Cr.Hrs.3 (Lab Required) (Formerly 060.348) Study of selected groups of micro-organisms that exhibit distinctive properties such as phototrophy, nitrogen fixation, parasitism. Not to be held with the former 060.331. *Prerequisite:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C).

MBIO 4020 Immunology Cr.Hrs.3 (Formerly 060.402) Topics will include antigens, antibodies, antigen-antibody reactions, immunogenetics, regulation of immune reactions, complement, hypersensitivities, autoimmunity, immunodeficiencies, transplantation and tumour immunology. Not to be held with MBIO 4010 (or 060.401) (or the former 060.444. *Prerequisite:* MBIO 3010 or MBIO 3011 (or 060.301) (C).

MBIO 4320 Environmental Microbiology Cr.Hrs.3 (Lab Required) (Formerly 060.432) Applications of microbial ecology and biogeochemistry to environmental concerns, including bioremediation, water treatment, and the terrestrial subsurface. *Prerequisite:* MBIO 2280 (or 060.228) (C). MBIO 2230 (or 060.223) and MBIO 3480 (or 060.348) are recommended.

Honours and Four Year Major Courses

MBIO 3980 Work Term 1 Cr.Hrs.0 (Formerly 060.398) Work assignments in business, industry or government for students registered in the Microbiology Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

MBIO 3990 Work Term 2 Cr.Hrs.0 (Formerly 060.399) Work assignments in business, industry or government for students registered in the Microbiology Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

MBIO 4010 Immunology H Cr.Hrs.3 (Lab Required) (Formerly 060.401) Topics will include antigens, antibodies, antigen-antibody reactions, immunogenetics, regulation of immune reactions, complement, hypersensitivities, autoimmunity, immunodeficiencies, transplantation and tumour immunology. Priority will be given to fourth year Science Honours students. Not to be held with MBIO 4020 (or 060.402) (or the former 060.444. *Prerequisite:* MBIO 3010 or MBIO 3011 (or 060.301) (C).

MBIO 4011 Immunologie Cr.Hrs.3 (Labo requis) (L'ancien 060.401) Les sujets abordés seront les antigènes, les anticorps, les réactions antigènes-anticorps, l'immunogénétique, la régulation de la réponse du système immunitaire, le complément, les réactions d'hypersensibilités, l'auto-immunité, les déficiences immunitaires, l'immunologie des grêffes et des tumeurs. On ne peuvent se faire créditer à la fois le MBIO 4010 (ou 060.401) et MBIO 4020 (ou 060.402) et l'ancien 060.444. *Préalable:* MBIO 3010 ou MBIO 3011 (ou 060.301) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 4410 Virology Cr.Hrs.3 (Formerly 060.441) A comprehensive examination of fundamental properties of viruses, virus taxonomy, and the different ways in which viruses replicate. The ways viruses cause disease and experimental methods used in virology also will be examined. Not to be held for credit by students who have already taken MMIC 7010 (or 097.701). *Prerequisites:* MBIO 3010 or MBIO 3011 (or 060.301)(C) and MBIO 3410 or MBIO 3411(or 060.341) (C).

MBIO 4470 Fermentations Cr.Hrs.3 (Lab Required) (Formerly 060.447) Biochemical and enzymatic mechanisms of microbial reactions in anaerobic fermentations and methods of their investigation. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.202, 060.220 or 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (or the former 060.235 or 002.235)(C).

MBIO 4510 Industrial Microbiology Cr.Hrs.3 (Lab Required) (Formerly 060.451) A survey of microbial reactions used in industry. Fermentations, such as the production of amino acids and antibiotics, will be discussed. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (or the former 060.235 or 002.235) (C).

MBIO 4530 Project in Microbiology Cr.Hrs.6 (Formerly 060.453) A research project chosen in consultation with the department head, and supervised by a staff member. A written report is normally required. The course is available only to final year Honours students in Microbiology, the Joint Microbiology-Chemistry programs, or the Genetics program. Not to be held with CHEM 4710 (or 002.471).

MBIO 4540 Biological Energy Transduction Cr.Hrs.3 (Formerly 060.454) Biochemistry of biological processes involving interconversion of different forms of energy such as oxidative phosphorylation, membrane transport and contractile processes. *Prerequisite:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (or the former 060.235 or 002.235) (C) or consent of the department.

MBIO 4541 Transduction de l'énergie biologique Cr.Hrs.3 (L'ancien 060.454) Biochimie des processus biologiques comportant l'interconversion des différentes formes d'énergie comme la phosphorylation oxydative, le transport dans les membranes et les processus de contractions. *Préalable:* MBIO 2110 ou MBIO 2111(ou

060.211) (ou les anciens 060.220 ou 060.222) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2370 ou CHEM 2371 (ou 002.237) (ou les anciens 060.235 ou 002.235) (C) ou le consentement du département. Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 4570 Recombinant DNA Technology H Cr.Hrs.3 (Lab Required) (Formerly 060.457) Techniques for plasmid isolation, restriction nuclease digestion, cloning in plasmid and viral vectors, DNA sequencing, transformation and gene transfer will be described. Priority will be given to Science Honours students. Not to be held with MBIO 4580 (or 060.458). *Prerequisite:* MBIO 3410 or MBIO 3411 (or 060.341) (C).

MBIO 4580 Recombinant DNA Technology Cr.Hrs.3 (Formerly 060.458) Techniques for plasmid isolation, restriction nuclease digestion, cloning in plasmid and viral vectors, DNA sequencing, transformation and gene transfer will be described. Not to be held with MBIO 4570 (or 060.457). *Prerequisite:* MBIO 3410 or MBIO 3411 (or 060.341) (C).

MBIO 4581 Technologie de l'ADN recombinant Cr.Hrs.3 (L'ancien 060.458) Techniques d'isolement de plasmides, la digestion de l'ADN par les enzymes (endonucléases) de restriction, le clonage, détermination de la séquence des nucléotides dans l'ADN, transformation de l'ADN, transfert de gènes. On ne peut se faire créditer à la fois le MBIO 4580 (ou 060.458) et le MBIO 4570 (ou 060.457). *Préalable:* MBIO 3410 ou MBIO 3411 (ou 060.341) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 4600 Molecular Genetics of Prokaryotes Cr.Hrs.3 (Lab Required) (Formerly 060.460) A detailed examination of replication, expression, mutability, repair and transposition of DNA in bacteria and their viruses. Priority will be given to Science Honours students. Not to be held with the former 060.452 or 060.456. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220, 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (or the former 060.235 or 002.235) (C). BOTN 2460 (or 001.246) is recommended.

MBIO 4601 génétique moléculaire des procaryotes Cr.Hrs.3 (Labo requis) (L'ancien 060.460) Une étude détaillée de la réplication, de l'expression, de la mutagenèse de la réparation de l'ADN ainsi que des éléments génétiques transposables des bactéries et des virus. On ne peut se faire créditer à la fois le MBIO 4600 (ou 060.460) et les anciens 060.452 ou 060.456. *Préalables:* le MBIO 2110 ou MBIO 2111 (ou 060.211) (ou les anciens 060.220 ou 060.222) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2370 (ou 002.237) (ou es anciens 060.235 ou 002.235) (C). Le BOTN 2460 (ou 001.246) est recommandé. Donné seulement au Collège universitaire de Saint-Boniface.

MBIO 4610 Molecular Genetics of Eukaryotes Cr.Hrs.3 (Lab Required) (Formerly 060.461) A comprehensive study dealing with replication and expression of DNA, genome structure, and the involvement of genes in AIDS and cancer. Check with the department for availability. Not to be held with the former 060.452 or 060.455. *Prerequisites:* MBIO 2110 or MBIO 2111 (or 060.211) (or the former 060.220 or 060.222) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (or the former 060.235 or 002.235) (C). BOTN 2460 (or 001.246) is recommended.

MBIO 4980 Work Term 3 Cr.Hrs.0 (Formerly 060.498) Work assignments in business, industry or government for students registered in the Microbiology Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

MBIO 4990 Work Term 4 Cr.Hrs.0 (Formerly 060.499) Work assignments in business, industry or government for students registered in the Microbiology Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

Service Courses

MBIO 2770 Elements of Biochemistry 1 Cr.Hrs.3 (Lab Required) (Formerly 060.277) Basic concepts of biochemistry including the properties of biomolecules (amino acids and proteins, enzymes, carbohydrates, lipids, and nucleic acids) and aspects of energy production in cells. For students in Agricultural and Food Sciences, Human Ecology, and Botany or Zoology programs in Science. May not be used as part of an Honours, Major, General, or Minor program in Chemistry or in Microbiology. This course is also given in Chemistry as CHEM 2770. Not to be held with CHEM 2770 (or 002.277), MBIO 2360 or MBIO 2361 (or 060.236) CHEM 2360 or CHEM 2361 (or 002.236), (or the former 060.235, 002.235, 060.240, 002.240) or CHEM 2860 (or 002.286). *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) (C) or CHEM 1320 (or 002.132) (or the former 002.123 or 002.128) (C), plus six credit hours of university level biological sciences.

MBIO 2780 Elements of Biochemistry 2 Cr.Hrs.3 (Lab Required) (Formerly 060.278) The continuation of MBIO 2770 (CHEM 2770), dealing with nitrogen and lipid metabolism, representative biosynthetic pathways, and synthesis and importance of DNA, RNA and proteins. For students in Agricultural and Food Sciences, Human Ecology, and Botany or Zoology programs in Science. May not be used as part of an Honours, Major, General, or Minor program in Chemistry or Microbiology. This course is also given in Chemistry as CHEM 2780. Not to be held with CHEM 2780 (or 002.278), MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (or the former 060.235, 002.235, 060.240 or 002.240). *Prerequisites:* MBIO 2770 (or 060.277) or CHEM 2770 (or 002.277) (C) or MBIO 2360 or MBIO 2361 (or 060.236) or CHEM 2360 or CHEM 2361 (or 002.236) (C).

4.14 Department of Physics and Astronomy

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Telephone: 204 474 9817

Websites: www.physics.umanitoba.ca
www.umanitoba.ca/science/astronomy

E-mail: physics@umanitoba.ca

4.14.1 Academic Staff

Distinguished Professors/Emeriti:

Morrish, A.H., B.Sc.(Hons.) (Manitoba), M.A. (Toronto), Ph.D. (Chicago), F.R.S.C.; **van Oers**, W.T.H., Ph.D. (Amsterdam).

Professors Emeriti:

Barber, R.C., B.Sc.(Hons.), Ph.D. (McMaster); **Connor**, R.D., B.Sc., Ph.D. (Edinburgh); **Duckworth**, H.E., B.A. (Manitoba), B.Sc., Ph.D. (Chicago), F.R.S.C.; **McKee**, J.S.C., B.Sc., Ph.D. (Queen's, Belfast), D.Sc. (Birmingham); **Standing**, K.G., B.Sc.(Hons.) (Manitoba), A.M., Ph.D. (Princeton).

Senior Scholars:

Bochonko, R., B.Sc.(Hons.) (Manitoba), M.S., C. Phil., Ph.D. (Michigan); **Falk**, W., B.Sc., M.Sc. (Saskatchewan), Ph.D. (UBC); **Jovanovich**, J., B.Sc. (Belgrade), M.Sc. (Manitoba), Ph.D. (Washington); **Standil**, S., B.Sc., M.Sc. (Queen's), Ph.D. (Manitoba); **Svenne**, J.P., B.Sc. (Toronto), Ph.D. (M.I.T.); **Tabisz**, G.C., B.A.Sc., M.A., Ph.D. (Toronto); **Vail**, J.M., B.Sc. (Hons), M.Sc. (Manitoba), Ph.D. (Brandeis);

Professors:

Birchall, J., B.Sc.(Hons.), Ph.D. (Birmingham); **Blunden**, P.G., B.Math. (Waterloo), Ph.D. (Queen's); **Chakraborty**, T., Ph.D. (Dibrugarh, India), Docent (Oulu, Finland), Ph.D. (h.c.)(Oulu, Finland), Canada Research Chair; **Davison**, N.E., B.Sc. (McMaster), Ph.D. (Alberta); **Ens**, E.W., B.Sc. (Winnipeg), Ph.D. (Manitoba); **Loly**, P.D., B.Sc., Ph.D. (London), D.I.C. (Imperial College); **Osborn**, T.A., B.Sc. (Cornell), Ph.D. (Stanford); **Page**, J.H., B.Sc.(Hons.) (Dalhousie), D.Phil. (Oxford); **Page**, S.A., B.Sc.(Hons.), Ph.D. (Queen's); **Roshko**, R.M., B.Sc. (Winnipeg), M.Sc., Ph.D. (Manitoba); **Sharma**, K.S., B.Sc.(Hons.), M.Sc., Ph.D. (Manitoba); **Southern**, B.W., B.Sc. (York), M.Sc., Ph.D. (McMaster); **Williams**, G., B.Sc.(Hons.) (Bristol), Ph.D. (London), D.I.C. (Imperial College); **Zetner**, P.W., B.Sc.(Hons.), M.Sc., Ph.D. (Windsor).

Associate Professors:

Bhakar, B.S., B.Sc. (Agra), M.Sc. (Aligarh), Ph.D. (Delhi); **English**, J., A.O.C.A. (Ont. Coll. Of Art), B.Sc. (Toronto), Ph.D. (Australian National Univ.); **Safi-Harb**, S., B.Sc. (American Univ. of Beirut), M.S., Ph.D. (Wisconsin).

Assistant Professors:

Fiege, J., B.Sc., M.Sc. (Queen's), Ph.D. (McMaster); **Gwinner**, G., Vordiplom (Heidelberg), M.A. (State U. of NY, Stony Brook), Ph.D. (State U. of NY, Stony Brook); **Hu**, C-M., B.Sc. (Fudan), Ph.D. (Wuertzburg); **van Lierop**, J., B.Sc.(Hons) (Concordia), M.Sc. (Queen's), Ph.D. (McGill).

4.14.2 Program Information

Physics is the discipline that by experiment and logical analysis examines the laws of nature that form the basis for all relationships and interactions between matter and energy. A knowledge of physics is also essential in other natural sciences, such as chemistry and geology, and to professions such as engineering, medicine and dentistry. Astronomy, the other focus of this department, examines the universe, the earth and the planets, as well as phenomena such as quasars, pulsars, comets, and asteroids; a planetarium

and an astronomical observatory are part of this program. In both Physics and Astronomy mathematical skills are developed simultaneously.

The department must approve a student's Honour or Major program each session. Students must also obtain approval for any and all revisions to their program.

Physics and Astronomy Prerequisite Information

Students failing to obtain a minimum grade of "C" in any course stipulated as a prerequisite to a further course in Physics and Astronomy are not allowed to proceed without written consent from the instructor.

Honours

To enter the Honours program in Physics and Astronomy, a student must have a "B" in PHYS 1050 and PHYS 1070, or a "B+" in PHYS 1020 and a "B" in PHYS 1070, standing in MATH 1500, a "B" in MATH 1700 and a "B" in MATH 1300 or any equivalents. In addition, a student must satisfy the faculty requirements for entry to the Honours program.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and Year 3 to Year 4, students must achieve a minimum grade of "C" in all Honours Physics and Astronomy courses which are either required in the program or required as prerequisites to other Physics and Astronomy courses taken in the Honours program. There are a number of awards — the Coish, the C.P. Loewen, the Neamtan, the Roulston, and the Sen Scholships — available in this program.

Joint Honours

The Department of Physics and Astronomy offers two joint honours programs, one in conjunction with the Department of Mathematics, and the other with the Department of Computer Science.

To enter the Joint Honours Mathematics-Physics program the student must have a minimum grade of "B" in MATH 1300, MATH 1510 and MATH 1710 (or MATH 1690), PHYS 1050 (or "B+" in PHYS 1020) and PHYS 1070.

To enter the Joint Honours Computer Science-Physics program, the student must have a minimum grade of "B" in PHYS 1050 (or "B+" in PHYS 1020), PHYS 1070, MATH 1300, MATH 1530, MATH 1730, and COMP 1020.

Four Year Major

The goal of this program is to cover approximately three years of the Physics and Astronomy Honours program in a longer period of time. The program allows greater scheduling flexibility and also accommodates a wider range of incoming student credentials.

To enter the four year Major program in Physics and Astronomy, a student must have PHYS 1050 (C+) or PHYS 1020 (B), and PHYS 1070 (C+), MATH 1500³ and MATH 1700³ with a minimum grade of "C" and an average of "C+" on these two courses. In addition, students must have satisfied the faculty requirements for entry to the four year Major program.

Three Year General

As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from **two** Science departments. To satisfy the requirement in the Department of Physics and Astronomy, students must select a minimum of 12 credit hours from the list in the below chart.

Variations in any of the programs listed above may be possible, but must be approved by the head of the department and the Science general office.

4.14.3 Physics and Astronomy, Department Code: 016

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS^{1,7} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
PHYS 1050 (B) (or PHYS 1020 ² (B +)) and PHYS 1070 (B), MATH 1300 ³ (B), MATH 1500 ³ (B), MATH 1700 ³ (B) Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course ⁶	PHYS 2260, PHYS 2390, PHYS 2490, PHYS 2380, PHYS 2600, PHYS 2610, PHYS 2650, MATH 2720 ⁸ Choose 1 of: Option A (Astronomy): PHYS 2070 Option B (Physics): 6 credit hours to be chosen from MATH 2730 ⁸ , MATH 2800 or courses in Computer Science, Chemistry or Geophysics	PHYS 3670, PHYS 3680, PHYS 3430, PHYS 3650, PHYS 3630, PHYS 3640, PHYS 3380 Plus 3 credit hours of electives with one of the following strongly recommended: PHYS 3220, PHYS 3570, PHYS 3660 and courses from Computer Science, Chemistry, Geological Sciences and Mathematics. Students who choose Option B may also want to consider PHYS 3180	PHYS 4390, PHYS 4510 ⁴ , PHYS 4520 ⁴ Plus 9 credit hours from PHYS 3570, PHYS 3660, PHYS 4250, PHYS 4560, PHYS 4590, PHYS 4600, PHYS 4620, PHYS 4630 PHYS 4230, PHYS 4240 PHYS 4670, MATH 3700
30 Hours	30 Hours	30 Hours	30 Hours

JOINT COMPUTER SCIENCE PHYSICS & ASTRONOMY HONOURS PROGRAM See Section 4.7.5 Computer Science

JOINT MATHEMATICS-PHYSICS AND ASTRONOMY HONOURS See Section 4.12 Mathematics

FOUR YEAR MAJOR^{7,9} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

PHYS 1050 (C+) (or PHYS 1020 ² (B)) and PHYS 1070 (C+), MATH 1500 ^{3,5} and MATH 1700 ^{3,5} Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course	PHYS 2260, PHYS 2390, PHYS 2490, PHYS 2380, PHYS 2600, MATH 1200, MATH 1300 ³	PHYS 2610, PHYS 2650, PHYS 3670, PHYS 3680, PHYS 3380, MATH 2720 ⁸ Plus 18 credit hours which must include PHYS 3630, PHYS 3640 or both of ECE 2160 and ECE 2220, with the remaining from the list of 3000 and 4000 level Honours and Major Physics and Astronomy courses	PHYS 3430, PHYS 3650, MATH 3130, MATH 3700
Astronomy courses may be used in place of some of the above courses with permission of the department. Consult the department advisor for details.			

THREE YEAR GENERAL

A minimum of 12 credit hours from PHYS 2070, PHYS 2200, PHYS 2250, PHYS 2260, PHYS 2270, PHYS 2280, PHYS 2350, PHYS 2700, PHYS 2710, PHYS 3180, PHYS 3360, PHYS 3800.

MINOR

PHYS 1050 (C) and PHYS 1070 (C) (or PHYS 1020 (C+) and PHYS 1030 (C+))	A minimum of 12 credit hours from PHYS 2070, PHYS 2200, PHYS 2250, PHYS 2260, PHYS 2270, PHYS 2280, PHYS 2350, PHYS 2700, PHYS 2710, PHYS 3180, PHYS 3360, PHYS 3800.
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NOTES:

¹ Students must achieve a minimum grade of "C" in all Honours Physics and Astronomy courses that are either required in the program or required as prerequisites to other Physics and Astronomy courses taken in the Honours program.

² PHYS 1030 is not suitable for entry to the Honours and four year Major program. Students must also take PHYS 1070 if they have already taken PHYS 1030. Students can hold credit for both PHYS 1030 and PHYS 1070.

³ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.

⁴ Other Honours Physics and Astronomy or Honours Mathematics courses may be substituted for one of PHYS 4510 or PHYS 4520 with permission of the department.

⁵ A minimum grade of "C" and an average of "C+" is required on these two Mathematics courses.

⁶ As there are no electives in Year 2 of the program, students should complete the University written English requirement in University 1. If not completed in University 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

⁷ The courses required in this program will satisfy the University mathematics requirement.

⁸ MATH 2750 may be taken in lieu of MATH 2720 and MATH 2730.

⁹IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates the recommended arrangement of the required courses and is meant to be a guide around which students can plan their program (Letters in brackets refer to minimum prerequisite standing required for further study.)

4.14.4 Physics and Astronomy Course Descriptions

Students failing to obtain a minimum grade of 'C' in any course stipulated as a prerequisite to a further course in Physics and Astronomy are not allowed to proceed without written consent from the instructor.

Students may not hold credit for more than one of PHYS 1020 or PHYS 1050 (formerly 016.102 or 016.105) (or the former 016.118, 016.120 or 016.127).

Astronomy

NOTE: Students registering in certain courses may be required to pay a portion of the costs associated with field trips. For details, contact the department general office.

U1 PHYS 1810 General Astronomy 1 Cr.Hrs.3 (Lab Required) (Formerly 016.181) The topics covered in this course outline the properties of stars and planets that can be observed and the physics necessary to interpret these observations. It includes a brief introduction to galaxies and cosmology. Using lectures and laboratory sections, it provides an astronomy background and introduction to the scientific method. It ranges from introductory physical background to considering current research problems. This course is mainly descriptive, taught at a qualitative level, with simple arithmetic and trigonometry used frequently. Not to be held with the former 016.180 or 013.121.

U1 PHYS 1820 General Astronomy 2: Exotic Stars, Galaxies and Cosmology Cr.Hrs.3 (Lab Required) (Formerly 016.182) This course extends the material from General Astronomy 1, increasing the student's physical understanding of topics like black holes, galaxies, and the expanding universe. Topics range from the Big Bang to the formation of neutron stars. A significant amount of simple arithmetic and trigonometry is used to provide the insights into physical background and to illuminate current research problems. Labs and observing sessions are used to teach scientific method. Not to be held with the former 016.180 or 013.121. *Prerequisites:* Pre-calculus Mathematics 40S or equivalent, and PHYS 1810 (or 016.181) (C), or consent of department.

U1 PHYS 1830 Perspective on the Universe Cr.Hrs.3 (Lab Required) (Formerly 016.183) This general interest course is a qualitative course on the concepts and discoveries in astronomy. Topics may vary from year to year and could include: Life on Other Worlds, or Astronomy in the News. These themes are used to give the student a qualitative astronomy background ranging from planets and stars to galaxies and cosmology. A few special sessions at Glenlea Observatory and the Lockhart Planetarium introduce the student to scientific method. Although simple arithmetic and trigonometry will be used occasionally, this is a descriptive course.

PHYS 2070 Observational Astronomy Cr.Hrs.6 (Lab Required) (Formerly 016.207) Students will undertake a project on galaxies or nebulae using the University of Manitoba's Astronomical Observatory at Glenlea. Not to be held with the former 016.280 or 013.227. *Prerequisite:* PHYS 1030 or PHYS 1031 (or 016.103) (B) or PHYS 1070 or PHYS 1071 (or 016.107) (C), or one of PHYS 1810 (or 016.181) (C) or PHYS 1830 (or 016.183) (C).

PHYS 3180 Stars Cr.Hrs.3 (Formerly 016.318) This course is an application of physics to the structure of stars, their formation and evolution; theoretical models and observations; comparisons of main sequence stars like our Sun, binary star systems, post-main sequence evolution, and the final stages of stellar evolution such as the formation of white dwarfs, neutron stars and black holes. *Prerequisite:* PHYS 1070 or PHYS 1071 (or 016.107) (C).

PHYS 3800 Topics in Astronomy Cr.Hrs.6 (Lab Required) (Formerly 016.380) An assignment and conference course to be taken only through consultation with the head of the department. The topics will vary, depending upon student needs and interests, and will include specialized topics not available in regular course offerings. Not to be held with the former 013.377.

PHYS 4230 The Phenomenology of Galaxies Cr.Hrs.3 (Formerly 016.423) This course describes the phenomenology of galaxies as determined by recent observational data. Topics include the characteristics and distribution of stars; radiation from the interstellar medium (hydrogen, molecular gas and dust); the kinematics of the stellar and gaseous components of the Milky Way; the formation and evolution of galaxies and clusters of galaxies. *Prerequisite:* PHYS 3180 (or 016.318) (C).

PHYS 4240 Astronomy Project Cr.Hrs.6 (Formerly 016.424) A research oriented course involving processing, analysis, and interpretations of astrophysical data. Available topics include neutron stars, supernova remnants, astrophysical jet sources, the interstellar medium, and galactic structure. *Prerequisites:* PHYS 2070 (or 016.207) (or the former 016.280 or 013.227) (C) and PHYS 3180 (or 016.318) (C). *Corequisite:* PHYS 4230.

Physics: General Courses

U1 PHYS 0900 Preparing for University Physics Cr.Hrs.0 (Formerly 016.090) A review of elementary physics, emphasizing the laws of mechanics, for students considering enrolling in a first-year university physics course. Mathematical techniques used in solving physics problems and the relevance of physics to everyday life will be stressed. Although this course may be used as part of the *prerequisite* requirements for first-year Physics courses, students are encouraged to take PHYSICS 40S whenever possible.

M U1 PHYS 1020 General Physics 1 Cr.Hrs.3 (Lab Required) (Formerly 016.102) A non-calculus survey course in Physics covering topics in mechanics and thermodynamics, with illustrations drawn from the life and physical sciences. This course, together with the sequel PHYS 1030 (or 016.103), is recommended for students seeking either a single, comprehensive course in Physics or entry into health science programs. It may also be used for entry into the Honours Physics program ("B+" or better) or the Major Physics program ("B" or better). Not to be held with PHYS 1050 or PHYS 1051 (or 016.105), PHYS 1410 (or 016.141) or PHYS 1420 (or 016.142) (or the former 016.118, 016.120 or 016.127). *Prerequisites:* Either Physics 40S, PHYS 0900 (or 016.090) (with a "P"), or equivalent; and either Pre-calculus Mathematics 40S, Applied Mathematics 40S (with 70 per cent or better), or equivalent. It is strongly recom-

mended that students attain a minimum of 70 per cent as the average of their marks in Physics 40S and Pre-calculus Mathematics 40S.

U1 PHYS 1021 Physique générale I Cr.Hrs.3 (Labo requis) (L'ancien 016.102) Ce cours d'initiation à la physique ne requiert pas de calcul et traite de certains thèmes tirés de la mécanique et de la thermodynamique avec des exemples tirés des sciences biologiques et physiques. Ce cours, de même que le PHYS 1030 (ou 016.103), est particulièrement conseillé aux étudiants désireux d'avoir une vue d'ensemble de la physique ou qui ont l'intention d'entreprendre des études dans les sciences de la santé. Il peut aussi servir comme cours de base pour un programme de spécialisation en physique ("B+" ou mieux) ou de majeure en physique ("B" ou mieux). On ne peut se faire créditer à la fois le PHYS 1020 (ou 016.102) avec le PHYS 1050 ou PHYS 1051 (ou 016.105), le PHYS 1410 (ou 016.141), ou le PHYS 1420 (ou 016.142), ou les anciens 016.118, 016.120 ou 016.127. *Préalables:* Soit Physique 40S, PHYS 0900 (ou 016.090) (avec "P") ou l'équivalent, et soit le cours de Mathématiques précalcul 40S, ou une note de 70% dans les cours de Mathématiques appliquées 40S, ou l'équivalent. Il est fortement recommandé aux étudiants d'obtenir une note de 70% dans les cours de Mathématiques précalcul 40S et de Physique 40S. Donné seulement au Collège universitaire de Saint-Boniface.

M U1 PHYS 1030 General Physics 2 Cr.Hrs.3 (Lab Required) (Formerly 016.103) A non-calculus survey in Physics covering topics in electricity, magnetism, optics, and modern physics, with illustrations drawn from the life and physical sciences. This course, together with its *prerequisite* PHYS 1020 (or 016.102), is recommended for students seeking either a single comprehensive course in Physics, or entry into health science programs. Not suitable for entry to Major or Honours in Physics. This course may not be held with PHYS 1410 (or 016.141) or PHYS 1420 (or 016.142) (or the former 016.120). *Prerequisite:* PHYS 1020 or PHYS 1021 (or 016.102) (C) or PHYS 1051 or PHYS 1050 (or 016.105) (or the former 016.118) (C).

M U1 PHYS 1031 Physique générale II Cr.Hrs.3 (Labo requis) (L'ancien 016.103) Ce cours d'initiation à la physique ne requiert pas de calcul et traite de certains thèmes tirés de l'électricité, du magnétisme, de l'optique et de la physique moderne et appuyé d'exemples pris des sciences biologiques et physiques. Ce cours, de même que le PHYS 1020 (ou 016.102), est particulièrement conseillé aux étudiants désireux d'avoir une vue d'ensemble de la physique ou qui ont l'intention d'entreprendre des études des sciences de la santé. Il ne peut servir aux programmes de majeure ou de spécialisation en physique. On ne peut se créditer à la fois le PHYS 1030 (ou 016.103) et le PHYS 1410 (ou 016.141) ou le PHYS 1420 (ou 016.142) ou les anciens 016.120. *Préalable:* PHYS 1020 ou PHYS 1021 (ou 016.102) (C) ou PHYS 1050 ou PHYS 1051 (ou 016.105) (ou l'ancien 016.118) (C). Donné seulement au Collège universitaire de Saint-Boniface.

U1 PHYS 1050 Physics 1: Mechanics Cr.Hrs.3 (Lab Required) (Formerly 016.105) A calculus-based introduction to classical mechanics which includes vectors, translational kinematics and dynamics, work and energy, linear momentum and collisions, rotational kinematics and dynamics, and oscillatory motion. This course is intended for students considering a program of study in engineering or the physical sciences. Not to be held with PHYS 1020 or PHYS 1021 (or 016.102), PHYS 1410 (or 016.141) or PHYS 1420 (or 016.142) (or the former 016.118, 016.120 or 016.127). *Prerequisites:* Pre-calculus Mathematics 40S (300) (or equivalent) and Physics 40S (300) (or equivalent) or PHYS 0900 (or 016.090) (with a grade of "P"). It is strongly recommended that students attain a minimum of 80 per cent as the average of their marks in Physics 40S (300) and Pre-calculus Mathematics 40S (300). *Corequisite:* One of MATH 1500 or MATH 1501, MATH 1510, MATH 1520, MATH 1530 or MATH 1690.

U1 PHYS 1051 Physique I: La mécanique Cr.Hrs.3 (Labo requis) (L'ancien 016.105) Une introduction, basée sur le calcul, à la mécanique classique. Les sujets suivants seront traités: les vecteurs, la dynamique et la cinématique du mouvement de translation. La cinématique de la rotation, l'énergie, le travail, le moment linéaire, les collisions, le mouvement oscillatoire. Ce cours est destiné particulièrement aux étudiants qui voudraient poursuivre leur programme d'études dans les sciences physiques ou en indignerai. On ne peut se faire créditer à la fois le PHYS 1050 (ou 016.105) et le PHYS 1020 ou PHYS 1021 (ou 016.102) ou PHYS 1410 (ou 016.141) ou le PHYS 1420 (ou 016.142) (et les anciens 016.118, 016.120 ou 016.127). *Préalables:* Mathématiques pré-calcul 40S (ou l'équivalent) et Physique 40S (ou l'équivalent) ou le PHYS 0900 (ou 016.090) (avec "P"). Il est fortement recommandé que l'étudiant obtienne une moyenne de 80% dans les Préalables de mathématiques précalcul 40S et de Physiques 40S. *Concomitants:* Un de MATH 1500 ou MATH 1501, MATH 1510, MATH 1520, MATH 1530 ou MATH 1690. Donné seulement au Collège universitaire de Saint-Boniface.

U1 PHYS 1070 Physics 2: Waves and Modern Physics Cr.Hrs.3 (Lab Required) (Formerly 016.107) A calculus based introduction to waves and modern physics which includes: oscillations, waves, superposition, interference, relativity, photoelectric effect, quantisation, Rutherford atom, Bohr model, atomic spectra, deBroglie waves, Heisenberg's uncertainty principle, nuclear reactions, fission, fusion, subatomic particles. This course, like Physics 1 (PHYS 1050), is intended for students considering a program in the physical sciences. Not to be held for credit with PHYS 1410 (or 016.141) or PHYS 1420 (or 016.142). *Prerequisites:* PHYS 1050 or PHYS 1051 (or 016.105) (or the former 016.118) (C) or PHYS 1020 or PHYS 1021 (or 016.102) (B), and MATH 1500 or MATH 1501 (or 136.150) or MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153) (or the former 006.125 or 013.139) (C). *Corequisite:* MATH 1700 or MATH 1701 or MATH 1690, MATH 1710, MATH 1730.

U1 PHYS 1071 Physique II: La physique des ondes et la physique moderne Cr.Hrs.3 (Labo requis) (L'ancien 016.107) Une introduction, basée sur le calcul, à la physique des ondes et à la physique moderne. Les sujets suivants seront traités: les oscillations: les ondes, la superposition, l'interférence, la relativité, l'effet photoélectrique, le mo-

dèle quantique, l'atome de Rutherford, le modèle de Bohr, les spectres atomiques, la théorie de deBroglie, le principe d'incertitude de Heisenberg, les réactions nucléaires, la fission, la fusion, les particules sous-atomiques. Ce cours, tout comme le PHYS 1050 (ou 016.105) Physique, est destiné aux étudiantes et aux étudiants qui veulent suivre un programme d'études en sciences physiques. On ne peut se faire créditer à la fois le PHYS 1070 (ou 016.107) avec le PHYS 1410 (ou 016.141), ou le PHYS 1420 (ou 016.142). Préalables: PHYS 1050 ou PHYS 1051 (ou 016.105) (ou l'ancien 016.118) (C) ou PHYS 1020 ou PHYS 1021 (ou 016.102) (B), et MATH 1500 ou MATH 1501 (ou 136.150) ou MATH 1510 (ou 136.151), MATH 136.152 (ou 136.152), MATH 1530 (ou 136.153) (ou les anciens 006.125 ou 013.139) (C). *Concomitants*: MATH 1700 ou MATH 1701 ou MATH 1690 ou MATH 1710. Donné seulement au Collège universitaire de Saint-Boniface.

U1 PHYS 1300 Energy and the Environment Cr.Hrs.6 (Formerly 016.130) This course provides a broad physical outlook on the environment in which we live. Emphasis will be placed on topics of current interest such as the atmosphere, outer space, the fundamental structure of energy and matter, energy sources, the application of physical principles in modern technology, etc. The lectures will include films and demonstrations; student participation will be encouraged in discussions and in the choice of topics. The course is designed for students of all faculties and a prior knowledge of mathematics and physics is not a requirement. This course cannot be used as a part of a Major or Minor in Physics.

U1 PHYS 1301 énergie et environnement Cr.Hrs.6 (L'ancien 016.130) Ce cours présente les Particularités physiques générales de notre environnement. On insistera sur certains problèmes d'actualité, à savoir l'atmosphère, le cosmos, la structure de la matière et de l'énergie, les sources d'énergie, l'application des principes de la physique à la technologie moderne, etc. Le cours comportera des projections de films et des démonstrations. La participation aux discussions et aux choix des sujets à traiter est encouragée. Ce cours est conçu pour les étudiants de toutes les facultés et n'exige aucune connaissance des mathématiques ou de la physique. Il ne peut faire partie des programmes de Mineure ou de Majeure en Physique. Donné seulement au Collège universitaire de Saint-Boniface.

U1 PHYS 1410 The New Physics Cr.Hrs.3 (Formerly 016.141) This is the first of two half courses designed to achieve "physics literacy" through the presentation of the "Great Ideas." Features include developing intuition, connections with technology and the environment, social and philosophical issues, profiles of scientists and science in the media. The course will draw on high school math for simple numerical calculations with core formulae. Students should expect to draw diagrams and to be introduced to some new concepts, but should not expect the "math problem" solving associated with the foundation courses PHYS 1020, PHYS 1030, PHYS 1050, and PHYS 1070. Discussed in this course: scientific method, mathematics as the language of science, regularities in the universe, mechanical universe, energy, thermodynamics, electromagnetism, waves and electromagnetic radiation, atomic physics, quantum mechanics (wave-particle duality and Heisenberg's uncertainty principle), clusters of atoms, mind and matter (the physicist Pauli and the psychologist Jung). This course is intended for students pursuing a liberal arts program and may not be held for credit with PHYS 1020 or PHYS 1021 (or 016.102), PHYS 1030 or PHYS 1031 (or 016.103), PHYS 1050 or PHYS 1051 (or 016.105), PHYS 1070 or PHYS 1071 (or 016.107), (or the former 016.106, 016.118, 016.120, or 016.128).

U1 PHYS 1420 More New Physics Cr.Hrs.3 (Formerly 016.142) This is the second of two half courses designed to achieve "physics literacy" through the presentation of the "Great Ideas." Features include developing intuition, connections with technology and the environment, social and philosophical issues, profiles of scientists and science in the media. The course will draw on high school math for simple numerical calculations with core formulae. Students should expect to draw diagrams and to be introduced to some new concepts, but should not expect the "math problem" solving associated with the foundation courses PHYS 1020, PHYS 1030, PHYS 1050 and PHYS 1070. Discussed in this course: materials, nuclear physics, elementary particles, relativity, planetary physics, astrophysics, cosmology, geometry of the universe, (Plato to Banchoff), computers and physics (cellular automata and Conway's "Game of Life," chaos, fractals,...). This course is intended for students pursuing a liberal arts program and may not be held for credit with PHYS 1020 or PHYS 1021 (or 016.102), PHYS 1030 or PHYS 1031 (or 016.103), PHYS 1050 or PHYS 1051 (or 016.105), PHYS 1070 or PHYS 1071 (or 016.107), (or the former 016.106, 016.118, 016.120 or 016.128). *Prerequisite*: PHYS 1410 (or 016.141) (C) or consent of department.

PHYS 2200 Electricity and Magnetism Cr.Hrs.6 (Lab Required) (Formerly 016.220) Electric field, electric potential, Gauss' law, capacitors, dielectric materials, magnetic fields, Ampere's law, magnetic induction, magnetic materials, displacement current, integral form of Maxwell's equations, Ohm's law, Kirchhoff's laws, DC circuit analysis, equivalent circuits, AC circuit analysis, complex impedance, RLC circuits, magnetic coupling, transformers, diodes and diode circuits. Not to be held with PHYS 2600 (or 016.260) or PHYS 2610 (or 016.261). *Prerequisites*: one of PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106 or 016.120) (C), or PHYS 1020 or PHYS 1021 (or 016.102) (C+) and PHYS 1030 or PHYS 1031 (or 016.103) (C+) (or the former 016.118, 016.127 or 016.128) (C); and one of: MATH 1500 or MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C), MATH 1530 (or 136.153) (C) or MATH 1690 (or 136.169) (or the former 006.125, 013.139 or 013.159) (C). *Corequisites*: MATH 1200 or MATH 1201 and one of MATH 1690, MATH 1700 or MATH 1701, MATH 1710 or MATH 1730.

PHYS 2201 Électricité et magnétisme Cr.Hrs.6 (Labo requis) (L'ancien 016.220) Champs électrostatique, potentiel électrostatique, loi de Gauss, capacité, matériaux diélectriques, champs magnétiques, loi d'Ampère, induction magnétique, matériaux magnétiques, courant de déplacement, forme intégrale des équations de Maxwell, loi d'Ohm, lois de Kirchoff, analyse de circuits en courant continu, circuits

équivalents, analyse de circuits en courant alternatif, impédance complexe, circuits RLC, couplage magnétique, transformateurs, diodes et circuits avec diodes. On ne peut se faire créditer à la fois le PHYS 2200 (ou 016.220) et le PHYS 2600 (ou 016.260) ou le PHYS 2610 (ou 016.261). Préalables: Un de PHYS 1070 ou PHYS 1071 (ou 016.107) (ou les anciens 016.106 ou 016.120) (C), ou PHYS 1020 ou PHYS 1021 (ou 016.102) (C+) et PHYS 1030 ou PHYS 1031 (ou 016.103) (C+) (ou les anciens 016.118, 016.127 et 016.128) (C); et un de MATH 1500 ou MATH 1501 (ou 136.150) (C), MATH 1510 (ou 136.151) (C), MATH 1520 (ou 136.152) (C), MATH 1530 (ou 136.153) (C) ou MATH 1690 (ou 136.169) (ou un des anciens 006.125, 013.139 ou 013.159) (C). *Concomitants*: MATH 1200 ou MATH 1201 et un de MATH 1690, MATH 1700 ou MATH 1701, MATH 1710 ou MATH 1730. Donné seulement au Collège universitaire de Saint-Boniface.

PHYS 2250 Introductory Modern Physics Cr.Hrs.3 (Formerly 016.225) An introductory course on atomic and nuclear physics. Kinetic theory of gases, special theory of relativity, quantum effects and atomic physics, nuclear physics. Not available to students who have previously obtained credit in, or are currently registered in PHYS 2380 (or 016.238) (or the former 016.250). Not available to students in Honours or Major programs in Physics. *Prerequisites*: One of: PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106 or 016.120) (C), or PHYS 1020 or PHYS 1021 (or 016.102) (C+) and PHYS 1030 or PHYS 1031 (or 016.103) (C+) (or the former 016.118 or 016.127 and 016.128) (C); and one of: MATH 1500 or MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C), MATH 1530 (or 136.153) (C) or MATH 1690 (or 136.169) (or the former 006.125, 013.139 or 013.159) (C). *Corequisites*: MATH 1200 or MATH 1201 and one of MATH 1690, MATH 1700 or MATH 1701, MATH 1710 or MATH 1730 (D).

PHYS 2251 Introduction à la physique moderne Cr.Hrs.3 (L'ancien 016.225) Un cours d'introduction en physique atomique et nucléaire. Théorie cinétique des gaz, théorie de la relativité, effets de quantum, physique atomique, physique nucléaire. Ce cours n'est pas disponible aux étudiants qui auraient Préalablement obtenu des crédits ou qui sont concurremment inscrits dans le cours PHYS 2380 (ou 016.238) (ou les anciens 016.250 ou 016.230)). Ce cours n'est pas disponible aux étudiants dans les programmes de spécialisation ou de majeure en Physique. Préalables: Un de: PHYS 1070 ou PHYS 1071 (ou 016.107) (ou les anciens 016.106 ou 016.120) (C), ou PHYS 1020 ou PHYS 1021 (ou 016.102) (C+) et PHYS 1030 ou PHYS 1031 (ou 016.103) (C+) (ou l'ancien 016.121) (C+), (ou les anciens 016.118 ou 016.127 et 016.128) (C); et un de MATH 1500 ou MATH 1501 (ou 136.150) (C), MATH 1510 (ou 136.151) (C), MATH 1520 (ou 136.152) (C), MATH 1530 (ou 136.153) (C) ou MATH 1690 (ou 136.169) (ou les anciens 006.125, 013.139, ou 013.159) (C). *Concomitants*: MATH 1200 ou MATH 1201 et un de MATH 1690, MATH 1700 ou MATH 1701, MATH 1710 ou MATH 1730. Donné seulement au Collège universitaire de Saint-Boniface.

PHYS 2260 Optics Cr.Hrs.3 (Lab Required) (Formerly 016.226) A survey of refraction, reflection, simple lens systems and optical systems, dispersion, achromatism, and an elementary treatment of diffraction, interference, and polarization. *Prerequisites*: One of: PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106 or 016.120), or PHYS 1020 or PHYS 1021 (or 016.102) (C+) and PHYS 1030 or PHYS 1031 (or 016.103) (C+) (or the former 016.128) (C); and one of MATH 1500 or MATH 1501 (or 136.150) (C), MATH 1510 (or 136.151) (C), MATH 1520 (or 136.152) (C), MATH 1530 (or 136.153) (C) or MATH 1690 (or 136.169) (C) or the former 006.125 (C), 013.139 (C), or 013.159) (C). *Corequisites*: MATH 1300 or MATH 1301 or MATH 1310, and one of MATH 1690, MATH 1700 or MATH 1701, MATH 1710 or MATH 1730.

PHYS 2261 Optique Cr.Hrs.3 (Labo requis) (L'ancien 016.226) Étude de la réfraction, réflexion, des systèmes de lentilles simples et des systèmes optiques, dispersion, achromatisme et vue, traitement élémentaire de la diffraction, interférence et polarisation. Préalables: Un de: PHYS 1070 ou PHYS 1071 (ou 016.107) (ou les anciens 016.106 ou 016.120) (C), ou PHYS 1020 ou PHYS 1021 (ou 016.102) (C+) et PHYS 1030 ou PHYS 1031 (ou 016.103) (C+) (ou l'ancien 016.128) (C); et un de MATH 1500 ou MATH 1501 (ou 136.150) (C), MATH 1510 (ou 136.151) (C), MATH 1520 (ou 136.152) (C), MATH 1530 (ou 136.153) (C) ou MATH 1690 (ou 136.169) (ou les anciens 006.125, 013.139, ou 013.159) (C). *Concomitants*: MATH 1300 ou MATH 1301 ou MATH 1310 et un de MATH 1690, MATH 1700 ou MATH 1701, MATH 1710 ou MATH 1730. Donné seulement au Collège universitaire de Saint-Boniface.

PHYS 2270 Physical Topics for Biologists A Cr.Hrs.3 (Formerly 016.227) Physical topics with a relation to biology are discussed. Radiative transfer of energy, boundary layers, heat conduction, diffusion, mass transport, and the use of radioactive materials in biology are considered. *Prerequisite*: PHYS 1070 or PHYS 1071 (or 016.107) (C) (or the former 016.106 or 016.120) (C) or PHYS 1030 or PHYS 1031 (or 016.103) (C) or consent of department.

PHYS 2271 Éléments de physique pour les sciences biologiques A Cr.Hrs.3 (L'ancien 016.227) Ce cours introduit les éléments de physique ayant un rapport direct avec les sciences biologiques. En particulier, le transfert d'énergie par rayonnement, les effets de surface, la conduction thermique, les phénomènes de diffusion, les phénomènes de transport ainsi que l'utilisation de matériaux radioactifs. *Préalable*: PHYS 1070 ou PHYS 1071 (ou 016.107) (ou les anciens 016.106 ou 016.120) (C) ou PHYS 1030 ou PHYS 1031 (ou 016.103) (C) ou le consentement du département. Donné seulement au Collège universitaire de Saint-Boniface.

PHYS 2280 Physical Topics for Biologists B Cr.Hrs.3 (Formerly 016.228) Physical properties of solids, liquids, and gases including diffusion and membranes; radiation and radioactivity. Aspects of particular interest to the biological sciences are stressed. *Prerequisite*: PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106 or 016.120) (C) or PHYS 1030 or PHYS 1031 (or 016.103) (C) or consent of department.

PHYS 2281 Éléments de physique pour les sciences biologiques B Cr.Hrs.3 (L'ancien 016.228) Ce cours traite des propriétés physiques des solides, des liquides et des gaz ainsi que des phénomènes de radiation et de la radioactivité. L'accent sera mis sur les aspects ayant un rapport direct avec les sciences biologiques. *Préalable:* PHYS 1070 ou PHYS 1071 (ou 016.107) (ou les anciens 016.106 ou 016.120) (C) ou PHYS 1030 ou PHYS 1031 (ou 016.103) (C) ou le consentement du département. Donné seulement au Collège universitaire de Saint-Boniface.

PHYS 2350 Energy Sources: Physical Aspects Cr.Hrs.3 (Formerly 016.235) A detailed investigation of the physical aspects of energy production and utilization. Critical comparison of the various energy sources including solar, nuclear, fossil, and wind will be emphasized. The physics of energy collection, production, storage, and distribution will be discussed in the context of thermodynamics, radiation, solid state and nuclear physics. *Prerequisite:* PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106 or 016.120) (C) or PHYS 1030 or PHYS 1031 (or 016.103) (C) or consent of department.

PHYS 2700 Concepts of Physical Science to 1900 Cr.Hrs.3 (Formerly 016.270) The evolution of scientific thought is traced through three major historical periods, namely the early Greeks, the scientific revolution of the 16th and 17th centuries and the modern period up to 1900. The course is designed to present the key ideas of scientific inquiry into the nature of heat, light, matter and celestial mechanics within their historical context. Not to be held with the former 016.124, 016.131 or 171.129. This course is not to be held for credit a Major or Honours program in Physics and Astronomy.

PHYS 2710 Concepts of Physical Science from 1900 Cr.Hrs.3 (Formerly 016.271) This course deals with the concepts of modern physics, which arose near the turn of the twentieth century and revolutionized our view of the physical world. Einstein's Theory of Relativity, the Bohr-Rutherford atom and wave-particle duality are discussed. The impact of these ideas on modern society is explored. N.B. This course should be preceded by PHYS 2700 (or 016.270) (or the former 016.131). Not to be held with the former 016.124, 016.132 or 071.129. This course is not to be held for credit in a Major or Honours program in Physics and Astronomy.

PHYS 4640 Introduction to Quantum Mechanics for Advanced Students 1 Cr.Hrs.3 (Formerly 016.464) An introduction to the fundamentals of quantum mechanics for students of engineering and sciences other than Physics, in the context of modern materials. Postulates of quantum mechanics, harmonic oscillator, angular momentum, one-electron many-electron systems. Not to be held with PHYS 3380 (or 016.338) (or the former 016.370) or PHYS 4390 (or the former 016.438 or 016.437) or PHYS 3580 (or 016.358). *Prerequisites:* PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106) (C), MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131 or 013.146) (C), MATH 1700 or MATH 1701 (or 136.170) or MATH 1710 (or 136.171) (C) or MATH 1730 (or 136.173) (the former or 006.126 or 013.149) (C).

PHYS 4650 Introduction to Quantum Mechanics for Advanced Students 2 Cr.Hrs.3 (Formerly 016.465) A continuation of PHYS 4640. Electron spin, approximation methods for stationary states, time-dependent perturbation theory, term project. Not to be held with PHYS 3380 (or 016.338) (or the former 016.370) or PHYS 4390 (or the former 016.438 or 016.437) or PHYS 3580 (or 016.358). *Prerequisite:* PHYS 4640 (or 016.464) (C).

Honours and Four Year Major Courses

PHYS 2380 Quantum Physics 1 Cr.Hrs.3 (Formerly 016.238) The first in a sequence of three courses on Quantum Physics. This course introduces the basic principles of quantum theory including cavity radiation and Planck's postulate, wave-particle duality, the Bohr model, and the Schrödinger theory of quantum mechanics. Special emphasis is placed on the derivation of the time independent Schrödinger equation and its solutions in one dimension. Not to be held with the former 016.250. *Prerequisites:* PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106 or 016.120) (C) and one of MATH 1690 (or 136.169) (C), MATH 1700 or MATH 1701 (or 136.170) (C), MATH 1710 (or 136.171) (C), MATH 1730 (or 136.173) (or the former 006.126, 013.149 or 013.159) (C).

PHYS 2390 Theoretical Physics 1 Cr.Hrs.3 This course provides an introduction to the mathematics required for both the Honours and Major programs in Physics and Astronomy. Topics include series expansions, partial derivatives, vector calculus and integral theorems. Not to be held with the former 016.237. *Prerequisites:* PHYS 1070 (or 016.107), and one of MATH 1690 (or 136.169), MATH 1700 (or 136.170), MATH 1710 (or 136.171), MATH 1730 (or 136.173) (or the former 006.126, 013.149 or 013.159).

PHYS 2490 Theoretical Physics 2 Cr.Hrs.3 This course provides a continuation of the introduction to the mathematics required for both the Honours and Major programs in Physics and Astronomy. Topics include Fourier series, differential equations, special functions, boundary value problems and transform methods. Not to be held with the former 016.237. *Prerequisite:* PHYS 2390.

PHYS 2600 Electromagnetic Field Theory Cr.Hrs.3 (Formerly 016.260) Electric field, electric potential, Gauss' law, capacitors, dielectric materials, magnetic fields, Ampere's law, magnetic induction, magnetic materials, displacement current, integral form of Maxwell's equations. Not to be held with PHYS 2200 or PHYS 2201 (or 016.220) (or the former 016.269). *Prerequisites:* PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106 or 016.120) (C) and one of MATH 1690 (or 136.169) (C), MATH 1700 or MATH 1701 (or 136.170) (C), MATH 1710 (or 136.171) (C), MATH 1730 (or 136.173) (or the former 006.126, 013.149 or 013.159) (C).

PHYS 2610 Circuit Theory and Introductory Electronics Cr.Hrs.3 (Lab Required) (Formerly 016.261) Ohm's law, Kirchhoff's laws, DC circuit analysis, equivalent circuits, AC circuit analysis, complex impedance, RLC circuits, magnetic coupling,

transformers, diodes and diode circuits. Not to be held with PHYS 2200 or PHYS 2201 (or 016.220) (or the former 016.269). *Prerequisite:* PHYS 2600 (or 016.260) (C).

PHYS 2650 Classical Mechanics 1 Cr.Hrs.3 (Formerly 016.265) The first in a sequence of three courses on intermediate to advanced level mechanics. Topics include dynamics of a particle, conservation theorems, rotation, rolling motion, oscillations, gravitation and central force motion, and associated mathematical methods. *Prerequisite:* PHYS 1070 or PHYS 1071 (or 016.107) (or the former 016.106) (C). *Corequisites:* PHYS 2490 and MATH 2700 or MATH 2100 or MATH 2750.

PHYS 3220 Medical Physics and Physiological Measurement Cr.Hrs.3 (Formerly 016.322) This course will introduce the core subject areas of Medical Physics, in particular the physics of physiology and of radiology. The mechanics of body systems and the theory, medical applications and safety issues relating to the production, use, detection and measurements of electromagnetic radiation (both ionizing and non-ionizing) will be included. It will also cover Medical imaging (Ultrasound, CT and MRI) and will provide the student with an understanding of the physics underlying neurological, audiological, respiratory and vascular function and measurements. Also taught by Allied Health as RTT 3320. *Prerequisite:* PHYS 2600 (or 016.260) (C) or PHYS 2200 (or 016.220) (C), or consent of the department.

PHYS 3360 Intermediate Modern Physics Cr.Hrs.6 (Formerly 016.336) Introduction to wave mechanics and its applications in atomic, molecular, and solid state physics. A survey of nuclear and particle physics phenomena. An introduction to astrophysics. *Prerequisite:* PHYS 2250 or PHYS 2251 (or 016.225) (C).

PHYS 3380 Quantum Physics 2 Cr.Hrs.3 (Formerly 016.338) This course is the sequel to PHYS 2380 (or 016.238). It focuses on solutions of the three-dimensional Schrödinger equation with special emphasis on one-electron atoms, multi-electron atoms, and single molecules. Not to be held with PHYS 4640 (or 016.464) or PHYS 4650 (or 016.465) (or the former 016.358 or 016.370). *Prerequisite:* PHYS 2380 (or 016.238) (or the former 016.250) (C).

PHYS 3430 Honours Physics Laboratory Cr.Hrs.6 (Formerly 016.343) Six hours per week. *Prerequisites:* PHYS 2260 or PHYS 2261 (or 016.226) (C) and PHYS 2610 (or 016.261) (or the former 016.269) (C) or consent of department.

PHYS 3570 Physics of Materials 1 Cr.Hrs.3 (Formerly 016.357) Introduction to the physics of materials. Solids within the elastic limit: stress and strain tensors, elastic constants. Liquids: continuity equation, Bernoulli, Euler and Navier-Stokes equations. *Recommended corequisite:* PHYS 3680.

PHYS 3630 Electro - and Magnetostatic Theory Cr.Hrs.3 Material covered will include electrostatics (i.e. Gauss' Law, Laplace and Poisson equations) and magnetostatics (Lorentz force, Maxwell equations) as well as the properties of electrostatic fields in matter and magnetism in materials. Not to be held with the former 016.369. *Prerequisites:* PHYS 2600 (or 016.260) and PHYS 2490 (or the former 016.237), or consent of department.

PHYS 3640 Electro - and Magnetodynamics and Special Relativity Cr.Hrs.3 Topics covered will include time dependent Maxwell's equations, Ohm's and Faraday's Law, electromagnetic waves, potential and fields, radiation, and special relativity including the Lorentz transformations. Not to be held with the former 016.369. *Prerequisite:* PHYS 3630.

PHYS 3650 Classical Mechanics 2 Cr.Hrs.3 (Formerly 016.365) The second in a sequence of three courses on intermediate to advanced level mechanics. Topics include dynamics of a system of particles, noninertial reference frames, dynamics of rigid bodies, calculus of variations, Lagrangian and Hamiltonian dynamics. Not to be held with the former 016.233. *Prerequisite:* PHYS 2650 (or 016.265) (C).

PHYS 3660 Classical Mechanics 3 Cr.Hrs.3 (Formerly 016.366) The third in a sequence of three courses on intermediate to advanced level mechanics. Topics include nonlinear oscillations and chaos, coupled oscillations, the wave equation in continuous media, special relativity. Not to be held with the former 016.356. *Prerequisite:* PHYS 3650 (or 016.365) (C).

PHYS 3670 Classical Thermodynamics Cr.Hrs.3 An introduction to the laws of classical equilibrium thermodynamics and their applications. Not to be held with the former 016.341. *Prerequisite:* PHYS 2490 (or the former 016.237).

PHYS 3680 Statistical Mechanics Cr.Hrs.3 An introduction to the principles of classical and quantum statistical mechanics and their applications. Not to be held with the former 016.341. *Prerequisites:* PHYS 2380 (or 016.238) and PHYS 3670.

PHYS 4250 Computational Physics Cr.Hrs.3 (Formerly 016.425) Application of numerical methods and programming skills to model a variety of physics problems on a computer. Topics include differential equations, boundary value and eigenvalue problems, special functions, and Monte Carlo methods, with examples from classical, quantum, and statistical mechanics. *Prerequisites:* PHYS 2490 (or the former 016.237) (C) or consent of department

PHYS 4300 Topics in Physics Cr.Hrs.3 (Formerly 016.430) Topics will vary depending upon student needs and interests, and will include specialized topics not available in regular course offerings. *Prerequisite:* PHYS 3380 (or the former 016.338 or 016.370 or 016.358) (C) or consent of department.

PHYS 4390 Quantum Physics 3 Cr.Hrs.3 Sequel to PHYS 3380 (or 016.338). Hilbert space formalism, symmetry and conservation laws, angular momentum, stationary state perturbation theory, variational methods. Not to be held with the former 016.438. *Prerequisites:* PHYS 2490 (or the former 016.237) and PHYS 3380 (or the former 016.338).

PHYS 4510 Introduction to Nuclear Physics Cr.Hrs.3 (Formerly 016.451) Nuclear properties, the nuclear two-body problem; the deuteron and nucleon-nucleon scattering, nuclear models, nuclear disintegration; alpha-decay, gamma transitions, and beta-decay nuclear reactions; elementary particles. *Prerequisite:* PHYS 3380 (or 016.338 or 016.370) or PHYS 3580 (or 016.358)(C).

PHYS 4520 Introduction to Solid State Physics Cr.Hrs.3 (Formerly 016.452) An introduction to the following topics as they relate to the properties of solids: crystal structure and lattice energy; lattice vibrations and specific heat; free-electron theory and band theory-metals, semiconductors and insulators; vacancies, diffusion, dislocations, and simple alloys. *Prerequisite:* PHYS 3380 (or 016.338) (or the former 016.370) or PHYS 3580 (or 016.358) ©.

PHYS 4560 Applied Nuclear Science Cr.Hrs.3 (Formerly 016.456) Review of nuclear physics, radioactive decay, nuclear reactions, interaction of radiation with matter, stopping powers, radiation dosimetry, radiation hazards; applications of nuclear science in medicine, nuclear reactors, chain reaction, moderators, neutron transport theory, nuclear fusion. *Prerequisite:* PHYS 4510 (or 016.451) ©.

PHYS 4590 Advanced Optics Cr.Hrs.3 Light as a classical electromagnetic wave, optical fields in media, interference by wavefront and amplitude splitting, diffraction, diffraction theory of image formation, spatial filtering and image processing, coherence theory. Not to be held with the former 016.458. *Prerequisites:* PHYS 2260 (or 016.226) and PHYS 3640 (or the former 016.369).

PHYS 4600 Lasers and Applications Cr.Hrs.3 Light and atoms: semi-classical theory, principles of laser operation and properties of laser light, polarization optics, Gaussian beam optics, laser spectroscopy. Not to be held with the former 016.458. *Prerequisites:* PHYS 2260 (or 016.226) and PHYS 3380 (or 016.338).

PHYS 4620 Advanced Classical Mechanics Cr.Hrs.3 (Formerly 016.462) Canonical invariants and Lagrange and Poisson brackets. Hamilton-Jacobi theory, action-angle variables, normal modes of vibration. *Prerequisite:* PHYS 3660 (or 016.366) (or the former 016.356) (C).

PHYS 4630 Physics of Materials 2 Cr.Hrs.3 (Formerly 016.463) Physics of materials beyond the elastic limit, emphasizing atomistic features. Structural aspects, crystal de-

facts, plastic deformation, radiation damage, diffusion and dislocations. *Prerequisite:* PHYS 3570 (or 016.357) (C).

PHYS 4670 Physics Laboratory Cr.Hrs.6 (Lab Required) (Formerly 016.467) For students in their final year in Honours. Experiments are available in nuclear physics, solid state physics, and optics. All are open ended, permitting the student to pursue the investigation of a phenomenon as far as desired. Six hours per week. Not to be held with the former 016.444 or PHYS 4570 (or 016.457). *Prerequisite:* PHYS 3430 (or 016.343) (C) or consent of department.

Service Courses

PHYS 2060 Fundamentals of Physics in Radiation Therapy Cr.Hrs.3 (Lab Required) (Formerly 016.206) Provides the student with a fundamental understanding of the physical nature of photons and electrons and the manner in which they interact with an absorbing scattering medium. The concepts presented in this series will enhance the student's ability to make decisions regarding clinical radiation therapy treatments. Also taught by Allied Health as RTT 2060. Restricted to students in the Radiation Therapy program. *Prerequisite:* PHYS 1030 or PHYS 1031 (or 016.103) (C). *Corequisites:* RTT 2040 and RTT 2080.

PHYS 2090 Radiation Protection in Radiation Therapy Cr.Hrs.3 (Formerly 016.209) Previews fundamental concepts used to minimize the risk when working with radiation, with emphasis on radiation therapy. Includes types and sources of radiation, radiation quantities and units, biological effect and potential risks, basic principles of protection, regulation and dose limits, methods of dose monitoring, and applications in radiation therapy. Also taught by Allied Health as RTT 2090. Restricted to students in the Radiation Therapy program. *Prerequisites:* RTT 2100 (or 163.210) (C), RTT 2060 (or 163.206) (C).

PHYS 2150 Radiation Biology Cr.Hrs.3 (Formerly 016.215) This course deals with the fundamentals of radiation biology and focuses on the effects of radiation at a cellular and molecular level. Also taught by Allied Health as RTT 2150. Restricted to students in the Radiation Therapy program. *Prerequisite:* PHYS 1030 or PHYS 1031 (or 016.103) (C).

4.15 Psychology Program

Head: G. Sande

Program Office: P404 Duff Roblin Building

Telephone: 204 474 9338

Website: umanitoba.ca/arts/psychology/

E-mail: thornel@cc.umanitoba

4.15.1 Program Information

Psychology is the scientific study of behaviour and mental processes, including the biological bases of behaviour and cognitive processes, and behavioural and cognitive neuroscience. The Honours and Major programs combine courses in Psychology with related courses in Science. Courses from the Faculty of Arts are included in this program. The Faculty of Science offers programs leading to a B.Sc. (Honours) degree in Psychology and a B.Sc. (Major) degree in Psychology.

Honours

To enter the Honours program, students must have obtained a grade of "B+" or better in PSYC 1200 (or in both PSYC 1210 and PSYC 1220) and a grade of "B" in six credit hours in courses offered by the Faculty of Science. In addition, students must have obtained a Grade Point Average of 3.25 or better on their first 24-30 credit hours and have no failed courses. Introductory courses in Biology, Chemistry, Computer Science, Mathematics, Statistics or Zoology are highly recommended.

To continue in the Honours program, a student must register in a minimum of 18 credit hours in the Regular Session and must meet all of the continuation criteria of the Faculty of Science. In addition, students must maintain a minimum cumulative Grade Point Average of 3.25 based on all courses in the program, and a minimum annual Grade Point Average of 2.50. Students who do not meet the minimum continuation requirement will be required to withdraw from the Honours program.

The department must approve a student's Honours program for each session. All revisions to the program must also have prior approval.

To graduate, a student must offer 120 credit hours of courses with passing grades (D or better) in each course and with a minimum cumulative Grade Point Average of 3.00 on the 120 credit hours that constitute the degree. In addition, students must complete the program of study in the chart below.

Four Year Major

To enter the Major program, students must normally have obtained a grade of C+ or better in PSYC 1200 (or in both PSYC 1210 and PSYC 1220) and in six credit hours in courses offered by the Faculty of Science and meet the Faculty of Science requirements for entry to the Major program. Introductory courses in Biology, Chemistry, Computer Science, Mathematics, Statistics or Zoology are highly recommended.

To continue in the Major program, a student must meet all of the continuation criteria of the Faculty of Science. This includes maintaining a minimum cumulative Grade Point Average of 2.00 based on all courses applied to and attempted in the program, and no more than 18 credit hours of failing grades after entry to the program. Students who do not meet the minimum continuation requirement will be required to withdraw from the Major program. The department must approve a student's Major program for each session. All program revisions must also have prior approval.

To qualify for the degree of Bachelor of Science (Major), a student must offer 120 credit hours of courses with passing grades (D or better) in each course and with a minimum cumulative Grade Point Average of 2.00. In addition, the student must complete the program of study as listed in the program chart below.

4.15.2 Psychology, Department Code: 017

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS⁹ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
PSYC 1200 (B+) (or PSYC 1210 (B+) and PSYC 1220 (B+)) 6 credit hours Science ¹ (B)	PSYC 2300W,M, ² 6 credit hours 2000 or 3000 level ³ Psychology 15 credit hours Science ⁶ 3 credit hours options ⁷	3 credit hours from PSYC 3630, PSYC 4500, or PSYC 4570 15 credit hours Psychology ⁴ 9 credit hours Science ⁶ 3 credit hours options ⁷	PSYC 4520 18 credit hours Psychology ⁵ 6 credit hours Science ⁶
30 Hours	30 Hours	30 Hours	30 Hours

FOUR YEAR MAJOR^{9,10} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
PSYC 1200 (C+)(or PSYC 1210 (C+) and PSYC 1220(C+)) 6 credit hours Science1(C+)	PSYC 2250, PSYC 2260M 6 credit hours 2000 or 3000 level Psychology ⁸ Plus 30 credit hours of courses from departments in the Faculty of Science, including a minimum of 18 credit hours at the 2000 level or above.	18 credit hours 2000 or 3000 level Psychology ⁸	18 credit hours 2000 or 3000 level Psychology ⁸

A "W" course must be taken in University 1 or Year 2

MINOR

PSYC 1200 or (PSYC 1210 and PSYC 1220)	12 credit hours in Psychology courses numbered at the 2000 or 3000 level
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NOTES:

- ¹ Introductory courses in Biology, Chemistry, Computer Science, Mathematics, Statistics or Zoology are highly recommended.
- ² PSYC 2250 and PSYC 2260 are required when PSYC 2300 is not offered.
- ³ These 6 credit hours must include 3 credit hours from each of two different lettered categories of Psychology courses below.
- ⁴ These 15 credit hours must include 3 credit hours from each of two different lettered categories of Psychology courses below and not sampled in Year 2.
- ⁵ These 18 credit hours must include 6 credit hours at the 4000 level; and 6 credit hours at any level including any remaining lettered category below.
- ⁶ The Science courses that are chosen must be approved by the Department of Psychology and must include a minimum of 18 credit hours at the 2000 level or above.
- ⁷ Free options are to be chosen from courses that are acceptable for credit in the Faculty of Science and must be approved by the Department of Psychology.
- ⁸ During Years 2 to 4 a total of 42 credit hours of 2000 or 3000 level Psychology courses must be completed, including a minimum of 3 credit hours from each of four of the five lettered categories of courses below.
- ⁹ The courses required in this program satisfy the university mathematics requirement.
- ¹⁰ IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.
(Letters in brackets indicated minimum prerequisite standing required for further study.)

Categories of Psychology Courses

Category A: Personality/Social	PSYC 2410, PSYC 2420, PSYC 3450, PSYC 3460
Category B: Developmental	PSYC 2290, PSYC 2310, PSYC 2370
Category C: Learning	PSYC 2440, PSYC 2470, PSYC 3420

Category D: Cognitive	PSYC 2480, PSYC 3441, PSYC 3580, PSYC 3610, PSYC 3170, PSYC 3160
Category E: Biological	PSYC 2360, PSYC 3330, PSYC 3430

Psychology Courses

All Psychology courses are available to Science students, for a complete course listing see the Faculty of Arts section.

4.16 Department of Statistics

Acting Head: Brian Macpherson

General Office: 338 Machray Hall

Telephone: 204 474 9826

Website: www.umanitoba.ca/statistics/

E-mail: Stats_Dept@umanitoba.ca

4.16.1 Academic Staff**Professors**

Brewster, J.F., B.Sc.(Hons.) (UBC), M.Sc. (Toronto), Ph.D. (UBC); **Cheng**, S.W., B.Sc. (Taiwan), M.A., Ph.D. (Western); **Fu**, J.C., B.A. (Taiwan), M.Sc., M.A. (Cornell), Ph.D. (Johns Hopkins); **Macpherson**, B.D., B.Sc., M.Sc. (Manitoba), Ph.D. (Iowa State); **Samanta**, M., B.Sc.(Hons.) (Presidency College), M.Sc. (Calcutta), Ph.D. (Arizona); **Thavaneswaran**, A., B.Sc.(Hons.) (Sri Lanka), M.Math, Ph.D. (Waterloo).

Associate Professors

Mount, K.S., B.Sc. (Stevens Institute of Technology), M.A. (Columbia), Ph.D. (Iowa State); **Wang**, L., B.Sc. (Northern Jiaotang), M.Sc. (Beijing), Ph.D. (Austria); **Wang**, X., B.Sc. (Central China Normal Univ.), M.Sc., Ph.D., (Saskatchewan).

Assistant Professors

Johnson, B., B.Sc., M.Sc. (Manitoba), M.Sc., Ph.D. (Purdue); **Leblanc**, A., B.Sc., M.Sc., Ph.D. (Montreal); **Mandal**, S., B.Sc., M.Sc. (India), Ph.D. (Glasgow); **Zhang**, J., B.Sc. (Yunnan Normal), M.Sc. (Yunnan), Ph.D. (York).

Instructors

Loewen, D., B.Sc., M.Sc. (Manitoba) (Instructor II); **Mateo**, Z., B. Sc. (City of Manila), M.S. (Philippines), Ph.D. (Okayama) (Instructor II).

4.16.2 Program Information

Statistics is a discipline grounded in mathematics that has practical applications in many other areas. Statistics is an analytical discipline that helps other disciplines carry out research projects and studies that involve measurement, comparison, and interpretation. Statistics is a useful ancillary subject to other sciences, the social sciences, and many of the professional programs. The department offers joint programs with Mathematics, Economics and Actuarial Mathematics.

Honours Requirements

Students will normally take STAT 2000 in second year and enter Honours in Year 3, however a student may enter Year 2 Honours if STAT 2000 is successfully completed in University 1.

To enter the Honours program students must have a “B” or better in STAT 2000 and either: an average grade of “B” or better with a minimum grade of “C+” in each of MATH 1500 and MATH 1700 or any equivalents; or a minimum grade of “C+” in MATH 1690.

To continue in the Honours program a student must achieve an annual Grade Point Average of 2.50 or better as assessed after each May, with a maximum of 6 credit hours of failures in each session. A student must have either a grade of “C+” or better in MATH 2750 or a grade of “C+” or better in each of MATH 2720 and MATH 2730. Students must complete 24 credit hours each regular session.

The department must approve a student’s Honours program each session. Students must obtain departmental approval for any and all revisions to their programs.

Four Year Major Requirements

Students will normally take STAT 2000 in Year 2 and enter the four year Major in Year 3; however a student may enter Year 2 of the Major program if STAT 2000 is successfully completed in University 1.

To enter the four year Major program in Statistics, students must have a “C+” or better in STAT 2000 and either: an average grade of “C+” or better with a minimum grade of “C” in each of MATH 1500² and MATH 1700²; or a minimum grade of “C” in MATH 1690. In addition, students must have satisfied the faculty requirements for entry to the four year Major.

To continue in the four year Major program a student must achieve a 2.00 cumulative Grade Point Average on all courses applied to, and attempted in, the program as assessed after each April and August examination series.

To graduate from the four year Major program a student must have a 2.00 cumulative Grade Point Average on all Statistics (005) courses used to meet a program requirement.

The department must approve a student’s four year Major program each session. Students must obtain departmental approval for any and all revisions to their programs.

NOTE: If students envisage, even after a gap, pursuing a master’s in Statistics, it is recommended they take STAT 3050, STAT 3470, STAT 3480, STAT 4140 and three courses from among STAT 4170, STAT 4580, STAT 4590, STAT 4600, STAT 4620, STAT 4630, STAT 4690 and STAT 4700.

In order to improve their academic backgrounds as well as job opportunities, students should carefully elect the optional courses in this program. They should particularly consider the following sequence of courses in Economics and Computer Science.

Economics: ECON 1200, ECON 2450, ECON 2460, ECON 2470, ECON 2480, ECON 3170, ECON 3180, ECON 3730, ECON 4120, ECON 4130.

Computer Science (Software and Artificial Intelligence): COMP 1260, COMP 1270, COMP 1010, COMP 1020, COMP 2080, COMP 2130, COMP 2140, COMP 3380, COMP 3440, COMP 4200, COMP 4380.

Computer Science (Numerical Analysis and Graphics): COMP 1260, COMP 1270, COMP 1010, COMP 1020, COMP 2080, COMP 2130, COMP 2140, COMP 2190, COMP 3140 or COMP 3490.

Three Year General

As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from **two** Science departments. To satisfy the requirement in the Department of Statistics, students must select a minimum of 12 credit hours from the list in the chart.

4.16.3 Statistics, Department Code: 005			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS¹ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
STAT 1000, MATH 1690 (or MATH 1500 ² and MATH 1700 ²), MATH 1300 ²	MATH 2300, MATH 2720 and MATH 2730 (or MATH 2750) Plus sufficient credit hours of electives to total 30 credit hours ⁴	STAT 3050, STAT 3470 and STAT 3480, STAT 3500, STAT 3600, MATH 3740	STAT 4140, STAT 4520, STAT 4530
The following courses must be taken in University 1 or Year 2 COMP 1010, STAT 2000 (B), MATH 1200 6 credit hours from the Faculty of Arts, which should include the required “W” course		Plus 18 credit hours from STAT 3010, STAT 3170, STAT 3180, STAT 3380, STAT 3490, STAT 4580, STAT 4590, STAT 4600, STAT 4620, STAT 4630, STAT 4690, STAT 4700 with at least 9 credit hours from STAT 4170, STAT 4580, STAT 4590, STAT 4600, STAT 4620, STAT 4630, STAT 4690 and STAT 4700 Plus 12 credit hours ⁴	
30 Hours	30 Hours	30 Hours	30 Hours
HONOURS DOUBLE MINIMUM 120 CREDIT HOURS By arrangement with the departments concerned			
FOUR YEAR MAJOR^{1,7} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
STAT 1000, MATH 1690 (or MATH 1500 ² and MATH 1700 ²), MATH 1300 ²	MATH 2720, MATH 2730	STAT 3120, STAT 3130, STAT 3500, STAT 3600	STAT 4520, STAT 4530
The following courses must be taken in University 1 or Year 2 COMP 1010, STAT 2000 (C+), MATH 1200 6 credit hours from the Faculty of Arts, which should include the required “W” course		Plus 18 credit hours from STAT 3010, STAT 3050, STAT 3170, STAT 3180, STAT 3380, STAT 3490, STAT 4140, STAT 4170, STAT 4580, STAT 4590, STAT 4600, STAT 4620, STAT 4630, STAT 4690, STAT 4700 Plus 15 additional credit hours from list below ⁵	
THREE YEAR GENERAL			
A minimum of 12 credit hours from STAT 3010, STAT 3050, STAT 3120, STAT 3130, STAT 3170, STAT 3180, STAT 3380, STAT 3490, STAT 3500 ⁵ , STAT 3600 ⁵ , STAT 4600, STAT 4630, STAT 4690			
MINOR			
STAT 1000	STAT 2000 Plus 12 credit hours from STAT 3010, STAT 3050, STAT 3120, STAT 3130, STAT 3170, STAT 3180, STAT 3380, STAT 3490, STAT 3500 ⁵ , STAT 3600 ⁵ , STAT 4600, STAT 4630, STAT 4690		

NOTES:

¹ The courses required in this program satisfy the University Mathematics requirement.

² MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

³ Of the electives required in Years 2, 3 and 4, 18 credit hours are to be selected from one department which represents a field of application such as: Actuarial Mathematics, Botany, Microbiology, Zoology, Economics, Psychology or Sociology. (Mathematics and Computer Science are excluded from this list.) In consultation with the department, combinations of courses from a coherent area of studies may be selected.

⁴ 15 credit hours are to be taken from either Computer Science and Mathematics, or from one of the following departments: Actuarial Mathematics, Botany, Microbiology, Zoology, Economics, Psychology or Sociology.

⁵ STAT 3500 and STAT 3600 have corequisites of MATH 2720 and MATH 2730. Therefore students who wish to take STAT 3500 and STAT 3600 should consider taking MATH 1300, MATH 1500 and MATH 1700 in University 1 or Year 2, as they are prerequisite to MATH 2720 and MATH 2730.

⁶ IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

4.16.4 Statistics - Actuarial Mathematics Joint Program, Department Code: 005A

The Department of Statistics and the Warren Centre for Actuarial Studies and Research offer a joint Honours program for students wishing in depth study in Statistics and Actuarial Mathematics.

Entry Requirements:

To enter the Honours program students must have satisfied the Faculty of Science requirements for entry to the program, and have completed STAT 1000, MATH 1300 and either MATH 1690, or MATH 1500 and MATH 1700 or any equivalent with a minimum grade of "B" in each of STAT 1000 and MATH 1690 (or a "B" average in MATH 1500 and MATH 1700).

Recommended Electives:

ACT 4050, ACT 4060, Accounting and Finance FIN 1100, FIN 2200, FIN 3410; Business Administration GMGT 2000; Economics ECON 1200, ECON 2450.

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

JOINT HONOURS³ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

MATH 1690 (or MATH 1500¹ and MATH 1700¹), MATH 1300¹

Plus 9 credit hours of electives

STAT 2000⁴, ACT 2120, MATH 2750 (or MATH 2720 and MATH 2730), MATH 2300⁵

Plus 15 approved credit hours

STAT 3050, STAT 3470 and STAT 3480, STAT 3500, STAT 3600, ACT 3130, ACT 3230, ACT 3330, ACT 3530

Plus 3 approved credit hours

STAT 3490, STAT 4140, STAT 4520, STAT 4530, ACT 4140, ACT 4150, ACT 4240 or ACT 4000, ACT 4340, MSCI 2150, COMP 1260

The following courses must be taken in University 1 or Year 2 COMP 1010², STAT 1000 (B)

6 credit hours from the Faculty of Arts, which should include the required "W" course

30 Hours

30 Hours

30 Hours

30 Hours

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² COMP 1010 may be taken in University 1 or later in the program.

³ The courses required in this program satisfy the university mathematics requirement.

⁴ STAT 2000 may be taken in University 1 or Year 2.

⁵ MATH 2350 may be taken in place of MATH 2300.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.16.5 Statistics - Mathematics Joint Program, Department Code: 005M

The departments of Statistics and Mathematics offer a joint Honours program for students wishing in depth study in Statistics and Mathematics.

Entry Requirements:

To enter the Honours program students must have satisfied the Faculty of Science requirements for entry to the program, and have completed STAT 1000, MATH 1300 and either MATH 1690, or MATH 1500 and MATH 1700 or any equivalent with a minimum grade of "B" in each of STAT 1000 and MATH 1690 (or a "B" average in MATH 1500 and MATH 1700).

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

JOINT HONOURS⁶ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

MATH 1300¹(B), MATH 1690(B) (or MATH 1500¹ and MATH 1700¹(B)),

Plus 9 credit hours

STAT 2000⁴, MATH 2200, MATH 2350, MATH 2600, MATH 2750, MATH 2800

Plus 6 approved credit hours

STAT 3050, STAT 3470, STAT 3480, STAT 3500, STAT 3600

Plus 3 approved credit hours

STAT 4140³, STAT 4520, STAT 4530³

Plus 6 approved credit hours

The following courses must be taken in University 1 or Year 2 COMP 1010², STAT 1000 (B)

6 credit hours from the Faculty of Arts, which should include the required "W" course

Plus a total of 30 credit hours from MATH 2400 and any 3000 and 4000 level Mathematics courses, which must include at least 3 credit hours at the 4000 level and must also include MATH 3230, MATH 3740 (or MATH 3760), MATH 3350 (or MATH 3300), MATH 3700 (or MATH 3710), MATH 3400 and MATH 3800

30 Hours

30 Hours

30 Hours

30 Hours

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² May be taken in Year 2

³ May be taken in Year 3.

⁴ STAT 2000 may be taken in University 1.

⁵ The courses required in this program satisfy the university mathematics requirement.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.16.6 Statistics – Economics Honours Joint Program, Department Code: 005E

The Department of Statistics along with the Department of Economics (Faculty of Arts) offer a Joint Honours program for students wishing in depth study in Statistics and Economics. For Economics course listings, refer to the Faculty of Arts chapter in the Calendar.

Students will normally take STAT 2000 in second year and enter Honours in Year 3, however a student may enter Year 2 Honours if STAT 2000 is successfully completed in University 1. To enter the Joint Honours Statistics – Economics program, the student must have a minimum grade of “B” in ECON 1200 (or ECON 1210 and ECON 1220) and STAT 2000, and an average grade of “B” or better with a minimum grade of “C+” in each of MATH 1500 and MATH 1700 or any equivalents and have satisfied the Faculty of Science requirements for entry to the honours program. Students must complete a minimum of 24 credit hours per regular session.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS⁴ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
ECON 1200 (or ECON 1210 and ECON 1220), MATH 1300 ¹ , MATH 1500 ^{1,2} , MATH 1700 ^{1,2} , STAT 1000, COMP 1010	ECON 2700, ECON 2800, MATH 2200, MATH 2350, MATH 2750, STAT 2000 Plus 6 credit hours of approved Economics electives ³	ECON 3700, ECON 3800, MATH 3740 or MATH 3760, STAT 3470, STAT 3480, STAT 3490, STAT 3500, STAT 3600 Plus 3 credit hours of approved Economics electives ³	ECON 4120, ECON 4130, STAT 4140, STAT 4520, STAT 4530, STAT 4580, STAT 4630 Plus 9 credit hours of approved Economics electives ³
Plus 9 credit hours of electives which should include the required “W” course			
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

¹ MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1530 may be taken in place of MATH 1500; MATH 1710 or MATH 1730 may be taken in place of MATH 1700.

² The combination of MATH 1500¹ and MATH 1700¹ may be replaced by MATH 1690.

³ Of the 18 credit hours in Economics electives in Years 2, 3 and 4, no more than 6 credit hours may be at the 2000 level or below; ECON 2530 and ECON 3180 are recommended in Year 2 or 3. The normal prerequisite for ECON 3180 is ECON 3170, which will be waived for students in this program who have completed Year 1.

⁴ The courses required in this program satisfy the University Mathematics requirement.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.16.7 Statistics Course Descriptions

Unless otherwise specified, a minimum grade of “C” must be attained in any course stipulated as a prerequisite to a further course in Statistics.

General Courses

M U1 STAT 1000 Basic Statistical Analysis 1 Cr.Hrs.3 (Formerly 005.100) An introduction to the basic principles of statistics and procedures used for data analysis. Topics to be covered include: gathering data, displaying and summarizing data, examining relationships between variables, sampling distributions, estimation and significance tests, inference for means. Not to be held with STAT 1001, STAT 2220 (or 005.222) (or the former 005.101, 005.120, 005.201, 005.210, 005.21, 005.220, 005.221, 005.231, 005.241, or 005.250).

M U1 STAT 1001 Analyse statistique de base I Cr.Hrs.3 (Labo requis) (L'ancien 005.100) Une introduction aux principes fondamentaux de la statistique et aux procédures utilisés en analyse de données. Les sujets traités incluent: la cueillette des données, l'affichage et l'élagage des données, les relations entre variables, les distributions échantillonneras, l'estimation et les tests de signification, l'inférence pour les moyennes. On ne peut se faire créditer à la fois le STAT 1000 et le STAT 2220 (ou 005.222) (ou les anciens 005.101, 005.120, 005.201, 005.210, 005.211, 005.220, 005.221, 005.231, 005.241, 005.250). Donné seulement au Collège universitaire de Saint-Boniface.

U1 STAT 2000 Basic Statistical Analysis 2 Cr.Hrs.3 (Formerly 005.200) The study of estimation and hypothesis testing procedures for means and proportions in one, two and multiple sample situations, introduction to the analysis of variance; regression and correlation analysis; optional topics may include nonparametric procedures, design of experiments, probability models. Not to be held with STAT 2001 or the former 005.120, 005.201, 005.211, 005.221, 005.231, 005.241, or 005.250. *Prerequisite:* STAT 1000 or STAT 1001 (or 005.100), (or the former 005.101 or 005.210).

U1 STAT 2001 Analyse statistique de base II Cr.Hrs.3 (Labo requis) (L'ancien 005.200) L'étude des procédures d'estimation et de tests d'hypothèses pour les moyennes et les proportions dans les contextes d'échantillonnage à une, deux ou plusieurs variables; introduction à l'analyse de variance; régression et corrélation; les sujets optionnels peuvent inclure les méthodes nonparamétriques, la conception d'expériences, les modèles probabilistes. On ne peut se faire créditer à la fois le STAT 2000 (ou 005.200), (ou les anciens 005.120, 005.201, 005.211, 005.221, 005.231, 005.241, ou 005.250). *Préalable:* STAT 1000 ou STAT 1001 (ou 005.100) (ou les anciens 005.101 ou 005.100, 005.210). Donné seulement au Collège universitaire de Saint-Boniface.

STAT 3010 Topics in Statistical Analysis Applied to Business Cr.Hrs.3 (Formerly 005.301) An introduction to decision theory, time series, index numbers and statistical quality control. *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200) (or the former 005.201, or 005.211 or 005.221) (C).

STAT 3050 Introduction to Probability Theory and Its Applications Cr.Hrs.3 (Formerly 005.305) Development of the basic concepts of probability theory and application in areas of biostatistics, actuarial science, reliability theory, queueing theory. *Prerequisites:* STAT 3500 (or 005.350) (or the former 005.331 or 005.341) (C) and MATH 2720 or MATH 2721 (or 136.272) and MATH 2730 or MATH 2731 (or 136.273) (or the former 136.270 and 136.271) (C).

STAT 3120 Topics in Regression Analysis Cr.Hrs.3 (Formerly 005.312) Linear regression and correlation, multiple regression, polynomial regression, selecting the best regression model. Not to be held with STAT 3470 (or 005.347). *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200) (or the former 005.201, 005.211, or 005.221) (C).

STAT 3130 Statistical Analysis of Designed Experiments Cr.Hrs.3 (Formerly 005.313) Analysis of variance, completely randomized designs, randomized complete block, interaction, factorial arrangement of treatments, analysis of covariance. Not to be held with STAT 3480 (or 005.348). *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200) (or the former 005.201, 005.211 or 005.221) (C).

STAT 3170 Statistical Quality Control Cr.Hrs.3 (Formerly 005.317) Techniques for quality improvement through the use of statistical process control. Topics will include acceptance sampling, Pareto diagrams, boxplots, normal probability plots, control charts (EWMA and CUSUM), measurements of process capability and process performance. *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200) (or the former 005.201 or 005.211 or 005.221) (C).

STAT 3180 Exploratory Data Analysis Cr.Hrs.3 (Formerly 005.318) Graphical and numerical techniques will be investigated for use in summarizing and exploring real data. *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200) (or the former 005.201 or 005.211 or 005.221) (A).

STAT 3380 An Introduction to Nonparametric Statistics Cr.Hrs.3 (Formerly 005.338) Parametric versus nonparametric inference; inference using ranks and order statistics; tolerance intervals; contingency tables; goodness-of-fit tests; examples from the social and physical sciences. *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200 or the former 005.201, 005.211 or 005.221) (C).

STAT 3500 Intermediate Statistical Theory 1 Cr.Hrs.3 (Formerly 005.350) Basic probability theory, distribution theory, special distributions and functions of random variables. Not to be held with the former 005.331 or STAT 3410 (or 005.341). *Pre-*

requisite: STAT 2000 or STAT 2001 (or 005.200). Corequisite: MATH 2720 or MATH 2721 or MATH 2730 or MATH 2731.

STAT 3600 Intermediate Statistical Theory 2 Cr.Hrs.3 (Formerly 005.360) Transformations, sampling distributions, convergence and introduction to estimation and hypothesis testing. Not to be held with the former 005.331 or STAT 3410 (or 005.341). Prerequisite: STAT 3500 (or 005.350) (C). Corequisite: Whichever of MATH 2720 or MATH 2721 (136.272) (or the former 137.270) or MATH 2730 or MATH 2731(136.273) (or the former 136.271) not yet taken.

Honours and Four Year Major Courses

STAT 3470 Statistical Methods for Research Workers 1 Cr.Hrs.3 (Formerly 005.347) Linear regression, multiple regression, correlation analysis, introduction to one way analysis of variance, some related topics. Not to be held with STAT 3120 (or 005.312). Corequisite: STAT 3500.

STAT 3480 Statistical Methods for Research Workers 2 Cr.Hrs.3 (Formerly 005.348) Analysis of variance, randomized block design, nested and Latin square experiments analysis of covariance. Not to be held with STAT 3130 (or 005.313) (or the former 005.333). Prerequisite: STAT 3470 (or 005.347) (C).

STAT 3490 Time Series Analysis Cr.Hrs.3 (Formerly 005.349) Trend and seasonal components, exponential smoothing by the multiple regression method, the Box-Jenkins Methodology, analysis of seasonal data. Prerequisite: STAT 3120 (or 005.312) (C) or STAT 3470 (or 005.347) (C).

STAT 4140 Introduction to Statistical Inference Cr.Hrs.3 (Formerly 005.414) Introduction to methods of estimation and tests of hypotheses. Prerequisites: STAT 3600 (or 005.360) (or the former 005.341) (C), or a "B" average in STAT 3120 (or 005.312), STAT 3130 (or 005.313) (or the former 005.331).

STAT 4170 Lifetime Data Analysis Cr.Hrs.3 (Formerly 005.417) An introduction to basic principles and techniques for lifetime data analysis in biostatistics and reliability, with emphasis on theory and applications. Topics to be covered include: censoring, truncation, survival and hazard functions, parametric and nonparametric methods, proportional hazards regression. Prerequisites: STAT 3120 (or 005.312) or STAT 3470 (or 005.347) (C), and STAT 3130 (or 005.313) or STAT 3480 (or 005.348) (C), and STAT 3600 (or 005.360) (or the former 005.331 or 005.341) (C).

STAT 4520 Sampling Techniques 1 Cr.Hrs.3 (Formerly 005.452) A development of sampling theory for use in sample survey problems, in regression estimates, in systematic sampling, sources of errors in surveys. Prerequisites: STAT 3600 (or 005.360) (C), STAT 3480 (or 005.348) (C) or STAT 3120 (or 005.312) (C) and STAT 3130 (or 005.313) (C), or consent of department.

STAT 4530 Design of Experiments 1 Cr.Hrs.3 (Formerly 005.453) Objectives in designing experiments; designs commonly used in research including analysis and an introduction to the construction of designs. Prerequisites: STAT 3600 (or 005.360)

(C), STAT 3480 (or 005.348) (C) or STAT 3120 (or 005.312) (C) and STAT 3130 (or 005.313) (C), or consent of department.

STAT 4580 Sampling Techniques 2 Cr.Hrs.3 (Formerly 005.458) A mathematical treatment of some advanced topics in sampling theory. Multistage sampling plans and other selected topics. Prerequisite: STAT 4520 (or 005.452) (C) or consent of department.

STAT 4590 Design of Experiments 2 Cr.Hrs.3 (Formerly 005.459) The theory and analysis of experimental designs treated in STAT 4530 (or 005.453) and more advanced designs; construction of designs. Prerequisite: STAT 4530 (or 005.453) (C) or consent of department.

STAT 4600 Statistics Topics 1 Cr.Hrs.3 (Formerly 005.460) Topics of current interest in Statistics that will vary with the needs and interests of students and Faculty. Prerequisite: STAT 3600 (or 005.360) (C) or consent of department.

STAT 4620 Mathematical Probability Cr.Hrs.3 (Formerly 005.462) Combinatorial and enumerative procedures, occupancy problems, limit theorems, laws of large numbers, characteristic functions. Not to be held with the former 005.456. Prerequisite: STAT 3050 (or 005.305) (C) or consent of department.

STAT 4630 Stochastic Processes Cr.Hrs.3 (Formerly 005.463) An introduction to stochastic processes. Prerequisite: STAT 3600 (or 005.360) (C) or consent of department.

STAT 4690 Applied Multivariate Analysis Cr.Hrs.3 (Formerly 005.469) The course will emphasize applications of various techniques in multivariate analysis and gaining familiarity with the relevant programs in statistical packages, i.e., SAS, BMDP. Prerequisites: STAT 3480 (or 005.348) (C) or STAT 3120 (or 005.312) (C) and STAT 3130 (or 005.313) (C) and MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (or the former 013.146) (C).

STAT 4700 Statistical Consulting Cr.Hrs.3 (Formerly 005.470) The role of a Statistics Consultant. Practical consulting experience. This course is normally open to fourth year and graduate students in Statistics. Prerequisites: STAT 3600 (or 005.360) (C) and STAT 3480 (or 005.348) (C) or STAT 3120 (or 005.312) (C) and STAT 3130 (or 005.313) (C) or consent of department. Corequisites: STAT 4520 and STAT 4530.

Service Courses

STAT 2220 Contemporary Statistics for Engineers Cr.Hrs.3 (Lab Required) (Formerly 005.222) Descriptive statistics, basic probability concepts, special statistical distributions, statistical inference-estimation and hypothesis testing, regression, reliability, statistical process control. Not to be held with STAT 1000, STAT 1001, (or 005.100) (or the former 005.101, 005.120 or 005.201, 005.210, 005.211, 005.220, 005.221, 005.231, 005.241, or 005.250). Prerequisite: One of MATH 1680 (or 136.168) (C), MATH 1690 (or 136.169) (C), MATH 1700 or MATH 1701 (or 136.170) (C), MATH 1710 (or 136.171) (C) or MATH 1730 (or 136.173) (C).

4.17 Department of Zoology

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4.17.1 Academic Staff

Emeritus Distinguished Professor

Eales, J.G., B.A.(Hons.) (Oxford), M.Sc., Ph.D. (UBC), F.R.S.C.;

Senior Scholars

Pruitt, W.O., Jr., B.S. (Maryland), M.A., Ph.D. (Michigan); **Stewart, K.W.,** B.Sc. (Colorado), M.Sc. (Miami), Ph.D. (UBC); **Ward, F.J.,** B.A.(Hons.), M.A. (UBC), Ph.D. (Cornell).

Professors

Abrahams, M.V., B.Sc. (Western), M.Sc. (Queen's), Ph.D. (Simon Fraser); **Dick, T.A.,** B.Sc. (Toronto), M.Sc. (New Brunswick), Ph.D. (Toronto); **Hann, B.J.,** B.Sc.(Hons.), M.Sc. (Waterloo), Ph.D. (Indiana); **Huebner, E.,** B.Sc.(Hons.) (Alberta), Ph.D. (Massachusetts); **MacArthur, R.A.,** B.Sc.(Hons.), M.Sc. (Alberta), Ph.D. (Manitoba); **Riewe, R.R.,** B.S., M.Sc. (Wayne State), Ph.D. (Manitoba); **Sealy, S.G.,** B.Sc. (Alberta), M.Sc. (UBC), M.Sc., Ph.D. (Michigan); **Wiens, T.J.,** B.A.(Hons.), M.A. (Saskatchewan), Ph.D. (Pennsylvania).

Associate Professors

Gillis, D.M., B.Sc. (Dalhousie), M.Sc. (McGill), Ph.D. (Simon Fraser); **Graham, L.C.,** B.Sc.(Hons.), M.Sc. (Alberta), Ph.D. (Tulane); **Hare, J.F.,** B.Sc. M.Sc. (Toronto), Ph.D. (Alberta); **Valdimarsson, G.,** B.Sc., M.Sc. (Manitoba), Ph.D. (Western).

Assistant Professors

Anderson, W. G. B.Sc.(Hons), Ph.D. (St. Andrews); **Campbell, K.L.,** B.Sc. (Hons), Ph.D. (Manitoba); **Davoren, G.K.,** B. Sc., M.Sc. (Victoria), Ph.D. (Memorial); **Whyard, B.Sc.**(Hons), Ph.D. (Queen's).

Senior Instructors

Horn, B.M., B.Sc.(Hons.), M.Sc. (Manitoba); **Narayansingh, T.G.,** B.Sc.(Hons.), M.Sc. (Manitoba); **McLeese, J.M.,** B.Sc., M.Sc. (Guelph), Ph.D. (Ottawa).

4.17.2 Program Information

Zoology is the study of animals, their biodiversity, form and function, evolution, and their interactions with the environment. Five areas of study are offered: animal behaviour and ecology, animal physiology, cell and developmental biology, ecology, and parasitology. The department cooperates with the Department of Botany to offer the joint program in ecology. There are opportunities for projects at the field station at Delta Marsh.

The department must approve a student's Honour or Major program each session. Students must also obtain approval for any and all revisions to their program.

Zoology Prerequisite Information

BIOL 1030 with a grade of "C" or better is normally a prerequisite for further study in Zoology. A grade of "C" must be achieved in any Zoology course stipulated as a prerequisite to a further course in Zoology.

Though normally a prerequisite for all Zoology courses, BIOL 1030 may be waived under special circumstances at the discretion of the department head. This waiver applies in all Zoology programs. Students who qualify should contact the department head to arrange for substitutions for BIOL 1030. However, students who intend to seek admission to professional faculties which require BIOL 1020 and BIOL 1030 (such as Dentistry, Pharmacy, Optometry and Veterinary Science) will not be eligible for

admission without credit in that course. Also, this waiver of the prerequisite of BIOL 1030 does not apply to ZOOL 2530.

Honours

Students planning a professional career in Zoology are strongly advised to enter the Honours program at the beginning of Year 2.

To enter Honours Zoology, students must have a "B" in BIOL 1030 or CHEM 1310 and not less than a "C+" in the other course. If BIOL 1030 has been waived (see above), then the entrance requirement will be CHEM 1310 and the replacement for BIOL 1030, with a "B" standing in either course and not less than a "C+" in the other.

To continue in the Honours program, i.e., to proceed from Year 2 to Year 3 and Year 3 to Year 4, a student must have an annual Grade Point Average of 2.50, with no failures, and in addition, must have a 3.00 Grade Point Average on all Zoology courses during that session and a grade of "C+" or better in each Zoology course. Students must complete 24 credit hours each regular session.

To graduate with an Honours degree after Year 4, a student must obtain a Grade Point Average of 3.00 or better on the year's work, with no failures, and must have a grade of "C+" or better in all Zoology courses.

Honours Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Honours Zoology program may enter the Cooperative Option after completion of their second year in Honours Zoology. This program provides students with 12 months of paid employment by the time they graduate. It enables them to obtain work experience with participating firms, government agencies and University units.

The course and grade requirements for entry to this option are the same as those required for entry to the regular Honours program. Students should refer to the general faculty regulations for B. Sc. (Honours) Cooperative Options in Section 3.6.

Students should note that the course and grade requirements for the Cooperative Option are the same as those for the regular Honours program, with the addition of the Work Term courses. To continue in the Honours Cooperative program, i.e., to proceed from Year 2 to Year 3 and from one academic term to the next and to complete the Honours Cooperative program successfully, a student must have an annual Grade Point Average of 2.50, and in addition, must have a 3.00 Grade Point Average on all Zoology courses during that session, a grade of "C+" or better in each Zoology course, and a pass on all work term courses.

Students may apply for openings in the Cooperative Option after completing at least two years (60 credit hours) in the Honours program. Before the first employment term begins, the prerequisite courses listed below must be completed and it is strongly recommended that 75 credit hours of the Honours program be completed. Acceptance and continuation in the program is dependent upon the student's receiving employment placements. Employment term positions available to the students will be approved by the department and may include positions within Zoology or other University departments; employers will select the students they wish to employ. The first employment term will preferably be taken in January or May of the third year, but may under exceptional circumstances begin in the preceding September or May. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Prerequisite courses to be completed before employment terms begin: BIOL 1020 and BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000, 3 credit hours of specified Mathematics or Physics, and ZOOL 3750*, plus at least 6 of ZOOL 2150, ZOOL 2280, ZOOL 2320, ZOOL 2370, ZOOL 2600, ZOOL 3530, BOTN 2460, and CHEM 2770/CHEM 2360 [* a Pre-Coop Workshop may be substituted for ZOOL 3750 only to permit an employment term in May of Year 2 or September of Year 3, but ZOOL 3750 must still be taken].

The program will include three employment terms, each of 4-month duration, two of which may be consecutive. Students are required to register in and pay fees for each employment term prior to its commencement. Students will be required to submit an employment report upon the completion of each employment term.

Four Year Major

The four year Major provides students with opportunities for intensive study in a particular field of zoology. Interested students should consult the department head for advice. To enter this program, students must have a "C+" in either BIOL 1030 or CHEM 1310 and not less than a "C" in the other course, and have satisfied the faculty requirements for entry to the four year Major program. If BIOL 1030 has been waived (see above) then the entrance requirements will be CHEM 1310 and the replacement for BIOL 1030, with a "C+" standing in either course and not less than a "C" in the other.

To continue in and graduate from the Major program a student must have a minimum sessional Grade Point Average of 2.00 and a "C" or better in each Zoology course. Four year Major students may transfer into the Honours program at the end of their second or third year with permission of the department head and providing faculty regulations regarding entry to Honours at that stage are satisfied.

Four Year Major Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Major Zoology program may enter the Cooperative Option after completion of their second year in the Zoology Major. This program provides students with 12 months of paid employment by the time they graduate. It enables them to obtain work experience with participating firms, government agencies and University units.

The course and grade requirements for entry to this option are the same as those required for entry to the regular Major program. Students should refer to the general faculty regulations for B. Sc. (Major) Cooperative Options in Section 3.4.

Students should note that the course and grade requirements for the Cooperative Option are the same as those for the regular Major program, with the addition of ZOOL 3750 and the Work Term courses. To continue in and graduate from the Major Cooperative program, a student must have a sessional Grade Point Average of 2.00, a grade of "C" or better in each Zoology course required in the program, and a pass on all work term courses. Students who achieve less than a 2.00 Grade Point Average while taking a course on an employment term will be allowed to continue in the Major Cooperative program if they maintain a 2.50 cumulative Grade Point Average in all Zoology courses (including that employment term).

Students may apply for openings in the Cooperative Option after completing at least two years (60 credit hours) in the Major program. Before the first employment term begins, the prerequisite courses listed below must be completed and it is strongly recommended that 75 credit hours of the Major program be completed. Acceptance and continuation in the program is dependent upon the student's receiving employment placements.

Employment term positions available to the students will be approved by the department and may include positions within Zoology or other University departments; employers will select the students they wish to employ. The first employment term will preferably be taken in January or May of the third year, but may under exceptional circumstances begin in the preceding September or May. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.

Prerequisite courses to be completed before employment terms begin: BIOL 1020 and BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000, 3 credit hours of specified Mathematics or Physics, and ZOOL 3750*, plus at least 6 of ZOOL 2150, ZOOL 2280, ZOOL 2320, ZOOL 2370, ZOOL 2600, ZOOL 3530, BOTN 2460, and CHEM 2770/CHEM 2360 [* a Pre-Coop Workshop may be substituted for ZOOL 3750 only to permit an employment term in May of Year 2 or September of Year 3, but ZOOL 3750 must still be taken].

The program will include three employment terms, each of 4-month duration, two of which may be consecutive. Students are required to register in and pay fees for each employment term prior to its commencement. Students will be required to submit an employment report upon the completion of each employment term.

Three Year General

Courses taken for a General degree provide an introduction to the major fields of study in zoology. As prescribed with all other faculty regulations in Section 3.2, students in this program must select 30 credit hours of 2000 and (or) 3000 level courses from **two** Science departments. To satisfy the

requirement in the Department of Zoology, students must take a minimum of 12 credit hours of Zoology courses as prescribed in the chart above. Course ZOOL 3750 is not available to students in this program.

NOTE: Botany BOTN 2460 and BOTN 3460 may be used to satisfy six credit hours of upper level Zoology.

Students anticipating a transfer to either the four year Major or Honours program at the end of their second or third year should examine requirements for these programs and consult with the department head before registering in their second or third year.

Botany-Zoology Joint Programs in Ecology

The Department of Zoology, in conjunction with the Department of Botany, offers a joint Honours program and a joint four year Major program in Ecology. See Section 4.8 Ecology Program for full details.

Minor

A Minor provides an appreciation of the diversity and evolution of animals as a supplement to a Major or Honours program, or a program of study in another faculty. The normal requirement for entry into a Zoology Minor is a "C" in BIOL 1030.

4.17.3 Zoology, Department Code: 022			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS SINGLE⁵ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	ZOOL 2150, ZOOL 2280, ZOOL 2320, ZOOL 2370 (BOTN 2370 AGEC 2370) ² , ZOOL 2600, CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780) or CHEM 2210 and CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370) ³	ZOOL 3000 (BOTN 3000), ZOOL 3530 ⁴ , ZOOL 3540 ⁴ , ZOOL 3750, BOTN 2460	ZOOL 4110
In University 1 or Year 2: 3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , PHYS 1020 or PHYS 1050 STAT 1000, STAT 2000 6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.		Plus an additional 21 credit hours from the remaining 3000 and 4000 level Zoology courses and 6 hours from Botany, Microbiology or electives from a related field. With Departmental approval, a student may substitute up to 6 credit hours of the 21 credit hours of unspecified Zoology credits from a related area.	
30 Hours	30 Hours	30 Hours	30 Hours
HONOURS DOUBLE MINIMUM 120 CREDIT HOURS			
BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	Arranged in consultation with departments concerned		
In University 1 or Year 2: 6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.			
HONOURS COOPERATIVE OPTION⁵ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310	ZOOL 2150, ZOOL 2280, ZOOL 2320, ZOOL 2370 (BOTN 2370 or AGEC 2370) ² , ZOOL 2600, CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780) or CHEM 2210 and CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370) ³	ZOOL 3000 (BOTN 3000), ZOOL 3530 ⁴ , ZOOL 3540 ⁴ , ZOOL 3750, BOTN 2460	ZOOL 4110
In University 1 or Year 2: 3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , PHYS 1020 or PHYS 1050 STAT 1000, STAT 2000 6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.		ZOOL 3980, ZOOL 3990, ZOOL 4980 Plus an additional 21 credit hours from the remaining 3000 and 4000 level Zoology courses and 6 hours from Botany, Microbiology or electives from a related field. With Departmental approval, a student may substitute up to 6 credit hours of the 21 credit hours of unspecified Zoology credits from a related area.	
30 Hours	30 Hours	30 Hours	30 Hours
FOUR YEAR MAJOR^{5,6} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000	ZOOL 2320, ZOOL 2600, CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780) or CHEM 2210 and CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370) ³	ZOOL 3000 (BOTN 3000), ZOOL 3530 ⁴ , ZOOL 3540 ⁴	

continued on next page

In University 1 or Year 2:

3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

STAT 2000

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

Plus an additional 21 credit hours from the remaining 3000 or 4000 level Zoology courses. With Departmental approval, a student may substitute up to 6 credit hours of the 21 credit hours of an unspecified Zoology credits from a related area.

ZOOL 2150, ZOOL 2280, ZOOL 2370 (BOTN 2370 or AGECE 2370)², BOTN 2460 which must be taken in Year 2 or 3

MAJOR COOPERATIVE OPTION^{5,6} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000

ZOOL 2320, ZOOL 2600, CHEM 2770 and CHEM 2780 (MBIO 2770 and MBIO 2780) or CHEM 2210 and CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370)³

ZOOL 3000 (BOTN 3000), ZOOL 3530⁴, ZOOL 3540⁴, ZOOL 3750

In University 1 or Year 2:

3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020 or PHYS 1050

STAT 2000

6 credit hours from the Faculty of Arts, which should include the required "W" course. Note: BOTN 1010 may also be selected to fulfil the "W" requirement.

ZOOL 3980, ZOOL 3990, ZOOL 4980

Plus an additional 21 credit hours from the remaining 3000 or 4000 level Zoology courses. With Departmental approval, a student may substitute up to 6 credit hours of the 21 credit hours of unspecified Zoology credits from a related area.

ZOOL 2150, ZOOL 2280, ZOOL 2370 (BOTN 2370 or AGECE 2370)², BOTN 2460 which must be taken in Year 2 or 3

THREE YEAR GENERAL

A minimum of 12 credit hours from 2000 and (or) 3000 level Zoology courses or Botany BOTN 2460 and BOTN 3460

MINOR

BIOL 1020 and BIOL 1030

12 credit hours from 2000 and 3000 level Zoology courses

JOINT BOTANY-ZOOLOGY HONOURS AND FOUR YEAR MAJOR ECOLOGY PROGRAM See Section 4.8 Ecology Program

NOTES:

¹ MATH 1510, MATH 1520, MATH 1530, MATH 1680 or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place MATH 1300.

² ZOOL 2370 (BOTN 2370 or AGECE 2370) has STAT 1000 as a corequisite.

³ If CHEM 2210, CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370) are elected, CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370) may be taken in either Year 2 or Year 3.

⁴ For students who have completed ZOOL 2530 and ZOOL 2540 before entering the Honours or four year Major program, the ZOOL 3530 and ZOOL 3540 requirement will be waived if they received a minimum grade of "B" in ZOOL 2540 and completed and pass the laboratory component of ZOOL 3530 and ZOOL 3540, however, if possible, completion of ZOOL 3540 is advised.

⁵ The courses in this program will satisfy the University mathematics requirement.

⁶ IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

4.17.4 Zoology Course Descriptions

NOTES:

BIOL 1030 with a grade of "C" or better is normally a prerequisite for further study in Zoology. Details of each course are given in a supplement available in the department office.

A grade of "C" or better must be achieved in any Zoology course stipulated as a prerequisite to a further course in Zoology.

NOTE: Students registering in certain courses may be required to pay a portion of the costs associated with field trips. For details, contact the department general office.

General Courses

U1 ZOOL 1320 Anatomy of the Human Body Cr.Hrs.3 (Lab Required) (Formerly 022.132) Microanatomy and gross anatomy discussed including changes occurring from conception to old age. Although this course may be used as an elective in an Arts or Science program, it may not be used to meet a program requirement of an Honours or Major program in the Biological Sciences. Not to be held with the former 022.123. No prerequisite. High school biology strongly recommended.

U1 ZOOL 1330 Physiology of the Human Body Cr.Hrs.3 (Lab Required) (Formerly 022.133) Function of all systems discussed with homeostatic regulatory mechanisms as foundation themes. Although this course may be used as an elective in an Arts or Science program, it may not be used to meet a program requirement of an Honours or Major program in the Biological Sciences. Not to be held with the former 022.123. Not available to students who have previously obtained credit

in, or are currently registered in, both ZOOL 2530 (or 022.253) and ZOOL 2540 (or 022.254). Prerequisite: ZOOL 1320 (or 022.132) (C) or BIOL 1030 or BIOL 1031 (or the former 071.125) (C). This prerequisite is waived for students in the Baccalaureate Program for Registered Nurses.

ZOOL 2150 Developmental Biology Cr.Hrs.3 (Lab Required) (Formerly 022.215) Principles and concepts of developmental biology including gametogenesis, fertilization, early and late development. Cellular, tissue and molecular aspects will be presented utilizing both invertebrate and vertebrate examples. Prerequisite: BIOL 1030 or BIOL 1031 or the former 071.125 (C).

ZOOL 2180 Introductory Toxicology Cr.Hrs.3 (Formerly 022.218) A survey of general principles underlying the effects of toxic substances on biological systems, including consideration of the history, scope and applications of toxicology, the mechanisms of toxic action, and some major types of toxicants. This course is also taught in the Department of Botany as BOTN 2180, in Environmental Science as ENVR 2180 and in Agriculture as AGRI 2180. Not to be held with ZOOL 2190 (or 022.219), BOTN 2180 (or 001.218), BOTN 2190 (or 001.219), AGRI 2180 (or 065.218), AGRI 2190 (or 065.219), ENVR 2180 (or 128.218), ENVR 2190 (or 128.219) (or the former 001.337). Prerequisites: BIOL 1030 or BIOL 1031 (or the former 071.125) (C), and CHEM 1310 or CHEM 1311 (or 002.131) (or the former 002.128) (C) or CHEM 1320 (or 002.132)(C).

ZOOL 2190 Toxicological Principles Cr.Hrs.2 (Formerly 022.219) A survey of general principles underlying the effects of toxic substances on biological systems, including consideration of the history, scope and applications of toxicology, and the mechanisms of toxic action. This course is also taught in the Department of Botany as BOTN 2180, in Environmental Sciences as ENVR 2180 and in Agriculture as AGRI 2180. Not to be held with ZOOL 2180 (or 022.218), BOTN 2180 (or 001.218), BOTN 2190 (or 001.219), AGRI 2180 (or 065.218), AGRI 2190 (or 065.219), ENVR

2180 (or 128.218), ENVR 2190 (or 128.219) (or the former 001.337). *Prerequisites:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C), and CHEM 1310 or CHEM 1311 (or 002.131) (or the former 002.128) (C) or CHEM 1320 (or 002.132)(C).

ZOOL 2280 Cell Biology Cr.Hrs.3 (Lab Required) (Formerly 022.228) The microscopic and submicroscopic aspects of cellular structure and function are considered with emphasis on the living cell as a dynamic system. *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 2281 Biologie cellulaire Cr.Hrs.3 (Labo Requis) (L'ancien 022.228) La fonction des organites cellulaires sera étudiée conjointement avec leur structure microscopique ou leur ultrastructure en insistant sur l'ensemble de la vie cellulaire en tant que système dynamique. *Préalable:* BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125) (C). Donnée seulement au Collège universitaire de Saint-Boniface.

ZOOL 2290 Introductory Ecology Cr.Hrs.3 (Formerly 022.229) The course involves a study of the interrelationships of living organisms (including human) with each other and with their environment. This course is also given in Botany as BOTN 2280. It is not normally acceptable as a *prerequisite* to other courses in ecology. Not to be held with BOTN 2280 or BOTN 2281 (or 001.228) or ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237). *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 2320 Introduction to Chordate Zoology Cr.Hrs.3 (Lab Required) (Formerly 022.232) A study of the origin, evolutionary history and structure of the major groups of Chordates. Provides the foundation for more specialized courses such as Biology of Fishes, Ornithology, and Systematics and Biogeography of Fishes. Not to be held ZOOL 2501 (or 022.250). *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 2370 Principles of Ecology Cr.Hrs.3 (Lab Required) (Formerly 022.237) Principles of ecology at the individual, population, community and ecosystems levels. This course is also given in Botany as BOTN 2370 and in the Faculty of Agricultural and Food Sciences as AGEC 2370. It is the normal *prerequisite* to other courses in ecology. Not to be held with ZOOL 2371, BOTN 2370, BOTN 2371 (or 001.237) or ZOOL 2290 (or 022.229) or BOTN 2280 or BOTN 2281 (or 001.228). *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C). *Pre- or corequisite:* STAT 1000 or STAT 1001 (or 005.100) (D).

ZOOL 2371 Principes d'écologie Cr.Hrs.3 (Labo Requis) (L'ancien 022.237) Principes d'écologie au niveau de l'individu, la population, la communauté et l'accostèmes. Ce cours est également offert dans le Département de botanique sous le numéro BOTN 2371 et dans la Faculté de sciences de l'agriculture et de nutrition sous le numéro AGEC 2370. On ne peut se faire créditer à la fois le ZOOL 2370 (ou 022.237), BOTN 2370 ou BOTN 2371 (ou 001.237) et le AGEC 2370 (ou 065.237) ou ZOOL 2290 (ou 022.229) ou BOTN 2280 ou BOTN 2281 (ou 001.228). *Préalable:* BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125) (C). *Pré-ou corequis:* STAT 1000 ou STAT 1001 (ou 005.100) (D). Donnée seulement au Collège universitaire de Saint-Boniface.

ZOOL 2530 Human Physiology 1 Cr.Hrs.3 (Formerly 022.253) The mechanisms of action of the body's major control systems (nervous and endocrine) and of the muscular and reproductive systems are examined. Not to be held with ZOOL 3530 (or 022.353) (or the former 022.245). *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) with a minimum grade of "C" or BIOL 1000 (or 071.100) and BIOL 1010 (or 071.101) with a minimum average grade of C+ . (or the former 071.123 with a minimum grade of C+), or ZOOL 1330 (or 022.133)(C).

ZOOL 2531 Physiologie du corps humain I Cr.Hrs.3 (L'ancien 022.253) Dans ce cours, les principaux mécanismes de contrôle du corps (systèmes nerveux et endocrinien) ainsi les systèmes musculaire et reproducteur seront étudiés. On ne peut se faire créditer à la fois le ZOOL 2530 (ou 022.253) et le ZOOL 3530 (ou 022.353) ou l'ancien 022.245. *Préalable:* note de "C" dans le BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125) ou une moyenne minimale de C+ . dans les deux cours BIOL 1000 (ou 071.100) et BIOL 1010 (ou 071.101) (ou une note de C+ . dans l'ancien 071.123) ou le ZOOL 1330 (ou 022.133). Donnée seulement au Collège universitaire de Saint-Boniface.

ZOOL 2540 Human Physiology 2 Cr.Hrs.3 (Formerly 022.254) An examination of homeostatic regulation by the body's major effector organ systems (cardiovascular, respiratory, digestive, renal, and immune). Not to be held the former 022.245. *Prerequisite:* Completion of ZOOL 2530 (or 022.253) (D) or ZOOL 3530 (or 022.353) (D) or consent of department.

ZOOL 2541 Physiologie du corps humain II Cr.Hrs.3 (L'ancien 022.254) Une étude de la régulation homéostatique par les systèmes effecteurs du corps (cardiovasculaire, respiratoire, digestif, rénal et immunitaire). On ne peut se faire créditer à la fois l'ancien 022.245. *Préalable:* avoir complété le ZOOL 2530 (ou 022.253) (D) ou le ZOOL 3530 (ou 022.353) (D) ou consentement du professeur. Donnée seulement au Collège universitaire de Saint-Boniface.

ZOOL 2600 Introductory Invertebrate Zoology Cr.Hrs.3 (Lab Required) (Formerly 022.260) Biology and phylogeny of invertebrates. Emphasis on common taxa and on those groups of particular phylogenetic significance. *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 2601 Introduction à la zoologie des invertébrés Cr.Hrs.3 (Labo Requis) (L'ancien 022.260) Une étude phylogénétique et biologique des invertébrés appuyant sur les taxa et sur les groupes qui ont une importance phylogénétique particulière. *Préalable:* BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125) (C). Donnée seulement au Collège universitaire de Saint-Boniface.

ZOOL 3000 Evolutionary Biology Cr.Hrs.3 (Lab Required) Evolution is the ultimate cause of biological diversity. This course introduces the major questions and research methods in evolutionary biology. Topics include evolutionary genetics, adaptation, speciation, and the reconstruction of evolutionary history. This course is also given in Botany as BOTN 3000. Not to be held with the former 022.400. *Prerequisites:* BOTN 2460 (or 001.246) and any one of the following: BOTN 2110 (or 001.211), BOTN 2210 (or 001.221), BOTN 2290 (or 001.229), ZOOL 2320 (or 022.232), ZOOL 2501 (or 022.250F), ZOOL 2600 (or 022.260), or consent of department.

ZOOL 3060 Comparative Animal Histology Cr.Hrs.3 (Lab Required) (Formerly 022.306) This course focuses on the cell and tissue organization of animals. Cell morphology and specialization, tissue types and a survey of the cellular and tissue organization of all organ systems are covered. The primary focus is on mammals but comparative aspects of other animal groups are also included. Not to be held with the former 022.347. *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C). *Recommended prerequisite:* ZOOL 2320 (or 022.232), ZOOL 2501 (or 022.250) or ZOOL 2280 (or 022.228).

ZOOL 3061 Histologie animale comparée Cr.Hrs.3 (Labo Requis) (L'ancien 022.306) Ce cours a pour objet l'étude de l'organisation cellulaire et tissulaire des animaux. La morphologie cellulaire ainsi que la spécialisation, les types de tissus, l'organisation cellulaire et tissulaire de tous les systèmes seront abordés. On mettra l'accent sur les mammifères, mais des études comparatives avec d'autres groupes animaux seront aussi incluses. On ne peut se faire créditer à la fois le ZOOL 3060 (ou 022.306) (ou l'ancien 022.347). *Préalable:* BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125) (C). *Préalable conseillé:* ZOOL 2320 (ou 022.232) ou ZOOL 2501 (ou 022.250) ou ZOOL 2280 (ou 022.228). Donnée seulement au Collège universitaire de Saint-Boniface.

ZOOL 3100 Animal Behaviour Cr.Hrs.3 (Lab Required) (Formerly 022.310) An introduction to the study of animal behaviour including key concepts from the parent disciplines of ethology and comparative psychology, the genetic and physiological bases of behaviours, and evolutionary aspects introducing optimality and game theoretical models characteristic of modern behavioural ecology. Laboratory work involves the design and execution of a behavioural project at the Assiniboine Park Zoo. Not to be held with the former 022.343. *Prerequisites:* ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C) and ZOOL 2320 (or 022.232) (C) or consent of department.

ZOOL 3380 Boreal Ecology Cr.Hrs.3 (Formerly 022.338) A survey of ecological factors in the formation, evolution, and survival of northern biota including northern peoples. There will be optional weekend field trips. Not to be held with the former 022.479. *Prerequisite:* ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C) or ZOOL 2290 (or 022.229) or BOTN 2280 or BOTN 2281 (or 001.228) (C) or consent of department.

ZOOL 3450 Field Ecology Cr.Hrs.3 (Lab Required) (Formerly 022.345) Problems, techniques, and assumptions involved in measuring parameters of biological populations and environmental variables. A field trip will be held prior to start of classes. Students must register in the departmental office by August 5. This course is also given in Botany as BOTN 3420. *Prerequisites:* ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C), STAT 2000 or STAT 2001 (or 005.200) (D).

ZOOL 3460 Introductory Parasitology Cr.Hrs.3 (Lab Required) (Formerly 022.346) General course covering major parasitic phyla: namely, Protozoa, Platyhelminthes, Aschelminthes, Acanthocephala, and Arthropoda. Emphasis will be on principles of parasitology. *Pre- or corequisite:* ZOOL 2600 (or 022.260) (C) or consent of department.

ZOOL 3500 Limnology Cr.Hrs.3 (Lab Required) (Formerly 022.350) Lectures and laboratories providing an introduction to the physics, chemistry and biology of lakes. *Prerequisite:* ZOOL 2370 or 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C).

ZOOL 3530 Control System Physiology Cr.Hrs.3 (Lab Required) (Formerly 022.353) The mechanisms of action of the human body's major control systems (nervous and endocrine) and of the muscular and reproductive systems are presented in lectures. Laboratories explore related subjects in various animals. Not to be held with ZOOL 2530 or ZOOL 2531 (or 022.253) (or the former 022.245) or ZOOL 3520 (or 022.352). *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C), or BIOL 1000 (or 071.100) and BIOL 1010 (or 071.101) (C+) (or the former 071.123) (C+), or ZOOL 1330 (or 022.133) (C).

ZOOL 3540 Comparative Environmental Physiology Cr.Hrs.3 (Lab Required) (Formerly 022.354) An examination of the environmental challenges confronting animals in aquatic and terrestrial habitats, and the various ways these problems are solved at the cellular and organ system levels. Not to be held with the former 022.352. *Prerequisite:* ZOOL 2320 (or 022.232) (C) and ZOOL 2600 (or 022.260) (C), or ZOOL 1330 (or 022.133) (or the former 022.123) (C), or ZOOL 2530 or ZOOL 2531 (or 022.253) (or the former 022.245) (C) or ZOOL 3530 (or 022.353) (C) or consent of instructor.

ZOOL 3580 Wetland Ecology Cr.Hrs.3 (Lab Required) (Formerly 022.358) Lectures and field exercises examine the biotic (algae, macrophytes, invertebrates, and vertebrates) and abiotic (hydrology, nutrient cycling) properties in Delta Marsh, a prairie lakeshore wetland. Other wetland types, including peatlands, will also be considered in lectures and field trips. The course is offered in Summer Session at the University Field Station (Delta Marsh). This course is also given in the Botany department as BOTN 3580. *Prerequisite:* ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C) or consent of department.

ZOOL 3610 Advanced Experimental Invertebrate Zoology Cr.Hrs.3 (Lab Required) (Formerly 022.361) Topics of current interest to be presented in lecture series given by staff. Students may undertake approved projects and may present reports and seminars. *Prerequisite:* ZOOL 2600 (or 022.260) (C).

ZOOL 3680 Foundations of Population Ecology Cr.Hrs.3 (Lab Required) The study of living populations, through experimentation and theory, will be examined. Topics investigated will include population regulation, competition, predation, disease, harvest, nonlinear and spatial dynamics and individual based models. Concepts and methods are reinforced through tutorials and evaluated by assignments and examinations. Not to be held with the former 022.348. *Prerequisites:* ZOOL 2370 or ZOOL 2371 (or 022.237), BOTN 2370 or BOTN 2371 (001.237) or AGEC 2370 (065.237), STAT 2000 or STAT 2001 (or 005.200) (C), or consent of department.

ZOOL 4260 Marine Biodiversity Cr.Hrs.3 (Lab Required) Examines key ecological principles governing the maintenance of marine biodiversity, particularly in northern ecosystems. Topics include the definitions and global patterns of biodiversity and the ecological mechanisms influencing changes in these patterns in the context of applied population, community and ecosystem ecology. The course will also emphasize practical solutions, including fisheries' harvest models and marine protected areas. *Prerequisites:* ZOOL 2370 or ZOOL 2371 (or 002.237), BOTN 2370 or BOTN 2371 (or 001.237), or AGEC 2370 (or 065.237) or ZOOL 2290 (or 002.229) or BOTN 2280 (or 001.228) or consent of department.

Honours and Major Four Year Courses

ZOOL 3070 Advanced Developmental and Cellular Biology Cr.Hrs.3 (Lab Required) (Formerly 022.307) The course focuses on contemporary concepts and approaches in developmental biology, including theoretical and practical aspects. The emphasis is on the laboratory component. *Prerequisite:* ZOOL 2150 (or 022.215) (C) or consent of department.

ZOOL 3750 Methods and Perspectives in Zoology Cr.Hrs.3 (Lab Required) (Formerly 022.375) Lectures and exercises on the preparation and analysis of zoological publications, library research methods, and historical perspectives in zoology. Introduction into current topics and career orientation in graduate research. *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 3980 Work Term 1 Cr.Hrs.0 (Formerly 022.398) Work assignment in business, industry, or government for students registered in the Zoology or Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Botany as BOTN 3980 for students in the Ecology Cooperative Option. (Pass/Fail grade only)

ZOOL 3990 Work Term 2 Cr.Hrs.0 (Formerly 022.399) Work assignment in business, industry, or government for students registered in the Zoology or Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Botany as BOTN 3990 for students in the Ecology Cooperative Option. (Pass/Fail grade only)

ZOOL 4110 Honours Thesis Cr.Hrs.6 (Formerly 022.411) The student will conduct a research project, chosen in consultation with a Zoology faculty member acting as an advisor, and produce a thesis in which the project, the results and conclusions are presented. The student will defend the thesis at an oral examination held on completion of the thesis. This course is restricted to final year Honours Zoology or Ecology students. Not to be taken concurrently with ZOOL 4880 (or 022.488) or BOTN 4880 (or 001.488).

ZOOL 4140 Microtechnique Cr.Hrs.3 (Lab Required) (Formerly 022.414) This course deals with a spectrum of animal tissue preparation techniques and microscopy. These span a survey of all types of microscopes, live cell and tissue methods, fixation and tissue processing for paraffin and plastic tissue embedding, histo- and immunocytochemistry, electron microscopy, video and image processing microscopy. This is a practical course with a major emphasis on the laboratory portion. Not to be held with the former 022.440. *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 4150 Developmental Molecular Biology Cr.Hrs.3 (Lab Required) (Formerly 022.415) An examination of early development with emphasis on the molecular events. Sex determination, gametogenesis and early embryogenesis will be discussed. *Prerequisite:* ZOOL 2150 (or 022.215) (C) or consent of department.

ZOOL 4160 Sensory-Motor Physiology Cr.Hrs.3 (Lab Required) (Formerly 022.416) Information flow in the nervous system and the control of behaviour. The diverse roles that ion channels and synaptic circuitry play in sensory reception, neuronal integration and motor control are emphasized. Not to be held with the former 022.458. *Prerequisite:* ZOOL 2530 or ZOOL 2531 (or 022.253) (C) or ZOOL 3530 (or 022.353) (or the former 022.245), ZOOL 3370 (or 022.337), or ZOOL 3520 (or 022.352) (C) or consent of department.

ZOOL 4170 Biology of Fishes Cr.Hrs.3 (Formerly 022.417) Lectures survey organ systems, life history, and the population biology of fishes. The ecological analysis of fish communities is addressed through a field trip and a series of workshops on the analysis of field data. Evaluation is based upon work related to the field trip and examinations based upon the lecture material. Not to be held with the former 022.467. *Prerequisite:* ZOOL 2320 (or 022.232) (C) or ZOOL 2501 (or the former 022.250) (C).

ZOOL 4200 Ecological Methods Cr.Hrs.3 (Lab Required) (Formerly 022.420) Methods of collection and analysis of biological and environmental data for estimation of abundance, life history parameters and spatial pattern in single species populations; population dynamics and life history strategies. Not to be held with the former 022.477. *Prerequisites:* ZOOL 3680 (or the former 022.348) (C) and STAT 2000 or STAT 2001 (or 005.200) (D) or consent of department.

ZOOL 4210 Models for Behavioural Ecology Cr.Hrs.3 (Formerly 022.421) Applications of optimization theory and game theory to the understanding of inter- and intraspecific interactions of animals. Models involving foraging, territoriality, animal spatial distributions, and mixed behavioural strategies will be considered. Not to be held with the former 022.487. *Prerequisites:* ZOOL 3100 (or 022.310) (or the former 022.343) (C), ZOOL 3680 (or the former 022.348) (C) and STAT 2000 or STAT 2001 (or 005.200) (D) or consent of department.

ZOOL 4220 Biodiversity of Vertebrates: Systematics and Biogeography of Fishes Cr.Hrs.3 (Lab Required) (Formerly 022.422) A study of the evolutionary history, interrelationships and distribution patterns of the fish-like vertebrates. Laboratories will cover the identification of the major groups of fish-like vertebrates. Next offered in 2007-2008 and in alternate years thereafter. Not to be held with the former 022.418 or 022.467. *Prerequisite:* ZOOL 2320 (or 022.232) (C) or ZOOL 2501 (or the former 022.250) (C) or consent of department.

ZOOL 4230 Biodiversity of Vertebrates: Biology of Amphibians and Reptiles Cr.Hrs.3 (Lab Required) (Formerly 022.423) Lectures consider the evolution, biology and adaptations of amphibians and reptiles. Laboratories and student presentations will deal with classification, structure, identification, and methods of field and laboratory study of these animals. Offered in 2006-2007 and in alternate years thereafter. Not to be held with the former 022.476. *Prerequisite:* ZOOL 2320 (or 022.232) (C) or ZOOL 2501 (or the former 022.250) (C) or consent of department.

ZOOL 4240 Biodiversity of Vertebrates: Biology of Birds Cr.Hrs.3 (Lab Required) (Formerly 022.424) Biology of birds including: morphology, systematics, evolution, life histories and breeding biology, ecology, migration, and distribution of birds. Not to be held with the former 022.468. *Prerequisite:* ZOOL 2320 (or 022.232) (C) or ZOOL 2501 (or the former 022.250) (C). *Corequisite:* ZOOL 3100.

ZOOL 4250 Biodiversity of Vertebrates: Biology of Mammals Cr.Hrs.3 (Lab Required) (Formerly 022.425) Structure, classification, evolution, life histories and distribution of mammals and their relation to human cultures. Techniques of studying mammals. Identification of the mammals of Manitoba. Next offered in 2007-2008 and alternate years thereafter. Not to be held with the former 022.457. *Prerequisites:* ZOOL 2320 (or 022.232) (C) or ZOOL 2501 (or the former 022.250) (C) and ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) (or the former 001.234), or AGEC 2370 (or 065.237) (C), or consent of department.

ZOOL 4270 Genes and Development Cr.Hrs.3 (Formerly 022.427) An in-depth examination of selected topics in embryonic development, emphasizing the genetic control of the cell and molecular mechanisms that direct embryogenesis. The course will focus primarily on vertebrate development, but insights provided by studies on invertebrates will also be covered. *Prerequisites:* ZOOL 2280 or ZOOL 2281 (or 022.228) (C) and ZOOL 2150 (or 022.215) (C) or consent of department.

ZOOL 4280 Behavioural Ecology and Cognitive Ethology Cr.Hrs.3 (Lab Required) (Formerly 022.428) Examines proximate and ultimate questions relating to mating and parental behaviour, communication, social parasitism and animal intellect to provide insight into the intimate relationship between behavioural evolution and the environment. Laboratory and field exercises complement major topics considered in lectures. Not to be held with the former 022.448. *Prerequisite:* ZOOL 3100 (or 022.310) (or the former 022.343) (C) or consent of department.

ZOOL 4600 Comparative Endocrinology Cr.Hrs.3 (Lab Required) (Formerly 022.460) The structure, control, and function of vertebrate endocrine systems. Courses ZOOL 2280 or ZOOL 2281 (022.228), and one of ZOOL 2530 (or 022.253) or ZOOL 3530 (or 022.353) (or the former 022.245 or 022.352) and a course in biochemistry are strongly recommended as *prerequisites*. *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 4710 Principles of Wildlife Management Cr.Hrs.3 (Lab Required) (Formerly 022.471) Introduction to the biological and socioeconomic goals of wildlife management and to the basic techniques of wildlife management in terms of these goals. There will be four or five field trips. Some weekend field trips may be required. *Prerequisite:* ZOOL 3680 (or the former 022.348) (C) or consent of department.

ZOOL 4720 Wildlife and Fisheries Parasitology Cr.Hrs.3 (Lab Required) (Formerly 022.472) Parasites of major vertebrate groups of economic importance in temperate regions. Emphasis on identification, means of control, and how to evaluate the impact of parasites on animal populations. A major project is required. *Prerequisite:* ZOOL 3460 (or 022.346) (C).

ZOOL 4730 Experimental Parasitology Cr.Hrs.3 (Lab Required) (Formerly 022.473) Principles of parasitology including immunology, ecology, biochemistry, and physiology. Students must carry out an experimental study. Offered in 2006-2007 and in alternate years thereafter. *Prerequisite:* ZOOL 3460 (or 022.346) (C).

ZOOL 4800 Special Topics in Field Biology Cr.Hrs.3 (Formerly 022.480) Lectures, field studies, and research projects on a selected topic. Course content to vary from year to year depending on instructor. Usually offered during the summer months. *Prerequisite:* at discretion of department.

ZOOL 4820 Aquaculture Cr.Hrs.3 (Lab Required) (Formerly 022.482) Biology and methods of commercial culture of fish and other aquatic animals. Emphasis on physiological, nutritional, genetic, pathological and economic aspects and on current and new technologies. *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200) (or the former 005.201, 005.211 or 005.221) (D) or consent of department.

ZOOL 4830 Comparative Animal Energetics Cr.Hrs.3 (Lab Required) (Formerly 022.483) Energetic strategies of animals living in ecologically diverse environments. Integration of physiological, morphological and behavioural adaptations with an em-

phasis on vertebrate species. *Prerequisites:* ZOOL 2320 (or 022.232) (C) or ZOOL 2501 (or 022.250) (C), and one of ZOOL 2530 (or 022.253) (C), ZOOL 3530 (or 022.353) (C) or ZOOL 3540 (or 022.354) (or the former 022.245 or 022.352) (C) or consent of department.

ZOOL 4840 Environmental Toxicology Cr.Hrs.3 (Lab Required) (Formerly 022.484) A survey of the principles governing the dynamics of chemicals in the environment, with emphasis on the biological systems, using case histories of known pollution problems. *Prerequisites:* CHEM 2370 or CHEM 2371 (or 002.237) or M BIO 2370 or M BIO 2371 (or 060.237) (or the former 002.235 or 060.235) (C), or CHEM 2780 (or 002.278) (or the former 002.240) (C) or M BIO 2780 (or 060.278) (or the former 060.240) (C); ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGE C 2370 (or 065.237) (C); ZOOL 2530 (or 022.253) (C) or ZOOL 3530 (or 022.353) (C), and ZOOL 3540 (or 022.354) (or the former 022.245 or 022.337) or ZOOL 3520 (or 022.352)) (C) or consent of department.

ZOOL 4850 Applications of Population Ecology in Fisheries and Wildlife Cr.Hrs.3 (Lab Required) The material introduced in ZOOL 3680 is developed into the quantitative analyses of field data to form a basis for conservation and management. Topics covered include: surplus harvest models, virtual population analysis, spatial population modeling, bioeconomics, and quantitative adaptive management. Concepts are reinforced through tutorials. *Prerequisite:* ZOOL 3680 (or the former 022.348).

ZOOL 4880 Analysis of Ecological Problems Cr.Hrs.3 (Formerly 022.488) Teams of students will analyze emerging regional ecological problems and present results or solutions in a written report and oral presentation. This course is also offered by Botany as BOTN 4880. Not to be taken concurrently with ZOOL 4110 or BOTN 4600. *Prerequisites:* ZOOL 3450 (or 022.345) (C) or BOTN 3420 (or 001.342) (C), ZOOL

3680 (or the former 022.348) (C), ZOOL 3750 (or 022.375) (C), BOTN 3540 (or 001.354) (C) and eligibility for graduation in the current academic year.

ZOOL 4890 Special Topics in Biology Cr.Hrs.3 (Formerly 022.489) Biology encompasses a broad array of ideas and special topic areas. In this course, students can pursue a specific topic in detail through lectures, seminars and research projects. Normally restricted to third and fourth year Honours and Major students. This course is also offered by Botany as BOTN 4890. *Prerequisite:* Consent of department.

ZOOL 4980 Work Term 3 Cr.Hrs.0 (Formerly 022.498) Work assignment in business, industry, or government for students registered in the Zoology or Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Botany as BOTN 4980 for students in the Ecology Cooperative Option. (Pass/Fail grade only)

ZOOL 4990 Work Term 4 Cr.Hrs.0 (Formerly 022.499) Work assignment in business, industry, or government for students registered in the Zoology or Ecology Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. This course is also offered by Botany as BOTN 4990 (or 001.499) for students in the Ecology Cooperative Option. (Pass/Fail grade only.)

Service Courses

ZOOL 2140 Human Reproductive Physiology Cr.Hrs.3 (Formerly 022.214) This course provides an in-depth understanding of human reproduction with particular emphasis on intrinsic control mechanisms and extrinsic methods of regulation of reproduction. This course also provides the basis for the understanding of alterations from normal mechanisms of reproductive processes. *Prerequisites:* ZOOL 1320 (or 022.132) (C) and ZOOL 1330 (or 022.133) (C) or consent of instructor.

4.18 Courses Offered in Other Faculties and Schools Acceptable for Credit in the Faculty of Science

Students who are registered in the Faculty of Science may take courses offered by other faculties and schools for credit towards a Science degree, subject to overall degree requirements.

NOTE: A student may request that a course, which is currently not creditable in a Science degree program, be added to this list of creditable courses. However, approval of such a course is at the discretion of the Faculty of Science Committee on Courses and the faculty or school offering the course. Students should initiate the request through the Faculty of Science general office at least a year in advance of their anticipated registration in such a course.

Students should consult the timetables of the faculties and schools for further information regarding the courses below.

All four and five credit hour courses will be counted as three credit hours in the Faculty of Science.

Honours Only

Students registered in an Honours program in the Faculty of Science may take any course offered by other faculties and schools for credit towards their degree, providing they have the approval of their Honours department(s) and the approval of the faculty or school offering the course. Students who revert to a Major or General program may lose credit for other faculty courses which are not acceptable in those degrees.

4.18.1 University 1

All courses acceptable for credit in University 1 are acceptable for credit in the Faculty of Science. The courses available to University 1 students are

listed in that chapter of this *Calendar*. These courses have also been included in each faculty chapter listed below.

4.18.2 Faculty of Agricultural and Food Sciences

Biosystems Engineering

BIOE 4450 Radiation Processing of Food and Other Agricultural Commodities (4)

BIOE 4500 Water Management (3)

This course is available to Environmental Science students only.

Animal Science

ANSC 2530 Nutritional Toxicology (1.5)

ANSC 3500 Principles of Animal Genetics (3)

ANSC 4280 Applied Animal Genetics (3)

ANSC 4410 Grassland Agriculture: Plant, Animal and Environment (3)L

Entomology

ENTM 1000 The World of Bugs (3)

ENTM 2050 Introductory Entomology (3)L

ENTM 3160 Veterinary and Wildlife Entomology (3)

ENTM 3170 Crop Protection Entomology (3)L

ENTM 4250 Pesticide Toxicology (3)

ENTM 4280 Aquatic Entomology (3)L

ENTM 4320 Pollination Biology (3)

ENTM 4500 Insect Taxonomy and Morphology (3)L

ENTM 4520 Physiological Ecology of Insects (3)L

Plant Science

PLNT 2500 Crop Production (3)

PLNT 2520 Genetics (3)L

PLNT 2530 Plant Biotechnology (3)

PLNT 3140 Introductory Cytogenetics (3)L

PLNT 3500 Plant Physiology (3)L

PLNT 3510 Cropping Systems (3)

PLNT 3520 Principles of Plant Improvement (3)L

PLNT 3540 Weed Science (3)L

PLNT 3570 Fundamentals of Plant Pathology (3) L

PLNT 4270 Plant Disease Control (3)L

PLNT 4330 Intermediate Plant Genetics (3)

PLNT 4410 Grassland Agriculture: Plant, Animal and Environment (3)L

PLNT 4540 Plant Genomics (3)L

PLNT 4550 Developmental Plant Biology (3)

PLNT 4560 Secondary Plant Metabolism (3)

PLNT 4570 Research Methods in Plant Pathology (3)L

PLNT 4580 Molecular Plant-Microbe Interactions (3)

Soil Science

SOIL 3060 Introduction to Agrometeorology (3)

SOIL 3600 Soils and Landscape in Our Environment (3)L

SOIL 4060 Physical Properties of Soils (3)L

SOIL 4120 Soil Microbiology (3)L

SOIL 4130 Soil Chemistry and Mineralogy (3)

SOIL 4500 Remediation of Contaminated Land (3)

SOIL 4510 Soil and Water Management (3)

SOIL 4520 Soil Fertility (3)L

SOIL 4530 Land Use and Environment (3)

SOIL 3520 Pesticides: Environment, Economics and Ethics (3)
 Agribusiness and Agricultural Economics
 ABIZ 1000 Introduction to Agribusiness Management (3)
 ABIZ 1010 Economics of World Food Issues and Policies (3)
 ABIZ 2120 World Agribusiness Study Tour (3)
 ABIZ 2210 Transportation Principles (3)
 ABIZ 2390 Introduction to Environmental Economics (3)
 ABIZ 2520 Introduction to Management Sciences (3)L
 ABIZ 3080 Introduction to Econometrics (3)
 ABIZ 3120 Commodity Futures Markets (3)
 ABIZ 3530 Farm Management (3)
 ABIZ 3550 Environmental Policy (3)
 ABIZ 3560 Agribusiness Portfolio Management (3)
 ABIZ 4120 Intermediate Econometrics (3)

DRAG 1500 Natural Resources and Primary Agriculture Production (3)
 DRAG 1510 Production, Distribution and Utilization of Agricultural Products (3)
 DRAG 2180 Introductory Toxicology (3)
 DRAG 2190 Toxicological Principles (1.5)
 AGECE 2370 Principles of Ecology (3)L
 AGECE 2500 Population Genetics (3)
Food Science
 FOOD 1000 Food Safety (3)
 FOOD 2500 Food Chemistry (3)L
 FOOD 3200 Baking Science and Technology (3)L
 FOOD 4150 Food Microbiology 1 (3)L
 FOOD 4240 Analysis of Water and Wastes (3)
 FOOD 4280 Food Microbiology 2 (3)L
 FOOD 4300 Food Toxicants (3)
 FOOD 4540 Functional Foods and Nutraceuticals (3)

General Agriculture

4.18.3 Faculty of Architecture

Interior Design

IDES 2650 The Social Aspects of Aging (3)

Environmental Design

EVDS 1600 Introduction to Environmental Design (3)

EVDS 1660 History of Culture, Ideas and Environment 1 (3)

EVDS 1670 History of Culture, Ideas and Environment 2 (3)

4.18.4 Faculty of Arts

All courses offered by and acceptable for credit in the Faculty of Arts are acceptable for credit in the Faculty of Science General, Major, or Honours

programs except for service courses provided to other faculties, such as ENGL 1240.

4.18.5 Faculty of Management/Asper School of Business

All courses offered by the Faculty of Management/Asper School of Business are acceptable for credit in the Faculty of Science. Business courses may be taken by Faculty of Science students subject to availability of space and satisfaction of prerequisites. Students who have not been admitted to the Faculty of Management/Asper School of Business will be limited to an aggregate total of 36 credit hours offered by the Asper School while registered in another faculty, school, or division. This total will include failures, repeats of previously passed courses, and transfer credit received for Business courses from external institutions.

Management (Minor) (PHDM)

For entry to the Minor, the prerequisite is a grade of "C" or better in the first 6 hours of Business courses. The Management Minor will consist of any 18 hours of credit in courses offered by the Asper School of Business. Enrolment in this program will be limited to 20 students annually. Students planning to enrol in this minor must consult a Faculty of Science student advisor.

4.18.6 Faculty of Education

Educational Administration and Foundations

EDUA 1540 Cross-cultural Education (3)

4.18.7 Faculty of Engineering

General Faculty

ENG 1420 Engineering Processes for Non-Engineering Students (3)

ENG 1430 Design in Engineering (3)

ENG 1440 Introduction to Statics (3)

ENG 1450 Introduction to Electrical and Computer Engineering (3)

ENG 1460 Introduction to Thermal Sciences (3)

Civil Engineering

These courses are available to Environmental Science students only

CIVL 3690 Environmental Engineering Analysis (4)

CIVL 3700 Environmental Engineering Design (4)

CIVL 3750 Hydrology (4)

CIVL 4250 Groundwater Hydrology (4)

CIVL 4200 Groundwater Contamination (4)

Electrical & Computer Engineering

These courses are available to Physics students only

ECE 2160 Electronics 2E (5)

ECE 2220 Digital Logic Systems (5)

4.18.8 Clayton H. Riddell Faculty of Environment, Earth, and Resources

All courses offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources are acceptable for credit in the Faculty of Science General, Major, or Honours programs. (except service courses)

4.18.9 Faculty of Human Ecology

General Faculty

HMEC 2650 The Social Aspects of Aging (3)

Foods and Nutrition

HNSC 1200 Food: Facts and Fallacies (3)

HNSC 1210 Nutrition for Health and Changing Lifestyles (3)

HNSC 2140 Basic Principles of Human Nutrition (3)

HNSC 3300 Vitamins and Minerals in Human Health (3)

HNSC 3310 Macronutrients and Human Health (3)

HNSC 4120 Senior Thesis (3)

HNSC 4540 Functional Foods and Nutraceuticals (3)

HUMAN NUTRITION AND METABOLISM MINOR (030M)

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HNSC 1200, HNSC 1210	HNSC 2140, HNSC 3300, HNSC 3310 and one of HNSC 4120 or HNSC 4540		

Family Social Sciences

FMLY 1010 Human Development in the Family (3)

FMLY 1020 Family Issues Across the Lifespan (3)

FMLY 1420 Family Management Principles (3)

FMLY 1900 Families, Housing & Community: An Introductory Perspective (3)

Textile Sciences

TXSC 1600 Textiles for Living (3)

TXSC 1610 Textiles, Products, and Consumers (3)

TXSC 2610 Textiles for Non-Apparel End Uses (3)

TXSC 3320 History of Textiles (3)

TXSC 3500 Textiles for the Healthcare Sector (3)

4.18.14 Faculty of Music

Students claiming advance standing, for any reason, will be asked to undergo placement tests to substantiate their claims.

MUSIC MINOR (MUSC) Minor 18 Credit Hours

Minor Option 1

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
MUSC 128 and MUSC 1290	12 credit hours of Music courses from List A (Students who elect ensemble courses from List A are required to complete all three courses)		
(At most, 12 credit hours numbered at the 1000 level may be used toward the minor)			

Minor Option 2

MUSC 1110 and MUSC 1120	12 credit hours of Music courses from List A (Students who elect ensemble courses from List A are required to complete all three courses)		
(At most, 12 credit hours numbered at the 1000 level may be used toward the minor)			

NOTE: Unless otherwise noted, these courses are available to all students in the Faculty of Science who have completed the required prerequisites. Courses in list B are not available to students completing the minor. Ensemble courses (MUSC 2180, MUSC 3180, MUSC 4180) are acceptable for credit towards a degree in Science only when applied to the minor. They are not acceptable for credit as options.

Minor Program

For entry to the minor, the prerequisite is a grade of "C" or better in each of MUSC 1280 and MUSC 1290 or a grade of "C" or better in each of MUSC 1110 and MUSC 1120. A maximum of 12 credit hours numbered at the 1000 level may be used towards 18 credit hours for a minor.

List A

Students are responsible for ensuring that all prerequisites have been met.

MUSC 1050 The Well-Tempered Concert-Goer (3)

MUSC 1070 Introduction to the History of Music (3)

MUSC 1080 History of Music 2 (3)

MUSC 1110 Music Theory 1 (3)

MUSC 1120 Music Theory 2 (3)

MUSC 1280 Musical Style and Structure 1 (3)

MUSC 1290 Musical Style and Structure 2 (3)

MUSC 2070 History of Music 3 (3)

MUSC 2080 History of Music 4 (3)

MUSC 2110 Music Theory 2 (3)

MUSC 2120 Music Theory 4 (3)

MUSC 2180** Ensemble (2)

MUSC 2460 Conducting (3)

MUSC 3020 History and Performance of Jazz (3)

MUSC 3030 History of Music in Worship (3)

MUSC 3050 Research Methods (3)

MUSC 3090 Introduction to Ethnomusicology (3)

MUSC 3100 Opera Repertoire (3)

MUSC 3110 Chamber Music Repertoire (3)

MUSC 3150 Orchestration (3)

MUSC 3180** Ensemble (2)

MUSC 3230 Acoustics of Music (3)

MUSC 3600 Conducting (3)

MUSC 3820 Topics in Music (3)

MUSC 3830 Topics in Music (3)

MUSC 3840 Topics in Music (3)

MUSC 3850 Topics in Music (3)

MUSC 3960 Music of the 20th Century 1 (3)

MUSC 3970 Music of the 20th Century 2 (3)

MUSC 4060 History of Music 6 (3)

MUSC 4070 History of Music 7 (3)

MUSC 4130 History of Women in Music (3)

MUSC 4150 Choral Repertoire (3)

MUSC 4180** Ensemble (2)

** Acceptable for credit in Science only to those graduating students with a declared Minor in Music.

List B

MUSC 1930 Rudiments of Music (3)

4.18.10 Faculty of Nursing

NURS 1260 Human Growth and Development (3)

NURS 1280 Introduction to Nursing (3)

NURS 2610 Health and Physical Aspects of Aging (3)

NURS 3330 Women and Health (3)

NURS 3400 Men’s Health: Concerns, Issues and Myths (3)

4.18.11 Faculty of Physical Education and Recreation Studies

Physical Education

PHED 1200Physical Activity, Health and Wellness (3)

PHED 1500Foundations of Physical Education and Exercise Science (3)

PHED 2310Kinesiology (3)L (Not for credit in a Major or Honours program in Zoology or Ecology.)

PHED 2320Human Anatomy (3)L

PHED 2610Health and Physical Aspects of Aging (3)

PHED 3070Rise of Modern Sport and Physical Education (3)

PHED 3460Sociology of Sport (3)

Recreation Studies

REC 1200 introduction to Leisure Travel (3)

REC 1400 Concepts of Recreation and Leisure (3)

REC 2650 The Social Aspects of Aging (3)

REC 3300 Nature-based Outdoor Recreation/Education (3)

4.18.12 Faculty of Social Work

SWRK 1310 Introduction to Social Welfare Policy (3)

SWRK 2080 Interpersonal Communication Skills (3)

SWRK 2650 The Social Aspects of Aging (3)

4.18.13 School of Art

FA 1020 Mathematics in Art (3)

FAAH 1030Introduction to Art 1A (3)

FAAH 1040Introduction to Art 2A (3)

FAAH 1050Introduction to Art 1B (3)

FAAH 1060Introduction to Art 2B (3)

STDO 1200Fundamentals of Drawing (9)

STDO 1220Basic Design (9)

STDO 1260Drawing for non-Majors (6)

FA 1990 First Year Field Trip (0)

FAAH 2060Medieval to Early Renaissance Art and Architecture (3)

FAAH 2070Renaissance to Baroque Art and Architecture (3)

FAAH 2080Modern to Contemporary Art (3)

FAAH 2090Art of the North American Aboriginal Peoples (3)

FAAH 2100Survey of Asian Art (3)

FAAH 2110Women and Art (3)

FA 2620 Writing about Art (3)

FAAH 2910Field Studies in Art History 1 (3)

FAAH 2920Field Studies in Art History 2 (3)

FAAH 3130Topics in Medieval Art and Architecture (3)

FAAH 3140Topics in Renaissance and Baroque Art and Architecture (3)

FAAH 3150Topics in 18th and 19th Century Art (3)

FAAH 3160Topics in 20th Century Art (3)

FAAH 3170Contemporary Art (3)

FAAH 3180History of Photography (3)

FAAH 3190History of Ceramics (3)

FAAH 3200Art in New Media (3)

FAAH 3210Introduction to the Theory and Criticism of Art (3)

FAAH 3220Topics in Aboriginal Art (3)

FAAH 3230Chinese Art and Architecture (3)

FAAH 3240Japanese Art and Architecture (3)

FAAH 3250Topics in Art History (3)

FAAH 3260Canadian Art and Architecture to World War II (3)

FAAH 3270Canadian Art Since World War II (3)

FAAH 3280Early Byzantine Art and Architecture (3)

FAAH 3290Later Byzantine Art and Architecture (3)

FAAH 3430Inuit Art (3)

FA 3440 Field Trip (0)

FAAH 3590Islamic Art and Architecture (3)

FAAH 3780Twentieth Century American Art Until 1950 (3)

FAAH 3910Field Studies in Art History 3 (3)

FAAH 3920Field Studies in Art History 4 (3)

FAAH 4060Seminar on the Theory and Criticism of Art (3)

FAAH 4070Seminar in Art History 1 (3)

FAAH 4080Seminar in Art History 2 (3)

FAAH 4090Seminar on Contemporary Issues in Art (3)

FAAH 4710Directed Study 1 (3)

FAAH 4720Directed Study 2 (3)

ART HISTORY MINOR (054A) 18 CREDIT HOURS

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

6 credit hours from FAAH 1030, FAAH 1040, FAAH 1050 or FAAH 1060

FA 1990
12 credit hours from either List A or List B

NOTE: Unless otherwise noted, these courses are available to all students in the Faculty of Science who have completed the required prerequisites.

Minor Program

For entry to the Minor, the prerequisite is a grade of "C" or better in 6 credit hours from FAAH 1030, FAAH 1040, FAAH 1050, FAAH 1060.

LIST A

Classics

CLAS 2670 Greek Art and Archaeology (3)

CLAS 2680 Roman Art and Archaeology (3)

Art History

FAAH 2060 Medieval to Early Renaissance Art and Architecture (3)

FAAH 2070 Renaissance to Baroque Art and Architecture (3)

FAAH 2080 Modern to Contemporary Art (3)

FAAH 2090 Art of the North American Aboriginal Peoples (3)

FAAH 2100 Survey of Asian Art (3)

FAAH 210 Women and Art (3)

LIST B

FA 2620 Writing About Art (3)

FAAH 2910 Field Studies in Art History 1 (3)

FAAH 2920 Field Studies in Art History 2 (3)

FAAH 3130 Topics in Medieval Art and Architecture (3)

FAAH 3140 Topics in Renaissance and Baroque Art and Architecture (3)

FAAH 3150 Topics in 18th and 19th Century Art (3)

FAAH 3160 Topics in 20th Century Art (3)

FAAH 3170 Contemporary Art (3)

FAAH 3180 History of Photography (3)

FAAH 3190 History of Ceramics (3)

FAAH 3200 Art in New Media (3)

FAAH 3210 Introduction to the Theory and Criticism of Art (3)

FAAH 3220 Topics in Aboriginal Art (3)

FAAH 3230 Chinese Art and Architecture (3)

FAAH 3240 Japanese Art and Architecture (3)

FAAH 3250 Topics in Art History (3)

FAAH 3260 Canadian Art and Architecture to World War II (3)

FAAH 3270 Canadian Art Since World War II (3)

FAAH 3280 Early Byzantine Art and Architecture (3)

FAAH 3290 Later Byzantine Art and Architecture (3)

FAAH 3430 Inuit Art (3)

FA 3440 Field Trip (0)

FAAH 3590 Islamic Art and Architecture (3)

FAAH 3780 Twentieth Century American Art Until 1950 (3)

FAAH 3910 Field Studies in Art History 3 (3)

FAAH 3920 Field Studies in Art History 4 (3)

FAAH 4060 Seminar on the Theory and Criticism of Art (3)

FAAH 4070 Seminar in Art History 1 (3)

FAAH 4080 Seminar in Art History 2 (3)

FAAH 4090 Seminar on Contemporary Issues in Art (3)

FAAH 4710 Directed Study 1 (3)

FAAH 4720 Directed Study 2 (3)

Faculty of Social Work

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BSW Program Coordinator: Alex Wright

Coordinator of Student Services and Admissions/ Advising Office: Anita Nowak

Student Advisor: Marcie Baker

Chapter Contents

SECTION 1: Academic Staff

SECTION 2: Social Work Education

SECTION 3: Admission to Social Work

- 3.1 Degree Offered
- 3.2 Fort Garry Campus
- 3.3 Inner City Social Work Program
- 3.4 Faculty of Social Work at Thompson
- 3.5 The Distance Delivery of the Bachelor of Social Work Program
- 3.6 Special Student Admission

SECTION 4: Regulations

- 4.1 Prerequisite – Co-requisite Policy
- 4.2 Residence Requirements for a Degree Program
- 4.3 Scholastic Progress
- 4.4 Professional Unsuitability Bylaw
- 4.5 Dean's Honour List
- 4.6 Appeal of Grades

SECTION 5: Program Requirements

- 5.1 Curriculum Outline
- 5.2 Specialization in Child and Family Services
- 5.3 Interfaculty Option in Aging
- 5.4 Field Instruction
- 5.5 Distance Courses open to Fort Garry Campus and Inner City Social Work students
- 5.6 Courses Open to Challenge for Credit
- 5.7 Credit for Social Work Courses Taken at Other Universities

SECTION 6: Course Descriptions

SECTION 1: Academic Staff

Professor Emeritus

Jehu, D., B.A. (Reading), Dip.Soc.Sc., Dip.App.Soc.Studies (Liverpool), F.B.Ps.S. (London).

Senior Scholars

Grosser, S.J., B.A., M.S.W. (Manitoba); Hudson, P., B.A. (London), M.S.W. (Toronto); Hutton, M., B.Sc., B.S.W., M.S.W., Ed.D. (Toronto); Penner, A.G., B.A., B.S.W. (Manitoba); Ryant, J.C., B.Comm., M.A., M.S.W., Ph.D. (McGill); Spearman, L.B., B.A., M.S.W. (Nebraska), D.S.W. (Washington).

Professors

Fuchs, D.M., B.A. (Regina), M.S.W. (Calgary), Ph.D. (Toronto); McKenzie, B., B.A. (Saskatchewan), M.S.W. (Manitoba), Ph.D. (Arizona State); Mullaly, R.P., B.A. (New Brunswick), M.S.W. (Dalhousie), Ph.D. (Toronto); Roy, R., F.R.S.C., B.A. (Delhi), A.A.P.S.W. (London), Adv.Dip. S.W. (Toronto).

Associate Professors

Bacon, B.L., B.S.W. (Regina), M.S.W. (Toronto), Ph.D. (Texas); Bracken, D.C., B.A. (Holy Cross College), M.A. (Toronto), Ph.D. (London); Cheung, M., B.Soc.Sc., M.Soc.Sc. (Hong Kong), Ph.D. (Wilfrid Laurier); Clare, K.A., B.S.W. (Manitoba), M.S.W. (Carleton); Ferguson, E.B., B.A., M.S.W. (Manitoba), Ph.D. (Toronto); Frankel, H., B.S.W. (Manitoba), M.S.W. (McGill), Ph.D. (Berkeley); Frankel, S.I., B.S.W., M.S.W. (Manitoba), Ph.D. (Berkeley); Heinonen, T., B.A. (Alberta), B.S.W. (Calgary), M.S.W. (McGill), Ph.D. (Sussex); Hiebert-Murphy, D., B.S.W., M.A., Ph.D. (Manitoba); Newman, P.R., B.A., M.S.W. (Manitoba); Reid, J.G.W., B.A. (Regina), M.S.W. (Toronto), Ph.D. (Manitoba); Selinger, G.F., B.S.W. (Manitoba), M.P.A. (Queen's), Ph.D. (London); Taylor-Henley, S., B.A. (St. Thomas), M.S.W. (Dalhousie), Ph.D. (Minnesota).

Assistant Professors

Bâ, O., B.S.W. (Senegal), M.S.W. (Laval), Ph.D. (Laval); Bonycastle, C.R., Dip. Ren Res. (Saskatchewan), B.H.J., M.S.W. (Regina); Blum, E.R., B.A. (McGill), M.S.W. (Toronto); Deane, L.J., B.S.W., M.S.W., Ph.D. (Manitoba); Milliken, E.J., B.S.W. (Manitoba), M.S.W. (Calgary); Pompana, Y., B.A. Adv., M.S.W. (Manitoba); Taylor, L., B.A. (McMaster), M.S.W. (Wilfrid Laurier), Ph.D. (Toronto); Wright, A. B.A. (College Universitaire de St. Boniface), B.S.W., M.S.W. (Manitoba), Ph.D. (Glasgow).

Instructors

Brady, J. I., B.A. (Concordia), B.S.W. (Regina), M.S.W. (Carleton); Casey, J., B.A. (Western), M.A. (Manitoba); Cook, G., B.S.W., M.S.W. (Manitoba); Fidler, G., B.S.W. (Manitoba), M.A. (Victoria); Gosek, G., B.A., B.S.W., M.S.W. (Manitoba); Hart, M., B.S.W., M.S.W. (Manitoba); Lands, R. M., B.S.W. (Manitoba); Lesperance, D.K., B.S.W., M.S.W. (Manitoba); Levine, K., B.S.W. (Manitoba), M.S.W. (Carleton); Morrisette, V., B.S.W. (Manitoba); Paziuk, L.J., B.Ed. (Brandon); Smith, D., B.S.W. (Manitoba).

SECTION 2: Social Work Education

The great complexity of life in our time has made it difficult for many people, families, and population groups to achieve self-realization without professional assistance. It has also created the need for services that help social institutions respond to these personal needs. The focus of social work is on the well being of people and the forces and conditions that undermine their dignity. In its professional practice, social work is involved in psychosocial treatment and social change.

The undergraduate program leads to a B.S.W. degree and provides basic professional preparation for practice. The degree is accepted as such by the Canadian Association of Social Workers and is accredited by the Canadian Association of Schools of Social Work. The Bachelor of Social Work program combines a liberal and professional education. The faculty offers the undergraduate program at three locations: Fort Garry Campus, The William Norrie Centre, and Northern program based in Thompson. Students from the three campuses graduate with a Bachelor of Social Work (B.S.W.) degree from the University of Manitoba. The Bachelor of Social Work Program by Distance is available for people living and working outside Winnipeg.

The faculty is a charter member of the Canadian Association of Schools of Social Work. Both the B.S.W. and the graduate degree, Master of Social Work, are accredited by the association, which is also recognized by the Council on Post Secondary Education in the U.S.

The mission of the Faculty of Social Work is to contribute knowledge, and educational programs for the social development of the Province of Manitoba, Canada and the world.

SECTION 3: Admission to Social Work

3.1 Degree Offered

Bachelor of Social Work

Minimum time to graduation: Normally four years (University 1 plus three years in Social Work) or two years if the concentrated study program is chosen following 51 credit hours of prior university study.

The following is a summary of the admission requirements. Equivalent academic courses completed at recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in an applicant information bulletin that is available from the Admissions Office, Enrolment Services, 424 University Centre; this information is also posted on the university's website.

3.2 Course Requirements for Admission to the Program on the Fort Garry Campus

Completion of 30 credit hours of any university level courses.

Other Requirements

The written English and mathematics requirements are recommended to be completed as part of University 1. If these requirements are not met in University 1 (i.e. the first 30 credit hours) they must be completed prior to graduation.

Minimum GPA for consideration: 2.5 (2.0 for Educational Equity applicants).

A criminal record statement must be completed following selection.

Selection criteria: Three applicant pools are created, with spaces allocated equally to applicants with highest grades, applicants in the Education Equity Initiative, and a random selection from all qualified applicants.

Concentrated Program

All applicants wishing to complete the program in two years of full-time study must have completed a minimum of 51 credit hours of university study prior to admission to the B.S.W. program. Of the 51 credit hours of university study, 21 credit hours must not be older than ten years to qualify for the two year concentrated program. Applicants wishing to complete the degree through the two year concentrated program must have an Adjusted Grade Point Average of 2.75 from all previous university study. In the event that three credit hours in each of written English and mathematics have not been completed as part of the 51 credit hours of previous university study, they must be completed within the first year of the two-year program.

The Selection Process

The selection process is designed to accomplish three objectives — to treat applicants fairly and equitably, to provide the diversity of practitioners required by the profession, and to provide for an efficient admissions process. The faculty selects applicants to the Fort Garry Campus B.S.W. program through three categories as described below.

Academic Achievement Category: One third of all available positions (25 positions) will be awarded on the basis of highest Adjusted Grade Point Average.

General Admissions Category: One-third of all available positions (25 positions) will be allocated to those chosen through a process of random selection from the pool of all qualified applicants.

Educational Equity Category: One-third of all available positions (25 positions) will be allocated to those eligible for inclusion in one or more of the six Educational Equity Priority Groups listed in the next paragraph. Each priority group will be allocated a specific portion of the 25 total positions in this category.

The purpose of the Educational Equity Initiative is to achieve equality in professional education so that no person shall be denied educational opportunities or benefits for reasons unrelated to ability. In the fulfilment of this goal, the aim is to correct the conditions of disadvantage in professional education experienced by Aboriginal peoples, persons with disabilities,

immigrants and refugees to Canada, and persons who are, because of their race or colour, a visible minority in Canada. Giving effect to the principle of educational equity means more than treating persons in the same way; it also requires special measures and the accommodation of difference. Details of the Educational Equity Initiative are provided in the application information bulletin.

3.3 Admission to the Inner City Social Work Program

The Bachelor of Social Work (B.S.W.) program at the William Norrie Centre is an inner-city extension of the Faculty of Social Work. The program is funded by Manitoba Education and Training. Students admitted to the centre are accepted directly into a four-year B.S.W. program, and do not require prior university study. All students complete a total of 123 credit hours of university study.

The objective of this program is to enhance the accessibility of the B.S.W. program by preparing as social workers those mature students who have had inner-city or similar social service experience, but who lack the normal university entrance requirements. Special academic and social support is provided to students admitted to the program. Staff assists candidates in arranging funding resources.

Admission to the centre is limited. Applicants to the full-time program must be 21 years old, low income and residents of Winnipeg at the time of application. The deadline date for submitting applications is early February.

A part-time B.S.W. Access program is offered to individuals who meet the above criteria, work for a Winnipeg or Aboriginal agency and/or have two years employment in human service fields. Deadline for applications for part-time studies is mid January.

The Aboriginal Child Welfare Initiative, a full time B.S.W. ACCESS Program offered to Aboriginal individuals who met the above criteria. The objective of this initiative is to educate and train Aboriginal residents of Manitoba who demonstrate an interest in Aboriginal child welfare and wish to become social workers within the restructured child welfare system. Student intake will occur in 2006-2007 academic year.

Students at the centre must meet the same graduation requirements as students in the B.S.W. program on the Fort Garry campus. For further information, contact: Inner City Social Work Program, 485 Selkirk Avenue, Winnipeg, Manitoba, R2W 2M6; telephone: (204) 668 8160 or the Selection Coordinator, 790-7218.

3.4 Admission to the Program at Thompson

The Northern Bachelor of Social Work (B.S.W.) program, based in Thompson, Manitoba, is an extension of the Fort Garry Faculty of Social Work. Students are admitted directly into a four-year B.S.W. program and do not require prior university study. All students complete a total of 123 credit hours of university study. Full time or part-time study is offered.

The objective of this program is to enhance the accessibility of the B.S.W. program by preparing as social workers mature students who, without the support of the program, would be unable to successfully complete a university degree due to lack of financial resources, lack of academic qualifications, remote location, and cultural barriers. Special academic and personal support is provided to students admitted to the program, as well as some assistance in arranging funding resources.

Students who have completed 30 credit hours of university level courses and have a minimum GPA of 2.5 (2.0 for Education Equity applicants) may apply as External Students.

Admission to the Thompson program is limited. Applicants must meet specified northern residency requirements. The deadline date for submitting applications is March 1 (classes begin in September).

Students in the Thompson program must meet the same graduation requirements as students in the B.S.W. program on the Fort Garry campus. For further information, contact the Director, Faculty of Social Work at Thompson, 3 Station Road, Thompson, Manitoba, R8N 0N3; telephone: (204) 677 1450.

3.5 Distance Delivery of the Bachelor of Social Work Program

The Faculty of Social Work remains committed to the accessibility of social work education. The faculty has extended the concept of accessibility to

include geographical accessibility through the delivery of the B.S.W. based on two approaches: (1) to individuals by means of an independent study program and (2) to community-based groups using the cohort method.

The distance education B.S.W. initiative is intended to target individuals who are employed in the social services and living outside of Winnipeg, but who may not have had the opportunity to pursue professional social work education.

Delivery methods for the independent study component of the program include a combination of teleconference sessions and print-based independent study manuals.

All course examinations are scheduled and arranged to take place in the student's community by the university's Registrar's Office.

Delivery of the program to the community-based cohorts utilizes the face-to-face delivery with the option of a combination of face-to-face and independent study.

Applicants to the B.S.W. distance education initiative must meet all three of the following requirements to be admitted into the program:

- A minimum of two years of work experience, within the last five years, in the social services;
- Residency outside of Winnipeg;
- The university admission requirements for either a regular student or a mature student.

Complete and detailed admissions information is available on our web site at www.umanitoba.ca/faculties/social_work or by calling the Faculty of Social Work Distance Education Advisor at (204)474-6070.

The Deadline for submission of applications in March 1st (for September start date).

3.6 Special Student Admission

A Special Student in Social Work is one who wishes to take undergraduate Social Work courses with no intentions of proceeding to a B.S.W. degree at the present time. In addition, the student is not currently registered at any other University. Students seeking admission as Special Students may request information from the Faculty of Social Work, 521 Tier Building; telephone (204) 474 7050. Criteria for admission are:

- Successful completion of a minimum of 30 credit hours of university level courses and an Adjusted Grade Point Average of 2.5 (C+)

Or

- Applicants who are eligible to apply in one of the five priority groups described under the section entitled Educational Equity Initiative may apply for admission with a minimum Adjusted Grade Point Average of 2.0 (C).

For complete information on the criteria and definitions of the Educational Equity groups, contact the Faculty of Social Work, 521 Tier Building.

Students are reminded they must submit an official transcript (one bearing the university seal) to the Social Work Student Advisor along with the application form on their appointment day (University of Manitoba students need only provide a student history). There is a \$75 application fee. Once admitted as a Special Student, students will:

- Be limited to registration in nine credit hours of social work courses plus SWRK 1310 and SWRK 2080.
- Be prohibited from adding courses in the Faculty of Social Work until August (refer to the *Registration Guide* for specific dates).
- Have all courses classified as "SS," which means that courses will not generate a Grade Point Average.

Students Enrolled in other Faculties/Schools

Students currently enrolled in other faculties or schools at the University of Manitoba may register for Social Work courses provided they have completed a minimum of 30 credit hours of university study and achieved a minimum Adjusted Grade Point Average of 2.5. These students will also be limited to registration in nine credit hours of Social Work courses plus SWRK 1310 and SWRK 2080.

Courses available to Special Students and students enrolled in other faculties and schools at the University of Manitoba:

SWRK 1310	Introduction to Social Welfare Policy Analysis
SWRK 2080	Interpersonal Communication Skills
SWRK 2090	Human Behaviour and Social Work Practice
SWRK 2110	Emergence of the Canadian Welfare State
SWRK 2120	Britain: Poor Laws to the Welfare State
SWRK 2130	Comparative Social Welfare Systems
SWRK 3130	Contemporary Canadian Social Welfare
SWRK 3100	Systematic Inquiry in Social Work

NOTE: Special and non-Social Work students are required to abide by the same pre/co-requisite policy that applies to B.S.W. students.

SECTION 4: Academic Regulations

All students are asked to note that some academic policies and regulations are under review and are subject to change. Please check the Web Calendar at www.umanitoba.ca after July 1, 2006 for updated information.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Social Work has regulations and requirements, published below, that apply specifically to its students.

4.1 Pre-requisite – Co-requisite Policy

The faculty has established a set of pre-/ co-requisite requirements to assist students in planning their program of study. The regulations are on file in the General Office of the faculty, in the Registration Guide and in the B.S.W. Student Handbook.

4.2 Residence Requirement

The general university residence requirement applies to the Faculty of Social Work. See Section 2, in the chapter, General Academic Regulations and Requirements.

4.3 Scholastic Progress

Except in circumstances covered in the official regulations referred to below, clear standing in the faculty requires a Cumulative Grade Point Average of 2.5 (C+) at the end of each academic session. A minimum grade of 2.0 (C) is required for all Social Work courses. The passing grades for electives taken in other faculties or schools are those required by the faculties or schools concerned. Complete statements of the regulations governing scholastic progress in the Faculty of Social Work are published in the B.S.W. Student Handbook and are also on file in the General Office. Students wishing to do so may consult this policy with the chair of the Committee on Academic Standings or the Dean. In the event of any question or dispute, this set of regulations shall be considered the official version. Directors of off-campus programs and the Student Services and Admissions/ Advising Office at Fort Garry Campus will advise students on issues concerning scholastic progress.

4.4 Professional Unsuitability Bylaw

The Senate has approved a bylaw granting authority to the faculty to require a student to withdraw for reasons of professional unsuitability (see the chapter, General Academic Regulations and Requirements, Section 6.2.3.). Copies of this bylaw may be obtained from the General Office. The bylaw is also published in the B.S.W. Student Handbook. Students are reminded of their obligation to be familiar with all regulations governing their continued progress in the program.

4.5 Dean's Honour List

Students who achieve a sessional GPA of 3.5 on the basis of 24 credit hours in a regular session will be included on the Dean's Honour List.

4.6 Appeal of Grades

The general university policy for appeal of assigned grades applies to the Faculty of Social Work. As well, the Faculty Council has approved a Social Work policy on the appeal of assigned grades and term work. The policy is listed in the B.S.W. Student Handbook. The Faculty Council has established the Academic Standing Appeals Committee to deal with these matters.

SECTION 5: Program Requirements

5.1 Curriculum Outline

A) Three-Year Plan

This plan allows a Fort Garry Campus student who has completed 30-50 credit hours of general university study prior to admission, to combine Social Work professional courses with other university courses. It requires three years of full-time study, after admission to the faculty, to complete the requirements for the B.S.W. degree. A student who has already completed the 51 credit hours of general university study may also register for this program however, ignoring the elective requirements.

Three-Year Plan- Example

Course No.	Course Name	Credit Hours	Year
SWRK 1310	Introduction to Social Welfare Policy Analysis	3	1
SWRK 2080	Interpersonal Communication Skills	3	1
SWRK 2090	Human Behaviour and Social Work Practice	6	1
SWRK 3140	Introduction to Social Work Practice	3	1
SWRK 3150	Field Instruction 1	12	2
SWRK 4200	Field Focus of Social Work Practice	6	2
SWRK 4120	Field Instruction 2	12	3
SWRK 4200	Field Focus of Social Work Practice	6	3
SWRK 2110	Emergence of the Canadian Welfare State	3	1
	or		
SWRK 2120	Britain: Poor Laws to the Welfare State	3	1
	or		
SWRK 2130	Comparative Social Welfare Systems	3	1
SWRK 3100	Systematic Inquiry in Social Work	3	1
SWRK 3130	Contemporary Canadian Social Welfare	3	2
SWRK 4210	Feminist Perspectives on Social Work Practice	6	2 or 3
SWRK 4220	Aboriginal People and Social Work Practice	6	2 or 3

NOTES:

- 1) SWRK 1310 and SWRK 2080 are open to University 1 students,
- 2) See *Registration Guide* for a list and description of SWRK 4200 courses (Students are encouraged to register for a Field Focus of Social Work Practice (SWRK 4200) that corresponds with their field placement area of practice).
- 3) All students must take the foundation courses very early in the program. Failure to do so may restrict progression through the program.
- 4) See course descriptions (Section 6) for a complete list of pre/co requisites.
- 5) Students must take SWRK 1310 before proceeding to SWRK 2110, SWRK 2120, SWRK 2130, and SWRK 3130. In addition, SWRK 1310, SWRK 2080 and SWRK 2090 are pre- or co-requisite to SWRK 3140.
- 6) All foundation courses are pre-requisite to SWRK 4200, SWRK 4210, 047.422, SWRK 3150 and SWRK 4120. In addition, SWRK 3150 (Field 1) is pre-requisite to SWRK 4120 (Field 2).
- 7) Students must take two sections of SWRK 4200. Each section is anchored in a different field or focus of social work practice. These practice courses must be taken concurrently with field instruction. It is recommended that students take a SWRK 4200 course that corresponds with their field practicum placement.
- 8) Students must take SWRK 4200 concurrently with SWRK 3150 and SWRK 4120. If a student withdraws from SWRK 4200, he/she must also withdraw from SWRK 3150 and/or SWRK 4120. As well, if a student withdraws from SWRK 3150 and/or SWRK 4120, he/she must withdraw from SWRK 4200. Students, who fail to withdraw from the co-requisite course, will be withdrawn.
- 9) Student admitted after '97-'98 must complete 3 credit hours of written English and Math as part of first 30 credit hours (unless completed prior to admission).
- 10) This plan assumes that students do not take courses in the summer.

Year 1 = 21 Credit hours social work courses 6 Credit hours electives
 Year 2 = 27 Credit hours social work courses 6 Credit hours electives
 Year 3 = 24 Credit hours social work courses 9 Credit hours electives

A) Planning Chart for Three-Year Program

Required Electives	Credit Hours	Year
Admitted on basis of	30	1
Unallocated transfer		
Electives to be completed		
Written English (W)		1
Mathematics (M)		1

B) Two-Year Plan (Concentrated Program)

Fort Garry Campus students who have completed 51 credit hours of general university study (equivalent to 8 1/2 full courses) prior to admission to the B.S.W. program, and have maintained a minimum Adjusted Grade Point Average of 2.75, are eligible for the two year plan (concentrated pro-

gram). If a student has completed the 51 credit hours of general university study, but does not have the required 2.75 A.G.P.A. or prefers a more extended time period, that student can register for either the three-year plan or the part-time plan. In both instances the "elective" requirements would be ignored except where applicants have not completed three credit hours in each of written English and mathematics prior to admission. In this instance students enrolled in the concentrated program, must complete the coursework in the first year. Students eligible to register for the concentrated program may choose to do so at point of initial registration following admission only. Students planning on completing their program in two years must follow the structure outlined below (which includes completing 12 credit hours, i.e. two full courses during the summer).

Year 1

Course No.	Course Name	Credit Hours
SWRK 1310	Introduction to Social Welfare Policy Analysis	3
SWRK 2080	Interpersonal Communication Skills	3
SWRK 2090	Human Behaviour and Social Work Practice	6
SWRK 2110	Emergence of the Canadian Welfare State	3
	or	
SWRK 2120	Britain: Poor Laws to the Welfare State	3
	or	
SWRK 2130	Comparative Social Welfare Systems	3
SWRK 3100	Systematic Inquiry in Social Work	3
SWRK 3130	Contemporary Canadian Social Welfare	3
SWRK 3140	Introduction to Social Work Practice	3

Summer Session

SWRK 4210	Feminist Perspectives on Social Work Practice	6
SWRK 4220	Aboriginal People and Social Work Practice	6
	Year 2	
SWRK 3150	Field Instruction 1	12
SWRK 4200	Field Focus of Social Work Practice	6
SWRK 4120	Field Instruction 2	12
SWRK 4200	Field Focus of Social Work Practice	6
	Total credit hours	72

Note: See course descriptions (Section 6) for a complete list of pre/co requisites.

C) The Part-Time Plan

Please note that it is possible to pursue the Bachelor of Social Work degree through a program of part-time study. Part-time students must complete all the professional and elective courses within nine years of their admission to the faculty.

5.2 Specialization in Child and Family Services

Not offered in 2006-2007.

5.3 Interfaculty Option in Aging

The Interfaculty Option in Aging is offered by the following faculties: Architecture (Interior Design), Arts, Human Ecology, Nursing, Physical Education and Recreation Studies, and Social Work. To complete the option, students will complete each of the following requirements: a) IDES 2650*, The Social Aspects of Aging; b) PHED 2610 *, Health and Physical Aspects of Aging; c) one field placement SWRK 3150 or SWRK 4120 in aging d) course SWRK 4200 (6 credit hours) must be in aging (see the aging option information sheet in the General Office). Students are encouraged to take courses from the participating units other than Social Work.

NOTE: *These courses are offered on a rotational basis by participating units.

Upon completion of these requirements, a "comment" will be added to the student's transcript. Further information on the Interfaculty Option in Aging is available from the General Office of the Faculty of Social Work.

5.4 Field Instruction

Students are expected to register for two courses in field, SWRK 3150 and SWRK 4120. Courses are taken when students have completed the prerequisites and are in the appropriate year of their degree plan. Field courses each have a co-requisite, which is Field Focus of Social Work Practice SWRK 4200. The Field Focus course selected should correspond with the field placement area of practice. Students wishing to divert from their degree plan should consult the Coordinator of Student Services and Admissions/Advising Office before March 1. Forms requesting confirmation of student plans to take field instruction in the following year will be distributed in the winter term. They must be returned on the date designated in

the form. Placements for Field Instruction may not be available for students who do not submit their forms by the deadline date.

Field Instruction in both SWRK 3150 and SWRK 4120 consists of participation in the field placement two days per week, both terms (16 hours per week). Field Instruction in the concentrated program constitutes four days per week (32 hours) in both terms. Students contemplating switching to a concentrated field placement are required to make themselves aware of eligibility requirements for this program and contact the Coordinator of Student Services and Admissions/Advising Office for confirmation of their eligibility no later than March 1. Only when this is resolved are they eligible to select this field option.

The Field Instruction program will provide the student with opportunities to learn first hand how to provide professional practice in a variety of social service agencies. The program provides an educationally focused experience in delivering progressively more demanding and complex professional social work interventions.

Field Instruction will be provided by university-appointed field instructors who may be agency-based or university-based, and who have knowledge, skills, and expertise in generic principles that can be applied to a wide range of fields of practice. The method of instruction will include individual and may include group seminars designed to assist the student to integrate theory with practice. This instruction is provided on a weekly basis. Field liaisons are available for student support, if necessary.

Active participation by the student is expected in all phases of Field Instruction including orientation conducted in their individual agency placements at the beginning of the academic year. Students absent due to illness or other reasons must contact the Field Instructor or Field Coordinator.

Students may be placed in a variety of agencies or departments. These include: school, probation, child and family services, health and mental health settings, occupational social work, those with a disability focus, and ethnically specific services. These settings provide experience in using a variety of interventive skills with individuals, families, groups, communities and policy initiatives. Every effort will be made to place students registering in SWRK 4120 (the final year of their field program) in a setting related to their field of interest. Final authority for field placement location, however, rests with the Field Coordinator. Decisions may be based on availability of agency openings, as well as on the educational needs of students. Students are expected to assume responsibility for any transportation expenses required for travel to and from the agency sites in which they are taking their Field Instruction course.

5.5 Distance Courses Open to Fort Garry Campus and Inner City Social Work Students

B.S.W students who are enrolled in the Fort Garry Campus or Inner City Social Work programs may take up to six credit hours of selected social work courses through Distance Education. The following courses are excluded: SWRK 2080, SWRK 3100, SWRK 3140, and SWRK 4200. If any Fort Garry Campus or Inner City Social Work program students are enrolled in the above mentioned practice courses they will be withdrawn.

5.6 Courses Open to Challenge for Credit

The Faculty of Social Work accommodates those students who are qualified and who can demonstrate acceptable knowledge and skill, by allowing them to challenge certain Social Work courses. They are:

SWRK 2080	Interpersonal Communication Skills
SWRK 3100	Systematic Inquiry in Social Work
SWRK 3130	Contemporary Canadian Social Welfare

Information on the procedures for challenge is available in the B.S.W. Student Handbook. The dates at which courses may be challenged are given in the academic schedule of the Undergraduate Calendar.

5.7 Credit for Social Work Courses Taken at Other Universities (Equivalency)

The Faculty of Social Work supports the principle of granting equivalency credit for social work courses taken within the last nine years at other educational institutions, or selected courses taken as part of a diploma or certificate offered at the University of Manitoba.

Information on the procedures for equivalency is available in the B.S.W. Student Handbook.

Section 6: Course Descriptions

U1 SWRK 1310 Introduction to Social Welfare Policy Analysis Cr.Hrs.3 (Formerly 047.131) Examination of social welfare policy as the end product of ideologies. Introduction of elements of ideology and the comparison of competing ideological systems. The relationship of economic, political and ethical views of society and their manifestations in societal responses to human need and social services. Students may not hold credit for both SWRK 1310 (or 047.131) and the former 047.130.

SWRK 2050 Community and Organizational Theory Cr.Hrs.3 (Formerly 047.205) Deals with concepts such as conflict and power which relate social work practice to the nature of secondary human relationships. These are applied to the dynamics within and between communities and organizations. *Prerequisite:* first half of SWRK 2090 (or 047.209).

SWRK 2070 Small Group Dynamics Cr.Hrs.3 (Formerly 047.207) Group norms, values, and goal as they relate to decision-making and communication patterns in groups. Membership roles and leadership styles are related to group development and group functioning. *Prerequisite:* first half of SWRK 2090 (or 047.209).

U1SWRK 2080 Interpersonal Communication Skills Cr.Hrs.3 (Formerly 047.208) A basic core of interpersonal skills for communicating effectively and for establishing and maintaining relationships in one-to-one and group situations. Emphasis is on experiential learning using a variety of techniques.

SWRK 2090 Human Behaviour and Social Work Practice Cr.Hrs.6 (Formerly 047.209) General systems theory is applied to the study of person-in-family-in-environment, with a corresponding examination of implications for social work practice. Various models of human development are critiqued. Information sessions on areas of human behaviour critical to social work practice are provided.

SWRK 2100 Perspectives on the Individual and Life Transitions Cr.Hrs.3 (Formerly 047.210) This course examines the impact of life course transitions on the psycho-social well-being of individuals. Focuses on crises and problematic issues that arise at turning points and their implications for social work intervention. *Prerequisite:* first half of SWRK 2090 (or 047.209). Students may not hold credit for both SWRK 2100 (or 047.210) and the former 047.206.

SWRK 2110 Emergence of the Canadian Social Welfare State Cr.Hrs.3 (Formerly 047.211) An examination of the emergence of the Canadian welfare state from its various colonial inheritances to the Canada Assistance Plan. Social, political, economic, religious, geographical, demographic and cataclysmic factors influencing the development of the welfare state are examined and analyzed. *Prerequisite:* SWRK 1310 (or 047.131). Students may not hold credit for both SWRK 2110 (or 047.211) and the former 047.130.

SWRK 2120 Britain: Poor Laws to the Welfare State Cr.Hrs.3 (Formerly 047.212) An examination of the emergence of the British welfare state from its origins in the 14th century. Social, political, economic, religious, demographic and cataclysmic factors influencing the development of parochial and state provision for human needs are examined and analyzed. *Prerequisite:* SWRK 1310 (or 047.131). Students may not hold credit for both SWRK 2120 (or 047.212) and the former 047.130.

SWRK 2130 Comparative Social Welfare Systems Cr.Hrs.3 (Formerly 047.213) The welfare systems of three modern societies are examined and compared. Economic, political, social, religious, geographical, demographic and cataclysmic factors influencing the development of the various models of social provision are analyzed for their significance to the Canadian welfare system. *Prerequisite:* SWRK 1310 (or 047.131). Students may not hold credit for both SWRK 2130 (or 047.213) and the former 047.130.

SWRK 2650 The Social Aspects of Aging Cr.Hrs.3 (Formerly 047.265) An examination of the social aspects of aging. Emphasis on understanding the aging process as a life transition involving adaptation through interaction with social and physical environments. Students may not hold credit for REC 2650 (or 123.265) and IDES 2650 (or 051.265) or HMEC 2650 (or 028.265) or SWRK 2650 (or 047.265). (A required Option in Aging course)

SWRK 3100 Systematic Inquiry in Social Work Cr.Hrs.3 (Formerly 047.310) Relates systematic methods of scientific inquiry to social work practice; theory building for practice; information collection; descriptive data for decision-making, understanding technical research material, introduction to issues of research design.

SWRK 3110 Perspectives on Deviancy Cr.Hrs.3 (Formerly 047.311) Examines human problems using several analytical models commonly applied in social work practice. *Prerequisite:* first half of SWRK 2090 (or 047.209).

SWRK 3130 Contemporary Canadian Social Welfare Cr.Hrs.3 (Formerly 047.313) An examination of social welfare in Canadian society, leading to an evaluation of present approaches in the light of changing economic and social conditions and changing needs. *Prerequisite:* SWRK 1310 (or 047.131). Students may not hold credit for both SWRK 3130 (or 047.313) and the former 047.301.

SWRK 3140 Introduction to Social Work Practice Cr.Hrs.3 (Formerly 047.314) Introduces students to ecological and other generalist based practice frameworks and the role of professional social workers. Course emphasizes values and knowledge in context of a rational approach to problem solving which includes problem definition, assessment, contracting, intervention and evaluation. Pre- or corequisite SWRK 1310 (or 047.131), SWRK 2080 (or 047.208) and SWRK 2090 (or 047.209).

SWRK 3150 Field Instruction 1 Cr.Hrs.12 (Formerly 047.315) A first educationally directed field experience in which the student will have the opportunity to assume responsibility for social work engagement, assessment, planning, intervention and evaluation, integrating theory from class. The required hours are calculated as 28 weeks x 2 days per week x 8 hours or 450 hours. This time commitment includes involvement with the agency in planning for, and engaging in, practice activity, and evaluation of performance. It also includes educational contact time with the field instructor in individual and/or group sessions. Subject to satisfactory completion and re-

ports, students will be graded on a pass/fail basis. *Prerequisites:* SWRK 1310 (or 047.131), SWRK 2080 (or 047.208), SWRK 2090 (or 047.209), and SWRK 3140 (or 047.314). *Corequisite:* 6 credit hours of SWRK 4200 (or 047.420).

SWRK 4050 Selected Topics in Social Work Cr.Hrs.3 (Formerly 047.405) Directed readings or concentrated study in some aspect of social service which is of interest to the student. Students must contract with an instructor prior to registration. *Prerequisite:* written consent of instructor.

SWRK 4070 Social Problem and Social Work Practice Seminar Cr.Hrs.3 (Formerly 047.407) In-depth study of the problem area, exploration of the ways other disciplines relate to the problem, and strengthening of interventive abilities of the student. *Prerequisite:* SWRK 3040 (or 047.304) / SWRK 3120 (or 047.312), SWRK 4200 (or 047.420) / SWRK 3150 (or 047.315) or written consent of instructor.

SWRK 4080 Current Issues in Social Welfare Cr.Hrs.3 (Formerly 047.408) Study of a particular area of social welfare to improve policies and practices. Students may select one seminar from several which are offered. These may vary from year to year.

SWRK 4120 Field Instruction 2 Cr.Hrs.12 (Formerly 047.412) A second educationally directed practice experience building on SWRK 3150 (or 047.315) in which the student will have the opportunity to carry a sustained professional role in situations which require the integration of values, knowledge, and skill at the level of a beginning professional practitioner. The required hours are calculated as 28 weeks x 2 days per week x 8 hours or 450 hours. This time commitment includes involvement with the agency in planning for, and engaging in, practice activity, and evaluation of performance. It also includes educational contact time with the field instructor in individual and/or group sessions. Subject to satisfactory completion and reports, students will be graded on a pass/fail basis. *Prerequisites:* 6 credit hours of SWRK 4200 (or 047.420), and SWRK 3150 (or 047.315). *Corequisite:* 6 credit hours of SWRK 4200 (or 047.420).

SWRK 4130 Advanced Interpersonal Communication Skills Cr.Hrs.3 (Formerly 047.413) An experiential course for self-understanding and self-awareness to produce a disciplined and conscious use of self in professional communication and relationships. *Prerequisites:* SWRK 2080 (or 047.208) and written consent of instructor.

SWRK 4200 Field Focus of Social Work Practice Cr.Hrs.6 (Formerly 047.420) A seminar that teaches social work practice skills in the context of a field or focus of practice. The course emphasizes practice as planned change (client systems) and policy and linkage (service system). Students must select two seminars from several which are offered. These may vary from year to year and are organized to cover various fields or focus of practice. For students admitted after 1993-1994. *Prerequisites:* SWRK 1310 (or 047.131), SWRK 2080 (or 047.208), SWRK 2090 (or 047.209), and SWRK 3140 (or 047.314); 6 credit hours corequisite with SWRK 3150 (or 047.315) and an additional 6 credit hours corequisite with SWRK 4120 (or 047.412). Students cannot hold credit for both SWRK 4150 (or 047.415) and SWRK 4200 (or 047.420).

SWRK 4210 Feminist Perspectives on Social Work Practice and Social Welfare Policy Cr.Hrs.6 (Formerly 047.421) An analysis of social work practice and welfare policy from a feminist perspective. Course emphasizes the integration of social work intervention with policy in the social welfare context and overlays concepts such as empowerment, ecological practice, oppression, and practice in context of cultural diversity. *Prerequisites:* SWRK 1310 (or 047.131), SWRK 2080 (or 047.208), SWRK 2090 (or 047.209), and SWRK 3140 (or 047.314). Students may not hold credit for both SWRK 4210 (or 047.421) and SWRK 4170 (or 047.417) or SWRK 4210 (or 047.421) and SWRK 4190 (or 047.419).

SWRK 4220 Aboriginal People and Social Work Practice Cr.Hrs.6 (Formerly 047.422) An analysis of social work practice and welfare policy from an aboriginal perspective. Course emphasizes the linkage between practice and policy and overlays concepts such as empowerment, ecological practice, and practice in context of cultural diversity. *Prerequisites:* SWRK 1310 (or 047.131), SWRK 2080 (or 047.208), SWRK 2090 (or 047.209), and SWRK 3140 (or 047.314). Students may not hold credit for both SWRK 4220 (or 047.422) and SWRK 4160 (or 047.416) or SWRK 4220 (or 047.422) and SWRK 4180 (or 047.418).

Part II: The Registration Guide

The Registration System: Aurora Student

Whether you are a new University of Manitoba student or are returning, this part of the *Undergraduate Calendar* provides you with the information you need to register successfully.

In addition to providing general registration information, this section contains a faculty or school chapter that provides details specific to your program. Also provided is general information on a wide variety of student services.

Administrative Office Hours and Locations

Monday to Friday (excluding statutory holidays)

Registrar's Office

4th Floor, University Centre
(204) 474-9423

Office Hours: 8:30 a.m. to 4:30 p.m.

The I.D. Centre has special hours and locations. Please see the chapter, "Other Important Things to Do and Know," Section 1.

Revenue, Capital and General Accounting Cashiers' Offices

Fort Garry Campus

138 University Centre
8:30 a.m. to 4:00 p.m.

Bannatyne Campus

P001 Pathology Building
8:30 a.m. to 4:00 p.m.

Enrolment Services

4th Floor, University Centre
Admissions (204) 474-8808; Financial Aid and Awards (204) 474-9531
Monday, Wednesday, Thursday, Friday 8:30 a.m. to 4:30 p.m.
Tuesdays 8:30 a.m. to 7:00 p.m.

Aurora Student, The University Registration System

Aurora Student is available seven days per week, 24 hours per day beginning in mid-July for registration for Fall 2006, Winter 2007, and Fall/Winter 2006/2007. See Section 3 for information about initial access times.

Telephone (204) 958-7600

Website umanitoba.ca

SECTION 1: Steps to Registration

STEP 1 Consult your Faculty/School/University 1 section in Part I, the *Undergraduate* or *Graduate Calendar* and Part II, the *Registration Guide*.

STEP 2 Obtain, where necessary, approval for your courses or program from the dean, director, or other faculty/school representative.

STEP 3 Prepare your timetable.

STEP 4 Use Aurora Student to register in the courses you have selected; or follow procedures outlined for you in the faculty/school section of this book. On the University home page (www.umanitoba.ca) choose [Aurora Student](#), then [Enrolment and Academic Records](#), and then [Registration](#).

STEP 5 Use Aurora Student to obtain a fee assessment.

STEP 6 Pay your fees.

STEP 7 Obtain a student photo identification card.

STEP 8 Obtain your internet account.

Information on all the above registration components can be found in this book.

New editions of the *Undergraduate Calendar* and the *Graduate Calendar*, including the *Registration Guide* are published each spring and distributed on campus to current students in April. Course offerings and schedules are available on the web at www.umanitoba.ca. The *Undergraduate Calendar*, and the *Graduate Calendar* including the *Registration Guide* are also available on our website.

SECTION 2: Getting Started

2.1 Students Registering at the University for the First Time

For students new to university as well as students transferring from other universities and visiting students, your Certificate of Acceptance will indicate the Faculty or School into which you will register. If you have not received your Certificate of Acceptance by July 11, contact the Admissions Office at (204) 474-4408.

2.2 Your Student Number

Your student number is recorded on your Certificate of Acceptance. If you are a returning student and are either continuing in your program or transferring to a new program, you will continue to use the student number assigned to you at admission.

2.3 Your Personal Identification Number (PIN)

New Students

When you contact Aurora Student, you will be asked for your PIN — your Personal Identification Number.

When you first access Aurora Student, your temporary PIN is your date of birth. When prompted, enter your date of birth numerically as YY MM DD (year, month, day). For example, if your birthday is February 8, 1985, you enter 850208 as your first PIN.

You will immediately be required to change your PIN to another sequence of numbers for your security. This new PIN must be a sequence of six numbers different from your date of birth. Choose a sequence of six numbers that cannot be easily guessed by others, and remember to memorize your PIN. Also, keep your PIN number confidential. You are responsible for changes made to your registration using your Student Number and PIN.

You can change your PIN again, and as often as you wish, through Aurora Student.

If you have difficulty with your PIN, call the Registrar's Office at (204) 474 9420 for help.

Returning Students

If you are a returning student, use the same PIN that you used the last time you contacted UMREG or myuminfo.

2.4 Transiting to the Faculty of Arts or the Faculty of Science from University 1

Transiting to the Faculty of Arts or the Faculty of Science is done through Aurora Student.

Transit to the Faculty of Arts or the Faculty of Science may be completed from July 3, 2006 until your day of registration. To transit after you have registered you must contact the University 1 Student Help Centre or your intended faculty for assistance. You may not transit after September 20, 2006 if you have registered for courses in Fall/Winter 2006/2007. If you plan to begin classes in January, you may transit to the Faculty of Arts or Science after September 20, 2006 with the assistance of a University 1 student advisor or an advisor in your intended faculty.

When you transit to the Faculties of Arts or Science, you will, by default, enter the three-year General Degree program. The four-year Advance (Faculty Arts), the four-year Major (Faculty of Science) and the four-year Honours programs (Arts and Science) have specific entry requirements and a minimum grade point average requirement. If you want to be admitted to any of these programs you will need to submit an application at the appropriate faculty office.

To enter a four-year Honours or Advanced degree in the Faculty of Arts, you will need to apply to the Arts General Office, 3rd floor, Fletcher Argue, after you transit.

To enter the four-year Major or the Honours degree in the Faculty of Science, check the Faculty of Science chapter in the Undergraduate Calendar to ensure that you meet the entrance requirements. Go to the general office of the department or program that you want to enter. Complete an "Application for Registration in an Honours or Four Year Major Program," and include a list of the courses in which you intend to enrol. Once departmental approval is obtained, take the completed application to the Science General Office, 239 Machray Hall, and see a Science student advisor.

2.5 Transiting through Aurora Student

Access the website: www.umanitoba.ca and click on Aurora Student. Log in with your student number and personal identification number (PIN). Click on [Enrolment and Academic Records](#) and then on [Declarations](#). Follow instructions from that point.

2.6 Transferring to Other Faculties or Schools

Entry to every faculty and school, other than Arts or Science, requires a formal application to Enrolment Services. Application forms, together with a detailed Applicant Information Bulletin, are available at Enrolment Services, 424 University Centre. Application deadline dates are available from Enrolment Services and are listed on the website at umanitoba.ca. Some faculties and schools admitting students from University 1 have application deadlines as early as February 1.

2.7 College Membership

For information about membership, services and academic programs in one of the following colleges, consult the chapter on College Membership in the Undergraduate Calendar and/or contact the college office at:

St. Andrew's College	(204) 474-8896
St. John's College	(204) 474-8531
St. Paul's College	(204) 474-8575
University College	(204) 474-9751

2.8 Definitions and Terms

Faculty, School, College and Subject Codes

A complete list of faculty, school, college and subject codes appears in the chapter, "University Codes" at the front of this book.

Course Sections

Courses with sections beginning with an "A" (e.g., A01, A02) are the lecture or seminar sections. Courses with sections beginning with a "B" (e.g., B01, B02) are laboratory sections. If a course has a lab requirement, you must register for a laboratory section. Courses that begin with a "D" (e.g., D01, D02) are taught through Distance Education.

Course Registration Numbers

Each section of each course is assigned a Course Registration Number (CRN). This is the number you will use for registering in a specific section of a specific course. Instructions for using the CRNs may be found on the website as you register.

Class Days

M = Monday
T = Tuesday
W = Wednesday
R = Thursday
F = Friday
S = Saturday

Time Between Classes

The 10- or 15-minute buffer between classes provides time to move from one class to another. As you prepare your timetable, refer to the campus maps at the end of this book. Consider the locations of your classes and the distances between them.

2.9 Declaring Your Major

You may declare your major through Aurora Student. Access the University of Manitoba Home Page (www.umanitoba.ca), click on [Aurora Student](#), then on [Enrolment and Academic Records](#) and then on [Declarations](#).

Section 3: Your Initial Registration Access Time

Each new group will have access to the system beginning at 8:30 a.m. on the dates listed below, and will continue to have access until the end of the revision period. On July 3, 2006, you may access Aurora Student to find your specific initial access time within the dates given for the categories below. To find your initial access time, access [Aurora Student](#), then [Enrolment and Academic Records](#), then [Registration](#), and then [Registration Status](#).

3.1 Advanced Registration Period

Students eligible for Advanced Registration include those with college memberships, university athletes, disabled students and/or students who register via Block Schedule.

● **Initial Access Dates: July 10 to 14**

3.2 Newly Admitted High School and U1 Students

This includes newly admitted high school students to University 1, Engineering (if not a block registrant), Fine Arts and Music.

● **Initial Access Dates: July 17 to 20**

3.3 Returning Students

This includes returning students registering in the following faculties/schools in Undergraduate programs: Agriculture (degree); Architecture; Arts (except Honours programs); Art; Engineering; Environment, Earth, and Resources; Human Ecology; Management; Music; Nursing; Pharmacy; Physical Education and Recreation Studies; Science; Social Work; and University 1 (continuing students).

Students will register according to cumulative grade point average as follows:

Initial Access Date	Cumulative Grade Point Average
July 24	4.0+
July 25, 26	3.50-3.99
July 27, 28	3.00-3.49
July 31 and Aug 1	2.5-2.99
Aug 3, 4	2.00-2.49
Aug 8, 9	1.50-1.99
Aug 10	1.00-1.49
Aug 11	0.00-.99

3.4 Newly Admitted External Transfers, Second Degree Students, and Education Undergraduates

Access times will be determined by the last two digits of the student number.

- **Initial Access Date:** beginning Aug 2

3.5 Special Visiting, General Studies and Auditing Students

- **Initial Access Date:** beginning Aug 15

3.6 Other Programs

Students registering in Undergraduate programs in Medicine; Dentistry; Dental Hygiene; Agriculture Diploma; Post Baccalaureate Certificate in Education; and Post Baccalaureate Diploma in Education.

- **Initial Access Date:** Beginning July 24

3.7 Open Access period

- **Open Access Dates:** Beginning July 24

3.8 Manual Registration

This includes students registering in the following programs: Arts (Honours program); Law; Medicine; Medical Rehabilitation; Northern Nursing program; Northern Social Work program; Winnipeg Education Centre Social Work program; and English Language Centre programs.

- **Registration Dates:** Beginning July 24

3.9 Other Exceptions to Aurora Student Registration

Courses for credit that are offered to University of Manitoba students at the **Canadian Mennonite University, William and Catherine Booth College,** and **Collège universitaire de Saint-Boniface,** are not available through Aurora Student. If you are interested in taking a U of M credit course at any of these colleges, contact your faculty or school as well as the college directly.

SECTION 4: Written English and Mathematics Requirement

All students admitted since 1997-98 must complete a minimum of three credit hours with significant content in written English, and a minimum of three credit hours with significant content in mathematics, within the first 60 credit hours (or first two years) of their programs.

Courses with attributes of "Written English" and "Mathematics" have been designated in this book with a "W" or "M" preceding the course description. Course attributes may also be found on the web.

Each faculty and school chapter of the *Undergraduate Calendar* describes how to satisfy the written English and mathematics requirements.

SECTION 5: Access to and Withdrawal from Courses

5.1 Prerequisites and Corequisites

Course descriptions indicate what prerequisites or corequisites must be met in order to enrol in that course.

Where a course description identifies another course as a prerequisite it means that you must first complete the prerequisite course. Aurora Student will let you register in courses requiring prerequisites even though your grades from the prerequisite courses are not known; for example, you can register for second term courses which have first term prerequisite requirements. If a prerequisite is not successfully completed, you are responsible for withdrawing from any course or courses requiring that prerequisite, and for any fees owing.

Where a course description identifies another course as a corequisite it means that you must enrol in both courses at the same time if you have not already completed the corequisite course previously.

5.2 Limited Access Policy

The Limited Access Policy may apply to students registering for a course for a second time. This policy is under review and may change. Please refer to the web after July 3, 2006 for updated information.

5.3 Challenge for Credit

Some courses may be "challenged for credit." This is a method of establishing university credit based on previous, non-University of Manitoba experiences. See the faculty or school chapters in the Undergraduate Calendar and this Registration Guide for information on the regulations specific to each program. Challenge for Credit courses cannot be added through Aurora Student. To challenge a course for credit you must receive written permission from the department offering the course, and provide it to the University 1 Student Help Centre if you are a new student, or to your faculty or school office if a returning student.

5.4 Repeating Courses

Students are normally permitted to repeat a course only once. Students who wish to repeat a course for which they previously have earned a grade must contact their faculty or school for assistance.

5.5 Laboratory Exemptions

If you wish to repeat a course for which you have passed the laboratory, see the general office of the department offering the course to be sure that you are eligible for a laboratory exemption. Only certain courses (usually courses in the Faculty of Science) offer laboratory exemptions.

5.6 Registering for Courses in Other Faculties or Schools

University 1 students may register in any course marked "U1" in the course description.

Students registered in faculties or schools wanting to register in a course or courses in another faculty or school should check the regulations in the chapter of their own faculty or school with respect to courses that can be applied to their programs. Also, such students should check the regulations of the other faculty or school to determine their eligibility and the availability of space.

5.7 Letters of Permission

Students who wish to take courses at another university do so on a Letter of Permission.

University of Manitoba students wishing to take a course or courses at another university may obtain a Letter of Permission form from the Registrar's Office, 400 University Centre. The course(s) you wish to take will be evaluated by your home faculty or school, and a determination will be made as to whether or not the course(s) may be used to complete your program.

Students from another university coming to the University of Manitoba on a Letter of Permission will be admitted as a Visiting Student, and may register as would any other University of Manitoba student.

5.8 Auditing Courses

Sometimes, a student will have an interest in the content of a course which he/she will not apply to any degree program now or in the future. In effect, then, the student "sits in" on a course without completing assignments or examinations. This is called "auditing" a course. A student wishing to audit a course should seek permission from his/her home faculty or school.

SECTION 6: Choosing Courses and Planning a Timetable

The courses you choose will be a combination of "required" courses and "elective" courses. Each faculty and school outlines the basic requirements in its chapter in the *Undergraduate Calendar*. The *Calendar* also includes course descriptions.

Course descriptions and class schedules may be found in Aurora Student on the website at www.umanitoba.ca.

Not all courses are offered every year. Most faculties and schools rotate their more advanced level courses over several years so they are available to you at least once during your academic career.

If you need more information about planning a timetable, registering for courses and/or fee assessment, please refer to our website at www.umanitoba.ca/registrar.

SECTION 7: Other Registration Information

7.1 Applying to Graduate

Please ensure that you declare your intention to graduate at the time you register for the term in which you expect to graduate. Use the [Declarations](#) function on Aurora Student to declare your intent to graduate. The deadline date for declaring your intention for May graduation is January 31; for October graduation, August 1; and for February graduation, September 30. After indicating your expected date of graduation, you will receive a verification letter from the Registrar's Office.

7.2 Voluntary Withdrawal (VW) from Courses

When considering whether or not to drop a course, note that not all your fees are refunded, and the actual refundable amount is based on when you withdraw. (See the chart on the inside front cover of this book for with-

drawal and fee refund dates and deadlines). In addition, courses dropped after the revision period will appear on your academic record as VW. To withdraw from any course, or an entire program of studies, you must use Aurora Student if you are eligible to do so.

You do not "drop" or voluntarily withdraw from a course by simply not attending class, or not paying your fees. You must complete the voluntary withdrawal procedures.

If you are registered in a faculty/school that does not register through Aurora Student, you must initiate your withdrawal action in person, or in writing, through the general office of your faculty or school.

Students who registered using Aurora Student must withdraw through Aurora Student.

If you are a student with a scholarship, bursary, or student loan, a voluntary withdrawal may affect your eligibility for that financial support. Before withdrawing, consult Financial Aid and Awards, 422 University Centre Phone: (204) 474-8197 for information on the impact voluntary withdrawal may have on your financial assistance.

7.3 Authorized Withdrawal (AW) from Courses

Students with valid and documented reasons for withdrawal, such as medical illness or compassionate circumstances, may be authorized to withdraw from a course or courses without academic penalty. Should you wish to apply for an authorized withdrawal, see a student advisor in your faculty or school or at the University 1 Student Help Centre as may be applicable. Receipt of an Authorized Withdrawal does not necessarily result in a tuition refund.

Fees, Payments and Refunds

SECTION 1: Fee Assessment

Do not wait for a fee statement to be mailed to you before paying fees. When you have finished registering for your courses, you must ask Aurora Student for a fee assessment. Look for your account summary under Enrolment and Academic Records. In addition to providing a statement of the total amount owing, you will also learn the amount that is due in Fall Term.

1.1 Pay Your Fees on Time

Your registration is complete only when the university **receives** your payment. Payments received after published fee deadlines will be considered late, and a late registration fee will be assessed.

1.2 Registration Revisions and Fee Payment

You do not need to pay your fees to revise your course selection and timetable. You can add, change, or drop courses anytime you are eligible to access Aurora Student. However, to avoid late fees or cancellation of registration for non-payment, you must pay your fees by the fee payment deadlines even if you are still planning to make changes to your program.

SECTION 2: Fee Payment

2.1 Payment Deadlines

The Fall Term fees must be paid by September 6, 2006.

The Winter Term fees must be paid by January 17, 2007.

If you amend your registration after these dates, any increased amount is due immediately. Any credit balances arising from a revision may be eligible for refund.

2.2 Methods of Fee Payment

Web/Phone Banking

Payments can be made using PC/WEB (On-line) banking or telephone banking. Both of these methods make paying your tuition easier than ever, as payments can be made 24 hours a day, seven days a week, from anywhere in the world.

The University does not charge for using this service. If you are not already using On-line or telephone banking, sign up by contacting your financial institution or visit the following website for links:

umanitoba.ca/admin/financial_services/revcap/fees/online.shtml

When using this service you will be asked for an "account number." You must enter your seven-digit student number. It is your responsibility to ensure that this student number is correct. Using an incorrect student number could result in your payment being misapplied or delays in the processing of your payment. For assistance, call 474 9433.

By Mail

Payments may be mailed to:

Cashiers' Office

The University of Manitoba

138 University Centre

Winnipeg, Manitoba R3T 2N2

Write your student number, session information and telephone number on the back of the cheque, money order, or bank draft made payable to the University of Manitoba. Do not send cash.

If you are mailing your payment, allow ample time for the payment to arrive at the University of Manitoba before the deadline date. **Payments received after the deadline date will be assessed a late payment fee regardless of when they were mailed.**

In Person

You can pay your fees at the following locations:

Fort Garry Campus
Cashiers' Office
138 University Centre
8:30 a.m. to 4:00 p.m.

Bannatyne Campus
P001 Pathology Building
8:30 a.m. to 4:00 p.m.

Please visit our website at:

umanitoba.ca/admin/financial_services/revcap/fees/index.shtml

These offices will accept cash, cheques, certified cheques, debit cards (Interac), bank drafts or money orders payable to the University of Manitoba. **PLEASE NOTE: Tuition fees can not be paid by credit card.** Remember that in-person payment can involve long line-ups.

You may also drop your payment (cheque, certified cheque, or money order only) into the express drop box located outside 138 University Centre (Fort Garry Campus) or Room P001 Pathology Building (Bannatyne Campus). **Payments dropped into the express drop box after 4:30 p.m. on the deadline date will be considered "late" and you will be assessed a late payment fee.**

Cheques must have a current date (if dated for after the fee deadline, applicable late fees will be assessed); be signed; have matching written and numerical amounts; include a student number and phone number, and be payable to the University of Manitoba. A \$30 administration fee, plus applicable late fees, will apply to all returned cheques.

Payment Via Tel-Pay

You may also pay your fees by telephone if you are a member of Tel-Pay, a computerized telephone bill payment service. Call Tel-Pay at (204) 947-9300 for details.

2.3 Late Registration with Late Fees

You may use Aurora Student to register during the registration revision periods. (See inside front cover for dates.) If you wait to make your initial registration after classes start, you will be assessed late registration fees in addition to the normal fees.

Fees must be paid immediately following your late registration. **Do not wait for a fee statement in the mail.**

2.4 Late Payment of Fees

If you pay your fees after the fee deadline, you will be assessed a late payment fee.

2.5 Sponsored Students

If your fees are to be paid by an outside agency, you must have your sponsoring agency complete and submit a Tuition Sponsorship form available from Revenue, Capital and General Accounting. These arrangements must be made before the fee payment deadline to avoid late payment penalties, cancellation of student registrations, or Holds on student accounts. The form may be obtained at:

umanitoba.ca/admin/financial_services/revcap/fees/index.shtml

Invoices to third parties are mailed out at the end of the revision period. Late receipt of sponsor payments may result in Holds on student accounts.

2.6 Non-Payment of Fees

Students with outstanding balances after the published fee payment deadlines may be placed on Hold Status or have their registrations cancelled.

Students who are cancelled will have a reinstatement fee of \$40.00 added to their fee balance.

Cancelled students must apply for reinstatement as soon as possible; reinstatement will not be granted following the voluntary withdrawal deadline in each term. Reinstatement, if granted, applies to **ALL** courses on your record at the date of cancellation. Payment for reinstatement (tuition fees owing and penalty fees) must be made by cash, debit card (Interac), certi-

fied cheque or money order. Payment must be received before reinstatement is complete.

Students who are placed on Hold Status will be denied access to most academic and administrative services until full payment is received.

If after registering for courses, you decide not to attend, it is your responsibility to withdraw.

2.7 Fee Assessment Appeals

To appeal your academic fees on medical or compassionate grounds, you must do so in writing on a Fee Appeal Form. Appeals are considered by the Registrar's Committee on Fee Appeals. (Appeals dating back more than one regular session will not be considered). Where the amount in question exceeds \$500, you may re-appeal an unfavourable decision to a University fee appeals committee. See the Registrar's Office for information. To appeal late fees or reinstatement fees, obtain an Appeal for Waiver of Undergraduate Tuition Fee Penalties form from Revenue, Capital and General Accounting, 138 University Centre or from the Registrar's Office, 400 University Centre. For more information, please visit our web site at www.umanitoba.ca/admin/financial_services/revcap/fees/fees/index.shtml.

2.8 Your Tax Receipt (Form T2202A)

All T2202A forms will be issued on line. Once you have accessed Aurora Student, select **Enrolment and Academic Records**.

You should check the information provided on the screen, print out the form and include it with your tax return. Students without internet access may use University computer labs to print their T2202A. Off-campus students without internet access should call 474-9420. Errors or omissions may be reported to the Registrar's Office, 400 University Centre.

Tax receipts will be available through Aurora Student before the end of February.

SECTION 3: Refund Schedule

You must withdraw using Aurora Student. You will have 24 hour access, seven days per week excluding holidays and August 14, 2006.

The amount eligible for refunds is calculated based on the full cost of the course (not including field trip fees and late registration payments). Refunds will first be applied to outstanding balances (including unpaid second instalments). Refund cheques are normally mailed within four to six weeks and only if there are no balances owing to the University or to a provincial and/or federal loan funding body.

3.1 Withdrawal and Course Change Warning

It can be expensive to withdraw from courses, or change courses, after the end of the course revision period. Before you take any action of this type, familiarize yourself with the refund policies and determine the implications for your program.

3.2 Withdrawal and Fee Refund Dates

Most faculties and schools have courses with start and end dates as shown on the inside front cover of this book in a chart, "Important Dates." Other faculties and schools have irregular start and end dates.

If your course or courses have start and/or end dates different from those in "Important Dates," please check with your faculty or school office for appropriate voluntary withdrawal and refund dates.

Tuition, Student Organization and Endowment fees for regularly scheduled courses are refundable according to the following schedule:

Tuition, Student Organization and Endowment fees are refundable according to the following schedule:

Fall Term, Half Courses

- **Withdrawal to September 20:** Full refund of eligible fees
- **Withdrawal from September 21 to October 4:** One half refund of assessed fees
- **No refunds after October 4**
- **Withdrawal is not permitted after November 15**

Winter Term, Half Courses

- **Withdrawal to January 17:** Full refund of eligible fees
- **Withdrawal from January 18 to January 31:** One half refund of assessed fees
- **No refunds after January 31**
- **Withdrawal is not permitted after March 19**

Fall/Winter 2006/2007, Full Courses

- **Withdrawal to September 20:** Full refund of eligible fees
- **Withdrawal from September 21 to January 17:** One half refund of assessed fees
- **No refunds after January 17**
- **Withdrawal is not permitted after March 19**

NOTE: Scholarship and Student Services fees are refundable only during or before the Revision Period.

3.3 Non-Refundable Fees

The following fees are not refunded when you withdraw from your program or any courses in it:

- Application for Admission
- Admission Acceptance Deposit
- Examination Fees
- Field Work Fees
- Graduate Continuing Fee
- Incidental Fees
- Late Registration Payment Charges
- Letter of Permission Fee
- Other Compulsory Fees
- Reinstatement Fee

SECTION 4: 2006-2007 Fees

4.1 How to Find Academic Fee Schedules on the Website

A complete schedule of Undergraduate and Graduate 2006-07 fees including tuition, student organization, endowment, health insurance and field trip fees will be available on our website: umanitoba.ca/registrar after July 10. Should you wish to have some indication of the costs involved in your chosen program, 2005-06 fees may be accessed on the web prior to July 10.

4.2 Application and Other Fees

Many faculties and schools have additional fees assessed on courses (such as Physical Education activity fees) or assessed on program registration (such as technology fees and fees for the rental of dental equipment). Please check the website in mid-July to determine the fees you will be required to pay.

Field Work Fees

Some courses include extra activities and will require a field work fee. Please check the website in mid-July to determine any field work fees you will be required to pay.

Application Fees

Application Fees are charged as indicated below for all undergraduate programs. Such fees are assessed by session of application for all categories of applicants, **including internal transfers**. The application fees are non-refundable and will **not** be credited against any university fees.

\$60.00 Application Fee:

Agricultural and Food Sciences (degree and diploma); Arts; Continuing Education; Engineering (direct entry from high school); Environment, Earth and Resources; Fine Arts (degree and diploma); Human Ecology; Music; Science; Social Work [off campus programs only – Northern (Thompson) and Winnipeg Adult Education Centre; Social Work Distance Education]; University 1.

\$75.00 Application Fee:

Dental Hygiene; Dentistry; Education; Engineering (Year 2 transfer students); Architecture; Law; Management; Medical Rehabilitation; Medicine; Nursing; Pharmacy; Physical Education and Recreation Studies; Social Work [Fort Garry Campus and Thompson (External)].

\$90.00 Application Fee:

All faculties and schools from international students (except U of M internal transfers, for whom application fees above apply).

Acceptance Deposits

Acceptance deposits are required in some programs from students when they indicate that they will be accepting the admission offer. The amount varies by program. The amount and the deadline for payment of the acceptance deposit will be included in the acceptance letter sent to successful applicants. The amount of the deposit is credited towards tuition fees.

Certification of Oral Proficiency

A Certificate of Oral Proficiency is awarded for demonstrated proficiency in a language other than English. The test is offered to anyone wishing to have their oral ability in a second language appraised. Cost: \$55.

The tests are conducted through the various language departments of the University of Manitoba and consist of language comprehension and conversation. A certificate is awarded only to those who are successful in the test. Grades of either **A** or **B** are given. Tests are offered by the following departments: French and Spanish, German and Slavic Studies, Icelandic, Native Studies, Near Eastern and Judaic Studies. Application should be made through the Registrar's Office, 400 University Centre.

Registrar's Office Service Fees

The Registrar's Office charges nominal fees for services such as:

- Certificates of Enrolment
- Replacement of lost Photo ID cards
- Parchment replacement including replacement with name changes)
- Duplicate tax receipts
- Documentation searches
- Transcripts

The amount of these fees for the current session are available at the Registrar's Office, 400 University Centre.

Deferment of Fee Payment

(First term only) Application \$10

Examination Fees

A special exam is any exam for which application is made to write at a time or place which differs from the official university/departmental exam timetable. It does not include approved deferred exams.

Special examination fee (per exam paper):

\$30, plus invigilation and courier costs

Supplemental examination fee (per exam paper): \$30

Grade Appeal Fee

A \$25 fee is charged per examination grade appealed and is refunded if appeal is granted

UMSU Health and Dental Insurance

All full-time undergraduate and graduate students are members of the UMSU Health and Dental Plan and are automatically assessed a fee for this insurance on their tuition statements. (For 2005-2006, the fee was \$197.00. The fee for 2006-2007 will be available on the web in July).

Students who are already covered under an extended health plan and/or a dental plan may choose to opt out of the UMSU plan. Application to opt out must be made in writing.

Information on the UMSU Insurance Plan is available from the UMSU Health and Dental Office, Room 110, University Centre (Phone: 474-6666) on the web at www.umsu.ca.

International Students Health Insurance Fee

Cost (from September 1, 2005 to August 31, 2006): \$423 Single; \$1,296 Family. (2006-07 fees will be available at the time of registration).

See the section, International Student Information for full details.

Information on coverage for part of a year is available from the Registrar's Office, 400 University Centre.

Letter of Permission Fee

For an institution in Manitoba: \$20

For an institution outside Manitoba: \$40

Locker Fee

Lockers may be made available to students in the building of their faculty or school (usually from their student council or association) with a fee receipt from Financial Services to certify payment of academic fees. The university reserves the right to allot one locker to more than one student. Locker fee rates are the responsibility of the student association.

Physical Education Facility Use Pass

The Faculty of Physical Education and Recreation Studies charges a fee for a pass to its facilities. Please consult our web site at: www.umanitoba.ca/rec_services, for rates, schedules, and other information pertinent to facility use. Information is also available from the Equipment Desk, Frank Kennedy Physical Education Centre. Students must present their Student Photo ID card when purchasing this pass.

Transcript Fee

Each official transcript: \$8

Audit Courses

Graduate students auditing courses must register for the course(s) and will be charged a fee equal to one half of the fee normally associated with that course.

Distance Education Courses

Independent Study courses are covered by the Graduate Program Fees if they are approved as part of the student's current program.

Extra Courses

Courses taken by graduate students in addition to those approved for their degree programs, are classified as OS (occasional) under "Course Category." For these courses, students are assessed the appropriate undergraduate fee based on teaching department for all courses taken. Fees paid for such courses are not transferable to a degree program at a later date.

4.3 Occasional Students

All occasional students are assessed the appropriate Undergraduate fees based on teaching department for all courses taken.

Fees paid by a student while registered as an occasional student are not transferable to a degree program at a later date.

TIMETABLE PLANNING FORM

MONDAY (M)		TUESDAY (T)		WEDNESDAY(W)		THURSDAY (R)		FRIDAY (F)	
8:30	01	8:30	04	01	04	01	04	01	
9:30	02			02				02	
		10:00	05			05			
10:30	03			03				03	
11:30	06	11:30	09	06	09	06	09	06	
12:30	07			07				07	
		1:00	10			10			
1:30	08			08				08	
2:30	11	2:30	14	11	14	11	14	11	
3:30	12			12				12	
		4:00	15			15			
4:30	13			13				13	
5:30	16	5:30	17	16	17				
6:45		6:45							
7:00	E1 (Mon)	7:00	E2 (Tue)	E3 (Wed)	E4 (Thur)	E6 (Sat AM)			

Other Important Things To Do and Know

SECTION 1: Personal Information and Identification

1.1 Photo Identification Cards

Your student photo identification (Photo ID) card is your access key to all student services.

You should carry your Photo ID card with you at all times. It is issued when you first register and is permanent throughout your attendance at the University of Manitoba.

The Photo ID Card is your library card. You will also be asked to show it when you sit for examinations, and you will need it if you pay the athletic facility use fee or purchase a food service meal plan or purchase a discounted bus pass.

ID Cards for New Students

You can obtain your Photo ID starting April 1.

You are encouraged to obtain your card during the summer when waiting times are shorter. A fee payment receipt to indicate that you have registered is not required, but some form of current photo identification is.

ID Cards for Returning Students

The Photo ID Card you received the first time you registered is valid for your use as long as you are a student. Your registration is checked by computer when your card is passed through an ID Card reader, so it is not necessary to renew or reactivate your ID card each year.

Evening and Part-Time Students

If you are an evening or part-time student you will also need a picture ID card. You can visit the ID Centre at your convenience during the normal office hours, or call the Registrar's Office, telephone (204) 474-9420, to ask about alternate arrangements.

ID Centre Location and Hours

For most of the year, the ID Centre is in the Registrar's Office, 400 University Centre and is open from 8:30 a.m. to 4:15 p.m. On September 6 and 7 the I.D. Centre in the Registrar's Office will be closed. During these two days, a special I.D. Centre will be operating in the Manitoba Room, 2nd Floor, University Centre from 9:00 a.m. to 4:00 p.m.

Replacement Cards

If your Photo ID card is lost or stolen, or you change your name, you should get a new ID card at the ID Centre, Registrar's Office, 400 University Centre.

There is a \$10 fee for a replacement card regardless of the reason for loss, except in cases where the loss was reported to the Winnipeg police and a police report number is provided to the ID Centre. Cards that have been damaged as a result of a defect in materials will be replaced free of charge.

ID Card and Photo Copy Service

The magnetic coding on your Photo ID card can be "loaded" with a sum of money so that you can use the card at library photocopying machines or at library microform machines.

Your Photo ID card can be encoded with a cash amount at the cash card manager units in the Elizabeth Dafoe Library, the Albert D. Cohen Management Library, the D.S. Woods Education Library, the Sciences and Technology Library, and the Neil John Maclean Health Sciences Library.

If you have an old ID card with only one magnetic strip, you may exchange it at the ID Centre for a dual striped card at no cost.

1.2 Changes of Personal Information

You may make changes to your personal information by accessing Aurora Student and then selecting [Personal Information](#).

Mailing Address

In order to receive University mail, it is essential that you provide the Registrar's Office with your current address. All mail will be directed to the address you provide.

Change of Name

If you have changed your name since you first registered, official evidence of the name change (such as a marriage certificate) must be submitted to the Registrar's Office. If you are unable to submit your name change documentation before registration, register under your former name, and then submit your name change information to the Registrar's Office after registration.

The University of Manitoba uses your full legal name on its records, transcripts, and on graduation documents. Abbreviated or anglicized names should not be used unless they have been legalized with documentation.

SECTION 2: Attendance at Class

Attendance at class is expected, but enforcement is at the discretion of your instructor. Students are responsible for all information given in class, including the important announcement of due dates, etc. In many classes, the information discussed in class is in addition to textbook information. Some classes assign marks for class participation.

As some faculties and schools have specific rules about attendance, students are asked to review the academic regulations section of their home faculty or school in the *Undergraduate Calendar*.

SECTION 3: Examinations

3.1 Examination Schedules

For most faculties/schools, final examinations are conducted in December for Fall Term courses; and in April/May for Winter Term and Fall/Winter Term courses. The Academic Schedule of the University, located at the front of this book, should be consulted for the exact time periods. A Preliminary Examination Timetable is posted approximately one month after the beginning of the term. The Final Examination Timetable, which contains the exact times and locations for each course and section, is posted by the Registrar's Office approximately six to eight weeks prior to each examination period. The examination timetable is available on the Registrar's Office Website (www.umanitoba.ca/registrar). **Students must remain available until all examination and test obligations have been fulfilled.**

3.2 Missed and Deferred Examinations

If you miss a final examination for medical or compassionate reasons, you may be granted a deferred examination. Travel plans are not an acceptable reason to miss examinations. University 1 or your home faculty/school, as appropriate, can arrange a deferred examination for you. To make this arrangement, you must report to University 1 or your home faculty or school, normally, no later than seven working days after the end of the examination series in which the examination was scheduled, and provide written proof (such as a medical certificate) supporting your reason for the missed examination. The dates of your illness or affliction must correspond to the dates of the examination. If your request is approved, you will, in most cases, be offered the opportunity to write another examination within 30 working days from the end of the examination series from which the examination was deferred. More information about this may be found in the General Academic Regulations and Requirements chapter of the *Undergraduate Calendar*.

If you miss a mid-term examination for personal or medical reasons, you must report to your instructor as soon as possible and provide written proof supporting your absence from the test or mid-term examination.

Missing an examination is serious. There are many ways your instructor can accommodate you and the options are up to the instructor and the department. Writing a make-up test at your convenience may not be one of these options.

SECTION 4: Release of Grades

Grades will be posted on the website when received. This may be a few days after classes for some courses and up to a few weeks after final examinations for others.

Students may access their grades through Aurora Student. Click on [Enrolment and Academic Records](#).

Appeal of Grades

Students wishing to appeal grades should contact the Registrar's Office to make application. The deadlines for grade appeals fall 15 working days from the first day of second term courses and 15 working days from the Victoria Day Holiday. For 2006-07 these dates are as follows:

Appeal of Fall Term Courses: on or before January 24, 2007

Appeal of Winter Term and Full Courses: on or before June 11, 2007

SECTION 5: Financial Aid

Financial Aid and Awards, 422 University Centre, provides assistance and advice on all matters relating to student aid and university awards.

5.1 Student Loans

For Manitoba residents, the Manitoba Student Aid Branch is your contact when applying for federal and provincial loans, grants and bursaries. Assistance is based on an assessment of financial need and is provided primarily in the form of repayable Canada and Manitoba Student Loans. Non-repayable grants and bursaries are also available.

You should apply well in advance of your program start date. You can obtain information about student financial assistance and apply on-line at: studentaid.gov.mb.ca. With the interactive on-line application, you will receive an estimate of Canada Student Loan and Manitoba Student Loan assistance within minutes of submitting your application. You will receive a letter notifying you of the actual assistance within two weeks. You can also obtain a paper application at Financial Aid and Awards, 422 University Centre. Applications for the 2005-2006 academic year are available in early June 2005.

Manitoba Student Loans and Canada Student Loans are interest-free and payment-free while you are in full-time studies. For Canada Student Loans, interest begins to accumulate once you cease to be a full-time student and the first payment is due six months after your end of study date.

Manitoba Student Aid has two offices to serve you:

In Winnipeg at 409-1181 Portage Avenue, call (204) 945-6321

In Brandon on the 3rd floor, 340-9th Street, call (204) 726-6592

If you are not a Manitoba resident, your application for financial assistance must be made through your home province or country.

5.2 Scholarships and Bursaries

If you have qualified for a scholarship from a program administered by the University of Manitoba, you will be notified by letter. This letter will also provide information on the award you have received. Prior to your application, you must have been a Manitoba resident for at least the previous twelve months.

To apply for a bursary, which is a need-based financial award, you must complete a separate bursary application. These application forms are available in September from Financial Aid and Awards, 422 University Centre. The application deadline is October 1.

5.3 Registration Requires Fee Payment

Application for a Canada Student Loan does not exempt you from late payment of fee penalties, late registration charges, or cancellation of your registration for non-payment. If you have applied for student assistance by June 30, but are unable to pay your fees by the fee payment deadline date, you must make arrangements for deferred payment at the general office of Financial Aid and Awards, 422 University Centre.

Similarly, if you are expecting financial support from another government student loans source or agency, you are not exempt from late payment penalties, late registration charges, or cancellation of your registration for non-payment. If you are unable to pay your fees by the fee payment deadline

date, you must make arrangements for deferred payment at the general office of Financial Aid and Awards by June 30.

5.4 Voluntary Withdrawals and Student Aid

If you voluntarily withdraw from courses, your decision may affect your eligibility for your scholarship, bursary, or loan. Financial Aid and Awards should be consulted when making a withdrawal decision.

Section 6: Information for Students with Disabilities

If you are a student with a disability, you should contact Disability Services, 155 University Centre; telephone 204 474 6213 (or 204 474 9790 for TTY).

This office will provide elevator service keys where necessary; arrange for your access to on-campus transportation if you have a mobility disability; and facilitate arrangements for registration assistance and for accommodations during tests and examinations.

In addition, Disability Services will provide information with regard to campus parking, purchasing your books and supplies in the Book Store, and the use of library facilities and services. Staff in the Parking Office, the Book Store, and the libraries are also prepared to help you.

For financial assistance for expenditures that are not covered under the regular student aid program, you may contact: Student Financial Assistance, Manitoba Education and Training, 409 - 1181 Portage Avenue, Winnipeg, R3G 0T3; telephone (204) 945 6321; or Education Support/Student Assistance Branch, Human Resources Development Canada, Box 2090, Station D, Ottawa, KIP 6C6, telephone (819) 994 1844 or (819) 994 1218 for TTY service.

SECTION 7: Information for International Students

7.1 Study Permit to Study in Canada

All international students must obtain a Study Permit before entering Canada. For some countries the Canadian government also requires that students obtain a temporary resident visa in addition to the Study Permit.

7.2 International Centre for Students

The International Centre for Students welcomes you to the university and to the city. As soon as you know that you will be studying at the University of Manitoba contact the centre's staff to inform them when you will be arriving.

Write to: International Centre for Students, University of Manitoba, 541 University Centre, Winnipeg, Manitoba, Canada, R3T 2N2; telephone (204) 474 8501; e-mail messages to ics@cc.umanitoba.ca. Further information on the centre is available on its website: unmanitoba.ca/student/ics.

7.3 Health Insurance for International Students

All international students must purchase the health insurance plan the university has arranged for non-Canadian students. This plan is the only insurance coverage the university will accept. The plan is comparable to coverage provided by the Manitoba Health Services Commission for residents of Manitoba. It does not provide dental or eye care coverage.

Information and application forms are available from the International Centre for Students, 541 University Centre, or Registrar's Office, 400 University Centre.

The international student insurance cost for "single" coverage will be included automatically on your fee assessment the first time you register. You must provide a current address so that your insurance card can be mailed to you.

The insurance plan for international students is administered by the AON Consulting Inc., 1800 - One Lombard Place, Winnipeg, Manitoba, Canada, R3B 2A3, telephone (204) 982-9000.

Exceptions to International Insurance Coverage

You may be exempted from purchasing the university's health insurance plan for international students if:

- You are a student sponsored by the Canadian International Development Agency (CIDA) and your health insurance coverage is included in the agency's support;
- You are the holder of a scholarship which provides complete health insurance coverage;
- You are an international student who qualifies for coverage from the Manitoba Health Services Commission (MHSC) because you have a valid work visa (Employment Authorization) of at least 12 months duration; or
- You are an international student currently covered by another Canadian provincial health plan.

To qualify for the exemption, you must present documentation of your health insurance coverage to the Registrar's Office.

Insurance Cost

See chapter on Fees, Payments and Refunds; Section 4, International Students Health Insurance Fee.

7.4 Work Permit for Study Purposes

International students who are registering for courses or programs that require work placement must obtain a valid Work Permit, in addition to maintaining a valid Study Permit. Work placement includes, but is not limited to, any paid or unpaid practicum, internships, work experience, field placement, and co-op programs that are a required component for the completion of their degree, diploma or certificate. Please contact your program advisor or the International Centre for Students for further information.

SECTION 8: Essential Computing Resources: Obtaining University of Manitoba Email, Internet, JUMP, and Computer Lab Accounts

Accounts required: UMnetID and INS

The University requests that you claim your UMnetID for a University of Manitoba (U of M) email address to facilitate official communication. Even if you already have an external email and Internet account, instructors may require correspondence and assignments to be submitted from an official U of M email address.

The INS account provides login access to the PCs in the Academic Computing and Networking (ACN) computer labs on campus which includes **instructional applications, disk space, and printing.**

The UMnetID services include **email, personal homepage, internet access, laptop ports, wireless network access, dial-up, Unix login and software, disk space, printing and WebCT.**

If you have questions regarding accounts, please contact the Computer Accounts Office at (204) 474-9788, or the Support Desk at (204) 474-8600.

8.1 How to Claim Your Accounts

Claimid is available on the web at: www.umanitoba.ca/claimid

or in the ACN campus computer labs, where students can login to any Windows PC with username: *claimid* (no password required). A document describes *claimid* in detail at: umanitoba.ca/acn/docs/claimid.html

Claimid automatically assigns students both a UMnetID and an INS account. Initially both are given the same password. Be ready to write down your userids and passwords before clicking on "Finish."

Your UMnetID account will normally be ready for use in one hour. Your INS account is normally available immediately upon completing *claimid*.

Keep your passwords private. If anyone sees your password, change it immediately. Do not set applications to "remember" them.

When to Claim Your Computer Accounts

You may claim your computer accounts as early as two weeks prior to the start of classes provided your tuition fees are processed (allow up to one week). Your accounts are automatically renewed each September as long as your tuition is paid.

9.2 Other UMnetID Features

Your UMnetID provides a 50 MB disk quota that includes your email, personal web page files, etc. You can download software from Software Express, including a free anti-virus application, Trend.

Your UMnetID account provides dial-up Internet access privileges at modem speeds up to 56K. The Internet connection is free for the first 30 hours a month, and 75 cents an hour above that. Note that any long distances charges you incur to reach the modem pool phone number in Winnipeg are not covered. Long distance callers, and those preferring a high-speed connection, may wish to consider a private ISP. Complete information on dial-up Internet access is at: umanitoba.ca/acn/remot

For other services and information, please refer to the Academic Computing and Networking website at: umanitoba.ca/acn

9.3 Your Responsibilities

Your computer account is a privilege that carries responsibilities. You are expected to use your account and University computing facilities in accordance with the policies and standards of the University of Manitoba and to be respectful of the rights and privileges of others.

Applicable policies are outlined in the University Policy 238 on computing usage, and in the IST/ACN document, Responsible Computer Usage. See umanitoba.ca/acn/policy

9.4 Computer Security

The University requires that any computer connecting to its network be protected against viruses by maintaining an adequately patched operating system and current antivirus software. See: umanitoba.ca/acn/antivirus

For Windows home computers the University licenses antivirus software from Trend and offers it to U of M students at no charge.

9.5 Charges

Charges may be incurred for additional dial-up internet use and laser printing. Your invoice is emailed to your UMnetID email address along with payment instructions. Accounts are temporarily disabled if not paid within 30 days. You can review your account charges at any time at: umanitoba.ca/acn/accounts/charges.html.

9.6 Using Your Email Account

Your UMnetID begins with *um*, followed by part of your surname, i.g. *ummist9*. Your email address would be *ummist9@cc.umanitoba.ca*.

All email delivered to your U of M email address is filtered for viruses and bulk mail (spam). You should check your filtered bulk mail each week to exclude (whitelist) any legitimate sender of bulk mail.

Reading your mail: You can read your U of M email with any mail program or on the web from any computer at: umanitoba.ca/webmail or from umanitoba.ca/jump.

Check or forward your CC email: Be sure to check your email regularly or forward that mail to an address you read. You can forward your U of M email by logging in to "BASIC" on the mail management page at: mail.cc.umanitoba.ca.

9.7 Privacy Information

When you claim a UMnetID account, your name, faculty and email address will automatically be listed in the University's "People" directory which is searchable from www.umanitoba.ca. This enables other students and professors to find you easily. The addresses are protected from harvesting by spammers. If you prefer not to be listed, you can opt out by deselecting the box "public email address book" in www.umanitoba.ca/claimid.

9.8 Computer Labs on Campus

There are 12 Academic Computing and Networking labs on campus (including one at the Bannatyne Campus) for the use of all University of Manitoba students in all faculties. Some departments or faculties provide additional labs only for use by their students.

Information on the ACN labs is at:
umanitoba.ca/acn/labs.

9.9 Connection Basics

For complete dial-in information, see umanitoba.ca/acn/remote

- Main modem number: 275-5166
- Free 10-minute Express Mail: 275-7779

IP Information

- Domain name server (DNS): 130.179.16.67
- Alternate DNS: 130.179.16.11

POP/IMAP Mail Hosts

- POP/IMAP: mail.cc.umanitoba.ca
- SMTP: smtp.cc.umanitoba.ca

SECTION 10: JUMP - Your U of M Portal

JUMP - umanitoba.ca/jump

JUMP is your University of Manitoba portal that you can customize to completely reflect your personal interests and University experience. Customize it by adding and removing information to make it work for you.

Content includes essential University of Manitoba information that will help you in your academic career, as well as provide access to your personal information including courses, grades, booklists, fees, course schedules, tax forms, and more. JUMP tools include email, online calendar, courses, and group use. Subscribe to news channels and keep yourself informed.

Campus Parking

The sale of student parking permits begins on June 5, 2006 through the telephone registration system (UMREG*) and will close **PERMANENTLY** at 6 p.m. on June 16. Parking applications may be made between 8 a.m. and 6 p.m. Monday through Friday, except statutory holidays.

Effective July 3, wait list requests can be placed through our online service available through the Parking and Shuttle Services website (umanitoba.ca/parking).

The worksheet which follows this section provides step-by-step instructions on how to acquire your parking permit using UMREG*.

Your student parking permit is assigned on a first come, first served basis. Your permit will not be sent to you until you have completed your registration in a Regular academic program and you have registered a license plate number.

All student parking applications are processed through the telephone registration system. This includes applications for residence student parking and student disability parking.

Parking Fees for 2006-07

The cost of a student parking permit for the Fall/Winter 2006/2007 Term is:

- Regular students: \$444.05
- Students living in a campus residence: \$415.00

Payment of Parking Fees

The deadline for receipt of parking fees is June 16.

Because a statement for parking fees will not be mailed to you, it is essential that you send your parking permit fee immediately so that it arrives before the payment deadline. If your payment arrives after this date, your application for parking will be cancelled and your space given to another applicant.

Payment may be made by cash, cheque, money order, credit card* (Visa or MasterCard). Post-dated cheques and payments through banking institutions will not be accepted, and credit balances from previous sessions will not be applied to parking fees. NSF cheques will result in cancellation of your permit and reallocation of the space to another applicant. Students on "hold" cannot access the system until the hold is cleared.

You may pay your parking fee in person (cash, cheque) at Parking and Shuttle Services, 125 University Centre, or at the Cashier's Office, 138 University Centre. Receipts will be issued if you pay in person.

If you mail your cheque or money order, make it payable to the University of Manitoba, and write your name and student number on the back, and also indicate that it is your parking permit fee. Mail the payment to Parking and Shuttle Services, 125 University Centre, University of Manitoba, Winnipeg, R3T 2N2; or to Financial Services, 138 University Centre, University of Manitoba, Winnipeg, R3T 2N2.

NOTE: * Credit card payments (Visa, MasterCard) may be made only at the time of application through the telephone registration system (UMREG*). If this is the method of payment you wish to use, complete the parking application worksheet to include your credit card number along with the expiry date.

Statement of Agreement

In applying for the parking permit indicated on the parking application, you hereby agree to assume all responsibilities for the vehicles registered herein, to adhere to the University of Manitoba Parking Regulations as amended from time to time and authorized by the Board of Governors and to accept all the conditions contained therein.

Parking Regulations

In accordance with University of Manitoba Policy 206, failure to pay parking fees or charges may result in discipline under the Student Discipline Bylaw. The University may withhold examination marks, transcripts, diplomas, or deny registration and registration materials until the outstanding fees or charges have been paid or other arrangements have been made which are satisfactory to the University. The parking permit may be revoked and the student prohibited from parking on University property. In some cases, the motor vehicle may be removed from University property and impounded.

Collection activities by the University or by others at the request of the University, include the issuance of a Statement of Claim in a civil court against the owner or operator of a motor vehicle for the amount of the fee or charge and all costs relating to and including the costs of removal, impoundment and storage of the motor vehicle, as well as any legal costs incurred by the University in taking such legal action.

If you have questions about parking regulations or you wish to review Policy 206 in its entirety, please refer to the website at umanitoba.ca/governance.

Permit Mailing Date

Your parking permit will be mailed to you in August together with a copy of the Student Parking Guide if you are a Manitoba resident. If you are coming to the U of M from outside Manitoba, your parking permit will be ready for pick up at Parking and Shuttle Services, 125 University Centre.

Transfer of Ownership

You may not transfer the ownership of your parking permit. If you no longer need or can't use your permit, or if you are no longer a registered student, your permit must be returned to Parking and Shuttle Services for a refund. If you are found using a parking permit that you acquired from any source other than Parking and Shuttle Services, you are subject to a \$150 fine, and will be prohibited from parking a vehicle at the university for up to 12 months, during which time your vehicle is subject to impoundment.

Completing Your Parking Application Worksheet

Before you call the telephone registration system to apply for your parking permit, read through the following pages and complete the worksheets provided.

Available Student Lots

Choose your preferred lot and two alternate choices from this list and record the information on the Parking Application Worksheet.

Lot	Telephone Keys	Location
L	*53	East of Robson Hall and University College
W	*91	East of the Ellis Building
Y	*93	Between Animal Science and Ellis Buildings
U	*82	Behind the Visitor Centre, west of University Crescent
Q	*01	On Dysart Road opposite St. Paul's College
I	*43	North of Investors Group Athletic Centre

Shaded parking lots indicate student parking areas on the map at the back of this Guide. (Note: D, F, and R lots are only available for resident student parking)

Residence Students

● Residence Student Lots are not listed. If you are a residence student, please apply for parking by calling the UMREG* system no later than June 16. Effective July 3, please call the Parking Office directly at 474-9483. It is not necessary to specify a preferred lot. Your lot assignment will be made after you have been assigned to a residence hall.

● Your assigned decal will be available for pick-up at the general office of your designated residence hall in August after check-in procedures are completed. Motor vehicle registration must be presented to obtain the permit.

● Permits for residence student lots will not be issued for any vehicle not registered in either the applicant's name or the name of an immediate family member, or for any vehicle registered to a student not living in a university residence.

Disability Parking

Applications for parking must be made through the telephone registration system (UMREG*) up to June 16. You will not be asked to specify a lot preference. Effective July 3, please call the Parking Office directly at 474-9483. Your lot assignment will be made after you have contacted the Parking Office directly and all documentation has been processed. The deadline for receipt of parking fees is June 16. Statements will not be issued.

*** THE UMREG SYSTEM WILL NO LONGER BE AVAILABLE AFTER JUNE 16.**

University 1

Initial Access Times

Registration times for newly admitted University 1 students

Registration begins July 17, 2006 and concludes September 20, 2006 for three credit hour (Fall Term) courses and six credit hour (Fall/Winter Term) courses. For three credit hour (Winter Term) courses, registration starts at the same time and ends January 17, 2007. All students are given an initial access time in which to register. This initial access time is the earliest you will be able to register for your courses. New University 1 students are the first students to be able to register, followed by returning students. It is important that, as a new University 1 student, you take advantage of this opportunity, in order to get space in your chosen courses. Initial access times for newly admitted University 1 students are between July 17, 2006 and July 20, 2006. Before you register you must attend a Start@U1 registration information session, see Section 1.1 below.

Determining your initial access time:

On July 3, 2006, you may access Aurora Student to find your specific initial access time within the dates given for the different categories of students. To find your initial access time, access [Aurora Student](#), then [Enrolment and Academic Records](#), then [Registration](#), and then [Registration Status](#). Please refer to The Registration System: Aurora Student - Section 3 in *Part 2* of this calendar for more details on registration and determining your initial access time.

Registration Reminders

Things to do before classes start:

- Attend a Start@U1 session. (for new U1 students)
- Determine your initial access time. (see above)
- Create a timetable.
- Check the online *Registration Guide* for any timetable updates, at umanitoba.ca. See The Registration System: Aurora Student section.
- Use Aurora Student to register for your courses. See The Registration System: Aurora Student section.
- Request a fee assessment from Aurora Student. See The Registration System: Aurora Student section.
- Confirm your schedule, and determine your fees and booklist. See The Registration System: Aurora Student section.
- Pay your fees. See Fees, Payments and Refunds section.
- Obtain your Photo Identification card. See Other Important Things To Do section.
- Attend U1 Orientation, September 5 and 6.
- Obtain your Userid and computer account. See Other Important Things To Do section.

Your registration is not complete until you pay your fees or make arrangements to have them paid by the September 6, 2006 fee payment deadline. Do not wait for a fee statement to be mailed to you. For payment options see Fees, Payments and Refunds section.

Registration and General Information

University 1 Student Help Centre: 205 Tier Building

The Student Help Centre hours are normally Monday, Thursday and Friday 8:30 a.m. to 4:30 p.m and Tuesdays and Wednesdays 9:30 a.m to 4:30 p.m.

Academic Advisors are available throughout the year, normally Monday through Friday, 9:30 a.m. to 4:00 p.m.

- In-person on a drop-in basis.
- On the University 1 telephone information system at (204) 474 6209 (Toll Free in Manitoba: 1 800 432 1960, ask for extension 6209).
- By e-mail: university_1@umanitoba.ca.
- Information is also available on our website: umanitoba.ca/u1.

Newly admitted students should attend a Start@U1 registration information session prior to consulting with a University 1 Academic Advisor about course selection. Complete instructions on course selection and registration are in the University 1 *STARTbook*. An online version is available at umanitoba.ca/U1/startbook.

SECTION 1: Preparing to Register

1.1 New Students - Start@U1

As a new University 1 student you **are required to attend a Start@U1** registration information session **before you register** for your courses. Alternate arrangements will be made for students who live more than 250 km from Winnipeg. At the Start@U1 session you will learn to choose your courses, determine a course load, build a timetable and use the Aurora Student registration system (Aurora Student). Other registration related concerns, such as fee payments and photo identification cards, will also be covered.

Start@U1 sessions are offered on campus in June and July for students beginning classes in September. Start@U1 registration details will be mailed in mid-May to all University 1 applicants. Detailed information will also be available online in mid-May at umanitoba.ca/u1. Sessions will be offered for late applicants throughout August as required. Contact (204) 474 8568 for more information.

Students beginning University 1 in January will be required to attend a Start@U1 session in the fall. You will receive information about these sessions after you have applied. Students beginning University 1 in Summer Term 1 or Summer Term 2 will not be required to attend Start@U1 before they register for their summer courses, but will be required to attend a session before they register for the Fall/Winter Term.

1.2 Returning Students

Before registering for courses you must determine whether you should register again in University 1, transit to the Faculty of Arts or the Faculty of Science, or apply for admission to another faculty or school.

If by the end of the August 31, 2006 you have completed less than 24 credit hours, your registration in the Fall/Winter 2006/2007 session will be in University 1. If you have completed between 24 and 29 credit hours, you may be able to apply directly to a faculty or school, or you may transit to the Faculty of Arts or the Faculty of Science, or you may remain in University 1 (see Section 1.2.1 below). If you have completed 30 credit hours or more you must exit from University 1 before you register for the Fall/Winter 2006/2007 session. You may transit to the Faculty of Arts or the Faculty of Science, or you may apply for admission to the faculty or school of your choice (see Section 1.2.2 or 1.2.3 below).

1.2.1 Remaining in University 1

If you are continuing your studies in University 1 you may register for a full course load (30 credit hours) in the Fall/Winter 2006/2007 session. When choosing courses, review your target faculty or school's chapter in *Part 1* of this calendar or refer to the 2006 - 2007 copy of the *STARTbook* for any changes in admission requirements since you started University 1. The *STARTbook* is online at umanitoba.ca/u1/startbook. See Section 1.5, Course Selection, in this chapter for more information.

1.2.2 Transiting to the Faculty of Arts or the Faculty of Science

Transiting to the Faculty of Arts or the Faculty of Science is processed through Aurora Student. The transit function is described in more detail in The Registration System: Aurora Student section.

Transits to the Faculty of Arts or the Faculty of Science may be completed from July 3, 2006 until your day of registration. To transit after you have registered you must contact the University 1 Student Help Centre or your intended faculty for assistance. You may not transit after September 20, 2006 if you have registered for courses in Fall/Winter 2006/2007. If you plan to begin classes in January you may transit to the Faculty of Arts or Science after September 20, 2006 with the assistance of a University 1 Academic Advisor or an advisor in your intended faculty.

1.2.3 Transferring to Other Faculties or Schools

Entry to every faculty and school, other than Arts or Science, requires a formal application to Enrolment Services. Application forms, deadline dates and a detailed *Applicant Information Bulletin*, are available at Enrolment Services, 424 University Centre. Some faculties and schools admitting students from University 1 have application deadlines as early as February 1.

1.3 Courses Available in University 1

The list of courses available to University 1 students is included in the *STARTbook*, and in the University 1 chapter in *Part 1* of this calendar. Courses appearing on the University 1 course list are approved for credit in University 1 and are acceptable for credit in most target faculties and schools, see the University 1 chapter in *Part 1* of this calendar or the *STARTbook* for exceptions. The course list in the *STARTbook* includes only those courses being taught during the Fall/Winter 2006/2007 session and the complete list of courses is found in the University 1 chapter in *Part 1* of this calendar. The University 1 course list includes all courses offered by the Faculty of Arts and the Faculty of Science, as well as introductory level courses offered by many other faculties and schools. All courses required for entry to target faculties and schools are included, as well as courses that may be taken to sample programs to which University 1 students apply.

You may be able to take courses not on the University 1 course list (see *Part 1* of this calendar for details). In some cases, you must take courses that are not on the University 1 course list as a "Special Student". This means that, although a grade is awarded in the course and it appears on your academic record, it does not form part of your academic record in University 1. You will be granted credit for the course if you transfer to the target faculty or school that offers the course. The granting of credit in a target faculty or school, other than by the faculty or school that offers the course, is at the discretion of that faculty or school. Consult the University 1 Student Help Centre to determine if you must take the course as a Special Student.

1.4 Introduction to University: Arts 1110

Introduction to University: Arts 1110 is a three credit hour course designed to help you make the transition from high school, college or workplace to university. As the university is a new environment, Introduction to University: Arts 1110 may help you adjust more quickly – with knowledge, practical skills, regular assignments, and the support of a group of fellow students. Features of Introduction to University: Arts 1110 include: time management; handling anxiety and stress; discovering your individual learning style and putting it into practice; introduction to libraries and research methods; instruction and extensive practice in effective writing from first draft to finished work; exercises in critical thinking and problem solving; and an examination of values and lifestyle issues. Introduction to University: Arts 1110 is only available to students who have completed less than 12 credit hours of university level courses prior to the Fall/Winter 2006/2007 session.

1.5 Course Selection

The University 1 *STARTbook* offers three approaches to course selection: the Focused, Balanced and Sampling approaches. The *STARTbook* is distributed at Start@U1 sessions for new students, at the University 1 Student Help Centre for returning students (available for pick up in May) and is online at umanitoba.ca/u1/startbook.

If you are a returning University 1 student, it may be possible to structure your course selection so that you can complete the admission requirements for your target faculty or school and begin to work on Year 2 degree

requirements. See your target faculty's chapter in *Part 1* of this calendar or the Academic Advisors at the U1 Student Help Centre for help with course selection. You may also be referred to the advising office of your target faculty.

1.6 Written English and Mathematics

All students are required to successfully complete, within the first 60 credit hours of their programs, a minimum of one three credit hour course with significant content in written English (a "W" course) and a minimum of one three credit hour course with significant content in mathematics (an "M" course). Refer to the "W and M Requirements" section of your target faculty's entry in the *STARTbook* to help you decide which "W" and "M" courses to take as well as when to take them.

1.7 Determining When Courses are Offered and Building a Timetable

Information on building timetables is covered at Start@U1 sessions and in The Registration System: Aurora Student section.

When building your timetable (i.e. deciding when to take your courses), you can determine when individual courses are offered by going to the on-line Calendar and Registration Guide to view a department's complete timetable or the timetable for an individual course in that department. A paper copy of the timetable will be available for student use in the University 1 Student Help Centre, 205 Tier Building.

1.8 Using Aurora Student

All registration functions are available using Aurora Student. Instructions on how to use Aurora Student are described in The Registration System: Aurora Student section and using Aurora Student will be described in detail at the Start@U1 sessions.

Aurora Student will not allow you: (1) to register for Challenge for Credit courses; (2) to take courses that are not on the University 1 course list; or (3) to register as a "Special Student". If you want to register in any of these categories, you must contact the University 1 Student Help Centre for registration assistance.

1.9 Repeating Courses

You **may** repeat courses in which you received an "F" or a Voluntarily Withdrawal (VW), but you are **not required** to do so unless it is a course required for your target faculty. There may be circumstances, however, when repeating a course to improve your grade is desirable. Aurora Student will not allow you to repeat a course in which you have earned a grade of "D" or better. If you wish to do this, contact the University 1 Student Help Centre for registration assistance.

1.10 Limited Access

The Limited Access Policy is designed to give registration preference to students who have not previously registered in the course. Limited access is applied to high enrolment courses. Limited access prevents students from re-registering in certain courses until a specified date. Please consult with a University 1 Academic Advisor regarding which courses are subject to Limited Access.

1.11 Laboratory Exemptions

If you wish to repeat a course for which you have passed the laboratory component, see the general office of the department offering the course to be sure that you are eligible for a laboratory exemption. Only certain courses (usually courses in the Faculty of Science) offer laboratory exemptions. It is your responsibility to ensure that you are eligible for an exemption. If you are eligible, you may then register for the laboratory exemption section, either B98 (for three credit hour Fall Term courses) or B99 (for six credit hour Fall/Winter Term courses and three credit hour Winter Term courses). Aurora Student will allow you to register in a laboratory exempt section if you have previously completed the course with a grade (including an "F"). If you register in a laboratory exempt section and it is determined that you are not eligible, you will be required to register for a laboratory section. If there is no space available, you will be required to withdraw from the course. If you previously did not finish the course (i.e., you VW'd), you must obtain written approval from the department and bring it to the University 1 Student Help Centre before registering in a laboratory exempt section.

1.12 Challenge for Credit

Challenge for Credit courses cannot be added through Aurora Student. To challenge a course for credit you must receive written permission from the department offering the course, and provide it to the University 1 Student Help Centre where you will be assisted with your registration. See section 4.12 of the University 1 chapter in *Part 1* of this calendar for more details.

SECTION 2: Starting Classes

2.1 University 1 Orientation 2006: Tuesday, September 5 and Wednesday, September 6

Information about University 1 Orientation 2006 will be mailed to you in August. University 1 Orientation is designed to help you succeed at university. It is an excellent way to become acquainted with the university community and to make some new friends. All new University 1 students are required to attend University 1 Orientation.

2.2 Fee Payment

End your Aurora Student session with a request for your fee assessment (for instructions see The Registration System: Aurora Student section).

Your registration is not complete until you pay your fees. Do not wait for a fee statement to be mailed to you. You will receive one fee statement in the mail after your initial registration. If you drop, add or change courses after your initial registration you will not receive another fee statement in the mail and must request an updated fee assessment on Aurora Student.

For complete information see Fees, Payments and Refunds.

2.3 Attendance in Classes

Attendance at class is expected, but enforcement is at the discretion of your instructor. Students are responsible for all information given in class, including the important announcement of due dates, etc. In many classes the information discussed in class is in addition to textbook information. Some classes assign marks for class participation.

2.3.1 Attendance in a class or section in which you are not registered

You are expected to attend the section and class in which you are registered. If you attend the wrong section or class, you may end up with a failing grade. In addition, make sure that you are attending courses in the correct term. You will be financially accountable for registration related errors.

2.4 Changing Your Registration

The first two weeks of each Fall Term and Winter Term is known as the registration revision period. During the revision period you can add courses, drop courses, or change sections without penalty – either academic or financial. This can be done using Aurora Student. The registration revision period is an opportunity for you to test out your courses and ensure that you are enrolled in the right ones for you.

The registration revision period for three credit hour (Fall Term) and six credit hour (Fall and Winter Term) courses is from September 7 - 20, 2006 and for three credit hour (Winter Term) courses is from January 4 - 17, 2007.

2.5 Withdrawal from Courses

If you want out of a course after the end of the registration revision period, you may voluntarily withdraw (VW) by the stated deadline, but it will be on your academic record and a financial penalty will be incurred. For refund deadlines see Fees, Payments and Refunds - Section 3. The VW deadline is final. You may not withdraw from a class after the deadline, except as described in Section 2.5.1 below. If you are enrolled after the VW deadline you must complete the remaining term work and write the final exam. If you do not complete the remaining term work and write the final exam, you will receive a grade classification of "NP" (No Paper) accompanied by a letter grade based on term work completed for the course using a zero value for any incomplete term work and for the final examination.

2.5.1 Authorized Withdrawals

Students with valid and documented reasons for withdrawal, such as medical illness or compassionate circumstances, may be authorized to with-

draw from a course(s) without academic penalty. See an Academic Advisor in the University 1 Student Help Centre for assistance.

2.6 Examinations

Information about final examinations and missed examinations can be found in Sections 4.4 and 4.5 of the University 1 chapter in *Part 1* of this calendar.

2.7 Release of Grades

Grade reports are mailed in early June, for three credit hour (Fall Term), six credit hour (Fall and Winter Term) and three credit hour (Winter Term) courses. Grades will also be available on Aurora Student after each final exam series. It is your responsibility to be aware of your grades and to determine whether you have the necessary grades to proceed in further courses. If you fail to meet the prerequisite requirement for any course in which you are registered, it is your responsibility to withdraw from it before the end of the registration revision period. If you do not withdraw, the University 1 Student Help Centre will eventually withdraw you, possibly after it is too late to add additional courses. For more information see Other Important Things To Do section.

2.7.1 Appeal of Grades

Information on appeal of graded term work and final exams can be found in section 4.6 of the University 1 chapter and in the General Academic Regulations and Requirements, in *Part 1* of this calendar.

2.8 Academic Performance and Assessment

Information about academic performance, probation and academic suspension can be found in Section 4.10 of the University 1 chapter in *Part 1* of this calendar.

2.9 Summer Courses

Summer is a good time to get a head start on your intended degree program, or to take missing requirements. Preliminary information about courses offered in Summer Term 1 and Summer Term 2 is normally available in December, with the final Guide, which includes registration information, available in March. Registration in summer courses normally begins at the end of March. Check the Faculty or School chapters in *Part 1* of this calendar to ensure that your intended degree program allows you to work ahead by taking summer courses.

You may register as a University 1 student in summer courses if you have completed 51 credit hours or less by the end of the Fall/Winter 2006-2007 session. Students who have completed more than 51 credit hours at the end of the Fall/Winter 2006-2007 session must transit to the Faculty of Arts or the Faculty of Science before registering for summer courses.

SECTION 3: The Colleges

3.1 Membership Information

For information about membership, services and academic programs in one of the following colleges, consult the chapter on College Membership in *Part 1* of this calendar or contact the college office at:

St. Andrew's College	(204) 474 8896
St. John's College	(204) 474 8531
St. Paul's College	(204) 474 8575
University College	(204) 474 9751

For instructions on how to designate college membership see The Registration System: Aurora Student section.

3.2 Taking Courses in the Colleges

3.2.1 University 1 course offerings at St. John's College

Students can meet the requirements for University 1 by selecting courses offered at the College. Students intending to enter a professional faculty (e.g., Medicine, Dentistry, Pharmacy) can meet their first year pre-professional requirements in the company of other like-minded students by selecting the SJC pre-professional package. Contact the registrar for more information on the timetable. St. John's College students who have identified themselves on Aurora Student with the appropriate college code will have special registration access to these sections. For instructions on how

to designate college membership see The Registration System: Aurora Student section.

3.2.2 Reserved Spaces in University 1 courses for St. Paul's College students

Space has been reserved for a limited number of St. Paul's College students in all University 1 courses taught in the College. St. Paul's College students

who have identified themselves on Aurora Student will have special registration access to these sections. For instructions on how to designate college membership see The Registration System: Aurora Student section.

Faculty of Agricultural and Food Sciences

SECTION 1: Access Times

Students are referred to the chapter "The Registration System: Aurora Student", Section 3 "Your Initial Registration Access Time" for registration dates.

SECTION 2: Registration Assistance

Students should contact the Student Advisor at 474 8269 or the Student Services Office at 474 9295 room 160 Agriculture Building for registration assistance.

Program Advisors

Contact the following Program Advisors for assistance in selecting courses:

Agribusiness:	Dr. Gary Johnson	(204) 474 9795
Agronomy:	Dr. Martin Entz	(204) 474 6077
Agroecology:	Dr. Neil Holliday	(204) 474 6020
	Dr. Brian Amiro	(204) 474 9155
Animal Systems:	Dr. Bill Guenter	(204) 474 9334
	Dr. Loreen Onischuk	(204) 474 9174
Food Science:	Dr. Sue Arntfield	(204) 474 9866
Plant Biotechnology:	Dr. Murray Ballance	(204) 474 6086

SECTION 4: Registration Information

All students in Faculty of Agricultural and Food Sciences degree programs must register through the website. Students are referred to the chapter "The Registration System: Aurora Student:", section 3.

It is critical that you select the correct courses to satisfy your degree requirements. Be certain that you carefully review the appropriate sections of the Undergraduate Calendar to ensure compliance with degree program requirements.

You are responsible for knowing degree requirements and may consult a Program Advisor, or the Student Advisor in the Student Services office for advice and assistance if the degree requirements are unclear. The final completion of degree requirements is your responsibility.

4.1 Second-Year Students

Students transiting from University 1

Students entering the Faculty of Agricultural and Food Sciences from University 1 are required to see a Program Advisor (see list above) before registration. This should be completed between April and June but not later than June 20, 2006. When your second-year program is approved, the Program Advisor will forward written authorization to the Student Advisor in the Student Services Office, who will then "unblock" your access to the registration system.

Once a student has selected a program, he/she should consult the *Undergraduate Calendar* to determine the required second year courses, plus any other courses that pertain to the program. Timetable information is available at www.umanitoba.ca. Questions about course selection should be directed to the Student Advisor in the Student Services office at (204) 474 9295, or a Program Advisor (as listed above).

4.2 Third-Year Students

Third year students must obtain approval of their third-year program from a Program Advisor. This should be completed between April and June but not later than June 20, 2006. It is also strongly recommended that you provide a fourth-year plan for approval at the same time.

When your third-year program is approved, the Program Advisor will forward written authorization to the Student Advisor in the Student Services Office, who will then "unblock" your access to the registration system.

4.3 Fourth-year students

Fourth-year students who have selected the courses they require to meet their degree requirements are allowed to register. If you have questions about your program, you should contact the Program Advisor or the Student Advisor in the Student Services Office.

4.4 Students on Probation or Attempting Reinstatement

Before registering, you must have your course selection approved no later than June 20, 2006, by the Student Advisor in 160 Agriculture Building, (204) 474 8269.

4.5 University Written English and Mathematics Requirement

If the written English or Mathematics requirement is not satisfied in University 1, you must include the courses in your first year in the faculty.

Please refer to the chapter in the *Undergraduate Calendar* section of this publication, "General Academic Regulations and Requirements", Section 2.2.

SECTION 5: Helpful Hints

Have you:

- Verified your access time?
- Chosen courses to satisfy the written English or mathematics requirement, if not already completed?
- Consulted a student advisor and/or obtained required program approvals?
- Registered for your courses through the website?
- Asked for a fee assessment?
- Reviewed the registration checklist for other registration tasks?
- Paid your fees?

Your registration is not complete until you pay your fees or make arrangements to have them paid by the fee payment deadline. Do not wait for a fee statement to be mailed to you. See the Section on fee payment for payment options.

SECTION 6: Additional Information

Prerequisites

You will not be allowed to register for any course for which you do not have the exact prerequisites as stated in the *Undergraduate Calendar*. Students who fail to satisfy the prerequisites either between Summer Session and Regular Session, or between first and second term, must withdraw and make alternate course selections prior to the deadline date for registration revisions.

Where the *Undergraduate Calendar* states a prerequisite and/or consent of Instructor or consent of Department Head and you do not have the prerequisite, you must obtain written permission from the Instructor or the Department Head and then deliver or forward a copy of the permission form to the Student Advisor, Student Services Office, 160 Agriculture Building. The prerequisite "block" for the particular course will then be removed and

you will be able to register for this course. This process should be completed before July 14, 2006.

Limited Access

Faculty of Agricultural and Food Sciences are not Limited Access courses. However, most courses offered by other faculties and schools, including all those offered by Arts and Science, are Limited Access courses. Students are referred to the chapter "The Registration System: Aurora Student:", section 3.

Term Load

Students are allowed to register for a normal course load of 30 credit hours during Regular Session.

Newly Admitted Transfer Students from other Colleges, Universities and Technical Institutes:

Students should contact the web registration system for information on registration access times.

If you are in one of the categories listed immediately above, you must see the Student Advisor in the Student Services Office after receiving your acceptance into the faculty, to have your course selection approved. Appointments can be made with the Student Advisor by calling (204) 474 9295.

Visiting students must have a "Letter of Permission" from their home university for acceptance into the faculty.

Auditing students should obtain written permission, from the instructor who is teaching the course, they wish to audit.

Agriculture Diploma

SECTION 1: Access Times

Students are referred to the chapter “The Registration System: Aurora Student”, Section 3 “Your Initial Registration Access Time” for registration dates.

SECTION 2: Registration Assistance

For information or assistance, contact the School of Agriculture General Office between 8:30 a.m. and 4:30 p.m. Monday through Friday. Telephone (204) 474 9391 or toll-free in Manitoba 1 800 432 1960 and ask for extension 9391.

SECTION 3: Orientation

In preparation for the transition to university, all students newly admitted to the Agriculture Diploma program are required to attend a one day orientation on Friday, September 15, 2006. Information regarding timetables, fees, course requirements and services will be distributed at that time. Further details about orientation will be mailed out in late August.

SECTION 4: Registration Information

Agriculture Diploma students enter directly into the program and are not required to take University 1. All Agriculture Diploma students are required to register using Aurora Student. Refer to the chapter “The Registration System: Aurora Student”.

4.1 First Year Course Registration Package

There is a course registration package for newly admitted, full-time, first-year students. This package will register you in all of the required courses for first-year (both first and second term). You will be able to revise your second-term course registrations in November following the information sessions on the program’s options. There are two packages available: one for students entering the Agricultural Finance option, the other for those entering one of the other options. Refer to section 4.5 for further information on the options available.

Specific information on how to register for the course package will be mailed directly to students and will also be available at www.umanitoba.ca/afs/school

4.2 Transfer Students

Transfer students will be blocked from registering for courses until their course selection has been approved by the Student Advisor from the School of Agriculture. Call the School to make an appointment with the advisor before your access time.

4.3 Returning Students

4.3.1 Full-Time Students

Returning students should review the instructions in the chapter “The Registration System: Aurora Student”.

4.3.2 Part-Time Students

Part-time students will be blocked from registering for courses until their course selection has been approved by the Student Advisor from the

School of Agriculture. Call the School to make an appointment with the advisor before your access time for registration.

4.3.3 Students on Probation or Reinstated from Academic Suspension

You will be blocked from registering for courses until your course selection has been approved by the Student Advisor from the School of Agriculture. Call the School before your access time for registration.

4.4 Special Students

Special Students (those not seeking a diploma) must make an appointment with the Student Advisor in the School of Agriculture before September 1, 2006 to register in person.

4.5 Choosing an Option

Agriculture Diploma students have a choice of five options in the program. Those wishing to enter the Agriculture Finance option do so by choosing the Ag Finance package. Those wishing to enter the options of: Crop Management, Livestock Management, Business Management or General Agriculture should choose the other package. These packages are different so it is important to register for the correct one. Contact the School of Agriculture at (204) 474 9391 if you require further information.

SECTION 5: Helpful Hints

Have you:

- Verified your access time?
- Consulted a student advisor and/or obtained required program approvals?
- Registered for your courses?
- Asked for a fee assessment?
- Reviewed the registration checklist for other registration tasks?
- Paid your fees?

Your registration is not complete until you pay your fees or make arrangements to have them paid by the fee payment deadline. Do not wait for a fee statement to be mailed to you. See the section on fee payment for payment options.

SECTION 6: Additional Information

Your Responsibility

It is critical that you select the courses that will enable you to satisfy the requirements for your diploma. Carefully review the sections dealing with Academic Regulations and Program Requirements in the *Undergraduate Calendar* section of this publication.

Graduation Requirements

It is your responsibility to ensure that you have met graduation requirements. See the *Undergraduate Calendar* for information on graduation requirements. Contact the Student Advisor if you require further clarification.

Faculty of Architecture

1. Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student," Section 3.

2. Registration Assistance

2.1 For All New And Returning Students

Whether you are a new or returning student, familiarize yourself, not only with the information contained in this *Guide*, but also with the faculty chapter in the *Undergraduate Calendar*. However, the student advisor is available in 220 Architecture 2 Building or by calling (204) 474 9566 to help should you encounter difficulties in selecting or registering for courses. Appointments are not required. Office hours are between 8:30 am and 2:30 pm Monday through Friday.

2.2 Registration Exceptions

Students 'on probation' and students seeking reinstatement must see an advisor before registering.

3. Orientation

It is recommended that all new students attend orientation. Information regarding time and location of orientation will be included with acceptance letters distributed to all new students by the Admissions Office.

4. Registration Information

4.1 Sequence In Which to Register

Students are reminded to register for their courses in the exact sequence listed under the sequence in which to register for the applicable year. If you do not follow this sequence exactly you will encounter difficulty as the Registration System is programmed to check that course prerequisites are met and that course conflicts do not occur.

Because timetable changes may occur throughout the summer, final schedules will not be available until the start of classes. The Guide may also differ from what is in the General Calendar. Please follow the course sequence in this Guide, not the General Calendar.

It is the students responsibility to ensure all degree requirements have been met.

Sequence in which to register

First Year

EVDS1610	Theory of Design 1
EVDS1620	Theory of Design 2
EVDS1630	Design Studio 1
EVDS1640	Design Studio 2
EVDS1650	Communication and Information Technology 1
EVDS1660	History of Culture, Ideas and Environment 1
EVDS1670	History of Culture, Ideas and Environment 2
EVDS1680	Environmental Technology
EVDS1690	Construction Materials and Assemblies 1
EVDS1700	Construction Materials and Assemblies 2

Register in any first-year courses you are repeating before attempting to register in second-year courses.

Second Year

EVDS2610	Theory of Design 3
EVDS2620	Theory of Design 4

Sequence in which to register

EVDS 2630	Design Studio 3
EVDS 2640	Design Studio 4
EVDS 2650	Communications and Information Technology 2
EVDS 2700	Construction Materials and Assemblies 3
EVDS 2670	Environmental Controls
EVDS 2690	Design Since 1800
	Elective (6 credit hours)

Register in any second-year courses you are repeating before attempting to register in third-year courses.

Third Year Architecture Option

EVAR 3680	Studio 5
EVAR 3690	Studio 6
EVAR 3560	Technology 4
EVAR 3570	Technology 5
EVAR 3470	Process, Method and Theory 1
EVAR 3480	Process, Method and Theory 2
EVAR 3700	History of Modern Architecture
EVAR 3330	Canadian Architecture
	Elective (3 credit hours)

Third Year Landscape Architecture Option

EVLA 3680	Studio 5
EVLA 3690	Studio 6
EVLA 3730	Introduction to Landscape Ecology
EVLA 3720	Introduction to Landscape Architecture Theory
EVLA 3240	Plants, Landscape and Design
EVLA 3750	History of Landscape Architecture
EVLA 3210	Process and Landscape Form (Site Planning)
EVLA 3220	Site Grading Technology
	Elective (3 credit hours)

Third Year Interior Environment Option

EVIE 3680	Studio 5
EVIE 3690	Studio 6
EVIE 3620	Sensory Technology 1
EVIE 3620	Sensory Technology 2
EVIE 3630	Sensory Technology 3
EVIE 3640	Design Inquiry
EVIE 3650	The Interior Dimension 1
EVIE 3660	The Interior Dimension 2
EVIE 3670	Digital Design Media

Third Year City Planning Option

Curriculum in the Community Design Option is in the process of being revised. All students will be notified of course selection prior to the registration dates.

4.1 Environmental Design Students Taking Courses in Other Faculties or Schools

Environmental Design students may choose their electives from the faculties of Arts, Science, Engineering, Fine Arts, Management and Agriculture. More specific information relating to scheduling is located on the Web.

4.2 Students From Other Faculties or Schools Registering for Courses in Environmental Design

The only Environmental Design course available to students not registered in the Environmental Design Program is EVDS1600 Introduction to Environmental Design. Please check the web for available sections. EVDS1660 and EVDS1670 History of Culture, Ideas and Environment 1 & 2 will not be available to students from other faculties.

5. Helpful Hints

Have you:

- Verified your initial access time?
- Consulted a student advisor and/or obtained required program approvals?
- Checked for any timetable updates?

- Registered for your courses?
- Asked for a fee assessment?
- Paid your fees?

Your registration is not complete until you pay your fees or make arrangements to have them paid by the fee payment deadline. Do not wait for a fee statement to be mailed to you. See the Section on fee payment for payment options.

Faculty of Arts

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3: Your Initial Registration Access Time" in this Guide.

Honours students and students with more than 30 credit hours of failed and/or repeated courses are not eligible to register through Aurora Student.

SECTION 1: Welcome

Welcome to the Faculty of Arts.

Please contact our office, either in person or by phone, to seek advice, assistance, or information concerning your academic program, registration procedures, and related problems.

Student advisors are available to help you plan your studies to meet the degree requirements and to provide information on the services available to you on campus.

If you are in a special category such as "Transfer" or on "Academic Probation," we advise you to consult a student advisor before registration. We encourage you to take advantage of the expertise our advisors offer.

While we are prepared to provide information and assistance to you, it is important for you to realize that *it is your responsibility* to be familiar with university and faculty academic regulations and registration procedures as they are described in this publication.

SECTION 2: Faculty Hours and Departments

Faculty of Arts, General Office

Third Floor, Fletcher Argue Building

Telephone: 474 9100; FAX: 474 7590

Office Hours: Monday through Friday: 8:30 a.m. to 4:30 p.m.

Anthropology

Head, B. Schwimmer 474 9361 435 Fletcher Argue Building

Asian Studies

Assoc. Director, W. Lee 474 9516 328 Fletcher Argue Building

Canadian Studies

Coordinator, K. Young 474 8864 315 St. John's College

Catholic Studies

Coordinator, D. Creamer 474 9165 118 St. Paul's College

Central and East European Studies

Coordinator, M. Shkandrij 474 6605 328 Fletcher Argue Building

Classics

Head, M. Joyal 474 9502 367 University College

Drama

Chair, C. Johnson 474 9581 367 University College

Economics

Head, W. Simpson 474 9207 501 Fletcher Argue Building

English

Head, D. Arnason 474 9678 625 Fletcher Argue Building

Film Studies

Chair, G. Toles 474 9581 367 University College

French, Spanish and Italian

Acting Head, C. Cartmill 474 9313 430 Fletcher Argue Building

German and Slavic Studies

Acting Head, M. Shkandrij 474 9370 328 Fletcher Argue Building

Global Political Economy

Coordinator, R. Kueneman 474 6501 302 Isbister Building

History

Head, M. Kinnear 474 9613 403 Fletcher Argue Building

Icelandic

Acting Head, D. Arnason 474 8487 357 University College

Labour Studies

Coordinator, J. Guard 474 7110 470 University College

Latin American Studies

Coordinator, J.-L. Chodkiewicz 474 6330 443 Fletcher Argue Building

Linguistics

Head, K. Russell 474 9596 514 Fletcher Argue Building

Medieval and Renaissance Studies

See faculty general office

Native Studies

Acting Head, W. Wuttunee 474 9266 533 Fletcher Argue Building

Near Eastern and Judaic Studies

Coordinator, M. Nahir 474 9623 545 Fletcher Argue Building

Philosophy

Head, C. Matheson 474 6878 453 University College

Political Studies

Acting Head, G. MacLean 474 9733 532 Fletcher Argue Building

Psychology

Head, H. Kesselman 474 9338 P404 Duff Roblin Building

Religion

Head, D. McCance 474 9516 328 Fletcher Argue Building

Sociology

Head, S. Brickey 474 9260 318B Isbister Building

Theatre

Chair, C. Johnson 474 9581 367 University College

Ukrainian Canadian Heritage Studies

Acting Director, D. Hlynka 474 8907 207 St. Andrew's College

Urban Studies

See faculty general office

Women's Studies

Coordinator, L. Wilson 474 6984 328 Fletcher Argue Building

SECTION 3: College Academic Programs

3.1 St. John's College

St. John's College was established in 1866 and later became one of the founding colleges of the University of Manitoba. It offers courses to students from all faculties and schools. These courses are accredited by the University of Manitoba degree granting programs and they are taught by College Fellows. Students who wish to learn in small classes in a community atmosphere, which includes a student residence, are encouraged to apply. For information, contact the College Registrar, at 474 8520.

3.2 St. Paul's College

St. Paul's College is the Catholic College at the University of Manitoba. Since 1970, its academic programs have been integrated with those of the university. Its faculty members belong to the departments of the university; its students may take any academic program offered by the university.

SECTION 4: Information Applicable to All Students

4.1 Important Information: Student Responsibility

It is your responsibility to be familiar with the regulations, course and graduation requirements of the degree program you have enrolled in. You are advised to review the appropriate sections in Part 1 of this book, the *Undergraduate Calendar*, carefully when selecting your courses, to ensure compliance with degree program requirements. If you are not sure of how regulations and requirements apply to your case, please consult a student advisor in the general office of the Faculty of Arts.

Since a complete graduation check is not done until you have indicated your intention to graduate, you are encouraged to make an appointment with a student advisor prior to your initial registration access date to con-

firm you are meeting the degree requirements. Ultimately you are responsible to ensure compliance with degree program requirements.

4.2 Registration Priorities

Read all of Section 4: Information Applicable to All Students and

If you are a *newly admitted transfer student*, read Section 5.

If you are a *returning student*, and/or a *student transiting from University 1*, read Section 6.

If you are a *visiting, auditing, special, or second degree student*, read Section 9.

4.3 Registration Office Hours

In person registration is only available to students who are not eligible to register using Aurora Student and/or those students who wish (and are eligible) to register for courses that are not available through Aurora Student.

The following are not eligible to register through Aurora Student:

Honours Students (new and returning students)

Students with more than 30 credit hours of failed and/or repeated courses

Registration for these students is handled at:

General Office, 3rd Floor Fletcher Argue Building

Monday through Friday commencing July 3, between 9 a.m. and 4 p.m., except on statutory holidays.

Registration is available on a drop-in basis only.

All other students *must* register using Aurora Student.

4.4 Prerequisites

Students are referred to the chapter “The Registration System: Aurora Student, Section 5.1: Prerequisites and Corequisites” in this guide.

4.5 Maximum Number of Courses During a Regular Session

You may attempt a maximum of 15 credit hours during a Term. If, however, you have taken no fewer than 24 credit hours in the previous Regular Session and obtained a Grade Point Average of 2.75 (with no failures) in that session, then you would be allowed to take 18 credit hours in the next Term. If you meet this minimum and wish to exceed the normal load you must apply in-person at the Faculty General Office. Contact the general office at 474 9100 for information.

4.6 Distance and On-Line Education Courses

You may register for a combination of on-campus and independent study courses offered through Extended Education. Registration is carried out through Aurora Student. The normal maximum of 15 credit hours per Term will apply.

Distance and On-Line Education information, including registration information, is available from the Student Services Office, Extended Education or in the general office, Faculty of Arts.

4.7 Subject Area Requirement with Examples

By the time you complete or are registered for up to 60 credit hours (10 full-course equivalents) you must have at least one full-course equivalent (i.e., six credit hours) in five *different subject* fields (or from 5 different departments).

Here is an example of a student who has registered in five different subject fields:

Department	Course	Credit Hours	Subject Area
Psychology	PSYC 1200	6	First
Sociology	SOC 1200	6	Second
Economics	ECON 1200	6	Third
Mathematics	MATH 1500	3	Fourth
		plus	
Mathematics	MATH 1300	3	Fifth
Anthropology	ANTH 1210	3	
Anthropology	ANTH 1220	3	

Here is an example of a student who *has not* registered in five different subject fields:

Department	Course	Credit Hours	Subject Area
Psychology	PSYC 1200	6	First
Sociology	SOC 1200	6	Second
Economics	ECON 1200	6	Third
Mathematics	MATH 1500	3*	Fourth
Anthropology	ANTH 1210	3*	
Religion	RLGN 1320	6	

* Not full course equivalents (i.e. six credit hours) from one subject field.

If you have not satisfied the subject field requirement by the time you complete and/or have registered for 60 credit hours, please contact the general office for clarification and assistance.

4.8 Written English and Mathematics Requirement

Students are referred to Part 1 of this book, the *Undergraduate Calendar*, “Section 2: General Academic Regulations.”

4.9 Initial Access Period

Students are referred to the chapter, “The Registration System: Aurora Student, Section 3: Your Initial Registration Access Time” in this Guide.

4.10 Course Space Availability

The initial registration access time is based on academic performance; therefore, space in all courses is available on Aurora Student from the beginning of the registration period.

4.11 Voluntary Withdrawals

Please see Part 1, the *Undergraduate Calendar*, “Section 6.2: Withdrawal from Courses and Programs.”

You are responsible for initiating withdrawals, and for doing this in the required manner by the deadline in the Academic Schedule. To voluntarily withdraw, it is not sufficient merely to stop going to class or to notify the instructor. Rather, you must officially withdraw from courses by the deadline by one of the following methods:

- If you registered through Aurora Student, the same method must be used to withdraw;
- If you registered in person, a request to withdraw must be submitted to the Faculty of Arts general office, either by letter, or by appearing in person and completing a Registration Revision Form.

4.12 Limited Access

This policy is currently under review. Please access Aurora Student for information after July 3, 2006.

4.13 Fee Payment and Cancellation for Non-Payment of Fees

Please see the chapter Fees, Payment, and Refunds, in this *Guide* for details.

4.14 Minimum Performance Level

For information on academic standing for students admitted for September 2006 and thereafter, please consult the Faculty of Arts section on the web Calendar after July 1, 2006.

For information on academic standing for students admitted prior to September 2006, consult the Faculty of Arts Dean’s Office.

4.15 Attend the Correct Section

Please see the chapter Other Important Things to Do and Know – Section 2

4.16 Course Outlines

Some departments have course outlines provided by individual instructors. Consult departmental general offices for further information.

4.17 Absence From Classes

If you are absent from classes for any reason, see your instructor to determine what arrangements, if any, can be made regarding missed term work and/or tests. Most instructors require a medical certificate or other documentation when you miss classes, miss an assignment, or miss a term test. Students who are going to be absent for any extended period of time (more than one week) should also notify the faculty general office and seek advice concerning their status and the action they need to take.

4.18 Academic Evaluations Regulations

Regulations for the Academic Evaluation of Undergraduate Student Course Work for the Faculty of Arts may be found on the Faculty of Arts website. Go to Student Resources and follow the link.

4.19 Final Examinations

Please see the chapter Other Important Things to Do and Know – Section 3

4.20 Deferred Final Examinations

Please see the chapter Other Important Things to Do and Know – Section 3

4.21 Required Courses (Summer)

You are encouraged to register for required courses during the Fall/Winter Terms because there is no guarantee that required courses will be offered during the Summer. Optional courses are best taken during Summer.

4.22 Repeating Courses

All courses taken will appear on your transcript; the calculation of a cumulative grade point average and the graduating average will include only the last grade of any course that has been repeated. The graduating average will exclude any failed course.

4.23 Students Taking Courses Offered by Other Faculties and Schools

Only those courses listed in Section 9 of the Arts chapter of Part 1 of this book, the *Undergraduate Calendar*, are acceptable for degree credit in the Faculty of Arts. All courses offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources (except for GEOL 2250 Geology for Engineers), Faculty of Science (except for service courses) and the I. H. Asper School of Business are acceptable for credit unless otherwise stated in the course descriptions.

4.24 Graduation and Convocation

You are responsible for meeting all degree requirements. If you are unsure about whether or not you have fulfilled all requirements for your degree – you should contact the Faculty of Arts general office and book an appointment to see a Student Advisor.

Graduation occurs three times a year – May, October, and February – while convocation ceremonies are held only twice each year – May and October. All February graduates are invited to be part of the May Convocation ceremonies.

Students in the General and Advanced programs who plan to graduate must indicate their intent to graduate by using Aurora Student. This feature is available to all students, whether or not you used Aurora Student to register for your courses.

Students in the Honours program who plan to graduate must declare their intention at the Dean's Office by the dates indicated below.

After indicating your expected date of graduation, you will receive a verification letter from The Registrar's Office confirming relevant graduation information such as name, address, degree sought and date of graduation. Amend any errors in the verification and return it to The Registrar's Office **immediately** to ensure time for correction.

You may also remove your graduation date through Aurora Student until approximately 8 weeks prior to the graduation date you had declared. After this, the system will not allow you to remove your date and you will need to contact your Faculty or School office.

Graduation Application Deadline Dates

The telephone registration system will stop accepting graduation applications at approximately these dates

May Graduation:	January 31
October Graduation:	August 1
February Graduation:	September 30

If you have missed your deadline, or have other questions, please contact the general office. Remember that it is your responsibility to ensure that you have satisfactorily completed the requirements for graduation.

SECTION 5: Information for Newly Admitted Transfer Students from Other Colleges, Universities and Technical Institutes, etc.

5.1 Registration Priority

Newly Admitted Transfer Students From Other Colleges, Universities And Technical Institutes, Etc.

An initial registration access period is set aside for newly admitted students whose admission is determined on the basis of course work completed at an external institution.

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3: Your Initial Registration Access Time" in this Guide.

5.2 Choosing Your Courses

Consult Aurora Student for courses and the times at which they are taught.

If you intend to transfer to the Faculty of Arts following completion of a minimum of 24 credit hours in University 1, be sure you select the equivalent of six credit hours in five different subject areas for your first 30 credit hours of registration. In addition to satisfying this Faculty requirement, you make yourself eligible in part, for consideration for admission to the Honours degree or Advanced degree programs.

After you receive your Certificate of Acceptance, the current edition of the *Undergraduate Calendar* will be mailed to you, as well as all materials necessary for registration. You should study the sections in Part 1 of this book, the *Undergraduate Calendar*, pertaining to:

- The overall Faculty of Arts regulations, and
- The course descriptions and departmental announcements.

Section 6: Information Applicable to Returning Students Including Students Transiting from University 1

6.1 Registration Priority

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3: Your Initial Registration Access Time" in this Guide.

Returning Arts Students

Initial access dates and times for returning students are determined on the basis of the Cumulative Grade Point Average (CGPA) at the end of the Regular Session. This includes newly admitted students who have transferred to Arts from other faculties/schools at the University of Manitoba.

6.2 Program Planning

Returning students are reminded that the *Undergraduate Calendar and Registration Guide* for the current session may be picked up. This document is available in April of each year at a location to be designated. Watch for posters and announcements indicating the location.

Students are urged to review information in the *Undergraduate Calendar and Registration Guide* that is appropriate. Student advisors are available in the Faculty of Arts, general office throughout the year to help you plan your Bachelor of Arts degree programs. You may also wish to discuss your proposed Major, Minor or Honours fields with faculty members in the Faculty of Arts departments. In addition you should review the *Undergraduate*

Calendar. It will provide you with overall faculty regulations, departmental announcements and course descriptions as well as university-wide regulations and procedures pertaining to all students.

If you are planning a three-year degree program, use the Summary Sheet for the General degree located in this chapter.

If you are planning a four-year Advanced degree or an Honours program, request assistance from departmental advisors or student advisors in the general office in planning your program.

In selecting your course of studies, remember that it is your responsibility to ensure that you:

- Meet the requirements for the degree;
- Meet the course prerequisites;
- Observe any restrictions with respect to the courses.

6.3 Declaring or Modifying Your Major or Minor

The Faculty of Arts requires that students who have completed (or have registered for) one half of a General degree program (i.e. 45 credit hours), declare both a Major and a Minor field of study. Aurora Student will prompt for the declaration of a Major and Minor and will not permit further registrations until this is declared.

While students may not intend to complete a B.A. General degree (e.g. student plans to transfer to another Faculty or School), the Faculty of Arts still requires students to make a Major and Minor declaration at the 45 credit hours point. This will allow for an alternative academic program in case the initial plan changes.

If you have previously declared a Major and a Minor, Aurora Student will confirm this information and no further action will be necessary.

To confirm your eligibility to declare a particular Major and/or Minor and to obtain information on current Major/Minor departmental requirements, see the departmental sections of the current *Undergraduate Calendar*.

To enter or modify your Major or Minor access the University of Manitoba home page (www.umanitoba.ca) then click on Aurora Student, then on Enrollment and Academic Records, then on Declarations.

NOTE:

- Not all Majors and Minors are available through Aurora Student. Consult the general office for the procedure to declare areas that are not available to Aurora Student (e.g., Minor in Business).
- Registration difficulties may occur with certain Major/Minor combinations. If this occurs, contact the general office.

Business Minor and Limitations in Asper School of Business Courses

- Effective September 2003 non-Asper School of Business students will be limited to a total of 36 credit hours of courses offered by the Asper School of Business at the University of Manitoba and/or transfer credit of Business courses from external institutions. The 36 credit hour limit also includes failed and repeated courses.

- Students who wish to declare a minor in Business must report to the general office, Faculty of Arts commencing June 29, 2006. Students are advised to consult the University of Manitoba *Undergraduate Calendar* for condition of admission prior to application.

Registration in the minor is limited and is available on a first come, first served basis only, subject to space availability. Prerequisites, where they exist, must be met.

- Once students have been admitted to the Business minor they may register for Business courses commencing on their stated registration date.
- Arts students who have **not** been admitted to the Business minor may register for Business courses commencing August 15, 2006.

6.4 New Advanced Degree Students

Between the time final grades are issued in early June and the start of registration, if you wish to enter the Advanced program you are encouraged to review the entrance requirements in the *Undergraduate Calendar* and if you are eligible, report to the Faculty general office in person to apply.

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3: Your Initial Registration Access Time" in this Guide.

SECTION 7: Students Ineligible to Register using Aurora Student

7.1 Honours Students

New Honours Students

If you wish to apply to the Honours program you should review the entrance requirements in the *Undergraduate Calendar* and if you are eligible, you should telephone the general office, Faculty of Arts, (Records Section) at 474 9684 once grades are available (early June) or at least two weeks prior to your registration date. A student advisor will review your eligibility to enter the Honours program. Prior to registration, you will be required to meet with a departmental advisor and an Arts student advisor in-person to review your Honours program requirements and registration procedures. You should apply as early as possible as delays in processing applications may occur.

Returning Honours Students

Returning Honours students must pick up their Honours form from the general office, Faculty of Arts and obtain approval from the departmental representative prior to registration. It is strongly recommended that you make an appointment with the departmental representative in order to have the Honours form approved on the same day. All Honours forms must be returned to the general office by 4:30 p.m. After receiving departmental approval, Honours students must report to the general office for Faculty review and approval. All Honours students are required to complete registration *in-person* commencing July 24, 2006.

7.2 Students with More Than 30 Credit Hours of Failed and/or Repeated Courses

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3: Your Initial Registration Access Time" in this Guide.

SECTION 8: Former Arts Students Not Registered During 2005-2006

Re-admittance procedures and/or eligibility to re-register for students previously admitted to Arts but not registered during 2005/2006

Former students who have registered in any session subsequent to the 2002 Summer Session and who have not attended another institution since and who did not attend the 2005-2006 Regular Session should contact the general office in person to obtain a current *Undergraduate Calendar and Registration Guide* and to have their records reactivated.

Re-admission: Admissions Office

The following must apply through the Admissions Office in accordance with the application deadlines and be readmitted before they are eligible to register again:

Students who were previously admitted to the Faculty of Arts but did not register in the Faculty of Arts in that session.

Students who have registered in another Faculty or School at the University of Manitoba since their last registration in the Faculty of Arts.

Students who have attended another university or institution since their last registration in the Faculty of Arts. This does not apply to Arts students who have taken courses at another university or college on the basis of a Letter of Permission granted by this university.

Applications for admission to the Faculty of Arts must be received by mail by June 1, 2006, or delivered *in-person* by July 4, 2006, with complete official documentation. Assessment of possible transfer credit may not be completed prior to registration.

Re-registration: General Office, Faculty of Arts

Students who have *not* registered in Arts since the 2002 Summer Session and prior, must obtain permission from the general office before registering again. Since it takes some time to review an up-dated student history, students in this category should contact the general office as soon as possible during the summer.

Former students in the Faculty of Arts who have been academically suspended at the end of the 2005-2006 Regular Session or the end of the 2006 Summer Session may not re-register. Students that may have registered for

Fall/Winter Terms before grades from the Summer Session were available and were then placed on "Academic Suspension" will be withdrawn from the Fall/Winter Terms regardless of the date. For information concerning the possibility of reinstatement for the Fall 2007/Winter 2008 Terms, contact the general office as early as possible but not later than February 2, 2007.

SECTION 9: Information for Visiting, Second Degree, Special and Auditing Students Only

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3: Your Initial Registration Access Time" in this Guide.

9.1 Newly Admitted Second Degree and Special Students

Second Degree Students

Second degree students are those who have completed a first degree and have been newly admitted to the Faculty of Arts for a second degree. Registration is blocked until advanced standing from the first degree has been determined. Failure to advise the faculty of transfer credit may result in the admission category being changed to "special."

Special Students

Special students are those who have completed a degree and who have been newly admitted to the Faculty of Arts for the purpose of taking credit courses out of interest or for some other purpose other than for seeking a second degree in the Faculty of Arts.

9.2 Returning Visiting, Second Degree and Special Students

Returning Visiting Students

Once having been admitted and registered as a Visiting student in the Faculty of Arts, you are eligible to register in the Faculty of Arts again in subsequent sessions without reapplying through the Admissions Office provided:

You have not changed your home university since your last registration at the University of Manitoba,

and
You last registered at the University of Manitoba in the Faculty of Arts,

and
You have a Letter of Permission from your home university approving your courses.

If you meet all of these requirements, present your Letter of Permission to the general office before registration. You may then register through Aurora Student for the courses approved on your Letter of Permission.

9.3 Auditing Students

Students wishing to audit courses must obtain written consent from the instructor of the course. This written consent must then be presented to the general office at the time of in-person registration commencing.

9.4 Courses Not Acceptable For Credit In The Faculty Of Arts

Registration must be completed in-person at the general office with the consent forms, if required. Students are advised to contact the Faculty/School that offers the course to determine access procedures.

Students wishing to take courses not acceptable for credit towards an Arts degree may register for a maximum of six credit hours of such courses.

SECTION 10: Information Concerning Electives

If you are looking for electives from different disciplines that can give you an area of concentration to use to complement your Major or Minor, it is suggested you go to the *Undergraduate Calendar* located on the web at umanitoba.ca.

SECTION 11: Approved Teaching Centres

Students who wish to and who are eligible to cross register for courses taught at the following location should contact the relevant centre or the general office regarding the courses to be taught and the registration procedures to be followed. Information should be available approximately mid-July.

Approved Teaching Centres:

Prairie Theatre Exchange, 3rd Floor Portage Place
William and Catherine Booth College, 447 Webb Place

SECTION 12: Challenge for Credit

12.1 Regulations

Purpose

Challenges for credit provide students of the university with a means of obtaining academic credit in university courses without attending classes or laboratories or transferring credit from other institutions. The knowledge and competence underlying the academic credit thus obtained may have arisen either from practical training and experience or from reading and study, and its acquisition may have either antedated or followed registration at the university.

General

Only the courses listed are available for challenge. If you wish to challenge courses for credit, prior to registering you must obtain an Application to Challenge for Credit from the general office, Faculty of Arts and obtain written approval from the department offering the course.

The final date to register and pay fees for challenge for credit where the final examination is held during the December series is September 20, 2006.

The final date to register and pay fees for challenge for credit where the final examination is held during the April series is January 16, 2007.

However, since approval of challenge for credit requires consent of the department offering the course and of the Faculty, we advise you to begin the procedure as early as possible.

Tuition fees for students wishing to challenge for credit are one-half the fees normally associated with the course.

If you intend to challenge courses for credit, note the university Senate approved regulations as well as the Faculty regulations governing challenge for credit which are listed below:

Senate Regulations

1. Application for challenge for credit in a given course in a given challenge period shall not be accepted by the university unless the applicant has at the time of application been admitted to or is registered in a program of a Faculty or School of the university, the Faculty or School officially counts the course in question as one that may be offered to qualify for the degree associated with the program, and the course is open for challenge in the challenge period.

2. An application for challenge for credit in a given course in a given challenge period shall not be accepted by the university unless it has the approval of the student's dean or director.

3. No student shall be allowed more than one challenge per course.

4. No student may challenge a course while on academic probation or suspension.

Faculty Regulations

1. Students may offer at most 30 credit hours on the basis of challenge for credit (including transfers of credit of challenge for credit) to qualify for either the B.A. General, B.A. Advanced or B.A. Honours degrees.

2. Credit in any course beyond the 1000 level obtained by challenge for credit does not fulfil the B.A. Honours degree requirements without the written approval of the Honours department(s) involved.

3. Failed challenges for credit are to count as attempts in any B.A. program and so far as student progress in the B.A. Honours program is concerned are to count the same way as failed courses not challenged for credit.

4. A student may not register to challenge any given Arts course for credit if the student is concurrently or was previously registered (registered in the sense that the student's history does or will record the registration) in the same or an equivalent course (two Arts courses are equivalent if and only if either the current *Undergraduate Calendar* prohibits holding credit in both courses, or the courses are deemed equivalent by the department concerned). One exception to this rule is permitted: A student who previously challenged a given Arts course for credit and then duly voluntarily withdrew may again challenge the course or an equivalent.

Method of Evaluation

1. All methods of evaluation for challenges for credit must include a written, supervised examination (not a "take-home" examination and not an examination the questions of which are made available prior to the time the examination is written) that lasts at least two hours and that counts for more than 50 per cent of the final grade. (Such an examination is referred to as the final examination for challenge for credit. It may count for as much as 100 per cent of the final grade.)

2. The final examination shall be scheduled in the final examination period in question. The examination may be scheduled and administered by the director of Student Records, scheduled and administered by the department, or scheduled by the director of Student Records and administered by the department. If scheduled by the director of Student Records, the examination must be of two, three or four hours duration at the discretion of the department.

3. In addition to the final examination, additional course work may also be required, either other examinations (e.g. a laboratory examination) or essays or exercises or projects. All such other examinations shall be held in the challenge period in question as scheduled by the department involved and shall be administered by the department involved. Required work other than tests or examinations must be submitted to the department before

or during the challenge period in question in accordance with deadlines set by the department involved.

4. Students registered for a challenge for credit may voluntarily withdraw in the usual way and in conformity with the following deadlines: For the December challenge period, the challenge VW deadline is the VW deadline for fall term half courses. For the April challenge period, the challenge VW deadline(s) are the applicable VW deadline for full and second term half courses.

5. The final grades reported for challenge for credit students are to be the customary letter grades or procedural grades now in use in Arts, are to be determined in accordance with the same marking standards used for non-challenge students in the same course, are to be reported on final grade mark registers in the usual way, and will show on student histories in the usual way except that an accompanying "CH" for "challenge for credit" will always appear — even if the student history shows VW or CW. Moreover, the procedural final grades of I accompanied by a letter grade, NP accompanied by a letter grade, and I and NP accompanied by a letter grade may be used on the final grade registers in the usual way for challenge for credit students. (In connection with incompletes, such may be awarded for courses challenged for credit only if course work in addition to the final examination for challenge for credit was required by the department but not completed in conformity with its schedule/deadlines, the student requests on or before the end of the challenge period in question an incomplete from the department head, and the department head judges that the student has an acceptable excuse.)

Departmental Approval

When courses are open for challenge for credit but require departmental approval of the student's request to challenge, the department may exercise its discretion for any of various reasons not herein delimited.

12.2 Available Courses: Challenge for Credit

None of these challenge for credit course sections are available for telephone registration. Students who wish to challenge for credit must report to the general office to apply.

Department	Course No.	Title	Section	Term	Credit Hours	Examination Period	Comments
Asian Studies	ASIA 1760	Introduction to Chinese (Mandarin)	A92	Winter Term	6	April	A written two or three hour final examination.
	ASIA 1770	Introduction to Japanese	A92	Winter Term	6	April	
	ASIA 2770	Intermediate Japanese	A92	Winter Term	6	April	
	ASIA 3770	Advanced Japanese	A92	Winter Term	6	April	
Classics	GRK 1010	Introduction to the Reading of Ancient Greek	1A91	Fall Term	3	December	A written two or three hour final examination.
	GRK 1010	Introduction to the Reading of Ancient Greek	1A92	Winter Term	3	April	
	GRK 1020	Introduction to the Reading of Ancient Greek	2A91	Fall Term	3	December	
	GRK 1020	Introduction to the Reading of Ancient Greek	2A92	Winter Term	3	April	
	GRK 1030	New Testament Greek	A91	Fall Term	6	April	
	GRK 1310	Intermediate Readings in Ancient Greek	A91	Fall Term	3	December	
	GRK 1310	Intermediate Readings in Ancient Greek	A92	Winter Term	3	April	
	LATN 1080	Introduction to the Reading of Latin 1	A91	Fall Term	3	December	
	LATN 1080	Introduction to the Reading of Latin 1	A92	Winter Term	3	April	
	LATN 1090	Introduction to the Reading of Latin 2	A91	Fall Term	3	December	
	LATN 1090	Introduction to the Reading of Latin 2	A92	Winter Term	3	April	
	LATN 1320	Intermediate Readings in Latin	A91	Fall Term	3	December	
	LATN 1320	Intermediate Readings in Latin	A92	Winter Term	3	April	
Economics	ECON 1200	Principles of Economics	A92	Winter Term	6	April	A written three hour final examination.
	ECON 2450	Microeconomic Theory and Its Applications	1A92	Winter Term	3	April	
	ECON 2460	Microeconomic Theory and Its Applications	2A92	Winter Term	3	April	
	ECON 2470	Macroeconomic Theory and Its Applications	1A92	Winter Term	3	April	
	ECON 2480	Macroeconomic Theory and Its Applications	2A92	Winter Term	3	April	
History	All 1000 level courses may be challenged in the examination series in which the regular offering is examined.						Consult the Department of History for further information.
Sociology	SOC 1200	Introduction to Sociology	A92	Winter Term	6	April	A written two or three hour final examination.

NOTE: All courses require written departmental approval prior to registration. For further information on the above courses consult the department office.

SECTION 13: Courses Offered by Other Faculties and Schools Acceptable for Credit in the Faculty of Arts

Students registered in Arts may take certain courses offered by other Faculties and Schools for credit towards an Arts degree, subject to the overall degree requirements.

Only those courses listed in Section 9 of the Arts chapter of Part 1 of this book, the *Undergraduate Calendar*, are acceptable for degree credit in the Faculty of Arts. All courses offered by the Faculty of Environment, Earth and Resources (except for GEOL 2250 Geology for Engineers), Faculty of Science (except for service courses) and the I. H. Asper School of Business are acceptable for credit unless otherwise stated in the course descriptions.

Note: All courses offered by the Asper School of Business are acceptable for credit in the Faculty of Arts. Students are advised to consult the University of Manitoba *Undergraduate Calendar* for conditions of admission to the Business minor and program requirements prior to application. Business courses may be taken by Faculty of Arts students subject to availability of space and satisfaction of prerequisites and registration priority as outlined below. Effective September 2003 non-Asper School of Business students will be limited to a total of 36 credit hours of courses offered by the Asper School of Business at the University of Manitoba and/or transfer credit of Business courses from external institutions. The 36 credit hour limit also includes failed and repeated courses.

Priority

Arts students who have been admitted to the Business minor program may register for Business courses commencing on their stated registration date.

Students who wish to declare a minor in Business must report to the general office, Faculty of Arts, commencing June 29, 2006 to apply in-person.

Students are reminded that space in the Business minor is limited and is available on a first come, first served basis only.

2) Arts students who have not been admitted to the Business minor may register for business courses commencing August 15, 2006.

Prerequisites, where they exist, must be met for Business courses. Please refer to the *Undergraduate Calendar* entry under the Asper School of Business for additional course information.

SECTION 14: Lecture and Laboratory Timetable

For timetable information on courses offered by other Faculties/Schools that are acceptable for credit in the Faculty of Arts, please refer to the applicable section on the web.

If you have any questions regarding the information within the timetable, consult the Faculty of Arts General Office, 3rd Floor Fletcher Argue Building, telephone 474 9100.

Changes in the Timetable

As this timetable is assembled a considerable time before the opening of the session, the Faculty reserves the right to make changes without notice, including cancellation and addition of courses and/or sections. In order to obtain timetable changes, please consult the University of Manitoba website www.umanitoba.ca.

If a course or section you have registered in is subsequently cancelled, the general office will make every attempt to contact you. You may then choose a course and/or section to replace the cancelled one.

Instructor "TBA"

Some courses which have instructors listed as "TBA" may not be offered due to budget restrictions, the extent of which are unknown at the time of publication. Final decisions regarding staffing will be made prior to the start of classes.

15.2 Summary Sheet (Sample)

The following Summary Sheet is to guide students who have declared or are about to declare their Major/Minor in determining the number of course hours in their Major/Minor and Options fields.

Complete the Summary Sheet by indicating your Major/Minor and then record your courses completed to date, under the Major/Minor/Options sections. (Record courses with a passing grade only - e.g. PSYC 1200 6 A.) If applicable, record course numbers for courses being taken in Summer and then choose courses you plan to take in the Fall and Winter Terms. You should then consult the Program Planning Form in this *Registration Guide* and the Faculty of Arts Section in Part 1 of this book, the *Undergraduate Calendar*, to see if you are meeting degree requirements, along with any requirements for your Major/Minor. It is particularly advisable for students who expect to graduate next year to complete this form and then meet with a faculty advisor to ensure degree requirements will be satisfied.

Warning: Students must complete degree requirements within a maximum of 23 attempts (i.e. you may complete a maximum of 23 full courses). Since a B.A. General degree is comprised of 90 credit hours, or 15 full courses, there are a maximum of 8 extra attempts. Failed and repeated courses are considered as attempts; voluntary withdrawals are not.

Degree Requirements		Courses registered for			Hours	Grades
A) Minimum 90 credit hours	✓	Major: Psychology				
B) Major: Minimum 30 credit hours	✓	Requirements				
C) Minor: Minimum 18 credit hours	✓	PSYC 1200			6	A
D) Maximum 42 credit hours from one department	✓	PSYC 1200 - 6 hrs	PSYC 2250	PSYC 2260	3/3	B/B+
E) Combined major and minor may not exceed 60 credit hours	✓	PSYC 2250 & 6-6 hrs	PSCY 3450	PSYC 3460	3/3	A/A+
F) 6 credit hours in each of:		18hrs 2000/3000 lvl	PSYC 2290	PSYC 2310	3/3	B+/A
a) 5 different subject fields	✓		PSYC 3510	PSYC 3530	3/3	B+/B+
b) Humanities	✓	Total hours	30			
c) Social Science	✓	Minor: History				
d) Science	✓	Requirements				
G) Equivalent of 48 credit hours in Faculty of Arts courses	✓	6hrs 1000/2000 lvl	HIST 1350	HIST 1360	3/3	B/C+
H) Residence Requirement		6hrs 2000 lvl	HIST 2230		6	B
a) 48 credit hours or	✓	6hrs 2000/3000 lvl	HIST 2550		6	B+
b) last 30 credit hours		Total hours	HIST 3290		6	B
I) Minimum of 30 credit hours at 2000 level or higher	✓	Total hours	24			
J) Minimum overall G.P.A. of 2.0 on best 90 credit hours that meet degree requirements and minimum cumulative G.P.A. of 2.0 in courses successfully completed that are used toward the major	✓	Options				
K) Maximum 23 attempts (138 credit hours) (See Warning above)	✓	English	ENGL 1200		6	C
L) Read the U of M <i>Undergraduate Calendar</i> for specific details		Philosophy	PHIL 1200		6	C+
M) *Written English and Math Requirement		Sociology	SOC 1200		6	D
N) Failed courses		English	ENGL 2090		6	B
		Political Studies	POLS 1500		6	C+
		Biology	BIOL 1020		3	B
		Biology	BIOL 1030		3	B
O) Other		Total hours	36			
		Grand Total	90		G.P.A.	

*Students admitted in September 1997 and thereafter must complete this requirement.

School of Art

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

Think and Plan Now

- Determine program requirements from the School or Art chapter of the current *Undergraduate Calendar*. Download program worksheet <http://www.umanitoba.ca/schools/art/supportedbrowser.shtml> located by clicking on the "Students" link and then choose **Course Requirement Worksheets**.
- Obtain any written approvals necessary (prerequisite waivers, special permission forms, etc.) and present them to the School of Art general office.
- When changing from Diploma to BFA General Degree or BFA Honours Degree, students must contact the student advisor at least one month prior to registration date.
- Register through Web Registration during your initial access time (24 hour window).

Before September 6, 2006

- List your courses and finalize fees after every transaction making a note of fees due.
- Pay all fees due by the fee payment deadline. Do not wait for a fee statement sent by mail.

September 7 to September 21, 2006

- Classes commence Thursday, September 7, 2006.
- End of late registration September 21, 2006.
- Consult *Undergraduate Calendar* for detailed withdrawal and add deadlines.

For all New and Returning Students

Student Responsibility: It is your responsibility to be familiar with all the requirements of your diploma or degree. See the School of Art chapter of the *Undergraduate Calendar* for specific program guidelines. It is your responsibility to ensure that you comply with degree program requirements and to understand all regulations, policies and practices that affect you. Should you encounter difficulty registering, or choosing courses, please contact the student advisor in 203 FitzGerald Building (204) 474-8294. Completion of degree requirements is the sole responsibility of the student.

Space Allocation: Web Registration confirms your successful registration and assigns space for you. You will not be able to register in sections that are full or unavailable to students in your situation. Because the system is "on-line", as students drop and add courses, space in courses may become available at a later date. Access the system several times to check for space once the initial access period has passed. Be persistent and aware of Registration Revision times. The School of Art will not be able to get you into courses that are full.

Special Permission or Written Consent: If you need special permission or written consent to take any course, obtain it from the instructor and present it to the School of Art general office before attempting to register. If you do not obtain permission you will be blocked from registering in the course.

Studio Laboratory Requirements: A few courses require both a lecture and a studio section and your registration will not be complete until you register for both sections.

Maximum Number of Credits Taken: If you wish to take more than the maximum number of credits for your program as outlined in the School of Art section of the current *Undergraduate Calendar*, you must obtain permission from the School of Art's student advisor before registration.

Advanced Standing: Students admitted to studio programs by having completed one or more of 054.120 Fundamentals of Drawing, 054.122 Basic Design, 054.105 Introduction to Art 1B and 054.106 Introduction to Art 2B, or 054.126 Drawing for Non-Majors while in University 1 or any other faculty/school are advised to contact the School of Art student advisor so that an appointment can be made to determine their advanced standing. You are not admitted to the School of Art until an Application for Transfer of Faculty has been completed through the Admissions Office, Enrolment Services.

Transfer Credit: The University of Manitoba will not evaluate courses from other academic institutions until students are admitted and confirmed by receipt of a deposit in the Admissions Office. The evaluation of courses can take significant time. We will try our best to give you as accurate a picture as possible prior to your initial registration time. An attempt to register before transfer credit is completed will result in required withdrawal from courses for which you may have the prerequisites.

Final Examinations: Since you must be available for final examinations, wait until the final examination schedules are published for December and April exam series before making travel plans. Examination schedules are published approximately six weeks before the exam period. Both a preliminary and a final examination timetable are posted throughout the campus, on the Web Page, and the hallway outside the general office in the FitzGerald Building. Once the final examination timetable is available, write down the information you need: course number, section, date, time and location of your examination. Since some examinations are scheduled and or arranged by the instructor, make sure that you obtain the correct date, time and location from your instructor.

Deferred Final Examination: If you are unable to write a final examination because of an illness or other disability, apply for a deferred examination through the School of Art's general office within seven days after the final examination period. Obtain a medical certificate signed by a doctor or other signed statement attesting to your inability to write the final examination when scheduled and indicate when you are available to write the exam.

Fundamentals of Drawing and Basic Design: Students registering for both 054.120 Fundamentals of Drawing and 054.122 Basic Design should ensure that they register for the appropriate sections as outlined in the School of Art timetable.

Returning Students Not Registered in 2005-2006

Returning Students in good standing who have registered within the last five years are eligible to register without submitting a portfolio but are still required to submit a re-admission form with the appropriate fee. You may also be asked to pay a deposit prior to registering.

Must I Register In Person?

Registration in Person: Certain students will be directed to contact the office for registration. All other students must register via the Web Registration. Students requiring office registration may register in person before August 11, 2006 in the School of Art general office, 203 FitzGerald Building.

Visiting Students: Must present a Letter of Permission from their home university to the School of Art, covering the courses they plan to take before registering. Since some courses may be unavailable in a particular term, or may be courses that continue into a second term after the student plans to return home, visiting students should strongly consider submitting alternate choices approved by their home university. It is not feasible to create individual courses for visiting students.

Auditing Courses: The School of Art does not allow auditing of studio courses. Art History courses may be audited based on availability of space. Written instructor approval must be obtained before you can register.

Probation: Students on probation must contact the School of Art student advisor regarding registration to ensure that they understand the assessment procedures and are aware of the assistance offered by the University Counselling Service.

Suspension: Students who are currently on suspension and who have been granted permission to attempt reinstatement must register in person.

Special Students: Students who have completed a degree may be admitted to the School of Art as a Special Student to take courses for their personal interest.

School of Art

	Monday	Tuesday	Wednesday	Thursday	Friday	
Studio - 8am-11am	8:00					Studio - 8am-11am
	8:30 Slot 1	Slot 4	Slot 1	Slot 4	Slot 1	
	9:30 Slot 2		Slot 2		Slot 2	
	10:30 Slot 3	10:00 Slot 5	Slot 3	Slot 5	Slot 3	
Studio - 11:30am-2:30pm	11:30 Slot 6	Slot 9	Slot 6	Slot 9	Slot 6	Studio - 11:30am-2:30pm
	12:30 Slot 7		Slot 7		Slot 7	
	1:30 Slot 8	1:00 Slot 10	Slot 8	Slot 10	Slot 8	
Studio - 3pm-6pm	2:30 Slot 11	Slot 14	Slot 11	Slot 14	Slot 11	Studio - 3pm-6pm
	3:30 Slot 12		Slot 12		Slot 12	
	4:30 Slot 13	4:00 Slot 15	Slot 13	Slot 15	Slot 13	
	5:30 Slot 16	Slot 17	Slot 16	Slot 17	Slot 17	
Studio - 7pm-10pm	7:00					Studio - 7pm-10pm
	10:00 Slot E1	Slot E2	Slot E3	Slot E4		

School of Dental Hygiene

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student," Section 3.

For All New and Returning Students

Whether you are a new or returning student, familiarize yourself, not only with the information contained in this Guide, but also with the faculty chapter in the Undergraduate Calendar. However, the student advisor is available in D113 Dental Building or by calling (204) 789-3484 to help should you encounter difficulties in registering.

Registration

Students are referred to the Faculty of Dentistry chapter in Part 1, the Undergraduate Calendar for a list of courses and to the web for registration instructions.

www.umanitoba.ca

Registration exceptions

Students who have a failing grade/s registered against them and/or have other outstanding academic matters (i.e. deferred or supplemental examinations, modified program, etc.) in regards to the previous academic session will not be allowed to register using the UMREG system. Students who fall into this category should contact the student advisor for further information.

Faculty of Dentistry

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student," Section 3.

DMD Program For All New and Returning Students

Whether you are a new or returning student, familiarize yourself, not only with the information contained in this Guide, but also with the faculty chapter in the Undergraduate Calendar. However, the student advisor is available in D113 Dental Building or by calling (204) 789-3484 to help should you encounter difficulties in registering.

Registration

Students are referred to the Faculty of Dentistry chapter in Part 1, the Undergraduate Calendar for a list of courses and to the web for registration instructions.

www.umanitoba.ca

Registration exceptions

Students who have a failing grade/s registered against them and/or have other outstanding academic matters (i.e. deferred or supplemental examinations, modified program, etc.) in regards to the previous academic session will not be allowed to register using Aurora Student. Students who fall into this category should contact the student advisor for further information.

Faculty of Education

SECTION 1: Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

SECTION 2: Registration Assistance

2.1 Bachelor of Education (B.Ed.) Students

230 Education Building
Office Hours: 8:30 a.m. to 4:30 p.m. Monday to Friday
Telephone: (204) 474 9004 or toll free in Manitoba 1 800 432 1960
E-mail: bachofed@umanitoba.ca
Website: www.umanitoba.ca/education

2.2 Post Baccalaureate Diploma in Education (PBDE)/Post Baccalaureate Certificate in Education (PBCE) Students

227 Education Building
Office Hours: 8:30 a.m. to 4:30 p.m. Monday to Friday
Telephone: (204) 474 7886 or toll free in Manitoba 1 800 432 1960
E-mail: pbde@umanitoba.ca
Website: www.umanitoba.ca/education

2.3 Graduate (Master's, Ph.D.) Students

227 Education Building
Office Hours: 8:30 a.m. to 4:30 p.m. Monday to Friday
Telephone: (204) 474 7886 or toll free in Manitoba 1 800 432 1960
E-mail: edgradpr@umanitoba.ca
Website: www.umanitoba.ca/education
Please refer to the Graduate Studies section of this *Guide* for course registration information.

SECTION 3: Orientation Sessions

First Year B.Ed. Students – Wednesday, September 6, 2006
Second Year B.Ed. Students - Thursday, August 31, 2006
Fifth Year B.Mus/B.Ed and B.H.Ecol./B.Ed. Students – Thursday, August 31, 2006
Weekend College Students – TBA
Times and locations will be posted on the faculty website
www.umanitoba.ca/education

SECTION 4: Registration Information

4.1 Bachelor of Education Students (including B.Mus/B.Ed and B.H.Ecol./B.Ed. and Weekend College)

The Bachelor of Education program integrates full-time students into what we call cohorts. Cohorts are groups of students who are in the same classes. To achieve this, students are assigned to particular sections of courses. For Early and Middle Years students the only course section options are in complementary courses. For Senior Years students, the only course section options are in complementary courses and curriculum and instruction courses required for teachable majors and minors.

Detailed course scheduling and registration information for the cohort groups will be mailed to new and continuing students. All packages should be received by June 15, 2006. If not received by that date, students are di-

rected to contact Student Services. Distribution of this material is as follows:

Part time students

Packages will be mailed to the permanent mailing address of part-time students and those students not registered in 2005/2006.

Call 474-9004 or e-mail bachofed@umanitoba.ca if you do not receive a package by June 15, 2006.

Students are encouraged to refer to the faculty website www.umanitoba.ca/education where any updates or revisions will be posted.

4.2 Part Time Bachelor of Education Students

If you are considering or have decided on part time study, please ensure that you contact the Student Services Office for an appointment with a student advisor. Appointments with advisors are available from June 1, 2006 – July 31, 2006. Appointments will not be available during the registration period. Prior to seeing your advisor, ensure that you have received the course information from the faculty and developed a draft timetable for review.

4.3 Course Selection

Students should refer to the Education chapter of the Undergraduate Calendar to determine if their degree requirements are satisfied. Should any inconsistencies occur between the Undergraduate Calendar and this Guide, the Undergraduate Calendar shall prevail.

5000-level courses may not be used in a B.Ed. degree.

In addition to scheduled course offerings, the Faculty sponsors a number of lectures, workshops and forums throughout the year. Generally, these are scheduled Wednesdays when the practicum is not scheduled; therefore, students should consider these dates and times when scheduling courses and other activities. The dates and times will be posted on the "News and Events" of the Faculty's website: www.umanitoba.ca/education.

4.4 Post Baccalaureate Diploma in Education (PBDE)/Post Baccalaureate Certificate in Education (PBCE) Students

Students are encouraged to register for both Fall 2006 and Winter 2007 courses by mid-August as courses are subject to cancellation if there is insufficient enrolment. Cancellation decisions are generally made two weeks prior to the start of classes.

Many of the PBDE/PBCE course offerings are determined in consultation with school divisions, superintendents, professional organizations based on the needs of educational professionals. Students are encouraged to refer to the faculty website www.umanitoba.ca/education for the most current information on course offerings.

4.5 Visiting Students

Visiting students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

4.6 Students Registered in Other Faculties of Schools

Undergraduate students currently registered in other faculties/schools may take education complementary courses in the Bachelor of Education program. Written permission from the Faculty is **not** required.

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

4.7 Complementary Courses

(Note: Not all courses are offered every year. The schedule of courses is published on the Faculty website at www.umanitoba.ca/education)

- EDUA 1500 Aboriginal Education
- EDUA 1510 Foundations of Moral and Religious Education
- EDUA 1520 Recent Developments in Educational Administration and Foundations (Different topics are offered under this course number)
- EDUA 1520 Recent Developments in Educational Administration and Foundations: Integrating Aboriginal Perspectives into the Manitoba Curriculum (not available to students outside the B.Ed. Program)
- EDUA 1540 Cross-Cultural Education
- EDUA 1550 Communication and Interpersonal Relationships in Education
- EDUA 1560 Adult Learning and Development
- EDUA 1570 Foundations of Adult Education
- EDUA 1580 Program Planning in Adult Education
- EDUA 1590 Facilitating Adult Education
- EDUB 1600 Teaching General Music
- EDUB 1620 Principles and Procedures of Second Language Teaching
- EDUB 1640 Teaching ESL Vocabulary and Pronunciation
- EDUB 1650 Teaching ESL Grammar
- EDUB 1660 Computers in Second Language Teaching
- EDUB 1670 English for the NNS (Non-Native Speaking) Teaching of ESL
- EDUB 1680 Media Literacy
- EDUB 1700 Teaching Canadian Studies
- EDUB 1710 Literature for Adolescents
- EDUB 1720 Literature for Children
- EDUB 1730 Art Across the Curriculum
- EDUB 1740 Drama Across the Curriculum
- EDUB 1750 Basic Experiences in Movement and Dance Education
- EDUB 1760 Historical Development of Physical Science Up to the 20th Century
- EDUB 1770 Historical Development of Physical Science in the 20th Century
- EDUB 1780 Integration of Technological Literacy Across the K-12 Curriculum
- EDUB 1800 Recent Developments in Learning and Teaching Senior Years Mathematics
- EDUB 1810 Computer-Based Multimedia in Education
- EDUB 1820 Language and Content Instruction of ESL/Bilingual Students
- EDUB 1830 La pédagogie du français de base aux niveaux intermédiaire et de la jeune enfance
- EDUB 1840 Recent Developments in CTL 1 (Different topics are offered under this course number)
- EDUB 1850 Recent Developments in CTL 2 (Different topics are offered under this course number)
- EDUB 1860 Practicum in Teaching English as a Second Language

SECTION 5: Additional Information

5.1 Information Updates

Scheduling changes for courses, practicum, cohort meetings and faculty events will be posted on the faculty website. Students are encouraged to regularly refer to the website.

5.2 Registration, Voluntary Withdrawal and Fee Refund Deadlines

Education courses may have unique start and end dates. Students are referred to the faculty website www.umanitoba.ca/education.

5.3 Facility Use Fees

Some classes in physical education/movement curriculum and instruction courses (EDUB 1020, EDUB 2020, EDUB 1260, EDUB 2150, and EDUB 2310) may be held in the Frank Kennedy Centre gymnasiums. Students must pay a facility use fee to access the gymnasiums prior to the first scheduled class. The fee can be paid at the Frank Kennedy Centre or Max Bell Centre, Customer Service Desks. When confirmed, the schedule for classes held in the Frank Kennedy Centre gymnasiums will be posted on the faculty website.

5.4 Faculty Events

The faculty sponsors a number of lectures, workshops and forums. Details will be posted on the "News and Events" of the faculty's website: www.umanitoba.ca/education.

Faculty of Engineering

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

Section 1: General Information for Engineering Registration

Welcome to the Faculty of Engineering. It is one of the finest engineering faculties in Canada and we are proud of our undergraduate programs. You will find your program challenging and enjoyable.

If you have any questions that are not answered in this *Guide*, or for detailed information on courses (flow charts, 5 year plans), contact your registration representative as follows:

Preliminary Engineering Program: E2-290 EITC (Engineering Innovation and Technology Centre)

(204) 474 9807; and Toll Free Canada and USA 1(800)278-9591

Engineering Access Program: E2-427 EITC, (204) 474 9872

Biosystems Engineering: E2-276 EITC, (204) 474 6033

Civil Engineering: Engineering, (204) 474 9220, E-3-386 EITC, (204) 474-6251

Electrical and Computer Engineering: E2-390 EITC, (204) 474 7237

Mechanical and Manufacturing Engineering: E2-327 EITC, (204) 474 6630

1.1 Newly Admitted Engineering Students

The Engineering programs are extremely demanding, and the pace of instruction is very rapid. You MUST give each of your courses its due attention starting from day one. You must always remember that in Engineering you must keep up: you don't catch up.

Students will progress through the various engineering programs subject to prerequisite and corequisite requirements and the seven-year rule. Five courses per term (10 courses per session) allows completion in five years or six courses per term (12 courses per session) allows completion in four years.

Students who are unable to complete their Level I(a) courses in first term will, for the most part, have the opportunity to obtain credit for them in the second term. Depending on need, the second term Level I(b) courses may be offered in Intersession. Students who are unable to complete all preliminary engineering courses in the regular session are URGED to attend Intersession.

1.2 Program Declarations

Student Program Declaration forms will be e-mailed out in March 2006 to all Engineering students in their preliminary year. Students are required to declare their program of choice to the Dean's Office, E2-290 Engineering Building before the end of the second term. Acceptance to the programs is competitive, based on grades achieved in eight of the preliminary year courses.

Students are advised to consult with the registration representative for their selected program if they require more information before making a decision. You will not be able to access the registration system to register for second year unless you have selected a program.

1.3 University 1 Applications

Students applying to an Engineering program from University 1 must fill out an Engineering application form through the Admissions Office, Room 424 University Centre by 1 May 2006. There is no a \$75.00 registration fee charged at this time.

1.4 Course Load Definitions

100% course load = 35 credit hours (credit hours per regular session),
80% course load = 28 credit hours, 60% course load = 21 credit hours.

1.5 Academic Integrity

The Faculty of Engineering, being a professional faculty, expects Engineering students to behave with the highest academic integrity. Academic dishonesty, plagiarism, or any other form of cheating in examinations or term tests will be dealt with harshly. Students are referred to the section on Plagiarism and Cheating in the *Undergraduate Calendar*.

1.6 Ineligible to Proceed and Intersession

If you are assessed *Ineligible to Proceed* following April examinations, you will be required to withdraw from any Intersession, Summer Evening or Summer Day courses you are registered in. You are responsible for any fees incurred. If you are assessed as *Ineligible To Take Engineering Courses For One Year*, you may take the engineering math courses and other courses not taught by engineering (i.e. ENGI 1310 and PHIL 1290).

If at the time of registering, you are on Academic Probation, note that to return to Good Academic Standing you must achieve a TGPA of 2.00 or better.

1.7 Help Available

Students at the University, especially first-time students, occasionally run into problems in their courses or programs. If this happens to you, remember that help is available and that with help you may be able to resolve a problem situation before it becomes serious. Following are typical problem situations and suggestions on where you may get help.

- Difficulty with a course? Make an appointment with the course instructor or head of department.
- Difficulty with some aspect of the preliminary year? Dean's Office, E2-290 EITC, telephone (204) 474 9807/8 or 1 (800) 278 9591.
- Can't seem to study effectively? Learning Assistance Centre, 520 University Centre, telephone (204) 474 9251.
- Wish to appeal a decision by a department or the faculty? The Office of Student Advocacy, 519 University Centre, telephone (204) 474 7423.
- Personal problem? Counselling Service, 474 University Centre, telephone (204) 474 8592.
- Medical problem? University Health Services, 104 University Centre, telephone (204) 474 8411.

1.8 Final Examinations

Examination schedules are published approximately six weeks prior to the examination period. The final examination timetables are posted on the Internet www.umanitoba.ca/student/records/exam.htm and hard copies of the schedule can be found in most general offices on campus. Since some examinations are scheduled and/or arranged by the course instructor, make sure that you obtain the correct date, time and location from the course instructor.

1.9 Deferred Examinations

Students who are unable to write a final examination because of a serious illness or for compassionate reasons must apply for a deferred examination through the Dean's Office, E2-290 Engineering, within seven days of the last examination the student is scheduled to write. *Final examinations CANNOT be deferred for vacation plans or family social events (weddings, anniversary celebrations). STUDENTS WHO HAVE ALREADY WRITTEN THE FINAL EXAMINATION SHOULD NOT APPLY FOR AN EXAMINATION DEFERRAL.*

1.10 E-Mail Accounts

All Engineering students are expected to have an e-mail account with the University of Manitoba. (See the section of this *Guide* on *Claimid*). As a student in the Faculty of Engineering, you are expected to check your e-mail regularly. All engineering students with UM accounts are included on the dean's office e-mail list.

1.11 University of Manitoba Engineering Students Society (UMES)

The student council members of UMES are involved in various academic, outreach and social activities throughout the year. Their council office is located in E2-292 EITC.

1.12 Need A Locker?

Go to the UMES office (E2-292 EITC). You will have to find your own locker partner.

Section 2: Registration:

Students in departmental programs may contact the department representative for detailed information on their program.

Preliminary Year

Students entering the Preliminary Year directly from high school may have the ability to register for all 12 courses by selecting one of a possible 12 schedules:

Pre-planned course timetables will register students in the following courses:

Chemistry – CHEM 1300, Literary Topics – ENGL 1301, Critical Thinking – PHIL 1290, Physics I – PHYS 1050, Computer Science – COMP 1010, Introduction to Thermal Science – ENG 1460, Introduction to Electrical and Computer Engineering – ENG 1450, Introduction to Statics – ENG 1440, Engineering Design – ENG 1430, Applied Calculus I – MATH 1510, Applied Calculus II – MATH 1710, Classical/Linear Algebra – MATH 1210.

(Instructions for block registration to be provided)

Students can withdraw from courses during the first two weeks of classes without financial or academic penalty. Contact the Dean's Office Engineering (474-9807) for more information.

2.1 Orientation

All students entering the Preliminary Program in the Faculty of Engineering should attend Orientation. Orientation will be held in September, usually the day before the first day of classes. The date and schedule of events will be mailed out to newly admitted students once the schedule has been finalized.

2.2 Dean's Office

For information on program planning, withdrawal from courses, deferred examinations, appeals, and interpretation of regulations, you should seek advice from a student advisor in the Dean's Office Engineering, Room E2-290 Engineering Building. Where necessary, an appointment can be made to meet with the Associate Dean of Engineering (Undergraduate).

2.3 Prerequisites and Corequisites

Students who do not obtain standing in a first term course (D, F or VW) may normally register for the course in second term. A schedule of sections

offered in second term can be found in the Engineering timetable section (in some instances, the Arts or Science section) of this *Guide*.

If you lack the prerequisite or corequisite of a second term course that you are already registered in, you must withdraw from that course – it will not be done automatically.

First Term Courses - Level 1(A)

CHEM 1300	Introductory University Chemistry
PHYS 1050	Physics 1 - Mechanics
MATH 1510	Applied Calculus 1
COMP 1010	Computer Science
ENGL 1310	Literary Topics or PHIL 1290 Critical Thinking
MATH 1210	Classical/Linear Algebra

Second Term Courses - Level 1(B)

ENG 1440	Introduction to Statics
ENG 1460	Introduction to Thermal Science
ENG 1430	Design in Engineering
ENG 1450	Introduction to Electrical and Computer Engineering
MATH 1710	Applied Calculus 2
PHIL 1290	Critical Thinking or ENGL 1310 Literary Topics

2.4 Preliminary Year Guideline of Prerequisites and Corequisites

PHYS 1050 (corequisite MATH 1510)
MATH 1710 (prerequisite MATH 1510, corequisite PHYS 1050)
ENG 1450 (corequisite MATH 1710)

You are required to register for at least three courses per term. If you have difficulty with courses in the first term, consider taking fewer courses in the second term.

2.5 Preliminary Year students Intending to Pursue Computer Engineering

COMP 1020 Computer Science 2 is a prerequisite for COMP 2060 Discrete Structures and Programming in second-year Computer Engineering. Students intending to take Computer Engineering in their second year are advised to register for COMP 1020 in their second term.

There are two options to consider:

Option 1: Register for COMP 1020 and withdraw from one of your courses in term 2. Most courses in Term 2 can be registered for during Intersession (May-June, 2006).

Option 2: Drop ENG 1460 and replace it with COMP 1020. ENG 1460 can be registered for in your final year. See the Department of Electrical and Computer Engineering for information.

Clayton H. Riddell Faculty of Environment, Earth, and Resources

Initial Access Times

Students are referred to the chapter "The Registration System: Aurora Student", Section 3 "Your Initial Registration Access Time" for registration dates.

SECTION 1: Welcome to the Clayton H. Riddell Faculty of Environment, Earth, and Resources

Please contact the Faculty general office, in person, by phone or by email, to seek advice, assistance, or information concerning your admission, your academic program options, registration procedures, participation in the Cooperative Education Option or any questions you may have regarding your academic situations.

General Office

440 Wallace Building

Telephone (204) 474-7252

Fax: (204) 275-3147

Website: www.umanitoba.ca/environment

Email: Faculty_Environment@umanitoba.ca

Student Advisor Office Hours:

Monday through Friday: 9:00 a.m. to 4:00 p.m.

Evening appointments: In exceptional cases, evening appointments can be arranged.

Program Information Sessions: Contact the Faculty general office for dates and times.

Note: While we welcome the opportunity to assist you, it is important for you to realize that *it is your responsibility* to be familiar with university and Faculty academic regulations and registration procedures as they are described in this publication.

Academic Regulations are under review. Please check the web Calendar after July 1, 2006 for updates.

SECTION 2: Information Applicable to All Students

2.1 Important Information: Student Responsibility

It is your responsibility to be familiar with the regulations, course and graduation requirements of your degree program. You are advised to review the appropriate sections of this *Calendar* carefully when selecting your courses, to ensure compliance with degree program requirements. If you are not sure of how regulations and requirements apply to your case, please consult your Faculty student advisor. Since a complete graduation check is not done until you have indicated your intention to graduate, you are encouraged to make an appointment with your Faculty student advisor prior to your initial registration access date to confirm you are meeting the degree requirements. Ultimately you are responsible to ensure compliance with degree program requirements.

2.2 Prerequisites

In order to register for courses, you must satisfy the prerequisites as stated in *Part 1* of this *Calendar*. You may register for courses which require pre-

requisites provided that: you have completed the prerequisite course with the appropriate minimum grade

or

you are currently registered in the prerequisite in a term not yet complete. In this case the registration system assumes that you will successfully complete the prerequisite course. However if you fail to earn the minimum grade you must withdraw immediately from the course for which the prerequisite was required. If you fail to withdraw you will automatically be withdrawn at which time it may not be possible to add courses, depending on the date. Students are also financially responsible for the course, up to the withdrawal date.

2.3 Maximum Number of Courses During a Term

You may attempt a maximum of 15 credit hours in any one term unless otherwise stipulated by your program. If you meet this minimum and wish to exceed the normal load you must apply in-person at the Faculty General Office.

2.4 Written English and Mathematics Requirements

All students admitted to the University of Manitoba in 1997-98 and thereafter are required to complete within the first 60 credit hours, a minimum of three credit hours in a course with significant content in written English, and a minimum of three credit hours in a course with significant content in mathematics. A complete list of all courses which satisfy the written English and mathematics requirement is found in the General Academic Regulations and Policy chapter in *Part 1* or this *Calendar*. In *Part 1*, course descriptions identify these courses with the letter "W" after the course numbers for written English courses, and the letter "M" for mathematics courses. In addition to the designated courses listed in *Part 1* or this *Calendar*, there are individual sections of courses which satisfy the written English requirement; these are marked in the timetable listings in the *on-line Course Schedule* with the letter "W" after the section number. Students may choose to complete the "W" and "M" requirements by completing courses offered in the Clayton H. Riddell Faculty of Environment, Earth, and Resources. Courses satisfying the "W" requirement include GEOG 3510, GEOG 3480, GEOG 3580, and may also be met by several courses offered through Distance Education (refer to the Distance Education Calendar for details). The "M" requirement can be satisfied through GEOG 3680.

2.5 Course Space Availability

The initial registration access time is based on *academic performance*; therefore, space in all courses is available on the system from the beginning of the registration period.

SECTION 3: Registration

3.1 How to Register

Before the initial access begins

- Review your program requirements as outlined in *Part 1* of this *Calendar* and see a Faculty student advisor if you have any questions.
- Obtain written approvals, including Major, Advanced, and Honours forms, prerequisite waivers, course and term overloads, etc., and deliver them to the general office to ensure that they are programmed into your academic record. You should consult with a Faculty student advisor for final approval.
- Know your registration time. See above for information, and review the registration instructions in the chapter, the *Aurora Student Registration System*.

Important Dates

● Note dates that may affect you; e.g., your initial access date and time, when reserved spaces are returned for common use, fee payment deadlines, etc.

July - August 2006

Students are referred to the chapter "The Registration System: Aurora Student", Section 3 "Your Initial Registration Access Time" for registration dates.

● Register using Aurora Student during your initial access time.

By September 6, 2006

● List your courses and finalize fees after every transaction.

● Pay all fees due by the fee payment deadline.

September 7 – 20, 2006

● Classes start Thursday, September 7, 2006.

● Course changes permitted until September 20, 2006.

● Determine fees due after each transaction and pay any outstanding fees due.

November 15, 2006

● Final voluntary withdrawal (VW) deadline for first term courses. For refunds, see dates published in the chapter: Fees, Payments, and Refunds in the *Registration Guide* section of this publication.

January 17, 2007

● Last date to register for second term half courses.

March 19, 2007

● Last date to VW from full and second term courses. For refunds see the dates published in the chapter: Fees, Payments, and Refunds, in the *Registration Guide* section of this publication.

3.2 What Aurora Student cannot do:

Aurora Student will not check degree requirements. You are responsible for knowing the requirements of your degree. Consult a Faculty student advisor for advice and assistance if degree requirements are unclear. You cannot add or change a course classification through Aurora Student. Therefore, if you are an undergraduate student and wish to take a course as a Special Student in your degree, as an Auditor or as a Challenge for Credit, you must add this course in-person in the Faculty general office within the normal deadlines for such activity.

3.3 Courses offered in other Faculties and Schools acceptable for credit in the Clayton H. Riddell Faculty of Environment, Earth, and Resources

Students who are registered in the Clayton H. Riddell Faculty of Environment, Earth, and Resources may take any course offered by other Faculties and Schools for credit towards their degree, subject to overall degree requirements. Contact a Faculty student advisor for further information. If you have any problems or questions with your registration, contact a Faculty student advisor in the general office of the Clayton H. Riddell Faculty of Environment, Earth, and Resources.

Distance and Online Education

Initial Access Times

To determine your registration access time, please see the chapter of this publication for which you were admitted. You can register for Distance and Online Education courses and on-campus courses in the same transaction.

Please register early for Distance and Online Education courses to ensure that you receive your course materials in time to complete your first assignment.

Section 1: Welcome and General Information

Distance and Online Education courses are open to all UM students and provide an opportunity for students to complete courses without attending classes on campus. Students have many different circumstances that motivate them to enrol in distance education courses: they may be full-time students needing flexibility for work and study, work shifts or in part-time service jobs, have young families and enjoy the convenience of studying at home, live or work at a geographic distance from the UM, or continue to study year round in order to more quickly complete their degrees.

Over 120 degree credit courses are offered from the following faculties/schools: Agricultural and Food Sciences; Art; Arts; Clayton H. Riddell Environment, Earth, and Resources; Education; Engineering; Human Ecology; Nursing; Physical Education and Recreation Studies; Science; and Social Work. Programs offered by distance include a Bachelor of Arts, Bachelor of Arts in Geography, Bachelor of Social Work, Post-Baccalaureate Diploma in Education, and Baccalaureate Program for Registered Nurses.

To request a copy of the 2006-07 Distance and Online Education Guide, call 474 6742, toll free in Canada at 1 888 216 7011, ext. 6742 or visit the website: www.umanitoba.ca/distance.

Distance and Online Education Course Delivery Methods

Independent Study

Independent Study courses are designed for you to study at your convenience. You will receive a manual that contains study notes, reading materials, and assignment questions. Any required textbooks or audio/video materials can be purchased from the UM Book Store. Additional reading materials or audio/visual materials, if required, may be borrowed from the Distance Education Library Service. Courses differ slightly in their approach but generally have two to four assignments per term and an exam.

Online Study

When you register in an Online Study course, you will access a website to read course material, participate in discussions and submit assignments. Interaction with other students and your instructor via e-mail, chat, or discussion groups is easily available. The nature of interaction during most of the discussions allows participation when it is convenient for you.

Group Based Study

These courses allow the flexibility of studying independently, as well as having the "real-time" contact of an on-campus course. Audioconference sessions facilitate discussions based on the course topics and provide the opportunity for interaction between students in various communities and the instructor. Course manuals and textbooks may be supplemented with audiotapes and/or videotapes.

Campus Manitoba

Campus Manitoba is a consortium of Brandon University, the University of Manitoba, the University of Winnipeg, College universitaire de Saint-Boniface, Red River College, Keewatin Community College and Assiniboine Community College. CMB is a unique program in that students receive transfer of credit for courses offered by any of the participating institutions. CMB courses offer a variety of technologies including virtual classroom

software, as well as Internet and web-based components. Campus Manitoba courses are offered in the following locations:

Altona	Cross Lake	Flin Flon	Swan River
Boissevain	Dauphin	Killarney	The Pas
Brandon	Deloraine	Southport	Thompson
Carman	Eriksdale	Steinbach	White Bear First Nation

For a list of course offerings and fees, contact: Campus Manitoba, Brandon University, Brandon, Manitoba R7A 6A9; telephone: 204 727 9668; Fax: 204 726 1059; e-mail: campus_mb@brandonu.ca; website: www.campusmanitoba.ca

Accessing Distance and Online Education Courses

The technologies required for studying by distance education can vary depending on the course. In some cases, you will require a VCR /television, an audiocassette tape player, a telephone, and access to mail or fax service. If you wish to take advantage of the many optional online course components that are available, you will require access to a computer and modem, software, and an Internet provider. Information regarding requirements for online courses can be found under the Online Study program description of the *Distance and Online Education Guide*.

Section 2: Registration

Please refer to the Registration System section of this publication for course registration dates and procedures. If you have questions regarding course registration procedures, please call 1-888-216-7011, ext. 8012. You may register for Distance and Online Education courses and on-campus courses in the same transaction.

2.1 Distance and Online Education Terms

Fall (6 cr. hrs.)	September 2006 - December 2006
Winter (3 cr. hrs.)	January 2007 - April 2007
Fall/Winter (6 cr. hrs.)	September 2006 - April 2007
Dist Ed Winter/Summer 1 (6 cr. hrs.)	January 2007 - July 2007
Dist Ed Summer 1/Summer 2 (3 cr. hrs.)	May 2007 - August 2007

The lecture section acts as an identifier for the specific section of a course. All Distance and Online Education lecture section numbers are prefaced by the letter 'D', i.e. D01, D02, etc. It is important that you select the appropriate section number prior to registration.

Section 3: Additional Information

3.1 Examinations

Final exams are held in April, July, August, and December. You are expected to be available at the scheduled day and time, and should consider this when registering for courses.

Most students are able to write exams in their own community. Students living in Winnipeg must write at the UM Fort Garry Campus.

3.2 Course Materials

Independent Study and Group Based Study course materials are sent to you by mail once you have registered for the course. Instructions regarding accessing Online Study courses will also be mailed to you once you register. Required textbooks can be confirmed and must be ordered directly from the UM Book Store. It is recommended that you register at least four to six weeks prior to the start of the term to ensure that you receive your course materials prior to the beginning of the term. The following dates are suggested guidelines for course registration:

Courses beginning in September

Register immediately upon your initial registration access time.

Courses beginning in January

October 31, 2006 (course materials are not mailed during the university closure in December).

Courses beginning in May

Register immediately after the registration period opens.

3.3 Distance and Online Education Course Fees

NOTE: Fees for the 2006-07 academic year are not available until May 2006. Undergraduate International Students are subject to a fee surcharge of 100 %.

2005/2006 Fees (for reference only; fee varies depending upon faculty)

6 credit hours:	\$690 - \$846
4 credit hours:	\$460 - \$564
3 credit hours:	\$345 - \$423

Section 4: Contacting Distance and Online Education

For further information and for program and course descriptions, go to www.umanitoba.ca/distance or see the *Distance and Online Education Guide*.

To obtain a copy, call the 24-Hour Request for Information Line at (204) 474 6742 or Canada Toll-Free at 1 888 216 7011, extension 6742.

For other inquiries, contact:

Distance and Online Education
188D Extended Education Complex
8:30 a.m. - 4:30 p.m. Monday to Friday
Telephone: (204) 474 8012
Canada: Toll-Free 1 888 216 7011, extension 8012
Fax: (204) 474 7661
Email: de_info@umanitoba.ca
www.umanitoba.ca/distance

General Studies

Section 1: Initial Access Times

General Studies students registering for **on-campus and Distance Education courses** may register starting on Tuesday, August 15, 2006. For more information about initial access times and how to determine your specific time, please refer to the University of Manitoba home page: www.umanitoba.ca

Section 2: Registration Assistance

Welcome to General Studies (Extended Education) for the 2006-2007 Regular Session. We encourage you to read the *Registration Guide* and *Undergraduate Calendar* for information about registration, course offerings, rules, regulations and procedures. Please take the time to become familiar with the academic regulations and requirements of the University of Manitoba, in general, and the specific academic regulations and requirements of General Studies. As well, you may wish to seek the advice of the General Studies student advisor with any questions concerning your situation.

The General Studies student advisor is available to assist you with course and program planning, and to provide admission and registration information on a drop-in basis or by appointment throughout the year in the General Studies Office.

Monday through Friday, 8:30 a.m. to 4:30 p.m.
188 Continuing Education Complex

Student Advisor: Norma Baldwin (204) 474-8330

Assistant Advisor: Michelle Kidd (204) 474-7154

Toll free in Canada: 1-888-216-7011 (ext. 7154 or 8330)

Fax: (204) 474-7661 **Email:** general_studies@umanitoba.ca

Web: www.umanitoba.ca/extended/general_studies

Section 3: Orientation Sessions

3.1 Pre-Registration Information Sessions

Pre-registration information sessions are scheduled throughout July and August to help make your transition to the University a little easier. The pre-registration sessions show you how to choose courses, how to use the UMREG system, and how to use the *Undergraduate Calendar* and *Registration Guide*. Dates and time of the pre-registration sessions are included in the package mailed with the General Studies Information Guide.

3.2 Students Exempt from the Pre-Registration Information Sessions

All new General Studies students are expected to attend a pre-registration session with three exceptions: students who have attended The University of Manitoba previously in another faculty or school; students who have attended a University 1 (Start@U1) registration information session (please inform General Studies if you attend a U1 session.); students who reside outside of Winnipeg.

3.3 Signing Up for Pre-Registration Information Sessions

To sign up for a session contact the General Studies Office by phone or email. After hours please leave a voice mail message or email anytime. Provide the following information: first and last name (please spell your name if you are leaving a voice mail message), phone number, and your student number (from the upper right hand corner of your Certificate of Acceptance), and the session you want to attend.

Section 4: Registration Information

4.1 Instructions

You may register up to a maximum of 30 credit hours during Regular Session and up to a maximum of 15 credit hours in any one term.

Read the Information Section on UMREG found in the registration section of this Guide. If you are experiencing difficulty in accessing the registration system contact General Studies for information and assistance.

If you have a family member or friend register on your behalf, please make sure they are aware of your initial registration access period. They must have your student number, your date of birth, your six-digit PIN number, and the two digit code of your faculty (26). You are responsible for all transactions undertaken on your behalf.

4.2 New Students

Newly admitted students, especially students who have not attended a university previously, are advised to attend a General Studies pre-registration information session. Pre-registration information sessions help you navigate your way through the *Undergraduate Calendar*, and the *Registration Guide* including choosing courses, determining a course load, structuring a timetable, and using the registration system and more. These sessions are scheduled throughout July and August.

Please refer to the General Studies Information package that was mailed to you for details on the pre-registration session, including how to reserve a space. If you are unable to attend, please contact 474-7154 or 474-8330.

4.3 Returning Students

If you have successfully completed 24 credit hours or more, you are eligible to apply directly to a faculty or school providing you have met that faculty or school entrance requirements. For detailed information on other faculties and schools refer to the appropriate chapter listed in the *Undergraduate Calendar*. If you need help with course selection or have any concerns about your status, please contact the General Studies student advisor before you apply.

4.4 Visiting Students

New visiting students must apply for admission. Please contact the General Studies Office for information.

Visiting students who have been admitted and registered previously in at least one course are eligible to register in a subsequent session without re-applying for admission provided: your home university has not changed since you last registered in General Studies; you have a Letter of Permission from your home university approving the selected courses in which you wish to register; and you provide the Letter of Permission to General Studies prior to registering.

4.5 Auditing Students

New auditing students must apply for admission. Please contact the General Studies Office for information. All auditing students are required to have the written permission of the course instructor and register in-person with General Studies.

Section 5: Information Applicable to All General Studies Students

5.1 Academic Performance

The overall performance of students in General Studies will be assessed in an effort to identify those students who are having academic difficulty. Assessments will occur when a student has completed 45 credit hours of study. Poor academic performance can limit further registration in General Studies and prevent transfers to certain faculties and schools. Detailed in-

formation can be obtained from the *Undergraduate Calendar* in the Continuing Education (General Studies) section, the General Studies Information Guide, or by contacting the General Studies Office.

5.2 Credit Hour Policy

In an effort to assist students with academic decisions, all students who have completed 45 credit hours of studies with General Studies will be required to meet with a student advisor before being allowed further registration in General Studies. Until such time as the student meets with the advisor, a block will be placed on their record to prevent further registration.

5.3 Transferring to Other Faculties or Schools

Entry to every faculty and school requires a formal application for admission or transfer of faculty form to be submitted to the Admission Office. Admission dates and forms are available at the Admissions Office, 424 University Centre or on the Admissions Office website at www.umanitoba.ca and click on Current Students. It is always in your best interest to seek admission or transfer to a faculty or school as early as possible.

5.4 Courses Available to General Studies Students

All courses in the following faculties and schools are available to General Studies students. Prerequisites may be required for some courses as specified in the course descriptions in the *Undergraduate Calendar*.

Faculty of Arts

Clayton A. Riddle Faculty of Environment, Earth, and Resources

Faculty of Science

Asper School of Business

(students who have not been admitted to the Asper School of Business are limited to total of 36 credit hours offered by the Asper School of Business while registered in another faculty, school or division.)

All courses offered in the following faculties and schools require the teaching faculty written approval before registering with the exception of courses open to all students as listed under University 1 in the General Calendar:

Faculty of Architecture

Faculty of Education (500 level courses only)

Faculty of Engineering

Faculty of Human Ecology

Faculty of Music

Faculty of Nursing

Faculty of Physical Education and Recreation Studies

Faculty of Social Work (students with less than 30 credit hours)

School of Art

Off-Campus Study

Section 1: Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

You can register for Off-Campus Study and Distance and Online Education courses and on-campus courses in the same transaction.

Section 2: Registration and General Information

A flexible and convenient alternative, Off-Campus Study allows students to take degree courses at various community sites within Winnipeg including U of M Bannatyne Campus, Vincent Massey Collegiate and the Canadian Mennonite University.

Students can register for Off-Campus Study courses on-line at umanitoba.ca. See the information in this *Guide* for details on registration. Contact Off-Campus Study for more information on courses or for assistance concerning registration procedures. For questions regarding your academic program, contact a student advisor in your faculty or school.

2.1 Registration

It is your responsibility to be familiar with the requirements of your program and to complete the prerequisites for any courses you plan to take.

Where faculties/schools require written consent, or courses where written consent of the department head or instructor is required, you must submit the written consent to your faculty/school prior to registering.

2.2 Regular Session (September 2006 - April 2007)

Registration for all courses scheduled in Regular Session begins Monday, July 17, 2006 in accordance with the initial access times that apply to your faculty or school of registration as outlined in this *Guide*, and continues until Wednesday, September 6, 2006 for courses beginning in September, and until Tuesday, January 16, 2007 for courses beginning in January.

The period for late registration and registration revisions is September 7-20, 2006 for all term 1 and term 3 courses. A late fee will be assessed on all registrations during this period.

2.3 Fee Information

Fee information published in this *Guide* is for reference only. When you register on-line, one of the transactions you must complete is a fee assessment, which will indicate the exact amount owing and the fee payment deadline.

2.4 Examinations

Final examinations are normally scheduled for the same location and time as the class. In some cases, examinations may be written at the University of Manitoba Fort Garry Campus. The examination schedule is published well in advance of the examination period. Students are expected to check the schedule and be available to write examinations as scheduled.

2.5 For Information

Off-Campus Study: 188 Continuing Education Complex

8:30 a.m. – 4:30 p.m., Monday to Friday

Telephone: (204) 474 8019

Toll-Free in Canada telephone: 1 888 216 7011 extension 8019

Fax: (204) 474 7661

Website: umanitoba.ca/extended/off-campus

Section 3: Off-Campus Study Courses

The description for each Off-Campus Study course may be found in this *Guide* listed by faculty and department. Courses may be added after the publication of this *Guide*. Check our website for up-to-date course listings and information: umanitoba.ca/extended/off-campus

Faculty of Arts

English

004.093W ENGL 0930 English Composition (3)

004.276 ENGL 2760 Introductory Creative Writing (3)

German and Slavic Studies

008.461/328 GRMN 4610/3280 Sex, Gender and Cultural Politics in the German Speaking World (3)

052.131 UKRN 1310 Introductory Ukrainian (6)

055.122 YIDD 1220 Yiddish (6)

Labour Studies

153.127 LABR 1270 Introduction to the Political Economy of Labour (3)

153.129 LABR 1290 Introduction to the Canadian Labour Movement (3)

Native Studies

032.200 NATV 2000 Aboriginal Urbanization (3)

032.210 NATV 2100 Aboriginal Wisdom and Spirituality (3)

032.310 NATV 3100 Aboriginal Healing Ways (3)

032.324 NATV 3240 Native Medicine and Health (3)

032.333 NATV 3330 Aboriginal People, Science and the Environment (3)
Political Studies

019.314 POLS 3140 Selected Topics in Politics I:
Ethics in World Politics (3)

019.314 POLS 3140 Selected Topics in Politics I: I
ntelligence and Espionage (3)

019.315 POLS 3150 Selected Topics in Politics II: Terrorism (3)

Faculty of Human Ecology

Human Nutritional Sciences

030.120 HNSC 1200 Food: Facts and Fallacies (3)

030.121 HNSC 1210 Nutrition for Health and Changing Lifestyles (3)

030.213 HNSC 2130 Nutrition Through the Life Cycle (3)

Faculty of Nursing

049.126 NURS 1260 Human Growth and Development (3)

049.128 NURS 1280 Introduction to Nursing (3)

Faculty of Physical Education and Recreation Studies

057.120 PHED 1200 Physical Activity, Health and Wellness (3)

123.140 REC 1400 Concepts of Recreation and Leisure (3)

Faculty of Science

Chemistry

002.130 CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry (3)

002.131 CHEM 1310 University 1 Chemistry: An Introduction to Physical Chemistry (3)

Physics and Astronomy

016.090 PHYS 0900 Preparing for University Physics (0)

Faculty of Human Ecology

Section 1: Initial Access Times

Students are referred to the chapter "The Registration System: Aurora Student", Section 3 "Your Initial Registration Access Time" for registration dates.

Section 2: Registration Assistance

2.1 Information Available in General Office (209 Human Ecology Building):

- Permission to Access Student's File form (important for all 4th year students)
- Minor declaration forms (important for anyone declaring a voluntary minor)
- Program Guides
- Permission Forms
- Management Minor information
- Option in Aging information
- Scholarship information
- Human Ecology program requirements checklists for all programs

2.2 On Line Information

The Faculty of Human Ecology website is: www.umanitoba.ca/human_ecology/

The websites are locations for your student history, the *Undergraduate Calendar* and this *Registration Guide*. In addition, the website provides updates on changes to courses and timetables. You may also obtain program summary sheets for your program on the Human Ecology website.

2.3 Telephone Numbers

General Office: (204) 474 8508

Faculty Student Advisor: (204) 474 9298

E-mail address: bwiebe@cc.umanitoba.ca

Fax Number: (204) 474 7592

All Human Ecology students are required to register through the University of Manitoba's registration system (Aurora Student). Details are available in this *Guide*, including examples and worksheets.

2.3.1 Department Telephone Numbers

Human Ecology Program, 205 Human Ecology Building, 474 8137

Family Social Sciences, 211 Human Ecology Building, 474 9225

Human Nutritional Sciences, H505 Duff Roblin Building, 474 9901

Textile Sciences, 205 Human Ecology Building, 474 8137

Section 3: Orientation Sessions

3.1 All New Students Entering Human Ecology

All new students must ask for an orientation kit prior to being eligible to register. Call by telephone 474 9375 (message), or 474 8508, or contact us by fax 474 7592 for an orientation kit. You will then be unblocked in order to access Aurora and select your courses for the 2006-2007 academic year. Advise us of your program choice when you contact us. You *cannot* register until you have an orientation kit.

An orientation session will be held on July 11, 2006, 10:00 a.m., Room 206 Human Ecology.

3.2 Information Session for New Students

An information session for all students new to the faculty will be held at the beginning of term. This session will provide you with general information about the faculty and program planning advice. The session will be held in: 206 Human Ecology Building, Wednesday, September 6, 2006, at 10:00 a.m.

Section 4: Registration Information for all Human Ecology Students

4.1 Academic Year Designation

The first date on which you can register depends on your grade point average. Follow instructions in the chapter "The Registration System: Aurora Student", Section 3. Human Ecology obtains reserved space in required courses, but be aware that Limited Access policies apply.

The initial access time indicates the first opportunity you have to enter your course selection. It is *highly* recommended that you register when your scheduled access time arrives to provide you with the best opportunity to obtain the desired courses. Access is then 24/7.

4.2 Program Selection

All new Human Ecology students must select a program from one of the following choices prior to entering any course selections:

Human Ecology program (general degree)

Nutrition option in Human Nutritional Sciences

Foods option in Human Nutritional Sciences

Second degree option in Human Nutritional Sciences

Product Development stream in Textile Sciences

Textile Development stream in Textile Sciences

Family Social Sciences (if you know which option you are choosing, please select one of the following):

Aging Option

Child and Adolescent Development option

Child and Adolescent Development AND Family Violence and Conflict Resolution option (2 options)

Family, Housing, and Community Studies option

Family Resource Management option

Family Violence and Conflict Resolution option

If you would like to make a program change in the Faculty of Human Ecology, consult with the faculty student advisor for more information. All programs are outlined in the current *Undergraduate Calendar*, which is available from the Registrar's Office.

4.2.1 Choosing an Option in Family Social Sciences

Family Social Sciences students must select at least one of the options (Section 4.2), if they have not already done so, before they will be eligible to register as a 3rd year student.

4.3 Transfer of Credit

Students transferring in from University 1 will automatically have credit for courses taken in University 1 transferred into their Human Ecology program. Students transferring from other faculties, external universities and students seeking a second degree may be required to consult with the student advisor either by appointment or telephone consultation to discuss transfer of credit.

The University of Manitoba does not evaluate courses from another academic institution until students are admitted to a program. Sometimes the evaluation of courses can take time, and if you are entering from another academic institution, we may not immediately have a complete picture of course transferability and equivalence. We will try our best to give you as accurate a picture as possible prior to your initial registration time. It may not be possible to arrange for transfer of credit during the busiest registration period, as we can only guarantee the presence of one faculty student advisor.

If you are admitted on the basis of a previous degree (seeking a second degree), we will have to specify which courses require evaluation from your previous program. This will require a consultation with the faculty student advisor.

4.4 Returning Students

All returning students must submit a Program Guide to the student advisor's office before April 30. Program information sessions were held in March in order to provide returning students with on-site consultation with professors in their programs. Program guides are due in the General Office by the end of April.

If you have not handed in a Program Guide you will be blocked from Aurora. If you are a student in Human Nutritional Sciences or the Human Ecology program, make an appointment with your department program advisor (professor) to approve and sign your completed Program Guide. If you are in Family Social Sciences or Textile Sciences, you are required to complete and hand in a Program Guide, but you do not have to obtain departmental approval or signature.

Submit your Program Guide to the General Office of Human Ecology, Room 209, or fax it to us if you are not on campus.

After the end of May, it may be difficult to find a professor due to research and holiday schedules. You are encouraged to plan your program before then.

Each department or program will ensure that a program advisor (professor) is available throughout the summer weeks. Call the department telephone number (Section 2) to obtain the name of the person to contact.

4.5 University Written English and Mathematics Requirement

The Faculty of Human Ecology has designated HMEC 2030 Human Ecology: Perspectives and Communication (or 028.103 or 028.203) and STAT 1000 Basic Statistics 1 (005.100) as the courses which fulfil the written English and Mathematics requirement. The second degree option in Human Nutritional Sciences does not require these courses.

4.6 Advisement

The faculty student advisor is available by appointment to discuss program and course choices prior to registration. The following students are blocked from registration until they contact the faculty student advisor:

- Students on probation
- Students repeating a course with a grade of C or higher
- Students requesting to challenge for credit (note: specific deadlines required for challenge application)
- Students requesting to audit a course
- Students reinstated after suspension
- Returning students who have not completed course planning forms
- New students who have not received an orientation kit

4.7 Graduation

If you have completed a specified number of credit hours in your program, Aurora Student will prompt you to enter your expected graduation date. There is no longer a paper application. You will be contacted by the Registrar's Office a few months prior to your graduation date to verify degree designation.

SECTION 5: Helpful Hints

5.1 Program Assessment

Your program will be formally assessed during the first term of your third year, and you may make an appointment at any time to review your file and your degree progress. During the first month of fourth year, an internal degree audit is conducted by the faculty student advisor of all the fourth year students who have declared graduation.

It is your responsibility to ensure that you follow the program of study for your chosen major or option.

Students may access their own records through Aurora Student.

5.2 Repeating Courses/Attempts

Any course you have failed, passed but voluntarily repeated, or substituted to obtain a higher grade, is considered an attempt.

Students are granted 30 credit hours of extra attempts to obtain the 120 credit hour Human Ecology degree. Students who exceed the 30 credit

hour limit of extra attempts are placed on academic suspension and are required to withdraw from the Faculty of Human Ecology for one full year prior to attempting reinstatement. Students may not substitute for required courses.

When a course is repeated, the latest attempt of the course is included in the calculation of the degree grade point average. The first attempt of the course then counts as an "extra attempt." Both grades are permanently recorded on the transcript.

5.3 Voluntary Withdrawal (VW) from a Course

In order to withdraw from a course, you must use Aurora Student and complete the transaction by the deadlines at the beginning of this *Guide*. *Authorized Withdrawals (AW)* are available for medical and compassionate grounds. A copy of the Authorized Withdrawal policy is available in the General Office of Human Ecology, Room 209.

5.4 Special Permission

5.4.1 Missing prerequisites

Prerequisite: If one course is prerequisite to a second course, the prerequisite must be met in order to continue in the second course. The department giving the second course may require a minimum grade of 'C' in the first course to register in the second course.

Corequisite: If a first course is a corequisite to a second course, the first course (unless previously completed) must be taken in the same term as the second course.

Course Availability: Not all courses listed in this *Calendar* are offered every year. Students are referred to the on-line calendar for courses offered in the year.

If you obtain special permission to take any course, get it in writing (using the course permission form) from the person who is scheduled to teach the course and forward it to the Human Ecology office *before* you plan to register in the course. The faculty student advisor or the registration assistant must enter the permission into Aurora Student to allow you to register; at least a half working day is required to input the permission.

We cannot guarantee instant help if you have left it until the last minute. If you do not obtain the permission, you will be blocked from registering in that course. Permission Forms are available from the General Office and a copy is printed later in this chapter.

5.4.2 Over the 33 credit hour limit

If you are over the 33 credit hour limit (total) in the fall and winter terms in Human Ecology, contact the faculty student advisor to discuss adding more.

5.5 Reserved Courses

Reserves have been obtained in courses taught by the Faculties of Arts, Science, the Asper School of Business, Engineering, and Physical Education and Recreation Studies. Check in the teaching Faculty's timetable and you will see notices regarding saved spaces for students in other faculties. Select from those lecture and lab sections when you are planning your timetable.

Students who have officially declared the Management Minor should use the School of Business timetable when selecting Management Minor courses. The Human Ecology reserves can be used by students who have not declared a minor. Non-Business students may now register on a space available basis for Management courses one week after registration has been made available to Management students. The School of Business will not impose any credit hour restrictions on such students. However, a student's home faculty may restrict the type and number of Management courses the student may take.

Reserved space in Arts courses: Check the Arts section of Aurora for reserves in ECON 1200, ECON 1210, ECON 1220, PSYCH 1200, and SOC 1200.

Reserved space in Asper School of Business courses: Check the I.H. Asper School of Business section of this *Guide* for reserves in GMGT 2030, GMGT 2070, GMGT 2080, GMGT 2440, GMGT 3300, MKTG 2210, MKTG 3230, and MKTG 3240.

Reserved space in Science courses: Check the Science section of this *Guide* for reserves in CHEM 0900, CHEM 1300, CHEM 1310, CHEM

1320, CHEM 2360, CHEM 2370, CHEM 2770, CHEM 2780, COMP 1260, COMP 1270, STAT 1000, STAT 2000, ZOOL 1320, and ZOOL 1330.

5.6 Off-Campus Human Ecology Courses

Human Ecology courses are offered off-site in several locations. Check the timetable for more information.

Section 6: Additional Information

6.1 Textile Sciences

New Textiles courses will be introduced in the following sequence:

1. 2006 – 2007: TXSC 2620, TXSC 2630, TXSC 3600, TXSC 3610, TXSC 3620, TXSC 3630, TXSC 3640, TXSC 3500.
2. 2007 – 2008: TXSC 3650, TXSC 4600, TXSC 4610, TXSC 4620, TXSC 2630, TXSC 4500.

Former Clothing and Textiles program courses will be offered for the last time in the following sequence:

1. 2006 – 2007: TXSC 2240, TXSC 2250, TXSC 3420, TXSC 3470, TXSC 3490.
2. 2007 – 2008: TXSC 4260, TXSC 4310, TXSC 4340.

6.2 Minors

6.2.1 Voluntary Minors

All Faculty of Human Ecology students may declare and complete a Minor from departments and interdisciplinary programs in which a Minor is offered. More information is available in the *Undergraduate Calendar*. Contact the Faculty Student Advisor for more information and program planning.

6.2.2 The Management Minor

If you are eligible to declare the Management Minor, complete the Minor Declaration form (available in General Office) and forward it to the faculty student advisor's office. The faculty student advisor or registration assistant must input the code for these areas into the registration system. It is not enough to state your intentions when planning your programs in March.

Students in the Management Minor may use the complete Business School timetable to select courses. The reserves obtained by this faculty are kept for students who are *not* in the Management minor.

There are a limited number of spaces to be allocated. In order to be enrolled in the Management Minor, you must have a cumulative GPA of 3.0 or higher in at least 30 credit hours in your program in the Faculty of Human Ecology. A description of the Management Minor is found in the current *Undergraduate Calendar* in the Human Ecology chapter. The Management Minor fits into the electives part of your program. This code must be entered by the faculty student advisor or the registration assistant. Without the code being entered, you will not have access to the entire Asper School of Business timetable.

6.2.3 The Family Social Sciences Minor

Human Ecology students who are not in Family Social Sciences may choose to complete the Family Social Sciences minor. Please review the *Undergraduate Calendar* for the requirements for completion of the minor.

6.3 The Option in Aging

The Interfaculty Option in Aging is available to students registered in Human Ecology. The option includes required and elective courses for a total of 18 credit hours. The required courses are one of PHED or NURS 2610 and one of HMEC or SWRK or IDES or REC 2650.

In 2006-2007 the two required courses will be taught under the following numbers: SWRK 2650 and NURS 2610.

More information on the Option in Aging and a complete list of courses is available in the General Office of Human Ecology.

At present, students must monitor their own progress through the Option. When the Option is completed, a "Comment" will be placed on the transcript indicating successful completion. Your practicum instructor must sign a form verifying that you have completed the practical requirement of the Option. Submit the signed form to the Student Advisor's office to have the comment placed on your transcript.

6.4 Human Ecology/Education Integrated Program

The last intake to the Human Ecology/Education Integrated program is September, 2006 based on a Feb. 1, 2006 application deadline. If you are admitted to the Faculty of Education in the Integrated Human Ecology/Education degree program you must follow the registration guidelines outlined in the Education portion of this *Guide*. You have access to all Human Ecology courses listed in the timetable.

6.5 Wrapping Up and Registering

Have you:

- Verified your initial access time?
- Declared your department (program) on Aurora Student if you are registering in Human Ecology for the first time?
- Chosen courses to satisfy the written English (HMEC 2030) and Mathematics (STAT 1000) requirement, if not already completed?
- Consulted a student advisor if you have program questions and/or obtained required program approvals?
- Registered for your courses?
- Asked Aurora for a fee assessment after registration is complete?
- Reviewed the registration checklist earlier in this *Guide* for other registration tasks?
- Paid your fees? Your registration is not complete until you pay your fees or make arrangements to have them paid by the fee payment deadline. Do not wait for a fee statement to be mailed to you. See the section on fee payment for payment options.
- Classes commence Thursday, September 7, 2006. All students are expected to be in attendance from the first day of classes. Human Ecology labs begin the first full week of classes in September (Monday, September 11, 2006). Any changes to this information will be provided in lectures during the first week of classes.

Asper School of Business

Faculty of Management

SECTION 1: Initial Access Times

For information about initial access times and how to determine your specific time, please refer to the introductory chapter, "The Registration System: Aurora Student", Section 3.

SECTION 2: Registration Assistance

If you have any questions regarding registration, your degree requirements, or your student status, you may contact an Asper School of Business student advisor:

Student Advisors Telephone: (204) 474 6388

Student Advisors Office: 268 Drake Centre

Office hours: 8:30 a.m. - 4:30 p.m. Monday - Friday.

SECTION 3: Information Sessions for Students Newly Admitted to the Bachelor of Commerce (Honours) Program

If you are a newly admitted student to the Bachelor of Commerce (Honours) program, you are invited to attend a voluntary information session on Thursday, July 13, 2006 at 7 p.m. or on Wednesday, July 26, 2006 at 7 p.m. in the Drake Centre (students will be notified of the room location at a later date). Topics to be discussed are: what courses to register for, the registration process, and program requirements. Telephone (204) 474 6388 to schedule a session.

SECTION 4: Registration Information

4.1 Registering for Business Courses

4.1.1. Business Students Registering for Business Courses

All newly admitted and returning Business students are required to register through Aurora - the University of Manitoba Student Registration System - using web access.

The only exceptions are: Students outside North America on the date of their initial access time must contact an Asper School of Business program advisor (telephone (204) 474 6388 or (204) 474 6752 for information).

Numerous checks have been programmed into the Aurora Registration System. While it will check for course prerequisites, it does not check your course selection to ensure that degree requirements are satisfied. It is your responsibility to be familiar with the requirements. See the Asper School of Business chapter of the *Undergraduate Calendar* to determine the specific requirements of your program.

If you have graduated from the Asper School of Business, you must apply for admission to another faculty or school if you wish to take additional courses. Contact Enrolment Services for information.

4.1.2 University 1 Students Registering for Business Courses

During the initial registration period, University 1 students may register for one of the following Business courses provided space is available: ACC 1100, GMGT 2030, GMGT 2070, GMGT 2080, or MKT 2210.

A University 1 student may choose to take one of the courses from the above list in place of three credit hours of electives in the Qualifying (pre-Business) Program. Such a student will be required to substitute three credit hours of electives for this Business course after admission to the Asper School of Business.

4.1.3 Students from Other Faculties Registering for Business Courses

Enrolment in courses taught by the Asper School of Business is limited almost entirely to Business students. However, after the initial registration period, students from other faculties and schools can register in Business courses, provided space is still available and provided they meet prerequisite and corequisite requirements. Such students should contact an advisor in their home faculty to determine whether they must register by web or in person for Business courses.

Students who have not been admitted to the Asper School of Business are limited to an aggregate total of 36 credit hours of courses offered by the Asper School of Business while registered in another faculty, school, or division. This aggregate total of 36 hours of Business courses includes failures, repeats of previously passed courses, and transfer credit received for Business courses from external institutions. Once the aggregate total of 36 credit hours of Business courses is reached, students will be restricted from registering for any more courses offered by the Asper School of Business. Faculty of Science students with a major in Actuarial Mathematics are exempt from this restriction.

4.2 Major – Declaring and Changing

4.2.1 Fulfilling the Requirements of a Major

All students in the Bachelor of Commerce (Honours) program are required to formally declare one major through the Aurora Registration System and to satisfy the specific course requirements for that major.

When selecting Business options, some students choose to take courses that will fulfil the requirements of a second major. The options component of the B.Comm.(Hons.) degree consists of 15 to 18 credit hours of Business courses freely selected by the student. Therefore, there is room within the options component of the degree to complete a second major (12 credit hours) plus another 3 to 6 credit hours of Business options.

4.2.2. Note for Students Wishing to Complete Two Majors:

Note the following Asper School of Business policy: "Students will not be given any registration priority for a second major." The Asper School of Business cannot guarantee that you will obtain space in the courses you would like for a second major.

Students who have completed all the requirements for a major or who have registered in courses that fulfil the requirements for a major are not permitted to formally declare a different major unless there is space in the courses needed to complete the different major. Students are not permitted to declare a different major in order to obtain space in full courses.

4.2.3 Majors on Transcripts

After you graduate with your B.Comm.(Hons.) degree, your formally declared major will appear on your University of Manitoba transcript. Your major will *not* appear on your transcript before you graduate, even though you have formally declared it. Also, your major will *not* be listed on the B.Comm.(Hons.) parchment.

If you complete the requirements of a second major within the credit hours required for the B.Comm.(Hons.) degree, you may request that the second major also appear on your transcript after you graduate. See the Undergraduate Program Office in your graduating term to complete a request form.

ASPER SCHOOL OF BUSINESS/FACULTY OF MANAGEMENT TIMETABLE FORM

NAME: _____

DATE: _____

MONDAY		TUESDAY	WEDNESDAY		THURSDAY	FRIDAY
M&W 8:30-9:45	8:30 1	8:30 4	M&W 8:30-9:45	8:30 1	8:30 4	8:30 1
	9:30 2			9:30 2		9:30 2
M&W 10:00-11:15	10:00 3	10:00 5	M&W 10:00-11:15	10:00 3	10:00 5	10:00 2
	10:30 3			10:30 3		10:30 3

M&W 11:30-12:45	11:30 6	11:30 9	M&W 11:30-12:45	11:30 6	11:30 9	11:30 6
	12:30 7			12:30 7		12:30 7
M&W 1:00-2:15	1:00 8	1:00 10	M&W 1:00-2:15	1:00 8	1:00 10	1:00 7
	1:30 8			1:30 8		1:30 8

M&W 2:30-3:45	2:30 11	2:30 14	M&W 2:30-3:45	2:30 11	2:30 14	2:30 11
	3:30 12			3:30 12		3:30 12
M&W 4:00-5:15	4:00 13	4:00 15	M&W 4:00-5:15	4:00 13	4:00 15	4:00 12
	4:30 13			4:30 13		4:30 13

5:30-6:45 16	5:30-6:45 17	5:30 - 6:45 16	5:30 - 6:45 17	
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7:00 E. Mon.	E. Tue.	E. Wed.	E. Thur.	
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- **Note: Avoid time conflicts between slots: 1, 2, 3 and slots: M&W 8:30-9:45; M&W 10:00-11:15
- **Note: Avoid time conflicts between slots: 6, 7, 8 and slots: M&W 11:30-12:45; M&W 1:00-2:15
- **Note: Avoid time conflicts with courses from other faculties in slots 11, 12 & 13 Mon, Wed, & Fri afternoons

Faculty of Music

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

Registration Information

All students in the Faculty of Music register through Aurora Student. Students should consult the Faculty of Music chapter in the *Undergraduate Calendar* and be sure that they are taking all of the courses required for their program. If there is need for assistance contact the Registrar either in person, email sleeson@cc.umanitoba.ca, or by phone at (204) 474-9133.

The Faculty of Music office, room 206, is open from 8:30-4:30 Monday through Friday.

New Students

Orientation for all new students is September 5. Specifics will be given in a letter that will be sent to you. This session covers such topics as Faculty of Music program structure, efficient study methods, library usage and management of financial aid resources. All new students are urged to attend.

First Year Students

All students admitted in the 2000-2001 Regular Session and later are required to complete, within the first 60 credit hours of their programs, a minimum of a course of at least three credit hours with significant content in written English, and a minimum of a three credit hour course with significant content in Mathematics. See the chapter, General Academic Regulations and Requirements of the *Undergraduate Calendar*.

Individual programs may have designated specific written English and Mathematics courses to fulfill this requirement. See program listings in the *Undergraduate Calendar* for details.

Courses and/or specific course sections which satisfy the *written* English or Mathematics requirement are identified by the letter "W" for written English and the letter "M" for mathematics courses in the *Undergraduate Calendar* and this *Guide*.

The first year is a common year in all programs within the faculty.

First year courses consist of MUSC 1070, MUSC 1080, MUSC 1110, MUSC 1120, MUSC 1180, MUSC 1190, MUSC 1380, MUSC 1390, MUSC 1400, MUSC 3230 and ENGL 1310 (or another course that satisfies the English requirement)

Transfer Students

Transfer students should be sure to have a thorough transcript evaluation and should discuss their course selection with the Registrar prior to registration to insure that they will be meeting the requirements of their program.

Returning Students

Returning students must register by Aurora Student. Students must be sure that the proper courses are selected to fulfill degree requirements. Students going into the combined B. Mus./B. Ed. program should choose non-music courses such that they fulfill the requirements for a second teachable area in Education.

Masterclasses

Weekly Masterclasses are offered in Composition, Piano, Strings, Voice, Woodwind, Brass, Guitar and Percussion.

Scheduled are:

Composition	Monday and Wednesday 2:30 - 4:30
Voice	Thursday, 3:30 - 5:00
Piano	Friday 2:30 - 4:00
Strings	TBA
Woodwind, Brass, and Percussion	TBA
Guitar	Tuesday afternoon
Jazz	Friday 2:30 - 4:30

Ensemble Schedule

Large Ensemble 033.118, 033.218, 033.318 and 033.418:

Women's Choir	Monday and Wednesday 2:30 - 4:00
University Concert Band	Tuesday 7:00 - 9:00 and Thursday 4:30 - 5:30
University Jazz Orchestra	Monday and Wednesday, 2:30 - 4:30
University Singers	Tuesday and Thursday, 1:00- 3:15
University Symphony Orchestra	Monday 5:00-7:00, Wednesday 7:00-9:00
University Wind Ensemble	Tuesday and Thursday, 1:15 - 3:30
Bison Men's Chorus	Tuesday, 5:00 - 7:00
Cantata Singers	Thursday 1:00 - 2:15

Jazz Ensembles	TBA
Second Ensemble 033.119, 033.219, 033.319 and 033.419:	
Accompanying 1	Tuesday 11:30 - 12:50
Accompanying 2	Tuesday 11:30 - 12:50
Chamber Music	M,T,W,Th,F 1:30 - 2:30
Opera Workshop	Slot 9
Musical Theatre	Thursday 11:30 - 12:50
Collegium	Thursday 7:00 - 9:00
Guitar	Tuesday afternoon
Saxophone	TBA
Percussion	TBA
New Music	Friday 2:30 - 4:30
*Recorder	TBA

* offered when sufficient interest

Faculty of Nursing

INITIAL ACCESS TIMES

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3.

SECTION 1: Information and Policies Applicable to All Newly Admitted Nursing Students

Information for nursing students is posted in two places:

- 1) web site www.umanitoba.ca/faculties/nursing
- 2) bulletin board outside HG260

Orientation

● Registration for new students is blocked until AFTER their deposit is submitted and official Criminal Record Check and Child Abuse Registry documents are received by the Faculty of Nursing. Fort Garry site students will receive an orientation package in lieu of attending an orientation session, on acceptance to the Faculty of Nursing. Optional sessions will be held.

Four Year Baccalaureate Program Students

To reserve space in your optional orientation at Fort Garry site, phone (204) 474-6655.

Baccalaureate Program for Registered Nurses

To reserve your mandatory orientation space, call (204) 474 6655.

Students registering as special students need not attend an orientation session.

Orientation Dates Four Year BN Students

Winnipeg

Dates will be scheduled in June, July and August and will be included in the student's Certificate of Acceptance.

Please call to book your orientation time AFTER you have received your Certificate of Acceptance and accepted your seat by submitting your deposit and read the written orientation material. **The orientation package is available on the web at:**

BPRN Orientation Dates

Dates will be scheduled in June, July and/or August and will be included in the student's Certificate of Acceptance.

SECTION 2: Information and Policies for All Nursing Students

All students are required to register by web.

Returning Students

Contact a student advisor if any of the following apply:

- On probation
- Repeating a failed course
- Requesting to challenge for credit
- Requesting to audit a course
- Have not taken clinical or skills courses for one year or more (Four Year BN students ONLY)
- Did not register for any courses the previous year
- At the end of April examinations, missing program requirements for the year you have just attended.

Advisors are available by appointment (call 474 6655 or their direct phone number listed below). Booking an appointment will ensure an advisor will be available.

Student Advisors

Baccalaureate Program -Winnipeg

Karen Nickerson: (204) 474 6733;
Martin Speight: (204) 474 6217;
Terri Tauffenbach: (204) 474 6734.
Toll free in Manitoba: 1(800) 432 1960
Extensions: 6217, 6734, or 6733.
Fax: (204) 474 7682.

Baccalaureate Program for Registered Nurses

Karen Nickerson: (204) 474 6733
Toll free in Manitoba: 1 (800) 432 1960, extension: 6733

Faculty Registrar

Catherine Johnston: (204) 474 9955
Toll free in Manitoba: 1(800) 432 1960, extension 9955
Fax: (204) 474-7682

The faculty registrar may be contacted for:

- Registration concerns
- Did not register for any courses the previous year
- CPR and/or immunization concerns
- Instructor approvals
- Lab exemptions
- Blocks/holds

Student Services Assistant

Eva Brasko: (204) 474-6655

The student services assistant may be contacted for:

- CPR and/or immunization concerns
- Blocks/holds
- Book appointments with a student advisor
- Criminal record check and child abuse registry document submissions.

Student Responsibilities

Refer to the current University of Manitoba *Undergraduate Calendar* and the *Registration Guide* for program regulations and details related to registration and payment for courses. These documents can also be accessed at website: www.umanitoba.ca/faculties/nursing/

Students are reminded "0900" level courses are not acceptable for credit in the Nursing program.

NOTE: Students are advised to review the current University of Manitoba *Undergraduate Calendar* carefully to ensure compliance with degree program requirements. Students must ensure the correct courses are selected to satisfy degree requirements. Final completion of degree requirements is the responsibility of the student.

Criminal Record and Child Abuse Registry Check

Refer to the General Calendar.

Personal Health Information Act Policies (PHIA)

Refer to the General Calendar.

Immunizations

Immunizations are a requirement mandated by the Winnipeg Regional Health Authority. Students who do not meet the immunization requirement will not be able to complete the clinical portion of the program.

Returning students are required to provide updated immunizations as necessary **by June 1st annually** to the Student Services Assistant or the Registrar. Refer to "Hold Status" Note: Students are advised to check with the UMSU Health and Dental Plan Office regarding reimbursement of immunization costs.

Reminder: Space will not be reserved for students with immunization and/or cpr deficiencies.

CPR (Cardio-Pulmonary Resuscitation)

Returning students in the Four Year Program are required to provide proof of Basic Rescuer level "C" CPR re-certification **by June 1st** annually to the Student Services Assistant or the Registrar. Refer to "Hold status" and "CPR". **Reminder: Space will not be reserved for students with immunization and/or cpr deficiencies.**

NOTE: It is the student's responsibility to ensure all documentation has been received by the Faculty of Nursing.

Scholastic Progress

All courses from any given year must be completed before proceeding to the next year. Rearrangement of course work will be considered on an individual basis **ONLY** upon receipt of a written request. Students should note that both Statistics, STAT 1000 (formerly 005.100) and Health Promotion in Families, NURS 3270 (formerly 049.327) are second year courses.

Ongoing Sequencing of Coursework (Fort Garry Site)

Normally, students are required to complete one year before proceeding to Nursing courses in the following year. However, students who have successfully completed all non-Nursing courses and specific required Nursing courses may receive permission to work ahead on select courses in the following year.

Students should note that if they have been given permission to "work ahead" on courses, and subsequently withdraw from or fail a course in their current year of Nursing, the permission for the "work ahead" course(s) may be revoked.

Where special permission is required, students are requested to meet with a Nursing Student Advisor. Approval will be subject to curricular requirements, space in the courses, and students' meeting the applicable criteria. A minimum GPA may also be required for some of the courses.

Third Year Courses

Third year courses are normally done in the following sequence:

Fall term:

- NURS 3280 (formerly 049.328) Nursing Skills Laboratory is scheduled across both fall term and winter term and must be started in fall term if students wish to take a third year clinical course.
- **EITHER** NURS 3310 (formerly 049.331) Health Maintenance in Nursing **AND** NURS 3320 (formerly 049.332) Clinical Nursing Practice IV; **OR** NURS 3290 (formerly 049.329) Health Restoration in Nursing **AND** NURS 3300 (formerly 049.330) Clinical Nursing Practice III.

Winter term:

- NURS 3280 (formerly 049.328) continues in winter term
- **EITHER** NURS 3290 (formerly 049.329) Health Restoration in Nursing **AND** NURS 3300 (formerly 049.330) Clinical Nursing Practice III **OR** NURS 3310 (formerly 049.331) Health Maintenance in Nursing **AND** NURS 3320 (formerly 049.332) Clinical Nursing Practice IV.

Fall or Winter term

- NURS 3210 (formerly 049.321) Nursing Research Methods (Statistics STAT 1000 (formerly 005.100) is a recommended pre- or co-requisite, STAT 1000 (formerly 005.100) is a year 2 requirement)

Fourth Year Courses

Three fourth-year courses, NURS 4170 (formerly 049.417) Issues and Trends in Nursing, NURS 4190 (formerly 049.419) Leadership in Nursing Practice, and/or NURS 4280 (formerly 049.428) Theories in Nursing Practice may be taken prior to completion of third year if the following courses have been successfully completed. **STUDENTS ARE EXPECTED TO HAVE ALL YEAR 1 & 2 COURSES AND ALL ELECTIVES COMPLETED BEFORE TAKING THE FOURTH YEAR COURSES.**

- NURS 4280 (formerly 049.428) Theories in Nursing Practice – may be taken with the first term of third year (i.e., with NURS 3280 (formerly 049.328), NURS 3310, (formerly 049.331), and NURS 3320 (formerly 049.332) or NURS 3280 (formerly 049.328), NURS 3290 (formerly 049.329) and NURS 3300 (formerly 049.330) IF NURS 3270/NURS 3210 (formerly 049.327/049.321) have been completed prior to third year)
- NURS 4170 (formerly 049.417) Issues and Trends in Nursing and/or NURS 4190 (formerly 049.419) Leadership in Nursing Practice may be taken with the second term of third year provided that NURS 3270 (formerly 049.327/ NURS 3210 (formerly 049.321, **AND EITHER** NURS 3310 (for-

merly 049.331) **AND** NURS 3320 (formerly 049.332) **OR** NURS 329 (formerly 049.329) **AND NURS 3300** (formerly 049.330) have been completed and the first term of NURS 3280 (formerly 049.328) has been successfully completed.

Special permission is not required to register for the fourth-year courses, provided the above criteria are met.

Registration in NURS 4270 (formerly 049.427) Clinical Nursing Practice V

Fall term section:

- Spaces will be held for all students requiring the course in fall term, except those blocked from registering because of deficiencies in immunization/ CPR. The balance of the space will remain available.
- Eligible students will be required to register in fall term section until all available space is filled.
- Winter term space will be closed until all spaces in fall term are filled, with the exception of students registered in NURS 3300 (formerly 049.330) in fall term (those who have already completed NURS 3280 (formerly 049.328), NURS 3310 (formerly 049.331) and NURS 3320 (formerly 049.332)). These students will be allowed to register in winter term.

- Students may not withdraw from NURS 4270 (formerly 049.427) once registered and will only be removed by the registrar or student advisors with valid documentation and approval.

Winter term section:

- When fall term is filled, space will then release in winter term.
- Students registering after fall term space is full will be required to register in winter term.

Space may be limited to the extent that students who do not register in NURS 4270 (formerly 049.427) during the initial access period might not be accommodated in this course, and consequently might have to wait until the next academic session.

Failing or withdrawing from required course(s)

Students' usual progression through the program may be delayed by failing or withdrawing from a required course. Under these circumstances, students may be required to withdraw from courses for which they received permission to take out of sequence. Students should note that if they have been given permission to "work ahead" on courses, and then withdraw from or fail a course in their current year of Nursing, the permission for the "work ahead" course(s) may be revoked.

Students who fail a course are expected to repeat that course during the next session, and are not normally permitted to proceed to the subsequent year of the program until the course has been successfully completed.

Refer to the University of Manitoba *Undergraduate Calendar* for the new policies on voluntary withdrawal and failures in nursing courses.

Continuance Following Interrupted Registration

Students who discontinue registration in the Faculty of Nursing (interrupting their studies without formally requesting a leave of absence) and request continuance must consult a student advisor. The advisor will inform the student of the procedure.

Students who formally withdraw from the Faculty of Nursing and who do not attend another faculty or institution and request, within five years of withdrawal (non-activity in the Faculty of Nursing), to re-enter the Faculty of Nursing will be advised to forward such request to the Associate Dean, Undergraduate Programs. The student will be advised of advanced standing, if any, that the student may receive. Course requirements for degree completion will be determined upon the student's re-entry to the faculty. Students who request to return to the Faculty of Nursing more than five years after withdrawal (i.e. non-activity in the Faculty of Nursing) must re-apply through Admissions. Students who attend another faculty or institution following withdrawal from Nursing must re-apply through Admissions. Note the policy in the General Calendar re transfer of credit.

Distance Delivery

Registration for Distance Delivery courses is done through Aurora Student. Independent study refers to course delivery by correspondence; group-based refers to studying independently as well as having scheduled audio-conference sessions; and net-based study refers to course delivery through the World Wide Web. **Nursing courses available by Independent Study**

through Distance Delivery are restricted to Registered Nurses. To obtain a Distance Education Program Guide, phone (204) 474 8011/8012 or (204) 474 8997.

Course Section Numbers

Read the timetable carefully and ensure you are registered in the correct section. When more than one section of a nursing course is listed (e.g. L01, A20, A30), it may indicate different programs or delivery sites or delivery mode.

NOTE: Normally A20/21 sections are restricted to BPRN students; A41 is restricted to UCN Joint Program students; A50 is restricted to RRC/UM Joint Program students; A15 are nursing electives that are available to all students.

Attend the Correct Section

Students are required to attend the section of the course in which they are registered. Each year a number of students are assigned "F" grades in courses in which they have actually attained a passing grade. In most cases, this is because they have registered in one particular section and attended another section of the same course. To prevent this:

- Double check the lecture section
- Check to ensure you are in the right section.
- If your name does not appear on the instructor's computerized class list, you are not registered in that section. **Changes MUST be finalized before the end of the revision period.**

Students registered for a section or a course in which they are not entitled to space may be removed without notice. Any resulting fees incurred are the responsibility of the student. It is the student's responsibility to attain space in the correct section or course.

Inter-Faculty Option in Aging

The Inter-Faculty Option in Aging is available to all students registered in Nursing at the Winnipeg site.

The Inter-Faculty Option in Aging includes required and elective courses for a total of 18 credit hours. Please note this option can be completed as part of program requirements. Refer to the current *Undergraduate Calendar* Faculty of Nursing chapter for information.

Required Courses: 6 credit hours

NURS 2610 (formerly 049.261). Health and Physical Aspects of Aging. This course will be offered in fall term, Tuesday evening 6:30 p.m. to 9:30 p.m. This course may also be offered as PHED 2610 (formerly 057.261)

HMEC2650 (formerly 028.265) Social Aspects of Aging. This course will be offered in winter term, Tuesday evening 6:30 p.m. to 9:30 p.m. This course may also be offered as SWRK 2650 (formerly 047.265) or IDES 2650 (formerly 051.265) or REC 2650 (formerly 123.265).

Elective courses: 12 credit hours

Students select 12 credit hours of aging-related courses: at least 3 credit hours of these must be from those offered within Nursing (not including NURS 2610 (formerly 049.261)). Students are encouraged to select elective courses from the other participating units in the Inter-faculty Option in Aging: Arts, Architecture (Interior and Environmental Design), Human Ecology, Physical Education and Recreation Studies, and Social Work. Space is reserved for students in the participating faculties during the initial access period. Students in University 1 will have access to these courses at the end of initial registration.

Students will monitor their own progress through the Inter-faculty Option in Aging. Consult a nursing student advisor as you complete each option in aging course to ensure your file is updated and you are meeting the requirements of the option. Students who complete the Inter-faculty Option in Aging will have a comment placed on their transcript indicating successful completion. Contact a student advisor for information.

Reserve/Service Courses

The Faculty of Nursing has reserved spaces in some Arts and/or Science courses required for nursing. These courses are listed in the timetable under "Service/Reserved Courses," following the Nursing courses.

SECTION 3: Baccalaureate Nursing Program Information

Revised Baccalaureate Nursing Program (effective Fall 2006)

The revised curriculum will be phased in gradually, as the existing curriculum is phased out over the next three years. NURS 2140 (formerly 049.214) Health Promotion of Individuals; NURS 2150 (formerly 049.215) Facilitation of Self Care; NURS 2160 (formerly 049.216) Introduction to Legal and Ethical Foundations of Nursing Practice and NURS 3270 (formerly 049.327) Health Promotion in Families will be offered for the last time in 2006-2007.

Students should check the website and the board across from HG260 for information related to the Revised Baccalaureate Nursing Program. If students require clarification on how the program changes will affect them, they should contact a student advisor.

First Week of Classes

All year 2 students registered in clinical courses (NURS 2180 (formerly 049.218) Clinical Nursing Practice I or NURS 2190 (formerly 049.219) Clinical Nursing Practice II are expected to attend mandatory orientation SP5, 2006 (students in Tuesday/Wednesday clinical) and SP6, 2006 (students in Thursday/Friday clinical). Location will be available on the website and on the bulletin board across from HG260.

The Faculty of Nursing reserves the right to revise student's registration as necessary to fully utilize clinical and/or lab space.

Classes commence Thursday, September 7, 2006.

• **Second year students and students in theory courses should attend classes as scheduled.** Students should attend the orientation for the year in which they are doing clinical.

• **Reminder:** lectures and labs in NURS 2120 (formerly 049.212) – Health Assessment, and NURS 2130 (formerly 049.213), NURS 3280 (formerly 049.328) Nursing Skills labs will start the week of September 11, 2006. Check the website and bulletin boards for details.

• All Year 3, and 4 students are required to be in attendance for the first week of classes for orientation daily from 8:30 a.m. to 4:30 p.m.

The Faculty of Nursing does not guarantee students will obtain space in courses in desired sections. Please read your timetable carefully.

Fort Garry Campus

Please Note: Health Assessment NURS 2120 (formerly 049.212), and Nursing Skills NURS 2130 (formerly 049.213) and NURS 3280 (formerly 049.328) do not start until the week of September 11, 2006. Clinical orientation information is posted on the web and on the bulletin board across from Helen Glass 260 for details. Clinical orientations are mandatory, students are required to attend clinical orientations the first week of class as follows:

First year students attend classes as scheduled.

Students registered in NURS 2180 (formerly 049.218) Clinical Practice I or NURS 2190 (formerly 049.219) Clinical Practice II in fall term on Thursday/Friday rotation **must attend clinical orientation on TBA.** Details will be posted outside HG260 and/or on the web. Students registered in NURS 2120 (formerly 049.212) Health Assessment, NURS 2130 (formerly 049.213) skills **and/or** NURS 2180 (formerly 049.218) Clinical Practice I or NURS 2190 (formerly 049.219) Clinical Practice II in fall term on Thursday/Friday rotation will attend continued orientation on September 7 and 8 2006. Details will be posted outside HG260 and/or on the web.

Students registered in Tuesday/Wednesday clinical rotation in fall term (NURS 2180 (formerly 049.218) Clinical Practice 1 or NURS 2190 (formerly 049.219) Clinical Practice II) and NURS 2120 (formerly 049.212) Health Assessment, NURS 2130 (formerly 049.213) skills **must attend clinical TBA.** Details will be posted outside HG260 and/or on the web. These students will continue clinical orientation September 12 and 13, 2006.

Students registered in Thursday/Friday clinical rotation in fall term (NURS 2180 (formerly 049.218) Clinical Practice 1 or NURS 2190 (formerly 049.219) Clinical Practice II) and NURS 2120 (formerly 049.212) Health Assessment, NURS 2130 (formerly 049.213) skills must attend clinical orientation TBA. Details will be posted outside HG260 and/or on the web. These students will continue clinical orientation September 7 and 8, 2006.

Students registered in NURS 3300 (formerly 049.330) Clinical Practice III (Restoration) or NURS 3320 (formerly 049.332) Clinical Practice IV Tuesday/ Wednesday in fall term will attend scheduled NURS 3280 (formerly 049.328) and NURS 3290 (formerly 049.329) or NURS 3310 (formerly 049.331) lectures on September 7 and 8, 2006 where initial discussion regarding the clinical will be held. Details will be posted outside HG 260 and/or on the web. **Please note there are additional lectures in NURS 3290 (formerly 049.329) and NURS 3310 (formerly 049.331) September 12, 13, 19, and 20.**

Students registered in NURS 3300 (formerly 049.330) Clinical Practice III (Restoration) or NURS 3320 (formerly 049.332) Clinical Practice IV (Maintenance) Thursday/Friday in fall term will attend scheduled NURS 3280 (formerly 049.328) and NURS 3310 (formerly 049.331) or NURS 3290 (formerly 049.329) lectures September 7 to 15, where initial discussion regarding the clinical will be held. Details will be posted outside HG 260 and/or on the web. **Please note there are additional lectures in NURS 3290 (formerly 049.329) and NURS 3310 (formerly 049.331) September 7, 8, 14 and 15.**

Students registered in NURS 4270 (formerly 049.427) Clinical Practice V in fall term should attend orientation September 7, 2006 and theory lectures on September 8. Details will be posted outside HG 260 and/or on the web. **Note – the site selection form can be found on the web and must be returned to the course leader by August 25, 2006.** Other fourth year students should attend scheduled classes.

Criminal Record and Child Abuse Registry Check

Refer to the General Calendar.

CPR

Students admitted in 2006/2007 who are deficient in immunization and/or CPR at August 1st will NOT be allowed to attend classes.

Students must re-certify their CPR at the Basic Rescuer level in **April or May annually** as all CPR must be valid throughout the entire academic year - September 1 to April 30th.

All returning students in the four year program must submit CPR documentation to the Student Services Assistant or the Registrar **by June 1**. Students deficient in immunization and/or CPR documentation as of June 2 will be **blocked** from the registration system and will only be permitted to register **after** the initial access period (August 17, 2006) **and after** all documentation has been received. **Reminder: Space will not be reserved during initial registration period for students with documentation deficiencies as of June 2.**

All returning students in the Baccalaureate Program for Registered Nurses are responsible for maintaining current CPR certification. They are not required to submit documentation to the Faculty of Nursing.

Hold Status

Students deficient in CPR and/or immunization documentation will be placed on **hold** and will not be permitted to attend classes until documentation is submitted. **Space will not be reserved in the initial registration period if documentation is not submitted by the deadline date.**

Consult the current University of Manitoba Undergraduate Calendar for information regarding "hold status".

Clinical Practice

NOTE: Students must be registered in all clinical courses (for both fall term and winter term) **no later than August 23, 2006**. Every effort will be made to accommodate eligible students who register for clinical courses by the specified deadline. However, available spaces for registration in clinical courses is agency dependent and therefore space cannot be guaranteed. In order to register for clinical, students' CPR and/or Immunizations must be current, and proof thereof must have been submitted to the Faculty of Nursing. **Space will not be reserved for students in the initial registration period in any course if documentation is not submitted by the deadline date.**

Clinical times may vary depending on the clinical setting.

Students are required to keep the full day (i.e. 7 a.m. to 10 p.m.) available on the days clinical practice is scheduled. **Therefore, students may not take a course that has lectures on a clinical day or evening. Preparation for clinical practice may be expected the day prior to clinical. Students should keep a few hours free the evening before clinical to do preparation for the following day.** This is especially important in years 3 and 4.

Third year students eligible to work ahead on NURS 4170 (formerly 049.417)/NURS 4190 (formerly 049.419)/ NURS 4280 (formerly 049.428) are reminded that third year clinical courses are their first priority. Students having difficulty with courses and/or course load are expected to withdraw from the 4th year courses and successfully complete 3rd year courses.

Students returning after one year or more of absence from clinical or nursing skills courses are required to complete a demonstration of psychomotor skills competency in the skills lab. Competency must be demonstrated *prior* to clinical attendance. The demonstration must be completed by July 1 for fall term and by November 1 for winter term.

Clinical Locations

Students are expected to travel for clinical rotations and should be available for evening or weekend practice. The Faculty uses evening and weekend hours for some clinical groups. Travel to clinical agencies is expected and is the responsibility of the student. For Fort Garry students, agencies are located in Winnipeg and surrounding towns.

NURS 4290 (formerly 049.429) SENIOR PRACTICUM

All students registering for NURS 4290 (formerly 049.429) should be aware there are orientation / information sessions for this course scheduled in the term prior to the term you are taking this course. Note: students cannot withdraw from this course via the registration system and must contact the registrar or student advisors after contacting the course leader in the event they are not completing this course.

All courses in the curriculum must be completed prior to starting the final course, Clinical Practicum NURS 4290 (formerly 049.429).

As indicated in the General Calendar all courses in the program are prerequisite to Clinical Practicum NURS 4290 (formerly 049.429); therefore, students will not be permitted to take courses concurrent with NURS 4290 (formerly 049.429).

If you require clarification on how this may affect your progress through the program, please make an appointment with a Faculty of Nursing student advisor.

September-November Section

Students taking the September-November section of NURS 4290 (formerly 049.429) will register for this course in the initial registration period. These students should expect to attend information sessions for NURS 4290 (formerly 049.429) in summer term and should watch the bulletin board across from HG260 for scheduled sessions.

January-March Section

Students taking the January-March section of NURS 4290 (formerly 049.429) will register for this course in the initial registration period. These students should expect to attend orientation sessions for NURS 4290 (formerly 049.429) in fall term and should watch the bulletin board across from HG260 for scheduled sessions.

May-July Section

Students completing their final practicum NURS 4290 (formerly 049.429) during the May-July session will register for this course after October 15, 2006. This course is registered as Summer Session 2007. Students must access "Distance Delivery Summer Session" in order to add this course. Therefore, when registering for your other courses in regular session, when asked if you will be graduating this session, respond - **NO**. Orientation/information sessions will be held in January/February 2007.

SECTION 4: Baccalaureate Program for Registered Nurses Information and Policies

Early registration is encouraged to avoid disappointment and/or course cancellation due to low enrolment. Students in the Baccalaureate Program for Registered Nurses should register in *both* fall term and winter term courses during the initial registration period. Fees for fall term courses **ONLY** are due in September.

Policies regarding immunization, CPR, and CRNM registration apply to **all** Registered Nurses in the program. See Immunization, Section 2. Nurses must maintain active practising membership with the College of Registered Nurses of Manitoba as a requirement of the Baccalaureate Program for Registered Nurses. The Faculty of Nursing will verify membership status direct-

ly with the College of Registered Nurses of Manitoba (CRNM) by January 15 annually.

Those students who are outside the province of Manitoba must provide the Student Services Assistant or the Registrar with proof of current registration annually.

NURS 2110 (formerly 049.211) Health Assessment of Individuals by Independent Study: Although this course is by independent study, students are required to attend three workshops and a practical examination at Fort Garry Campus or another designated site. Alternative arrangements can be made for those studying at a distance.

NURS 3200 (formerly 049.320) Nursing Individuals and Families with Long Term Illness and Disability and/or NURS 3230 (formerly 049.323) Perspectives on Mental Health Nursing: It is recommended students do not register for NURS 3200 (formerly 049.320) and/or NURS 3230 (formerly 049.323) concurrently due to the heavy time commitment for the clinical practice component.

NURS 4210 (formerly 049.421) Independent Study In Nursing Practice: Students registering for NURS 4210 (formerly 049.421) must have attended an information session on the objectives for this course or must contact the leader at least 3 months prior to the start of the term in which the course is offered to discuss their proposal.

Information Sessions: Information sessions are held approximately 3 months prior to the start of the course. Students should check the BPRN News section of the Faculty of Nursing web page for dates of upcoming information sessions: www.umanitoba.ca/faculties/nursing/programs/bprn or contact the BPRN Student Advisor at (204) 474 6733.

Clinical Practice in Courses NURS 3200 (formerly 049.320)

Clinical experience for this course must be arranged by May 1, 2006 for fall term and by September 30, 2006 for winter term. Contact the placement officer at 474 6266 to discuss opportunities for clinical experience.

Registration for these courses WILL BE CLOSED by:

- August 23, 2006 for courses beginning September 2006.
- November 1, 2006 for courses beginning January 2007.
- January 31, 2007 for courses beginning May 2007.

Web Based Delivery

Students should be aware their fees must be paid and processed in order to access a web based course. When fees are paid, access to web based courses begins on the first day of the term. Registration by August 15 for fall term and November 15 for winter term will ensure receipt of the course information from the professor by the course start date. When a student is placed on hold access to web based courses is interrupted.

SECTION 5: Collaborative Adult Intensive Care Courses

Students admitted to the Baccalaureate Program for Registered Nurses may register for NURS 3240 (formerly 049.324) Adult Intensive Care Nursing 1, and NURS 3440 (formerly 049.344 or 090.324) Principles of Disease Related to Adult Intensive Care without permission. Space is limited.

NOTE: Registration in the additional Adult Intensive Care courses requires completion of an application form available from the CAICN Assistant, Adult Intensive Care Nursing Courses; call (204) 474 6266 for further information.

Special students in the Faculty of Nursing or Extended Education must obtain permission to register for Collaborative Adult Intensive Care Nursing courses. For further information, call (204) 474 6266. Once permission has been obtained, students register for the approved course(s) through the Registration System.

Collaborative Adult Intensive Care Nursing courses are available for challenge for credit *only* by students enrolled in the Baccalaureate Program for Registered Nurses. For information, call the BPRN advisor at: (204) 474 6733.

SECTION 6: Registration Information

All newly admitted U of M students must access the web to determine their exact access time. Refer to the Registration Information section at the front of this *Registration Guide* for further direction.

Initial Registration Period

Students are referred to the chapter, "The Registration System: Aurora Student, Section 3.

Timetable Patterns/Layouts

Students registering for a full schedule of courses, may register for a timetable pattern which will automatically register all the courses simultaneously.

Timetable patterns and timetable layouts will be posted at

http://www.umanitoba.ca/faculties/nursing/programs/reg_info/index.html, as well as on reserve in the Education Library and outside HG 260.

SECTION 7: Helpful Hints

Registration

Nursing students should register for **all** their courses (i.e. fall term and winter term) during the Initial Access Period.

Before registration begins: Students requiring help with their PIN number should contact Registrar's Office at (204) 474 9420 for assistance.

Read through the steps outlined in the Registration Section of this Guide carefully at least once so you understand the system.

It is recommended that you access the registration system during your initial access time to facilitate space in preferred courses and/or sections.

It is strongly recommended after every "drop" or "add" transaction, you check your courses, to ensure the transactions you intended did occur.

The Nursing Registrar is unable to enrol you in courses which are full.

NOTE: Because the system is "on-line", as students drop and add sections in lectures, space may become available at a later date. You may access the system several times to check for space.

Special Students may Access Nursing Courses with Written Permission as Follows:

(other than adult intensive care special students)

Space in nursing theory courses is available only to Registered Nurses in other faculties as follows:

Fall term Courses:

Teleconference sections: During the Initial Access Period.

Independent Study sections: Beginning July 24, 2006.

On site sections: Beginning August 23, 2006.

Winter term Courses:

Teleconference sections: During the Initial Access Period Independent Study sections: Beginning October 1, 2007.

On site sections: Beginning November 1, 2007.

Registration Guide Changes

While the *Undergraduate Calendar* and other sections of the *Registration Guide* provide additional information, also note the following:

Any information about new courses or sections of courses which may have been added or deleted from timetables or changed since the *Guide* was printed will be available by web search.

Follow the instructions in the *Guide* under "Other Functions" for timetable updates. Updated timetables are also available through the UM home page at www.umanitoba.ca/.

Required Courses (Summer Session)

Students are urged to register for required courses during the fall and winter terms. There is no guarantee required courses will be offered during summer session.

Voluntary Withdrawal

Students are requested to discuss their plans with a student advisor before withdrawing from required courses.

Faculty of Nursing students have a maximum of 34 credit hours from which voluntary withdrawal will be permitted.

Voluntary withdrawal dates are listed in the Academic Schedule of the current *Undergraduate Calendar* and in the Fee Refund Section of this *Guide*.

The dates for Voluntary Withdrawal and the Refund Schedule are two different things. Consult the appropriate sections of this guide for details and dates.

Letters of Permission

Students who wish to take a course at an institution other than U of M must request a Letter of Permission. The request and payment should be made through the Registrar's Office. Approval is required at least one month prior to the commencement of classes at the other institution. The application for a Letter of Permission form must be processed by Registrar's Office and forwarded to Faculty of Nursing for approval before the actual Letter of Permission is produced. The Letter of Permission is then sent to the other institution providing the basis for admission. Allow ample time for processing. Refer to the regulations in the current *Undergraduate Calendar*.

Students are responsible for ensuring that a transcript of the course(s) taken on a Letter of Permission is submitted to the Registrar's Office. Students registered through a Letter of Permission with Registrar's Office must advise the Registrar's Office if they do not complete the course. If students do not advise the Registrar's Office, an "F" will be recorded on their transcript.

Final Examinations

You must be available for final examinations.

Refer to examination information in the current Undergraduate Calendar.

Both preliminary and final examination timetables are available at website: www.umanitoba.ca.

Since some examinations are scheduled and/or arranged by the instructor, please ensure you obtain the correct date, time, and location from the instructor. **Double check the information carefully!**

Deferred Examinations

If you are unable to write your final examination because of illness or other disability:

- **You must inform your instructor;**
- **You may apply for a deferred examination through a Faculty of Nursing Student Advisor, no later than seven days after your final scheduled examination.**
- **Either a medical statement signed by a doctor or other appropriately signed statement attesting to your inability to write the final examination on the scheduled date is required.**
- **Permission to write a deferred final examination is granted or denied by the Associate Dean, Undergraduate Programs, Student Affairs, Faculty of Nursing.**

Limited Access Courses

Some faculties have a limited access policy. This policy applies to students who have previously voluntarily withdrawn (within the previous two sessions) from or are required to repeat a course (Received less than a "C"):

Consult the guidelines relevant to the teaching faculty of the course. The Faculty of Nursing is governed by Limited Access Policy. Therefore, registration will be available to all Nursing students with limited access following the initial access period, (i.e. August)

Lab exemptions

If you are repeating a course with a required lab which was successfully completed in a previous session, consult the teaching department/faculty to see if a lab exemption is available.

Obtain the required form from the teaching department/faculty and forward it to the registrar or a student advisor, Faculty of Nursing.

When registering for the course, enter B98 for fall term lab section and B99 for winter term lab section.

Changes in the Timetable

The timetable is published on Aurora Student, the faculty reserves the right to make changes without notice, including cancellation and/or addition of courses and/or sections.

Faculty of Pharmacy

INITIAL ACCESS TIMES

Students are referred to the chapter, The Registration System: Aurora Student, Section 3.

Registration and General Information

Mandatory Orientation – there is no formal orientation for Pharmacy Students.

Student Responsibility

Students are advised to carefully review the Pharmacy chapter of the *Undergraduate Calendar* to ensure compliance with degree program requirements.

It is your responsibility to know all relevant regulations, policies and practices that affect you.

Final completion of degree requirements is the responsibility of the student.

The University of Manitoba Registration System is not a degree audit system and the onus is on students to make sure they are selecting courses appropriate to their academic program.

Registration Assistance

If you have questions or problems with your registration, call the general office of the Faculty of Pharmacy at (204) 474 9306.

Course Start and End Dates

For lectures, labs and experiential rotations, please check the Academic Schedule at the front of this book.

First Year Student Information

It is important that you register at your initial access time to guarantee that you get space in the required Science courses.

The courses in the first year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hours
Chemistry	CHEM	2210	3
Chemistry	CHEM	2360	3
Chemistry	CHEM	2370	3
Pharmacy	PHRM	1000	1
Pharmacy	PHRM	1100	5
Pharmacy	PHRM	1300	4
Pharmacy	PHRM	1430	3
Pharmacy	PHRM	1700	1
Microbiology	MBIO	2100	3
Anatomy	ANAT	1030	3
Physiology	PHGY	1030	6

Total Credit Hours for first year: 35

Second-Year Students

The courses in the second year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit hours
Pharmacy	PHRM	2100	3
Pharmacy	PHRM	2220	6
Pharmacy	PHRM	2270	6
Pharmacy	PHRM	2280	3
Pharmacy	PHRM	2310	4
Pharmacy	PHRM	2420	3
Microbiology	MBIO	3010	3
Pharmacology	PHAC	2100	6
Pharmacy	PHRM	2700	2

Total credit hours for Second Year: 36

Third Year Students

The courses in the third year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit hours
Pharmacy	PHRM	3100	2
Pharmacy	PHRM	3210	3
Pharmacy	PHRM	3220	3
Pharmacy	PHRM	3310	10
Pharmacy	PHRM	3320	3
Pharmacy	PHRM	3430	3
Pharmacy	PHRM	3500	4
Pharmacy	PHRM	3510	2
Pharmacy	PHRM	3640	3
Pharmacy	PHRM	3700	4

Total credit hours for Third Year: 37

Fourth Year Students

Registration for fourth year students:

Courses common to all fourth year students are:

Dept. Name	Dept. Code	Course No.	Credit hours
Pharmacy	PHRM	4230	4
Pharmacy	PHRM	4310	4
Pharmacy	PHRM	4450	3
Pharmacy	PHRM	4470	3
Pharmacy	PHRM	4700	10
Pharmacy	PHRM	4800	10

Total credit hours for fourth year is 34.

Total program credit hours: 142

Faculty of Physical Education And Recreation Studies

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

B.P.E./ B.Kin. Students

Students are referred to the chapter, The Registration System: Aurora Student, Section 3.

Students admitted to the B.P.E. between 1987 and September 1997

Year 1 (P): 0 to 34 credit hours

Year 2 (P): 35 to 66 credit hours

Year 3 (P): 67+ credit hours

(maximum attempts: 138 credit hours).

Students admitted to the B.P.E. program September 1998 only

Year 1 (PI): 0-23 credit hours

Year 2 (PI): 24-62 credit hours

Year 3 (PI): 63+ credit hours

(maximum attempts: 138 credit hours).

Students admitted to the B.P.E. program for September, 1999, or later

Year 2 (PE): 24 to 64 credit hours

Year 3 (PE): 65+ credit hours

(maximum attempts: 132 credit hours).

Students admitted to the B.KIN. program (Health and Wellness or Exercise and Sport Science) for September 1999, or later

Year 2 (B): 24 to 59 credit hours

Year 3 (B): 60 to 89 credit hours

Year 4 (B): 90+ credit hours

(maximum attempts: 158 credit hours).

Students admitted to the B.KIN. program (Athletic Therapy) for September 1999, or later

Year 2 (B): 24 to 60 credit hours

Year 3 (B): 61 to 90 credit hours

Year 4 (B): 91+ credit hours

(Maximum attempts: 178 credit hours).

B.R.M.C.D. students

Your day and time of access to the UMREG/WEBREG system (see above) is determined by your year in the program.

Year 1: 0 to 60 credit hours

Year 2: 61 to 90 credit hours

Year 3: 91+ credit hours

(maximum attempts allowed is 161)

SECTION 1: Information for All Students

Degree Requirements

It is the student's responsibility to have read this *Undergraduate Calendar and Registration Guide* carefully, and to know all relevant university and faculty regulations, policies and practices. Final completion of degree requirements is the responsibility of the student.

NOTE: The B.P.E. and B.KIN. programs require six credit hours of English literature, normally taken in University 1, to meet the written requirement.

Faculty Advisors

If you require further registration information *after* reading both this *Registration Guide* as well as the current *Undergraduate Calendar*, contact one of the following Physical Education and Recreation Studies staff members:

Kate Swallow Yee, Undergraduate Program Administrator
telephone (204) 474 9277

Patti Dickieson, Student Advisor
telephone (204) 474 9748

Special Students/Visiting Students

Those registering as Special Students and Visiting Students in the B.P.E., B.KIN., and B.R.M.C.D. Programs must make an appointment with an advisor in order to register.

Orientation Sessions: Physical Education and Kinesiology Students

All students entering the B.P.E./ B.KIN. degree programs for the first time must attend an Orientation Session. Students will not be able to register by telephone or web without attending one of the following sessions:

Wednesday, July 5th, 2006; 6:30 – 9:00 p.m.; 136 Frank Kennedy Building
Friday, July 7th, 2006; 10:00 – 12:30 p.m.; 136 Frank Kennedy Building
Bring your your *Undergraduate Calendar and Registration Guide*.

At this session students will receive confirmation of transfer credits from previous university courses. Upon acceptance into our faculty, students from other provinces will be informed by telephone, fax, or email of their transfer credits.

Orientation Sessions: Recreation Management & Community Development Students

Returning students should contact their advisor should they have any questions about their curriculum. All first year students are required to attend a Recreation Management & Community Development Orientation Session which will be held Wednesday, September 6, 2004, 9 a.m. – 1 p.m. Watch for announcements.

Limited Access

Limited access policy conditions do not apply to Physical Education and Recreation Studies courses. However, students in Physical Education and Recreation Studies who take courses in other faculties are governed by their limited access policy.

Voluntary Withdrawals

While course changes a student may make prior to the last date for course changes will not show on the final transcript, students are responsible for initiating withdrawals, and for doing this in the required manner and by the deadline specified in the Academic Schedule of the current *Undergraduate Calendar*.

Interfaculty Option in Aging

An Interfaculty Option in Aging is available to students registered in Physical Education and Recreation Studies and several other faculties. Students are requested to indicate to a faculty advisor their selection of the option at the time of registration.

The Option includes required and elective courses for a total of 18 credit hours:

Required Courses (6 credits):

XXXX 2610 Health and Physical Aspects of Aging: Fall Term, Tuesday evening 6:30-9:30.

XXXX 2650 Social Aspects of Aging: Winter Term, Tuesday Evening 6:30-9:30.

Elective Courses (12 credits):

Students select 12 credit hours of aging-related courses of which at least three credit hours of these are taken within the Faculty of Physical Education and Recreation Studies. Students are encouraged to select elective courses from the other five participating units in the Option in Aging: Arts, Human Ecology, Nursing, and Social Work. A list of elective courses from these units is available from faculty advisors.

Students must monitor their own progress through the Option. Students who successfully complete the Option in Aging have a "comment" placed on their transcript.

Challenge for Credit

PHED 1500 Foundations of Physical Education and Exercise Science is open to challenge for credit. Students must demonstrate their competence in this course before challenging (e.g., students with significant professional experience and training who may have the necessary knowledge; transfer students who may have completed several related courses at other institutions that are not directly equivalent to PHED 1500). The Academic Schedule in the front section of the Calendar contains the relevant registration deadline dates appropriate to challenge for credit. Any student wishing to challenge a course for credit should contact the Physical Education General Office.

Probation

Students whose last assessment was "On Probation" should review the B.P.E./B.KIN. scholastic standards in the current *Undergraduate Calendar*. Students on Probation will be blocked from registering until they have contacted Kate Swallow Yee, Undergraduate Program Administrator, (474-9277). This must be done as early as possible before July 5, 2006.

Practical Courses

The following practical courses are two credit hours in value, and are offered for one term (12 weeks in length):

- PHED 1420 Principles of Human Movement Education
- PHED 1360 Aquatics
- PHED 1380 Track and Field
- PHED 2650 Early and Middle Years Physical Education
- PHED 3840 Wilderness Skills; this course is offered only during Intersession.

All remaining practical courses are scheduled for *one quarter of the school year only* (i.e. six weeks or equivalent). Be sure to check in which quarter you are registered. *No special dispensation will be given to students who misread this information.*

First Quarter: September 7, 2006 to October 23, 2006.

Second Quarter: October 24, 2006 to December 8, 2006.

Third Quarter: January 3, 2007 to February 22, 2007.

Fourth Quarter: February 23, 2007.

Aquatics (PHED 1360)

A competency level in Aquatics is required for graduation. This may be demonstrated by passing PHED 1360 - Aquatics 1, or by presenting evidence of having achieved at least RLSS Bronze Medallion or equivalent. Presentation of RLSS certification does NOT equal credit hours; 2 ch. hrs. of activity must be completed in lieu of aquatics.

Facility Use Pass

(Many activity courses require a facility use pass).

Students may report to the Frank Kennedy Customer Service Desk to obtain or renew a facility pass by presenting a processed fee statement. This should be done as soon as possible, before classes begin.

Theory Courses

In planning a timetable always work from required courses that are offered in one slot only (e.g., PHED 2310, etc.) to courses with more than one slot available.

Lab Sections

Where two lab sections are offered in Physical Education courses (PHED 2310, PHED 2320, PHED 3060 and PHED 3430) choose either B01 or B02.

Education Teachable Minors

Students who intend to apply for admission to the Faculty of Education after completing their B.P.E. degree should review the information in the current *Undergraduate Calendar* and consult with an Education and Physical Education advisor to ensure they are selecting an appropriate teachable minor, every year due to changes in programs and curriculum. Physical Education students who intend to pursue the Early or Middle Years concentration in Education (as a Physical Education major) must complete the Early and Middle Years B.P.E. requirements, formerly titled Elementary Stream.

Note: No minor in Physical Education is offered.

Field work Fees

- Foundations of Physical Education (PHED 1500): TBD
 - Movement Principles and the Expressive Arts (PHED 3410): TBD
 - Outdoor Activities (PHED 3150): TBD
 - Golf (PHED 3650): TBD
 - Cross Country Skiing (PHED 3670): TBD
 - Camping courses (PHED 3880 and PHED 3890): TBD
- Any physical education theory or practical course with fewer than ten students registered may be cancelled at the discretion of the coordinator of the B.P.E./B.KIN. degree programs.

Awards

A minimum of 80 per cent of a full regular session workload is necessary for consideration for most awards, including the Faculty of Physical Education and Recreation Studies Medal.

Limitations

Students may not register in PHED 3010, PHED 4350 or PHED 4370 without the consent of the Undergraduate Program Administrator.

Movement Principles and the Expressive Arts (PHED 3410) *must* be taken during the same term as Creative Dance (PHED 3140).

Early and Middle Years Physical Activity (PHED 2650) *must* be taken during the same term as Design and Assessment of Physical Activity (PHED 3100). This applies to Early and Middle Years students, *not* to Senior Year students.

SECTION 2: Information Applicable to Recreation Management & Community Development Students

Transfer students should not register until receiving written confirmation of transfer credits from previous university coursework from the coordinator of the Recreation Management & Community Development degree program, or from Patti Dickieson, Student Advisor.

Newly admitted students to the Recreation Management & Community Development Program must arrange an in-person or telephone orientation with Patti Dickieson by calling (204) 474 9748. **This is a requirement for registration.**

Probation

Students whose last assessment was "On Probation" should review the Recreation Management & Community Development scholastic standards in the current *Undergraduate Calendar*. Students on Probation will be blocked from registering until they have contacted Patti Dickieson, Student Advisor (474-9748). This must be done as early as possible before July 5, 2006.

Awards

A minimum of 80 per cent of a full regular session workload (27 credit hours) is necessary for consideration for most awards, including the Faculty of Physical Education and Recreation Studies Medal.

Field work Fees

Nature-Based Outdoor Recreation/Education 2 (REC 4300): TBD

Selecting Courses

Students continuing in the Recreation Management & Community Development degree program should select courses based on advice received from the faculty advisor. Please contact your advisor to discuss any further information required.

A student's schedule will vary depending on the years to be spent completing the degree requirements. Students taking three years, should enrol in fieldwork in their second term, second year. Students taking two years should enrol in fieldwork in their second term, final year.

NOTE: REC 3080 Fieldwork Practicum, although taken in Term 2, is listed as L01.

In preparing your program remember the following:

Select Recreation Management & Community Development core curriculum courses, first.

Select general education courses required to complete degree program.

There is reserved space in the Faculty of Arts, Department of Psychology, for PSYC 2290 Child Development, PSYC 2410 Social Psychology 1, and PSYC 2420 Social Psychology 2, and the Asper School of Business MKTG 2210 Principles of Marketing, for Recreation Management and Community Development students.

For details of sections and time slot numbers for these reserves, see the last page of the Recreation Management & Community Development timetable printout following this section.

MKTG 2210 is the prerequisite to the Recreation Management & Community Development's course marketing course REC 4140. Students who plan to take this course, must take MKTG 2210 the previous term. MKTG 2210 may also be used as a general education elective (REC 3860 is also a prerequisite for REC 4140)

Select any courses required for your minor.

Select any minor available from the Faculty of Arts, Family Studies, Science, Music, Physical Education,

Students requiring activity courses select from the Physical Education timetable (for a listing of quarter courses see above). Several spaces are reserved in most activity courses specifically for Recreation Management & Community Development students.

Select any advanced recreation courses you wish to take. Be sure you have the required prerequisites. There are four advanced recreation courses offered in 2005-2006: REC 4120, REC 4130, and REC 4150. An attempt is made to offer advanced recreation electives in alternating years, although this will not always be possible.

Students may not register in REC 4100 or REC 4110 during the regular session without the consent of the Coordinator of the Recreation Management & Community Development degree program.

Students taking the fieldwork practicum during must register for both REC 3070, Fieldwork Seminar, and REC 3080, Fieldwork Practicum. Be sure to register for the correct section and term.

Faculty of Science

Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student", Section 3.

Section 1: Welcome

Welcome to the Faculty of Science. We hope that you have a successful year.

Please feel free to contact a Science Student Advisor when you have questions about your academic situation throughout the year. Advisor availability in Summer 2006 is listed below.

Section 2: Registration

2.1 University 1 Students Transiting to Science for the 2005-2006 Regular Session

"Transiting" is simply the AURORA STUDENT procedure that changes your faculty of registration to Science from University 1. There is no charge for transiting.

If you have completed 24 credit hours or more in University 1, either by the end of the 2005-2006 Regular Session or the 2006 Summer Session, you can "transit" into Science from University 1. If you completed 24 or 27 credit hours, you may transit to Science or remain in University 1 for your next registration, again regardless of your academic performance to date. If you completed 30 hours or more by the end of the 2006 Summer Session, you **must** exit University 1 on your next registration, regardless of your academic performance to date. (For example, even if you have failed 30 hours, you must transit from University 1. You may be admitted to Science "On Academic Warning," and would have to work very hard to improve your academic standing).

For further information and instructions on how to transit, please refer to the chapter, The Registration System: Aurora Student, Section 2.4.

Once you have transited, you will register according to the procedure as noted for "returning" students.

2.2 Have You Been Away for a While?

Students who have been away from Science for more than a year cannot use AURORA STUDENT until they have consulted a Science Student Advisor. The advisor will determine academic progress, registration date and time, and discuss degree plans. Students are strongly urged to contact an Advisor well in advance of the start of registration.

Students who have graduated must re-apply (by July 4) for admission and be academically competitive for admission.

- Students who have attended elsewhere since their last registration in Science must normally re-apply for admission and be academically competitive for admission on all of their previous academic work. July 4 is the application deadline.

Section 3: Registration Dates and Reminders

- Before Mid-July

Review your program requirements as outlined in the *Undergraduate Calendar, Part I of this book*, and see a Science Student Advisor if you have any questions.

Obtain written approvals, including Major and Honours forms, prerequisite waivers, course and term overloads, etc., from your department(s) or

program and deliver them to the Science General Office to insure that they are programmed into your academic record. You may be required to see a Science advisor for final approval, so take note of advisor availability.

Know your registration time. See above for information, and review the registration instructions in Section 2: Getting Started in the front section of this *Guide*.

Note dates that may affect you; e.g., your initial access date and time, when reserved spaces are returned for common use, fee payment deadlines, etc.

- Mid-July Onwards

Register through AURORA STUDENT during your initial access time.

- By September 6, 2006

List your courses and finalize fees after every transaction.

Pay all fees due by the fee payment deadline.

- September 7 - 20, 2006

Classes start Thursday, September 7, 2006

Course changes permitted until September 20, 2006

Determine fees due after each transaction and pay any that are outstanding.

- November 16, 2006

Final Voluntary Withdrawal (VW) deadline for Fall Term courses. For refunds, see dates published in the chapter: Fees, Payments, and Refunds in this *Guide*.

- January 17, 2007

Last date to register for second term half courses.

- March 19, 2007

Last date to VW from Fall/Winter and Winter Term courses. For refunds see the dates published in the chapter: Fees, Payments, and Refunds, in this *Guide*.

Section 4: Science Student Advisor Hours and Availability:

4.1 Contact Information

Science General Office, 239 Machray Hall

Telephone: (204) 474 8256 or

Manitoba Toll-Free 1 800 432 1960, extension 8256

E-mail: Science_Advisor@UManitoba.CA

4.2 Advisor availability during registration

4.2.1. June 2006

Drop in basis: 9:00 a.m. - 4 p.m., Monday to Friday

The Faculty of Science reserves the right to limit intake if demand exceeds time available.

4.2.2 July and August 2006

Daily, drop in basis: 9:00 a.m. - 12 noon.

Usually, the maximum number of students that can be seen in any one day is 40, so students are advised to come early. The Faculty of Science reserves the right to limit intake if demand exceeds time available.

4.2.3 Evening appointments:

Monday, July 10, 5:30 - 8 p.m.

Wednesday, July 19, 5:30 - 8 p.m.

Tuesday, July 25, 5:30 - 8 p.m.

Thursday, July 27, 5:30 - 8 p.m.

Tuesday, August 1, 5:30 - 8 p.m.

Call (204) 474 8256 to arrange an appointment.

4.3 Program Information Sessions

Attendance is recommended for students transiting from University 1 into Science, or who are transferring from another faculty or school or post sec-

ondary institution to Science. Science advisors will explain registration procedures and degree program requirements.

Tuesday, July 11

in 205 Armes Building, 7 p.m. Reserve a spot through the Science General Office, 239 Machray Hall, call (204) 474-8256, or e-mail Science_advisor@UManitoba.ca

Section 5: Science Program Info Applicable to all Science Students

5.1 Student Responsibility

You must insure that you are selecting the correct courses that will enable you to satisfy your degree requirements. See the Science chapter of the *Undergraduate Calendar* to insure compliance with degree program requirements. Final completion of degree requirements is your responsibility. Student Advisors are available to help you with any questions about your academic progress.

5.2 General Program

All students are admitted to and registered in the General degree program unless they indicate otherwise to a Science Student Advisor.

Students in the General program are not required to contact a Science Student Advisor before registration; however, you are strongly advised to do so. A Science Student Advisor can answer any questions about degree progress and entry to professional faculties that may affect your registration.

Students reverting from the Major or Honours program to the General program must consult a Science Student Advisor prior to registration, so that their university records may be changed.

Science Student Advisors may check your degree progress periodically, but such checks are completed after registration. Remember, you are responsible for satisfying all degree requirements.

5.3 Major, Major (Co-operative Option), Honours, Honours (Co-operative Option)

Students must obtain departmental approval and deliver it to the Science General Office prior to accessing AURORA STUDENT. Honours students are reminded that their Fall/Winter Session registration must comply with your program's definition of full-time study. Prior to declaring graduation, Honours and Major students must have their program checked by a Science Student Advisor.

Students entering or changing a program must also see a Science Student Advisor so that eligibility will be checked and university records updated.

Departments may not be able to provide advice by telephone. Also, not all departments have departmental advisors available during all working hours. Contact your department to determine hours of availability.

5.4 Students Continuing in Their Second Degree

Students continuing in a second degree program will register according to their cumulative grade point average (CGPA) at the end of the 2005-2006 Regular Session. If unsure of correct access time please contact AURORA STUDENT, or check the chapter, The Registration System: Aurora Student, Section 3.

5.5 Special Students

Students who have completed a degree may be admitted to Science as Special Students to take courses for their personal interest. Such students will:

Have all courses classified as "SS," which means that courses will not generate a grade point average.

For your initial registration access time, check the chapter, The Registration System: Aurora Student, Section 3.

5.6 Visiting Students

You must have a Letter of Permission from your home university before you can register. Present this letter to the Science General Office to gain access to AURORA STUDENT. For your initial registration access time, check the chapter, The Registration System: Aurora Student, Section 3.

5.7 Students in Special Academic Situations

5.7.1 Academic Suspension

Students returning from either a one or a two year suspension must contact a Science Student Advisor prior to registration. A Science Student Advisor will explain what is needed to remain in good academic standing in the Faculty of Science.

5.7.2 Probation

If your last assessment was "On Probation," you **must** see a Science Student Advisor prior to registration so that you can be advised about your status.

5.7.3 Required to Withdraw

If your last assessment was "Required to withdraw from the Honours or the Major program," you must consult a Science Student Advisor prior to registration. An advisor will discuss your new degree plans, determine your eligibility for your desired program and change your university records accordingly.

5.7.4 Students on "Hold"

If your records are on "Hold" you are prevented from any registration transaction until you have cleared this status.

Section 6: Important Information applicable to all students

6.1 Space Availability and Allocation

Most space in Science and Arts courses except that which is reserved for other faculties and schools is available on AURORA STUDENT from the beginning of the registration period; i.e., space is not filtered in on a daily basis.

Space allocation: AURORA STUDENT will confirm that you have been successfully registered and will assign space for you. It will not allow you to register in a section that is full or unavailable. *Make note of the responses to ensure that the transaction is complete.*

6.2 Repeated courses

Any course in which you have earned a grade of "C" or better cannot be repeated without approval of a Science Student Advisor. Registration in courses that cannot be held for credit with another course previously taken must be done through the Science General Office. Repeated courses are subject to Limited Access.

6.3 Courses offered by other faculties and schools acceptable for credit in Science

Students are reminded that in most cases a maximum of 36 credit hours from outside Science can contribute to degree credit.

The list of other faculties' courses acceptable for credit in Science is printed at the end of the Science chapter *Undergraduate Calendar*. Students in an Honours program and/or other degree students who wish to register for courses not on this list must see a Science Student Advisor. Registration in such courses normally requires written permission of the department offering the course prior to registration. Refer to the other faculties' timetables included in this *Guide* for registration information.

6.4 College Students

Students who are members of St. John's or St. Paul's College must contact their college to determine the status of their membership.

6.5. Other reminders detailed at the front of this Guide

Please check the front sections of this guide for information on:

- university written English and Mathematics requirement
- prerequisites, term loads, timetable conflicts
- Limited Access policies

6.6 What AURORA STUDENT Cannot do:

AURORA STUDENT will not check degree requirements. You are responsible for knowing the requirements of your degree. Consult a Science Student Advisor for advice and assistance if degree requirements are unclear.

You cannot add or change a course classification through AURORA STUDENT. Therefore, if you are an undergraduate student and wish to take a course as a Special Student in your degree, as an Auditor or as a Challenge for Credit, you must add this course in person in the Science General Office within the normal deadlines for such activity.

Section 7: Laboratory

7.1 Registration:

If a course requires registration in both a lecture and a separate appropriate laboratory section, AURORA STUDENT will not permit you to register in that course unless you register for both.

7.2 Exemptions:

If you think you are eligible for a laboratory exemption, you must check with the department offering the course to obtain formal consent of this. Once received, deliver it to your faculty or school office, as an override may be required on your academic record. You must register for the laboratory exempt section.

It is your responsibility to ensure that you are eligible for a laboratory exemption. If you register for one of these courses and it is subsequently determined that you are not entitled to exemption, you will be required to register for a laboratory section. If no space remains available in the laboratory, you will be required to withdraw from the course.

The Department of Chemistry has instituted the following regulations for laboratory exemption:

- valid for two calendar years only
- lab exemption given only one time per course
- laboratory marks are carried forward to the next course attempt
- students are responsible for laboratory questions on test and examinations
- students must earn a minimum of 60% on the laboratory to be eligible for an exemption.

The Department of Microbiology requires that all students obtain a written laboratory exemption and deliver this to their faculty office prior to registration.

Students with laboratory exemptions are subject to Limited Access.

7.3 Laboratory release:

Certain Chemistry and Microbiology courses require that you check out of the laboratory before you withdraw or change lab sections. It is your responsibility to check with the departmental office prior to making any changes to your laboratory registration, after September 15, 2006 and January 10, 2007. Failure to check out of your laboratory might put your academic records on HOLD.

Section 8: Appeals

8.1 Authorized Withdrawal:

Students who have valid and documented reasons for withdrawal, such as medical illness or compassionate circumstances, may be authorized to withdraw without penalty. Authorized withdrawal must be approved by the Faculty of Science General Office.

8.2 Other academic appeals:

Students who believe they have grounds for some academic concessions based on their personal circumstances should consult with a Science Student Advisor. The Office of Student Advocacy, 519 University Centre, 474-7423, Student_advocacy@umanitoba.ca is also available to provide information and assistance.

Section 9: Registration Revisions

9.1 Through AURORA STUDENT

All students (except Auditors) must revise their registration through AURORA STUDENT, except for the addition of courses taken as a special student, as an auditing student or as challenge for credit within a degree program. Your department must approve any changes to your Major or Honours program.

See the inside front cover for deadline dates for course revisions, withdrawals, and fee refunds.

9.2 Major and Honours Students (and Co-Operative Option Students)

You may revise your registration prior to obtaining departmental approval, but you should obtain departmental approval of these changes before classes start. Failure to obtain departmental approval may make you ineligible to graduate. Prior to declaring graduation, your program must be approved by a Science Student Advisor.

9.3 In Person

Only those students who cannot revise their registration through AURORA STUDENT may process revisions in person in the Science General Office, 239 Machray Hall.

Section 10: Departmental Office Information

Biology	208 Buller Building	474 9732
Botany	505 Buller Building	474 8132
Chemistry	350 Parker Building	474 9321
Computer Science	545 Machray Hall	474 8313
Ecology	Z305 Duff Roblin	474 9683
Environmental Science	204 Isbister Building	474 7252
Mathematics	342A Machray Hall	474 8703
Microbiology	418 Buller Building	474 9372
Physics and Astronomy	301 Allen Building	474 9817
Statistics	338 Machray Hall	474 9826
Zoology	Z320 Duff Roblin Building	474 9245

Some departments have established hours when advisors are available. Contact your department to determine when advisors are available.

Faculty of Social Work

Initial Access Times

Students are referred to the chapter, The Registration System: Aurora Student, Section 3.

SECTION 1: Information for All Students

All B.S.W. Fort Garry students in the Faculty of Social Work are required to register through Aurora Student.

Students enrolled in Thompson, Inner City Social Work program, do not register through Aurora Student.

M.S.W. and Pre-M.S.W. students are required to register through Aurora Student. Refer to the Social Work registration information in the Graduate Calendar and Registration Guide. Mail-in registration and/or in-person registrations are not accepted unless the student is overseas at the point of registration.

Student Responsibilities

See the Social Work chapter of Part I, the *Undergraduate Calendar*, in this book. It is your responsibility to be familiar with all the requirements for your degree, to ensure compliance with degree program requirements and to understand all relevant regulations, policies and practices that affect you. The final completion of degree requirements is your responsibility.

Registration and Web Access

Information about how to register through Aurora Student may be found in the chapter, The Registration System: Aurora Student.

Aurora Student checks for course prerequisites and course conflicts. However, it does not check student's course selection to ensure that degree requirements are satisfied. Students should refer to Part I, the *Undergraduate Calendar*, to determine if their degree requirements are satisfied. Should any inconsistencies occur between the Calendar and this Registration Guide, the Calendar shall prevail.

Students Blocked from Registration Include:

Probation: Students whose last assessment was "On Probation" must see the Social Work student advisor and clear their program prior to registering by contacting UMREG by web access as shown in your section of the Guide.

Required to Withdraw: If your last assessment was "Required to withdraw," you must consult the Social Work student advisor.

Students on "Hold" Students who are on "hold" are prohibited from any registration until they have cleared this status with the department concerned (e.g. library, parking tickets, etc.). The Social Work student advisor cannot bypass your "hold" status to permit registration.

Voluntary Withdrawal

Courses dropped during the registration revision period shall not be regarded as VW's and shall not be recorded on an official transcript or student history.

It is not sufficient to merely stop attending the classes. Students who cease attending classes must drop the course through Aurora Student (or in writing for those who were required to register in writing). If you do not withdraw from a course in an appropriate way, a failing grade will be the result.

Authorized Withdrawal: Students who are unable to continue in courses for medical or compassionate reasons may apply for an Authorized Withdrawal (AW).

Students may request an AW by submitting a written request along with supporting documentation to the Committee on Standings of the Faculty of Social Work.

Registration Revisions

All revisions must be made through Aurora Student.

Students are encouraged to complete any registration revisions (i.e. additions, deletions and section changes) prior to the commencement of classes in either term. If you voluntarily withdraw from a course at any time throughout the registration and revision period that space will be made available to other students.

Changing Sections

Students are required to attend the section of the course in which they are registered. Failure to do so may result in a failure being recorded in the course section in which the student is actually registered.

What If the Course I Want to Take Is Full?

The Coordinator of Student Services and Admission/Advising Office will not be able to register you in courses which are full unless you present written permission from the instructor.

Physical space issues many times prevent an instructor from increasing class size. In this event, a student may check with Aurora Student at regular intervals to see if a space has been released by other students who have dropped the course.

Social Work Electives

SWRK 4050 Selected Topics in Social Work: Before you are eligible to register for this course as an elective you must obtain written permission from the instructor and forward it to the student advisor at least five working days before your access day to register through Aurora Student.

Students wishing to register for other Social Work courses as electives towards their degree must make this request to the student advisor in writing no later than July 5, 2006. Include alternatives in the event your first choice is full. Once your Social Work elective selections have been submitted, you may register through Aurora Student on your scheduled access date.

Registration Assistance

If after reading all the instructions, you require assistance with registration, please call one of the following numbers: 474-9152, 474-9356. You may also e-mail the Coordinator of Student Services and Admissions/Advising office at nowakaj@ms.umanitoba.ca or the Student Advisor at bakerm@ms.umanitoba.ca for assistance.

Regulation Governing Student Progress

Faculty of Social Work regulations governing student progress are detailed in the Scholastic Progress statement found in the BSW Student Handbook. Handbooks are available for perusal in the Social Work General Office or on the Faculty of Social Work website www.umanitoba.ca/faculties/social_work.

Requirements for Graduation

Eligibility for graduation is contingent upon:

The successful completion of 72 credit hours of required Social Work courses; successful completion means attaining a minimum grade of "C" in all Social Work courses and a Social Work minimum Cumulative Grade Point Average of 2.50 (C+).

The successful completion of 21 credit hours of electives (beyond the first 30 credit hours for admission). Students admitted after 1997/98, are required to successfully complete three credit hours of written English and three credit hours of Mathematics. The passing grades for electives taken in other faculties or schools are those required by the faculties or schools concerned. A minimum of "C" must be attained in Social Work electives. The minimum Cumulative Grade Point Average required for graduation is also 2.50 (C+).

Total credit hours required for a B.S.W. are 123 (30 credit hours for admission + 21 credit hours of electives + 72 credit hours of required Social Work courses). A minimum Social Work and Cumulative Grade Point Average of 2.50 (C+) is required for graduation. It is the student's responsibility to ensure that all the B.S.W. program requirements are met.

Field Work Instruction Classes: Starting Dates

Students must request a field placement by completing a field selection form at least 75 calendar days prior to the term that they will commence field. Students requesting a summer field placement must request the field placement at least 40 calendar days prior to summer field start. Students who do not meet the deadline cannot be guaranteed a field placement in that term.

All students registered in Field Instruction courses (SWRK 3150 and SWRK 4120) are required to attend Field orientation on Tuesday, September 5, 2006 and Wednesday September 6, 2006. As attendance at Field orientation is mandatory, Field students are not required to attend classes on the 5th and 6th. Information regarding Field orientation will be mailed to each Field student in late August. If more information is required, contact the Field Coordinator at (204) 474-9682.

BSW Student orientation will be held on the afternoon of Tuesday September 5th. It is strongly recommended that all newly admitted BSW students attend this event as important information is provided.

Information for Students Admitted After 1993-1994

All BSW students admitted after 1993/94 will register and complete the new curriculum (See current Undergraduate Calendar and the chapter for Social Work Section for program information).

Field / Focus

Second and Third Year Students Registering for Field Instruction and Field/Focus Courses (SWRK 4200)

Tuesday afternoons are normally reserved for Field. Do not schedule yourself for courses during that time.

Students registering for Field / Focus of Social Work Practice and Field Instruction 1 (SWRK 4200 and SWRK 3150) must add Field Focus of Social Work Practice (SWRK 4200) before adding Field Instruction 1 (SWRK 3150).

Students registering for Field / Focus of Social Work Practice and Field Instruction 2 (SWRK 4200 and SWRK 4120) must add Field / Focus of Social Work Practice (SWRK 4200) before adding Field Instruction 2 (SWRK 4120). On your worksheet remember to add your other courses before entering SWRK 4200 and SWRK 4120. Courses SWRK 4200 and SWRK 4120 must be the last courses to enter onto Aurora Student.

Students in their last year of the Concentrated program (two-year program) who are registering for two sections of Field / Focus of Social Work Practice (SWRK 4200) in addition to Field Instruction (SWRK 3150) and Field Instruction 2 (SWRK 4120), must register in the following manner:

Example: add SWRK 4200 L01
 add SWRK 3150 L01
 add SWRK 4200 L04
Do you wish to repeat course? Respond "yes"
 add SWRK 4120 L01

NOTE: A student cannot register for the same topic twice. In other words, each SWRK 4200 course must be on a different topic. Students cannot drop SWRK 4200 without dropping Field Instruction courses (SWRK 3150 and/or SWRK 4120)

Field / Focus of Social Work Topics and Description

Students are encouraged to register for a Field / Focus of Social Work (4200) that corresponds with their Field placement area of practice.

Aboriginal Social Work Practice: TBA

Immigrants, Refugees & Visible Minorities: This course will explore ethnic, racial and cultural dynamics in Social Work practice. Culture extends beyond ethnic and cultural heritage to include values, beliefs, norms and behaviours determined by gender, class, generation, geography, religion, skin colour, sexual orientation, etc.

Aging: This course will address issues facing Canada's aging population. It will examine policy, programs and services in community and institutional settings, clinical practice with elderly, their families and groups.

Child and Family Services: An examination of the child welfare social service system from an historical and ecological perspective. Course will pro-

vide opportunities to study and analyze social policy, legislation, services, delivery structures and Social Work practice in child welfare.

Criminal Justice and Corrections: This course will examine issues relating to people involved in the criminal justice system. The system will be defined broadly, as to permit consideration of both adult and juvenile offenders (male/female) as well as victims of crime.

Substance Misuse (Abuse): A course that will look at policy and Social Work practice in the area of substance misuse (abuse) and addictions.

Disability Agency: This course will examine practice and policy issues in the Field of disabilities. Historical perspectives and current trends in policy, practice and research, technological and economic implications will be presented. Issues relevant to persons with visible and invisible disabilities, issues across the life-span and issues for families and caregivers will be addressed.

Family Violence: This course will provide knowledge of policy and practice issues related to wife abuse, child abuse and elder abuse. It acknowledges that violence in families occurs in a context and examines the impact of economic conditions, historical factors, values and beliefs, culture and gender.

Health: This course expresses a holistic view of health and well-being and offers opportunities to learn about social activities in situations of ill health and in health care facilities/environments. This course examines current trends and concepts in health, the realities of health Social Work and selected practice issues and challenges.

Community Development and International Social Work: Issues in global inequality, current ideas and topics in literature on social development. Some examples of topic areas are: child welfare and child labour, the role of informal education, community health and development, gender and migration, impacts of tourism, etc., in countries of the "South" or in nations undergoing and social transition (e.g. Russia and others).

Mental Health: This course examines mental health programming and policy and focuses on Social Work practice anchored in mental health settings. Course concentrates on how to work in a team environment.

School Social Work: A course about Social Work practice and social policy in primary and secondary schools. The connection between home-school partnerships and student success is well established, and social work has traditionally played a key role in facilitating home-school connections. However, there is emerging recognition of the critical importance of the school as an integral part of the community, which has created some opportunities to develop new models of integrated health and social services delivery within a public school setting.

Opting Into Field and Practices of the Two-Year Plan

Students may apply for "opt-in" by fulfilling the following conditions.

Consult with and submit written request for "Opt-in" to the Coordinator of Student Services and Admission/Advising Office and Field Coordinator no later than March 1.

Complete and return the Field placement form to the Field Coordinator by March 1.

Successful completion of all required Social Work courses except for SWRK 4200 Field Focus, SWRK 3150 Field Instruction 1 and SWRK 4120 Field Instruction 2 and successful completion of all electives prior to opt-in year.

Achieved a minimum Cumulative Grade Point Average of 2.75 at point of opting in.

Achieved a minimum cumulative Social Work Grade Point Average of 2.75 at point of opting in.

Final approval to opt-in is also based on faculty resources: space availability in SWRK 4210 Feminist Perspectives on Social Work Practice and SWRK 4220 Aboriginal People and Social Work Practice during Summer 1 & Summer 2 terms; space availability in SWRK 4200 Field Focus of Social Work Practice courses in Fall and Winter terms; and the availability of concentrated Field placements.

Distance Education Courses

Some Distance Education courses are open to Fort Garry Campus and Inner City Social Work program students. Please refer to the Undergraduate Calendar for details.

Challenge for Credit

The purpose of Challenge for Credit is to provide students with some means of obtaining academic credit in Social Work courses (not otherwise obtained as a transfer of credit from other Social Work degree programs), or for practical training and experience or reading and study previously completed. Previously failed courses may not be challenged for credit. See the *BSW Student Handbook* for the complete policy statement.

Courses Open to Challenge for Credit:

SWRK 2080 Interpersonal Communication Skills
SWRK 3100 Systematic Inquiry in Social Work
SWRK 3130 Contemporary Canadian Social Welfare

Option in Aging

The interdisciplinary Option in Aging is made available to students registered in Social Work. Students are requested to fill out a form, available from the Faculty of Social Work, 521 Tier Building during the first week of fall classes. The Option requires the following courses:

PHED 2610 Offered in Fall term, 2006: Health and Physical Aspects of Aging (3 credit hours)

Plus

HMEC 2650 Offered in Winter term, 2007: The Social Aspects of Aging (3 credit hours)

Plus

SWRK 4200 Field Focus of Social Work Practices: Aging (6 credit hours)

Plus:

One Field placement (SWRK 3150 - 12 credit hours or SWRK 4120 - 12 credit hours) in the area of Gerontology. Students are encouraged to take courses from other participating units (Architecture, Human Ecology, Nursing, Arts, Psychology and Sociology).

For details see the information sheets available from the Faculty of Social Work General Office.

Bachelor of Social Work Courses Structure

Foundation Courses

Course Number	Course Name	Credit Hours
SWRK 1310	Introduction to Social Welfare Policy Analysis	3
SWRK 2090	Human Behaviour and Social Work Practice	6
SWRK 2080	Interpersonal Communication Skills	3
SWRK 3140		3

Research Course

SWRK 3100	Systematic Inquiry in Social Work	3
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Social Policy Courses

SWRK 2110	Emergence of the Canadian Welfare State	3
Or		
SWRK 2120	Britain: Poor Laws to the Welfare State	3
Or		
SWRK 2130	Comparative Social Welfare Systems	3
SWRK 3130	Contemporary Canadian Social Welfare	3

Field/Practice Courses 1

SWRK 3150	Field Instruction 1	12
SWRK 4200	Field / Focus of Social Work Practice	6

Field/Practice Courses 2

SWRK 4120	Field Instruction 2	12
SWRK 4200	Field / Focus of Social Work Practice	6

Policy/Practice Courses

SWRK 4210	Feminist Perspectives on Social Work Practice	6
SWRK 4220	Aboriginal People and Social Work Practice	6
Total credit hours of required courses		72

NOTES:

1. SWRK 1310 and SWRK 2080 are open to University 1 students,
2. See the *Registration Guide* for a list and description of SWRK 4200 courses
3. Students are encouraged to register for a Field Focus of Social Work Practice (SWRK 4200) that corresponds with their Field placement area of practice.

Electives

SWRK 2050	Community and Organizational Theory	3
SWRK 2070	Small Group Dynamics	3
SWRK 4080	Current Issues in Social Welfare	3
SWRK 4130	Advanced Interpersonal Communication Skills	3
SWRK 4050	Selected Topics in Social Work	3
SWRK 4070	Social Problem and Social Work Practice Seminar	3

* Students must obtain and complete a Contract Form (available in the General Office) signed both by the instructor and the student to be considered as a written permission and submit it to the Coordinator of Student Services and Admissions/ Advising Officer five days prior to their access date.

SECTION 2: Information for Advanced Planning

Part-Time Plan

It is possible to pursue the B.S.W. degree through a program of part-time studies. Students must complete all the required Social Work and elective courses within 9 years of his/her admission to the faculty. When planning your workload, allow approximately two hours of study/reading time for each hour of class time. It is also advisable to schedule time to use the library. The faculty will offer as many evening courses as possible each year.

SECTION 3: Important Information for Special Students and Students Enrolled in Other Faculties/Schools at the University of Manitoba

Special Students

A Special Student in Social Work is one who wishes to take undergraduate Social Work courses with no intention of proceeding to a B.S.W. degree at the present time. In addition, the student is not currently registered at any other University. Information is available from the Faculty of Social Work General Office.

Students seeking admission as a Special Student must meet the following requirements:

- Be limited to registration in nine credit hours of Social Work courses plus SWRK 1310 and SWRK 2080.
- Be prohibited from adding courses in the Faculty of Social Work until August, 2006.
- Have all courses classified as "SS" and this means that courses will not generate a grade point average.

Non-Social Work Students

Students currently enrolled in other faculties/schools at the University of Manitoba may register for Social Work courses provided they have completed a minimum of 30 credit hours of university study and achieved a minimum Cumulative Grade Point Average of 2.50. These students will:

- Be limited to registration in nine credit hours of Social Work courses plus SWRK 1310 and SWRK 2080.
- Be prohibited from adding courses in the Faculty of Social Work until August, 2006.

Courses available to Special Students and students enrolled in other faculties/schools at the University of Manitoba are:

SWRK 1310 Introduction to Social Welfare Policy Analysis
SWRK 2110 Emergence of the Canadian Welfare State
SWRK 2120 Britain: Poor Laws to the Welfare State
SWRK 2130 Comparative Social Welfare Systems
SWRK 3130 Contemporary Canadian Social Welfare
SWRK 2090 Human Behaviour and Social Work Practice
SWRK 2080 Interpersonal Communication Skills
SWRK 3100 Systematic Inquiry in Social Work

NOTE:

Special and non-Social Work students are required to abide by the same pre/co-requisite policy that applies to B.S.W. students.

Social Work 2006/2007 Undergraduate Timetable

The online timetable shows the times and locations for all Social Work undergraduate courses. Students wishing to take courses offered by other faculties and schools should refer to the appropriate chapter of this *Guide*. Students must register in-person for courses not available by contacting UMREG by web access. See courses offered by other faculties and schools, for in-person registration instructions.

After reading the B.S.W. registration guidelines and reviewing your degree plan, make a tentative timetable based on the required courses for which you are eligible and for desired electives.

It is important that you pre-plan and select alternate choices should your first choice be full, so you can go to your next choice while on Aurora Student. The following notations are used in the Social Work undergraduate timetable:

TBA: To be announced.

Example - A time period which occurs, Monday and Wednesday from 2:30 p.m. to 3:45 p.m. is referred to as MW 2:30 - 3:45.

NOTE: The Faculty reserves the right to make changes without notice, including cancellations and additions of courses and/or sections. Also, the list of instructors is as complete and firm as possible; however, some changes may be necessary.

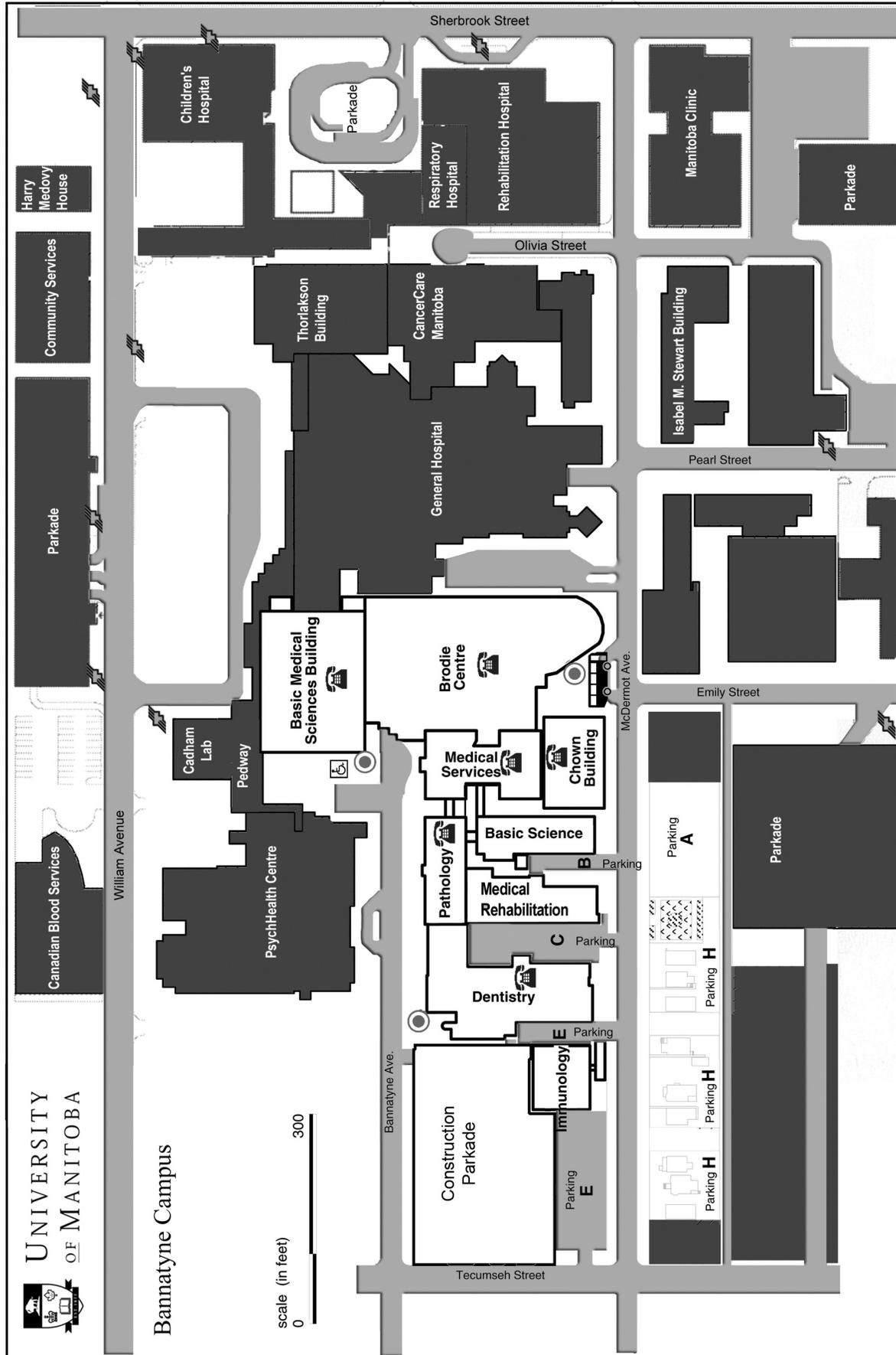
If a course or section you have registered for is subsequently cancelled, the Faculty of Social Work will make every attempt to contact you. You will then choose a course and/or section to replace the cancelled one.

Note:

* Courses may be cancelled due to low enrolment.



Bannatyne Campus



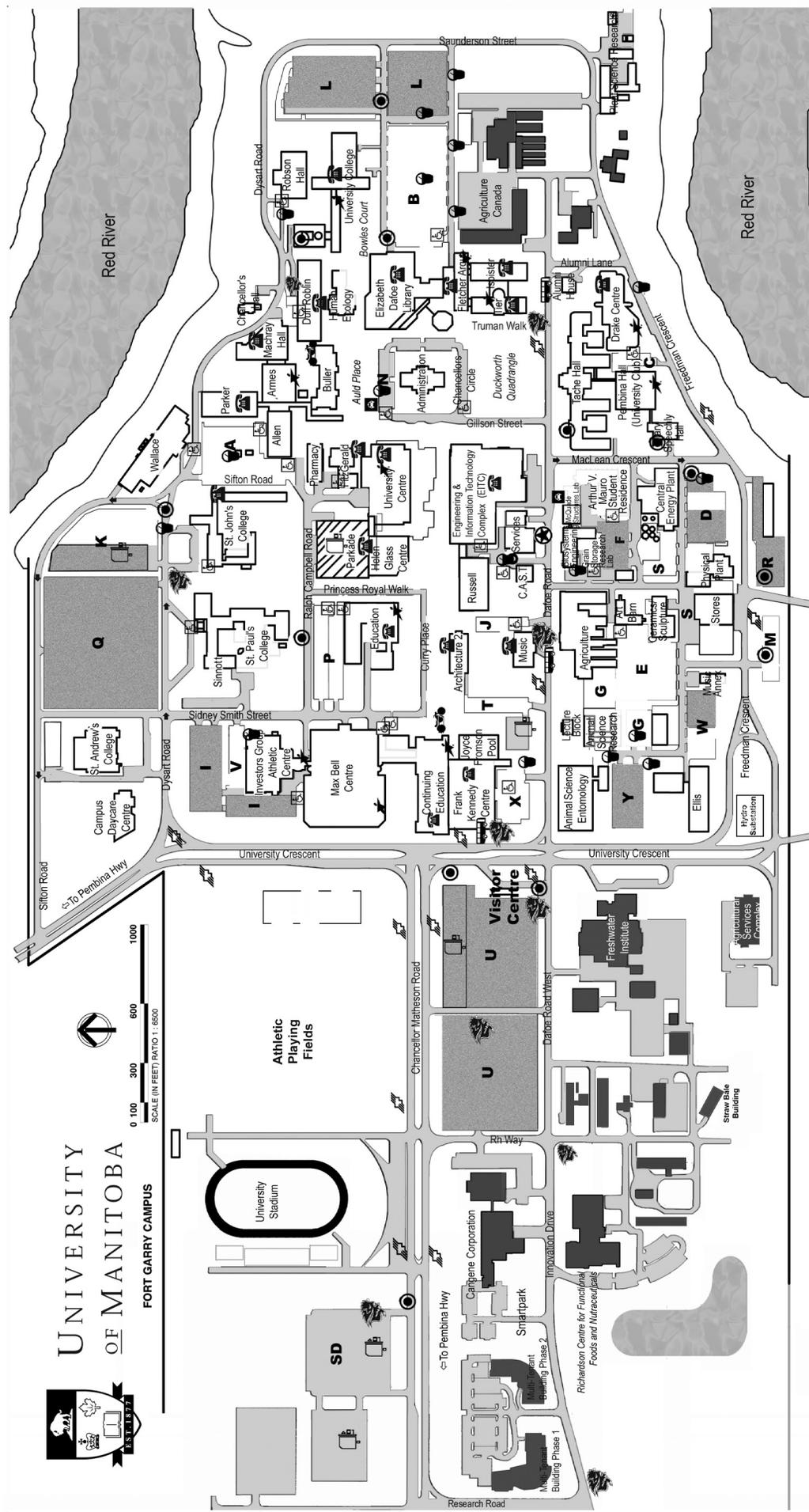
- Non-University Buildings
- Accessible Parking (with permit)
- Emergency Code Blue Telephones
- Emergency Red Telephones
- Fort Garry/Bannatyne Shuttle Bus
- Winnipeg Transit Bus Stops

UNIVERSITY OF MANITOBA

FORT GARRY CAMPUS



0 100 300 600 1000
SCALE (IN FEET) RATIO 1 : 6500



- Meter Parking
- Ticket Dispenser Parking
- Student Parking Areas
- Reserved Parking Areas
- Motorcycle Parking
- Accessible Parking *permit required
- Fort Garry Campus Shuttle Bus
- Fort Garry/Bannatyne Shuttle Bus
- Emergency Red Telephone
- Emergency Code Blue Telephone
- Winnipeg Transit Bus Stop
- Campus Security
- Food Services (some locations open during regular session only)
- Taxi Stand

Index

A

Academic Appeals 26
Academic Evaluation 23
Academic Honours 23
Academic Integrity 26
Academic sessions 19
Access Programs 284
Admissions 13
 Admission from High School 14
 Application Procedure 18
 English Language Proficiency 17
 General Entrance Requirements 14
 Readmission, Continuing and Returning 16
Agricultural and Food Sciences 60
 Academic Regulations 63
 Admission 62
 Biosystems Engineering 68
 Cooperative Education Program 60
 Course Descriptions 69
 Pre-Veterinary Program 69
 School of Agriculture
 Diploma Program 74
Agricultural and Food Sciences Registration 477
Agriculture Diploma Registration 479
Anthropology 105
Appeals of Grades 25
Application for Graduation 27
Approved Mathematics Courses 27
Approved Written English and Mathematics
 Courses 27
Architecture Registration 480
Art 86
 Academic Regulations 87
 Admission to the School of Art 86
 Course Descriptions 91
 Program Descriptions 88
Art, School of Registration 491
Arts 94
 Admission to the Faculty of Arts 96
 Anthropology 105
 Asian Studies 109
 Canadian Studies Program 111
 Catholic Studies Course Descriptions 115
 Catholic Studies Program 114
 Central and East European Studies Program
 115
 Classics 116
 Economics 121
 English 127
 Faculty Regulations 97
 Film Studies 132
 French 134
 French, Spanish and Italian 133
 German and Slavic Studies 145
 Global Political Economy 150
 Greek 117
 History 152
 Icelandic 158
 Labour and Workplace Studies Course De-
 scriptions 161
 Labour and Workplace Studies Program 159
 Latin 117
 Latin American Studies Program 162
 Linguistics 162
 Medieval and Renaissance Studies Program
 165

Native Studies 165
Near Eastern and Judaic Studies 169
Philosophy 170
Political Studies 175
Psychology 178
Religion 183
Russian 147
Sociology 188
Theatre (Minor) Program 192
Ukrainian Canadian Heritage Studies 193
Urban Studies (Minor) Program 195
Women's Studies Program 195
Arts Registration 482
Asian Studies 109
Asper School of Business Registration 509
Attendance and Withdrawal 26
Authorized Withdrawal 26

B

Biochemistry 394
Biology 396
Biosystems Engineering 68
Biotechnology 397
Bison Sports 39
Board of Governors 5
Book Store 39
Botany 398
Business 308
 Academic Regulations 311
 Admission to the Asper School of Business
 309
 Asper School of Business
 Assiniboine Community College Joint Pro-
 gram 316
 Asper School of Business Ecole technique et
 professionnelle Joint Program 318
 Asper School of Business Keewatin Commu-
 nity College Joint Program 317
 Asper School of Business Red River College
 Joint Program 316
 B. Comm. (Hons.) 315

C

Calculation of Grade Point Average 23
Campus Parking 39
Catholic Studies Program 114
Challenge for Credit 25
Chemistry 401
Civil Engineering 239
Collège universitaire de Saint-Boniface 50
Continuing Education
 Certificate and Diploma Programs 286
 General Studies 283
 Off-Campus Study and Courses in High
 School 285
 Program Areas 283
 Summer Session 286
Convocation 27
Course Identification 28

D

Deferred Examinations 24
Dental Hygiene 203
 Academic Regulations 204
 Admission 203
 Program Requirements 205

Dental Hygiene Registration 493
Dentistry 206
 Admission 207
 Program Outline 209
 Program Requirements and Regulations 208
Dentistry Registration 494
Distance and Online Education 284
Distance and Online Education Registration
 501

E

Ecology 414
Economics 121
Education Registration 495
Electrical and Computer Engineering Engineer-
ing
 Electrical and Computer Engineering 241
Engineering 232
 Academic Regulations 234
 Admission 233
 Aerospace Engineering Option 246
 Biosystems Engineering 237
 Civil Engineering 239
 Cooperative Education in Civil Engineering
 240
 Mechanical and Industrial Engineering 244
 Mechanical and Manufacturing Engineering
 244
 Program Requirements 236
Engineering Registration 497
English 127
English Language Proficiency 17
English Language Studies 285
Enrolment Services 34
Environment, Earth, and Resources Registration
 499
Environmental Engineering Option 239
Examinations 24
 Personations 25
Extended Education 283

F

Family Social Sciences 292
Field/Practice Courses 1 527
Field/Practice Courses 2 527
Film Studies 132
Foundation Courses 527
Freedom of Information and Protection of Priva-
cy 29
Freedom of Information and Protection of Priva-
cy Act 2
French, Spanish and Italian 133

G

General Studies 283
General Studies Registration 503
Genetics 416
Geological Engineering 239
German and Slavic Studies 145
Global Political Economy 150
Grades and Grade Point Average Calculation 22
Graduate Studies 288
Graduation 27

H

History 152

Housing and Student Life 38

Human Ecology 289

Academic Regulations 291

Admission 290

Course Descriptions 298

Family Studies 292

Human Nutritional Sciences 295

Interfaculty Option in Aging 296, 297

Program Requirements 292

Textile Sciences 296

Human Ecology Registration 506

I

I.H. Asper School of Business 308

Icelandic 158

Interfaculty Option in Aging 384

International Students 21

Inter-Universities North Program 285

L

Labour and Workplace Studies Program 159

Latin American Studies Program 162

Law

Academic Regulations 304

Program Requirements 304

Letter Grade System 23

Letter of Permission for Transfer of Credit 25

Libraries 43

Libraries Resources and Locations 44

Limited Access to Courses 26

Linguistics 162

M

Management 308

Management Registration 509

Management/Professional Institute Affiliation 287

Mathematics 418

Mathematics Requirement 22

Mechanical and Industrial Engineering 244

Mechanical and Manufacturing Engineering 244

Medical Rehabilitation 325

Academic Regulations 327

Admission 326

Occupational Therapy 326

Physical Therapy 327

Program Requirements 328

Medieval and Renaissance Studies Program 165

Microbiology 427

Military Support Office 285

Music Registration 511

N

Native Studies 165

Near Eastern and Judaic Studies 169

Nursing 359

Academic Regulations 362

Admission 360

Course Descriptions 368

Nursing Registration 512

O

Off-Campus Study 285

Off-Campus Study and Courses in High School 285

Off-Campus Study Registration 505

Ombudsman 42

Orientation 19

P

Payment of Fees 20

Personal Health Information Act 29

Personation at Examinations 27

Pharmacy 372

Academic Regulations 373

Admission 373

Course Descriptions 375

Program Requirements 375

Pharmacy Registration 518

Philosophy 170

Physical Education 379

Physical Education and Recreation Studies 377

Academic Regulations 378

Admission 378

Course Descriptions for Recreation Studies 383

Exercise and Sport Science 379

Interfaculty Option in Aging 384

Physical Education 379

Recreation Studies 383

Physical Education And Recreation Studies Registration 519

Physics and Astronomy 432

Plagiarism and Cheating 26

Political Studies 175

Pre-Veterinary Program 69

Probation and Academic Suspension 24

Psychology 178

R

Recreation Services 40

Recreation Studies 377

Registration 19

Registration and Fees 19

International Students 21

Payment of Fees 20

Registration 19

Religion 183

Repeating a Course 23

Required Withdrawal from Professional Programs 26

Research Course 527

Residence Requirements for Graduation 22

S

Science 385

Actuarial Mathematics Program 393

Admission 385

Biochemistry 394

Biology 396

Biotechnology 397

Botany 398

Chemistry 401

Degree Programs in the Faculty of Science 386

Ecology 414

Environmental Science 416

Genetics 416

Mathematics 418

Microbiology 427

Physics and Astronomy 432

Programs and Courses Offered by the Faculty of Science 393

Statistics 438

Zoology 442

Science Registration 522

Social Policy Courses 527

Social Work 453

Academic Regulations 455

Program Requirements 456

Social Work Registration 525

Sociology 188

Special Examination - Religious Reasons 24

St Andrew's College 47

St John's College 47

St. Boniface College 50

St. Paul's College 48

Statistics 438

Student Access to Final Examinations 24

Student Advocacy/Student Resource Services 35

Student Employment Services 39

Student Records 35

Student Records Office 35

Summer Session 286

Supplemental Examinations 25

T

Term Work 23

Textile Sciences 296

Theatre (Minor) Program 192

U

Ukrainian Canadian Heritage Studies 193

University 1

Admission 52

Course Requirements 53

Transfer to Faculties and Schools Following University 1 53

University 1 Course List 56

University 1 Regulations 54

University 1 Course Requirements 53

University 1 Registration 473

University College 49

University of Manitoba 4

University of Manitoba Colleges 47

University of Manitoba Students' Union (UMSU) 40

University Policies

Accessibility Policy for Students with Disabilities 31

Conflict of Interest 32

Disclosure and Security of Student Academic Records 31

Hold Status 33

Inappropriate and Disruptive Student Behaviour 33

Language Usage 32

Responsibilities of Academic Staff with regard to Students 29

Sexual Harassment 30

Student Discipline Bylaw 33

V

Voluntary Withdrawal 26

W

Withdrawal from Courses and Programs 26

Women's Studies Program 195

Written English and Mathematics Requirement 22

Z

Zoology 442