



UNIVERSITY
OF MANITOBA

Undergraduate Calendar
including Registration Guide
for the Academic Year
2007 - 2008

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 Post-secondary Section, Centre for Education Statistics, 17th Floor, R. H. Coates Building, Tunney's Pasture, Ottawa, Ontario, Canada, K1A 0T6.

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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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Rectrice: Raymonde Gagné, B.A., Cert. Ed., M.B.A.

St. John's College

Warden: Janet A. Hoskins, B.E.S., M.Sc., Ph.D.

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Undergraduate Calendar

2007-2008 Academic Schedule

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

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Section 1: Orientation Sessions for Fall/Winter Session

IDDP Year 1	May-June 2007
University 1	Sept. 4-5, 2007
Agriculture Diploma	Sept. 14, 2007
Education, Year 1	Sept. 5, 2007
Education, Year 2 and Year 5 Integrated	Aug. 30, 2007
Medicine, Year 1	Aug. 20, 2007
Medicine Inaugural Exercises	Aug. 22, 2007
Music	Sept. 4, 2007
Nursing, Year 2 (2180)	
Tuesday/Wednesday clinical orientation	Aug. 28, 2007
Nursing, Year 2 (2190)	
Tuesday/Wednesday clinical orientation	Aug. 28, 2007
Nursing, Year 2 (2180)	
Thursday/Friday clinical orientation	Aug. 29, 2007
Nursing, Year 2 (2190)	
Thursday/Friday clinical orientation	Aug. 29, 2007
Nursing, Year 2 (2180 continues)	
Tuesday/Wednesday clinical orientation continues	Sept. 4, 2007
Nursing, Year 2 (2180 continues)	
Thursday/Friday clinical orientation continues	Sept. 5, 2007
Nursing, Year 2 (2190 continues)	
Both rotations clinical orientation continues	Sept. 5, 2007
Nursing, Year 2 (2180 and/or 2190)	
Tuesday/Wednesday clinical begins	Sept. 11, 2007
Nursing, Year 2 (2180 and/or 2190)	
Thursday/Friday clinical begins	Sept. 6, 2007
Nursing, Year 3 clinical orientation	
Tuesday/Wednesday clinical rotation begins	Sept. 25, 2007
Nursing, Year 3 clinical orientation	
Thursday/Friday clinical rotation begins	Sept. 20, 2007
Nursing, Year 4 clinical orientation	Sept. 6, 2007

Nursing Lectures in NURS 2120 (Health Assessment) and Nursing labs in NURS 2120 (Health Assessment) and NURS.2130 (Skills Year2, NURS 3280 (Skills year 3) start week of Sept. 10, 2007

NOTE: Immunizations/CPR due for all newly admitted Nursing students Aug. 1, 2007

Occupational Therapy, Year 1 Linking Week	Aug. 20 - 24, 2007
Pharmacy, Year 1 orientation session	Sept. 5, 2007
Physical Education and Recreation Studies	June 26 & July 4, 2007
Social Work, Year 1	Sept. 4, 2007
Social Work, Year 2 and 3 Field Orientation	Sept. 4 and 5, 2007

Section 2: Start and End Dates for Fall/Winter 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 and Online Education** courses should consult the Distance and Online 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 2007 (including full courses)	Start	End
Most faculties and schools	Sept. 6, 2007	Dec. 5, 2008
Agriculture diploma	Sept. 17, 2007	Nov. 30, 2007
Dentistry, Years 1 and 2	Aug. 13, 2007	Nov. 30, 2007
Dentistry, Year 3	Aug. 7, 2007	Nov. 30, 2007
Clinics	NA	Dec. 7, 2007
Dentistry, Year 4	Aug. 7, 2007	Nov. 30, 2007
Clinics	NA	Dec. 14, 2007
Dental Hygiene, Year 1	Aug. 20, 2007	Nov. 30, 2007
Clinics	NA	Dec. 7, 2007
Dental Hygiene, Year 2	Aug. 13, 2007	Nov. 30, 2007
Clinics	NA	Dec. 7, 2007
Law	Sept. 4, 2007	Dec. 7, 2007
Medicine, Years 1 and 2	Aug. 27, 2007	T.B.A.
Medicine Years 3 and 4	Aug. 27, 2007	Dec. 18, 2007
Medicine, B.Sc.	May 28, 2007	Aug. 25, 2007
Occupational Therapy Year 1	Aug. 27, 2007	Nov. 16, 2007
Basic Fieldwork	Nov. 19, 2007	Dec. 14, 2007
Occupational Therapy Year 2	Aug. 27, 2007	Dec. 14, 2007
Pharmacy, Year 4 (classes)	Sept. 4, 2007	Oct. 30, 2007
(Experiential rotations/electives)	Nov. 5, 2007	Dec. 21, 2007
Physical Therapy	Aug. 27, 2007	Dec. 14, 2007
Respiratory Therapy Years 1, 2, 3	Aug. 20, 2007	Dec. 14, 2007
Respiratory Therapy,		
Year 1 Basic Fieldwork	Sept. 21, 2007	Dec. 14, 2007
Year 2 Basic Fieldwork	Sept. 14, 2007	Dec. 14, 2007
Social Work, Field Instruction Years 2 & 3	Sept. 4, 2007	Dec. 7, 2007

Winter Term 2008 (including full courses)	Start	End
Most faculties and schools	Jan. 7, 2008	Apr. 11, 2008
Agriculture Diploma	Jan. 7, 2008	Mar. 28, 2008
Dental Hygiene, Years 1 and 2 classes	Jan. 7, 2008	Apr. 11, 2008
Year 1 clinic	Jan. 7, 2008	Apr. 11, 2008
Year 2 clinic	Jan. 7, 2008	May 2, 2008
Dentistry, Years 1 and 2	Jan. 7, 2008	Apr. 25, 2008
Dentistry, Year 3 classes	Jan. 7, 2008	May 2, 2008
Year 3 clinics	Jan. 7, 2008	May 16, 2008
Dentistry, Year 4 classes	Jan. 7, 2008	Feb. 15, 2008

Year 4 clinics	Jan. 7, 2008	May 2, 2008
Medicine, Years 1 and 2	T.B.A.	May 23, 2008
Medicine, Year 3	Jan. 3, 2008	Aug. 22, 2008
Medicine, Year 4 Clerkship	Jan. 3, 2008	May 9, 2008
Occupational Therapy Year 1	Jan. 7, 2008	May 2, 2008
Intermediate Fieldwork 1	May 5, 2008	June 27, 2008
Occupational Therapy Year 2		
Intermediate Fieldwork 2	Jan. 7, 2008	Feb 29, 2008
Occupational Therapy Year 2	March 10, 2008	June 27, 2008
Advanced Fieldwork	June 30, 2008	must end by (flexible start date) Sept. 12, 2008
Pharmacy, Year 2, experiential rotations	May 5, 2008	May 16, 2008
Pharmacy, Year 3 Community Practice	April 7, 2008	May 2, 2008
Pharmacy, Year 4, experiential rotations/electives	Jan. 7, 2008	Apr. 11, 2008
Physical Therapy	Jan. 3, 2008	variable; depends on clinical place- ments
Resp. Therapy Year 1 Basic Fieldwork	Jan. 3, 2008	March 28, 2008
Resp. Therapy Year 2 Basic Fieldwork	Jan. 3, 2008	March 21, 2008
Respiratory Therapy Years 1 and 2	Jan. 3, 2008	Apr. 30, 2008
Respiratory Therapy Year 3	Jan. 3, 2008	June 27, 2008
Social Work Years 2 and 3 field instruction	Jan. 3, 2008	Apr. 9, 2008

Section 3 Registration and Withdrawal Dates

NOTES: 1. The fee refund schedule may be found in the Calendar 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 Calendar.

Fall Term 2007 (including full courses)	Start	End
Nursing Clinical Courses: last date to register for Fall Term 2007 and Winter Term 2008	Aug. 22, 2007	
Last Date to register and pay fees without penalty for all programs (except Agriculture Diploma)	Sept. 5, 2007	
Agriculture Diploma	Sept. 14, 2007	
Law: Registration after this date requires Dean's approval	Sept. 4, 2007	
Registration revisions and late registration in all programs (except Agriculture Diploma). A financial penalty is assessed on all late registrations during this period	Sept. 6, 2007	Sept. 19, 2007
Agriculture Diploma	Sept. 17, 2007	Sept. 26, 2007
Last date in all programs (except Agriculture Diploma) to withdraw from Fall Term 2007 and full courses and not be assessed a "VW"		Sept. 19, 2007
Agriculture Diploma		Sept. 26, 2007
Last date in all faculties and schools to Voluntary Withdraw Fall Term 2007 courses. (See refund schedule in Registration Guide for implications).		Nov. 14, 2007
Winter Term 2008		
Registration and Revision period in Winter Term 2008 half-courses in all programs (except Agriculture Diploma)	Jan. 7, 2008	Jan. 18, 2008
Agriculture Diploma	Jan. 7, 2008	Jan. 17, 2008
Last date for registration in Winter Term 2008 half courses, including Challenge for Credit, and/or registration revisions in all programs (except Agriculture Diploma)		Jan. 18, 2008
Agriculture Diploma		Jan. 17, 2008
Winter Term 2008 half courses and full courses dropped after this date from any program (except Agriculture Diploma) are recorded as Voluntary Withdrawals		Jan. 18, 2008
Agriculture Diploma		Jan. 17, 2008
Last date for Voluntary Withdrawal from Winter Term 2008 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, 2008
Agriculture Diploma		Mar. 11, 2008

Section 4: Fee Deadlines

Last date for all students to pay Fall Term 2007 and 1st instalment fees without late fee (except Agriculture Diploma) Sept. 5, 2007
 Agriculture Diploma Sept. 14, 2007
 Last date for all students to pay Winter Term 2008 and 2nd instalment fees without late fee Jan. 18, 2008

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)	July 2, 2007	
Civic Holiday	Aug. 6, 2007	
Labour Day	Sept. 3, 2007	
Thanksgiving Day	Oct. 8, 2007	
Remembrance Day (Holiday Observed)	Nov. 12, 2007	
December Holidays	Dec. 22, 2007	Jan. 2, 2008
Mid-Term Break* for all faculties and schools (except Medicine, Education, Occupational Therapy, Physical Therapy Yr. 3 and Respiratory Therapy Yr. 3)	Feb. 18, 2008	Feb. 22, 2008
Occupational Therapy	March 3, 2008	March 7, 2008
Medicine Years 1 and 2	Mar. 17, 2008	Mar. 20, 2008
Good Friday	March 21, 2008	
Easter Monday (Respiratory Therapy department only)	March 24, 2008	
Victoria Day	May 19, 2008	

*The academic and administrative offices will be open during this period, but there will be no classes/examinations held for students

Section 6: Fall/Winter 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 2007-2008

Fall Term 2007 (including full courses)	Start	End
Most faculties and schools	Dec. 7, 2007	Dec. 20, 2007
Agriculture Diploma*	Dec. 3, 2007	Dec. 10, 2007
Dentistry, Years 1, 2, and 3	Dec. 3, 2007	Dec. 14, 2007
Dentistry, Year 4	Dec. 10, 2007	Dec. 14, 2007
Dental Hygiene Year 1	Dec. 3, 2007	Dec. 14, 2007
Dental Hygiene Year 2	Dec. 10, 2007	Dec. 14, 2007
Law	Dec. 8, 2007	Dec. 20, 2007
Medicine, Year 1	Nov. 8, 2007	Nov. 8, 2007
Medicine, Year 2	Nov. 22, 2007	Nov. 23, 2007
Pharmacy, Year 4	Oct. 31, 2007	Nov. 2, 2007

Winter Term 2008 (including full courses)

Most faculties and schools	Apr. 14, 2008	Apr. 29, 2008
Agriculture Diploma	Mar. 31, 2008	Apr. 7, 2008
Dental Hygiene, Years 1 and 2	Apr. 14, 2008	Apr. 18, 2008
Dentistry, Years 1 and 2	Apr. 28, 2008	May 19, 2008
Year 3	May 20, 2008	May 30, 2008
Year 4	Feb. 25, 2008	Feb. 29, 2008
Law	Apr. 10, 2008	April 23, 2008
Medicine, Year 1	Jan. 25, 2008	Jan. 25, 2008
	May 14, 2008	May 16, 2008
Medicine, Year 2	Mar. 13, 2008	Mar. 14, 2008
	May 22, 2008	May 23, 2008
Pharmacy, Year 3	Mar. 31, 2008	April 4, 2008
Respiratory Therapy		
Clinical Entrance Exams Year 2	Apr. 30, 2008	
Composite Exams Year 3	June 13, 2008	

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 3, 2007
Language reading tests for graduate students	Sept. 8, 2007
Last date to apply for Challenge for Credit for courses offered in Fall Term 2007	Sept. 19, 2007
International Dental Degree Program on-site assessment	Dec. 17-21, 2007
Last date to apply for Challenge for Credit for courses offered in Winter Term 2008	Jan. 18, 2008
Agriculture Diploma	Jan. 7, 2008
Last date for applications for Fall Term 2007 supplemental examinations	
Fall term supplementary examinations	Jan. 14, 2008
Language reading tests for graduate students	Apr. 5, 2008
Agriculture Diploma	May 2, 2008
Last date for applications for Winter Term 2008 supplemental examinations	
Winter Term supplementary examinations	May 23, 2008
Last day to register for Challenge for Credit for examinations in June series	May 3, 2008
Medical Council of Canada examinations	Apr. 28-May 13, 2008

Section 8: Grade Appeal Dates

Appeal period for grades received for Fall Term 2007 courses	Jan. 7, 2008	Jan. 25, 2008
Appeal period for grades received for Winter Term 2008 courses and full courses	May 20, 2008	June 9, 2008

Section 9: University Convocation

Fall Convocation	Oct. 17 - 18, 2007
Last date to apply to graduate in Fall	Aug. 1, 2007
Last date to apply for graduation in February	Sept. 20, 2007
School of Agriculture graduation ceremony	April 25, 2008
Faculty of Medicine Convocation ceremony	May 16, 2008
Spring Convocation	May 27, 28, 29, 2008
Last date to apply to graduate in May	Jan. 18, 2008
Convocation ceremony at Collège universitaire de Saint-Boniface	June 2, 2008

Section 10: Other University Special Events

Parents Orientation	June 9, 2007
2007 School Counsellors Admissions Seminar	Sept. 19, 2007
Enrolment Services/Student Recruitment: Evening of Excellence	Oct. 15, 2007
Memorial events for 14 women murdered at l'Ecole Polytechnique in 1989	Dec. 6, 2007
Information Days for high school students	Feb. 19-20, 2008
Annual traditional graduation Powwow in honour of Aboriginal students	May 3, 2008

Section 11: Distance and Online Education 2007/2008 Deadline Dates

Last date for registration and fee payment without fee penalty for students wishing to take Distance and Online Education courses commencing in September.	Sept. 5, 2007
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 and Online Education courses commencing in January	Jan. 18, 2008
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 2007

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.

May Day, June Day, Summer 1	Start	End
Classes	May 7, 2007	June 26, 2007
Examinations		
Term 1	June 1, 2007	June 2, 2007
Term 2 and Full	June 28, 2007	June 29, 2007
May-June Eve, June-Aug. Eve, May-Aug. Eve		
Classes	May 7, 2007	Aug. 9, 2007
Examinations		
Term 1	June 22, 2007	June 23, 2007
Term 2 and Full	Aug. 10, 2007	Aug. 11, 2007
July Day, Aug. Day, Summer 2		
Classes	July 3, 2007	Aug. 22, 2006
Examinations		
Term 1	July 27, 2007	
Term 2 and Full	Aug. 24, 2007	Aug. 25, 2007
Other		
Nursing Summer Term	Apr. 23, 2007	July 25, 2007

Section 13: Summer Session 2008

Class Start Dates

Nursing summer term begins	April 28, 2008
Summer Session Start Date	May 5, 2008

The other summer session dates are not available yet.

Section 14: Faculty of Graduate Studies Submission Dates for 2007-2008

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. 30, 2007
For receipt in Graduate Studies Office of Ph.D. theses (for distribution) from graduate students expecting to graduate in February	Oct. 9, 2007
For distribution of Master's theses/practica (to examining committee) by students expecting to graduate in February	Oct. 22, 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 February.	Jan. 7, 2008
For receipt, in Graduate Studies Office, of Ph.D. thesis (for distribution) from graduate students expecting to graduate in May.	Jan. 21, 2008
For distribution of Master's theses/practica (to examining committee) by students expecting to graduate in May	Jan. 28, 2008
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 9, 2008
For receipt by the Faculty of Graduate Studies, of Annual Progress Reports for Master's and Ph.D. students	June 12, 2008
For receipt, in Graduate Studies Office, of Ph.D. thesis (for distribution) from students expecting to graduate in October	June 16, 2008
For distribution of Master's theses/practica (to examining committee) by students expecting to graduate in October	June 23, 2008

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)
	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)		
Economics (018)	Economics (ECON)		
English (004)	English (ENGL)		
Film Studies (152)	Film Studies (FILM)		
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)		
Hebrew: Semitic Language and Literature (055)	Hebrew: Semitic Language and Literature (SEM)		
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 (YDSH)		

Faculty/School	Department	Subject
	Philosophy (015)	Philosophy (PHIL)
	Political Studies (019)	Political Studies (POLS)
	Psychology (017)	Psychology (PSYC)
	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 (PDSD)
	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 (025)	Mechanical Engineering Undergraduate (MECH)
	Engineering (025)	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)
	Health Studies (173)	Health Studies (HEAL)
	Human Nutritional Sciences (030)	Human Nutritional Sciences (HNSC)
	Textile Sciences (064)	Textile Sciences (TXSC)
Kinesiology and Recreation Management (22)	Kinesiology (171)	Kinesiology (KIN)
	Physical Education (057)	Physical Education (PHED)
	Physical Education & Recreation Studies General (172)	Physical Education & Recreation Studies General (PERS)
	Recreation Studies (123)	Recreation Studies (REC)
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)
	Actuarial Studies, Warren Centre (010)	Actuarial Studies, Warren Centre (ACT)
	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)

Faculty/School	Department	Subject
	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)
	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)
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 (ZOOL)
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
Actuarial Studies Warren Centre	ACT	Management
Agribusiness and Ageconomics	ABIZ	Agricultural and Food Sciences
Agroecology	AGEC	Agricultural and Food Sciences
Agriculture	AGRI	Agricultural and Food Sciences
Agriculture Diploma	DAGR	Agricultural and Food Sciences
Anatomy	ANAT	Medicine
Anesthesia	ANES	Medicine
Animal Science	ANSC	Agricultural and Food Sciences
Anthropology	ANTH	Arts
Applied Mathematics	AMAT	Science
Architecture	ARCG	Architecture
Architecture Interdisciplinary	ARCH	Architecture
Arts Interdisciplinary	ARTS	Arts
Asian Studies	ASIA	Arts
Biochemistry and Medical Genetics	BGEN	Medicine
Biology	BIOL	Science
Biosystems Engineering	BIOE	Agricultural and Food Sciences
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

Subject	Code	Faculty/School
Computer Science	COMP	Science
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	DS	Disability Studies
Economics	ECON	Arts
Education Ph.D.	EDUC	Education
Educational Administration, Foundations and Psychology	EDUA	Education
Education: Curriculum, Teaching and Learning	EDUB	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
Film Studies	FILM	Arts
Finance	FIN	Management
Fine Art General Courses	FA	Art

Subject	Code	Faculty/School
Fine Art Diploma	FNDP	Art
Fine Art: Art History	FAAH	Art
Food Science	FOOD	Agricultural and Food Sciences
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	Environment, Earth, and Resources
German	GRMN	Arts
Global Political Economy	GPE	Arts
Graduate Studies	GRAD	Graduate Studies
Greek	GRK	Arts
Health Studies	HEAL	Human Ecology
Hebrew: Semitic Lang & Lit	SEM	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
Judaic Studies	JUD	Arts
Kinesiology	KIN	Kinesiology and Recreation Management
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
Mathematics and Astronomy	MAST	Science
Mechanical Engineering Graduate	MECG	Engineering
Mechanical Engineering Undergraduate	MECH	Engineering
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

Subject	Code	Faculty/School
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	Kinesiology and Recreation Management
Physical Education and Recreation Studies General	PERS	Kinesiology and Recreation Management
Physical Therapy	PT	Medical Rehabilitation
Physics and Astronomy	PHYS	Science
Physiology	PHGY	Medicine
Plant Science	PLNT	Agricultural and Food Sciences
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
Recreation	REC	Kinesiology and Recreation Management
Religion	RLGN	Arts
Resource Management	NRI	Environment, Earth, and Resources
Respiratory Therapy	RESP	Medical Rehabilitation
Restorative Dentistry	RSTD	Dentistry
Russian	RUSN	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	YDSH	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

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

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

Director: Iris Reece Tougas

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SECTION 1: Welcome

You are joining a vibrant community of nearly 27,000 students and over 5,000 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 2007 The University of Manitoba celebrates its 130th 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 the Admissions Office.

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 2007-2008

To meet the General Entrance Requirements of the University, candidates must present Manitoba high school graduation, with five full credits at the Grade 12/Senior 4 level, in courses designated S (Specialized), G (General), or U (Dual Credit – University), and with a minimum of three of these credits in S or U courses.

Certificates usually accepted as equivalent to Manitoba high school graduation 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 on five credits.

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

Ontario: 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 four and an overall minimum score of 24. Credit may be granted for selected Higher and/or Standard Level courses with minimum scores of four 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:

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: three courses at the Higher Level and three courses at the Standard Level with a minimum score in each subject of four and an overall minimum score of 24. Advanced credit may be granted for selected Higher and Standard Level courses with minimum scores of four 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 Umum (S.M.U.); 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 the Admissions Office.

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 (selected Advanced Placement College Board examinations with a minimum score of four in specific areas) or the *International Baccalaureate* program (selected Higher and Standard 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 the Admissions Office 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.

The minimum performance requirement for entry to a post-University 1 level program at any faculty or school at the University of Manitoba is a cumulative grade point average (CGPA) of 2.0 (C). Students who do not meet this requirement may be considered for admission if they have achieved a minimum grade point average (GPA) of 2.0 (C) on all courses acceptable for credit in the faculty or school to which application is made. In this case, students must have at least 24 credit hours acceptable for credit. In addition to this university minimum performance requirement, students must meet any additional entrance requirements, performance levels, and selection criteria stipulated for the faculty or school of application.

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 the Admissions Office.

4.2 Readmission, Continuing and Returning Students

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

Students who voluntarily withdraw from their first-year of studies must re-apply for admission. The only exceptions are students in Agricultural and

Food Science, Arts, Human Ecology, Social Work, and University who are permitted to reregister without reapplying for admission.

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

Students whose past registration was in the following faculties, but who have not been in attendance for one or more years, should seek formal permission to re-register from the office of the dean or director of the faculty or school concerned, to ensure that work previously completed complies with current program requirements: Agricultural and Food Sciences; Arts; General Studies (Extended Education); Engineering; Environment, Earth, and Resources; Human Ecology; Science; Social Work; or University 1.

All students who were admitted to the Asper School of Business, Dental Hygiene, Education, Environmental Design, School of Art, Nursing, Music, or 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 (see Section 4.1).

Students wishing to return to their program of studies after serving a period of academic or disciplinary suspension, must make a formal request for re-registration to the Dean's or Director's office of their faculty or school. Students who attend another post-secondary institution or another faculty or school at the university after being placed on suspension, must submit an application through the Admissions Office to be considered for readmission to the faculty or school of suspension.

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 in good academic standing (see the University 1 section of this *Calendar*) intending to transit to the Faculty of Arts or Science may do so prior to their next regular term of registration subject to the following conditions:

- Students in good academic standing who have completed at least 24 credit hours may choose to transit to the Faculty of Arts or Science.
- Students in good academic standing 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 term of registration. Students will not normally transit for Summer 1 or Summer 2 Terms.
- Students whose last assessment in University 1 was On Probation may be considered for entry to the Faculty of Arts or the Faculty of Science if a minimum GPA of 2.0 has been achieved on all courses acceptable for credit in the Faculty they intend to enter. In this case, students must have at least 24 credit hours acceptable for credit. Students requesting entry in this category must contact the Faculty of Arts or Science for further information.
- Students who are currently on academic suspension from University 1 will not be eligible for transit to Arts or Science until the period of suspension has been completed.
- Upon transit to the Faculty of Arts or Science, a student's next assessment of academic performance will be according to the standards required in Arts and Science. 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 the Admissions Office before completing their application. The faculty or school bulletin is the only document which describes all the specific prerequisites for eligibility and selection that exist

beyond the University's minimum performance requirement as noted in Section 4.1 above.

Students currently on suspension from a faculty or school at the University of Manitoba will not normally be eligible for consideration for admission to another faculty or school.

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 for Direct Entry programs: University 1; Engineering; Music; Fine Arts (Studio); Agriculture Diploma; and General Studies (Extended Education).
- 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 currently on suspension at another post-secondary institution 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 Extended Education Division of the University of Manitoba 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 Summer 1 term ; before July 1 for Summer 2 term; before September 30 for the Fall term; and before January 31 for the Winter term. and,
- Is either a Canadian citizen, or a permanent resident of Canada.

Applicants who have completed 24 credit hours or more of course work at another post-secondary institution are not normally eligible for mature student status admission.

Applicants who do not qualify for consideration for admission under the mature status requirements must the regular entrance requirements applicable to their chosen faculty or school.

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

Applicants seeking admission under mature student status are advised to seek further information from the Admissions Office.

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 General Studies (Extended Education) or to the faculty or school offering the course.

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. These students generally apply for admission to General Studies (Extended Education).

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 the Admissions Office).

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 total score of 80 with a recommended minimum of 19 in each component score on the internet-based Test of English as a Foreign Language (TOEFL).
- Achieve a minimum score of 550 with no less than 50 (unscaled) in each of the component scores on the paper-based TOEFL.
- Achieve a minimum total score of 213 with no less than 17 (unscaled) in each component score in the computer-based TOEFL.
- 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 C or higher 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.

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 five credits at the Grade 12/Senior 4 level which include two credits of English at the 40S or U level with an average grade of 75 per cent.
- Achieve a grade of four or better on the International Baccalaureate Higher Level English course, or a grade of four or better on the Advanced Placement English Composition: Literature and Composition.

- Verify conditions equivalent to the above in a country where English is the primary language.

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 the Admissions Office.

SECTION 7: Application Procedure

7.1 Application Forms, Deadlines and Documents

Application forms are available at www.umanitoba.ca/admissions. Copies are also available at the Admissions Office 424 University Centre; telephone (204) 474 8808, or from the general office of the faculty or school to which application is made. Students are encouraged to submit their applications as early as possible to the Admissions Office. Students cannot register until a favourable 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 at the time of 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 the Admissions Office, 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 the Admissions Office, 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 in writing within ten days of mailing of the notification of denial of admission 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 available 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 Office of the University Secretary for transmission to the Senate Admission Appeals Committee, within ten days following the mailing of the results of the selection committee's reconsideration. All appeals shall be filed on the approved form.

Information and appeal forms for the Senate Admission Appeals Committee are available from the Admissions Office or the Office of 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.

University Policies

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• *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's Governing Documents are available on line at http://www.umanitoba.ca/admin/governance/governing_documents/index.html. 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 con-

duct 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.

The Respectful Work and Learning Environment procedure is available online at:
http://www.umanitoba.ca/admin/governance/governing_documents/community/566.htm .

SECTION 3: 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.

Copies of this policy are available online at: http://www.umanitoba.ca/admin/governance/governing_documents/students/281.htm .

SECTION 4: 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.

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 5: 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 cliches 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 6: 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 is available online at: http://www.umanitoba.ca/admin/governance/governing_documents/students/277.htm .

SECTION 7: 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 is available online at: http://www.umanitoba.ca/admin/governance/governing_documents/community/253.htm .

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 is available online at: http://www.umanitoba.ca/admin/governance/governing_documents/operations/427.htm .

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 available online at: http://www.umanitoba.ca/admin/governance/governing_documents/community/255.htm .

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 the Office of the University Secretary. The bylaw is available online at: http://www.umanitoba.ca/admin/governance/reddot/governing_documents/students/discipline/210.htm .

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 is available online at: http://www.umanitoba.ca/admin/governance/governing_documents/students/279.htm .

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).

General Academic Regulations and Requirements

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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. See Appendix A in this chapter for lists of courses that satisfy these requirements.

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 listed in Appendix A at the end of this chapter. (On the web, students may search Course Attributes for courses that satisfy the written English and Mathematics requirements).

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

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

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

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 Cal-

endar 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, 2007 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 4.2.8, 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.

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)
CDN 1130	Introduction to Canadian Studies (6)
CATH 1190	Introduction to Catholic Studies (3)
CATH 2010	Literature and Catholic Culture 1 (3)
CATH 2020	Literature and Catholic Culture 2 (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)

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.

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 Religious (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)
SOC 3350	Feminism and Sociological Theory (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 2300	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

Prerequisite: If a course is prerequisite for a second course, the prerequisite must be met in order to begin the second course. To determine whether or not a course has a prerequisite, see the course descriptions in this *Calendar*. Normally, a minimum grade of "C" is required in all courses listed as prerequisites, except as otherwise noted in the course descriptions.

For some courses, the prerequisite may be completed before registering for the second course or may be taken concurrently with the second course. To determine if a course may be taken concurrently, see the course descriptions in this *Calendar*.

Corequisite: If a first course is a corequisite for a second course, the first course **must** be completed in the same term as the second course. To determine if a course has a corequisite, see the course descriptions in this *Calendar*.

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. Some prerequisite courses may be taken concurrently. Check the course description for specific information.

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 an 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.

Registration Information: Aurora Student

This chapter provides general registration information. You should also consult your faculty or school chapter which provides details specific to your program.

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 2007, Winter 2008, and Fall/Winter 2007-2008. See Section 4 for information about registration times.

Registration Information	(204) 474-9420
Website	umanitoba.ca/registrar

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SECTION 1: Steps to Registration

STEP 1 Consult your Faculty/School/University 1 chapter of this Calendar.

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. (If your program does not web register, see your faculty or school chapter for instructions).

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*, campus to current students in April. Course offerings and schedules are available at that time on the web at www.umanitoba.ca. The *Undergraduate Calendar* and the *Graduate Calendar* are also available on our website.

SECTION 2: Eligibility and Classification of Students

2.1 Registration Eligibility

Students 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.

Students in Law and Medical Rehabilitation will be mailed information on registration.

After enrolling for the courses selected, students must complete registration by making fee payment before the published deadline.

2.2 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, Kinesiology and Recreation Management, 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.

2.3 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.

2.4 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 Extended 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.

2.5 Student Status: Full-time and Part-time

Registered students fall into one of two categories based upon their credit hour course load. Full-time and part-time status is determined on a term basis.

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

Students who begin the term 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 term 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 term's program in the term of competition.

Different criteria apply to Graduate students. For information, please consult the University of Manitoba Graduate Calendar.

SECTION 3: Getting Started

3.1 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 mid-July, contact the Admissions Office at (204) 474-4408.

3.2 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.

3.3 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 YYMMDD (year, month, day). For example, if your birthday is February 8, 1986, you enter 860208 as your first PIN.

You will immediately be required to change your PIN to another sequence of numbers. 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.

Returning Students

If you are a returning student, use the same PIN that you used the last time you contacted Aurora Student.

If you have forgotten your Aurora Student PIN, you can still login by answering your security question. Enter your student number in the user ID box as usual, but click on the box labelled "Forgot PIN?" The system will prompt you to answer your security question, which when answered properly will allow you access to your account. Please note that you will need to set a new PIN immediately after accessing the system. This new PIN may not be your birthday or your previous PIN.

If you have difficulty with your PIN, call the Registrar's Office at (204) 474 9420 for help.

3.4 Transfer to Faculties and Schools Following University 1

Entry to every faculty and school 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.

Target faculties and schools that students may enter after University 1 have established minimum admission 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 programs after University 1 are summarized in each faculty or school section in 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 with a cumulative Grade Point Average (GPA) of 2.0 must exit University 1 before registering in the next Fall/Winter terms. Students with 30 credit hours or more who have not met specific academic requirements will be required to remain in University 1 until those requirements are met.

Students who have completed 24 credit hours or more with a minimum cumulative GPA of 2.0 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 this Calendar and the *STARTbook*. Student who have completed 24 to 29 credit hours with a cumulative GPA of 2.0 may elect to remain in University 1 and may register for a full course load.

Students who have completed 24 or more credit hours with a cumulative GPA of 1.99 or less may be required to remain in University 1. Students should refer to University 1's academic standards as outlined in Section 4.9 of this chapter.

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 this *Calendar* for program information.

3.5 College Membership

For information about membership, services and academic programs in one of the following colleges, consult the chapter on College Membership 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

You may declare a college membership through Aurora Student. Access "Enrolment & Academic Records," then "Declarations." Select "Declare College Membership," verify current information and select "Add."

3.6 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.

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 special twelve month Bannatyne Undergraduate term is used for programs offered at the Bannatyne Campus.

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.

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. Courses with "R" sections have enrolment restricted, usually to a specific faculty or program.

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 break 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.

3.7 Declaring Your Major and Minor

If you are registering in one of the faculties of Agriculture and Food Sciences, Arts (General), Management or Human Ecology, you may declare your major and/or minor 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 4: Your Registration Time

Each new group will have access to the system beginning at 8:30 a.m. beginning in mid-July and continuing until early August. After this initial registration access period, all students will continue to have access until the end of the revision period.

July 11-13	Advanced Registration Period (Bison athletes, students with disabilities, 1st Year Engineering students, St. John's College students)
July 16-20	New High School and Mature Status admits to U1, Fine Arts and Music
July 23-August 10	Returning U of M students (most faculties and schools), newly admitted Social Work
July 23-August 3	Asper School of Business students
August 1-8	Faculty of Education students
August 1	Newly admitted external transfers and newly admitted second degree students
August 13	System closed

August 14	Special Students, Visiting Students and all Extended Education
August 14	Reserves will have been lifted; open access to all students begins

On July 2, 2007, you may find your personal initial access time within the above broad categories by accessing [Aurora Student](#), then [Enrolment and Academic Records](#), then [Registration](#), and then [Registration Status](#).

Exceptions to Aurora Student Registration

Students registering in the following programs will not register through Aurora Student: Law; Medical Rehabilitation; Northern Nursing program; Northern Social Work program; Winnipeg Education Centre Social Work program; and English Language Centre programs. Students will receive registration information from the faculty or school. Please consult the appropriate faculty or school chapter of this Calendar for specific information.

Other 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 University of Manitoba credit course at any of these colleges, contact your faculty or school as well as the college directly.

SECTION 5: 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” may be found in Appendix A of the chapter, General Academic Regulations and Requirements. 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 6: Access to and Withdrawal from Courses

6.1 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 whether or not a course has a prerequisite, see the course descriptions in this *Calendar*. Normally, a minimum grade of “C” is required in all courses listed as prerequisites, except as otherwise noted in the course descriptions.

Some prerequisite courses may be taken concurrently. In this instance, the course description will indicate that a specific course is a pre- or corequisite for the course in which you wish to register. If you have not previously taken the course, you may register for it in the same term.

Corequisite: If a first course is a corequisite for a second course, the first course **must** be completed in the same term as the second course. To determine if a course has a corequisite, see the course descriptions in this *Calendar*.

6.2 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.

6.3 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.

6.4 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.

6.5 Registering for Courses in Other Faculties or Schools

University 1 students are referred to the course list in the University 1 chapter.

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.

6.6 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.

6.7 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 7: 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 within this *Undergraduate Calendar*. Course descriptions may be found in the last chapter of this book.

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 8: Other Registration Information

8.1 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. Af-

ter indicating your expected date of graduation, you will receive a verification letter from the Registrar's Office.

If you need to change your graduation date after declaration is made you must contact the General Office of your faculty or school

8.2 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 withdrawal 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.

8.3 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

Chapter Contents

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- 1.2 Registration Revisions and Fee Payment

SECTION 2: Fee Payment

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SECTION 4: 2007-2008 Fees

- 4.1 How to Find Academic Fee Schedules on the Website
- 4.2 Application and Other Fees
- 4.3 Occasional Students

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 5, 2007.

The Winter Term fees must be paid by January 18, 2008.

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

or follow the links from the Registrar's Office home page for "fee information."

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 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.

2.4 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.

2.5 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.

2.6 Student Organization Fees

Student organization fees, with the exception of the fee for the University of Manitoba Students' Union Student Accident Plan, are assessed dependent upon the faculty/school, the program, and the course load of the individual student.

2.7 International Student Differential Fee

All international students will pay a 180% international student differential fee for the courses in which they register. Refer to the 2007-2008 fee information on the website: www.umanitoba.ca after July 2, 2007. Prior to this time, you may consult the 2006-2007 fee information.

2.8 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.**

2.9 Late Payment of Fees

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

2.10 Sponsored Students

If your fees are to be paid by an outside agency or sponsor, the sponsor must submit a Tuition Sponsorship Application form (available at

www.umanitoba.ca/admin/financial_services/revcap/fees).

Applications must be received prior to the fee deadline to avoid late payment penalties and holds on your student account. Sponsorship applications will not be accepted after September 19, 2007 for Fall term or January 18, 2008 for Winter term.

Invoices to third parties are mailed out at the end of the revision periods. Late receipt of sponsor payments may result in Holds on student accounts.

2.11 Non-Payment of Fees

This policy is currently under review and may change. Please refer to the website: umanitoba.ca/registrar after July 2, 2007.

Students with outstanding balances after the published fee payment deadlines may be placed on Hold Status or may 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. Payment in full 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.

2.12 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 the Cashier's Office, 138 University Centre or from the Registrar's Office, 400 University Centre. For more information or to download a form, please visit our web site at www.umanitoba.ca/admin/financial_services/revcap/fees/fees/index.shtml.

2.13 Your Tax Receipt (Form T2202A)

All T2202A forms will be issued on line. Once you have accessed Aurora Student, select **Enrolment and Academic Records**, then **Canadian Tax Forms**.

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 including holidays.

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 19:** Full refund of eligible fees
- **Withdrawal from September 20 to October 3:**
One half refund of assessed fees
- **No refunds after October 3**
- **Withdrawal is not permitted after November 14**

Winter Term, Half Courses

- **Withdrawal to January 18:** Full refund of eligible fees
- **Withdrawal from January 19 to February 1:**
One half refund of assessed fees
- **No refunds after February 1**
- **Withdrawal is not permitted after March 20**

Fall/Winter 2006/2007, Full Courses

- **Withdrawal to September 19:** Full refund of eligible fees

- **Withdrawal from September 20 to January 18:**
One half refund of assessed fees

- **No refunds after January 18**

- **Withdrawal is not permitted after March 20**

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 Reregistration Fee
- Incidental Fees
- Late Registration Payment Charges
- Letter of Permission Fee
- Other Compulsory Fees
- Reinstatement Fee

SECTION 4: 2007-2008 Fees

4.1 How to Find Academic Fee Schedules on the Website

A complete schedule of Undergraduate and Graduate 2007-08 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, 2006-07 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 assessed.

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; Kinesiology and Recreation Management; 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 accept-

ance 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.

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):

\$60, plus invigilation and courier costs

Supplemental examination fee (per exam paper): \$75

Grade Appeal Fee

A \$30 fee is charged per examination grade appealed and is refunded if appeal is granted

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 2006-2007, the fee was \$226.55. The fee for 2007-2008 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.

In addition, International students are required to have basic health insurance. Please see the chapter, Other Important Things to Do and Know, Section 7: Information for International Students.

Letter of Permission Fee

All Letters of Permission: \$50

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.

Recreation Facility Use Pass

The Faculty of Kinesiology and Recreation Management 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: \$10

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		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		12	
		4:00	15			15			
4:30	13			13				13	
5:30	16	5:30	17	16	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 5 and 6 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 \$15 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 Campus Parking

Beginning in May, detailed instructions on how and when to apply for your student parking permit will be available through the Parking and Shuttle Services website (umanitoba.ca/parking). The sale of student parking permits is available through our Online Application System only.

1.3 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 Aurora Student 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](#), [Student Records](#), [Final Grades](#).

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 2007-08 these dates are as follows:

Appeal of Fall Term Courses: on or before January 24, 2008

Appeal of Winter Term and Full Courses: on or before June 9, 2008

For more information, including fees, please consult umanitoba.ca/registrar.

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, K1P 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: umanitoba.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.

Cost from September 1, 2006 to December 31, 2006: \$140 Single; \$432 Family.

Cost from January 1, 2007 to August 31, 2007: \$280 Single; \$864 Family.

The fees for 2007-08 fees will be available at the time of registration).

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.

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 you are registered.

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/remote

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 de-se-

lecting 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.

Student Services

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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 mission of Student Affairs is to create opportunities for student success by engaging students and other members of the University of Manitoba community in a student-centered process of integrated learning and development.

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 **twenty-nine** 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

Asper School of Business Co-operative Education : Leah Bannister, (204) 474-6673

Aboriginal Business Studies: Leah Bannister, (204) 474-6673

Actuarial Mathematics: Leah Bannister, (204) 474-6673

Entrepreneurship/Small Business: Leah Bannister, (204) 474-6673

Finance: Leah Bannister, (204) 474-6673

Generalist: Leah Bannister, (204) 474-6673

Human Resources Management/Industrial Relations: Leah Bannister, (204) 474-6673

International Business: Leah Bannister, (204) 474-6673

Logistics & Supply Chain Management: Leah Bannister, (204) 474-6673

Management Information Systems: Leah Bannister, (204) 474-6673

Management of Organizations: Leah Bannister, (204) 474-6673

Marketing: Leah Bannister, (204) 474-6673

Operational Research/Operations Management : Leah Bannister, (204) 474-6673

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 DeCruyenaere, (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; 64iBT with a minimum of 15 in each area), 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 English 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 recognised by the University of Manitoba.

Part Time Courses

The English Language Centre offers part time courses four times a year for University of Manitoba students and potential students.

Courses include:

- Oral English for Academic Purposes: conversation and discussion; seminars and presentations; pronunciation.
- Academic Writing Courses: Complex sentences and paragraphs; critical reading and summary writing; essay writing.
- For Graduate Students only: Research writing.

2.4 Financial Aid and Awards

422 University Centre

Telephone: (204) 474 9531 Fax: (204) 474 7543

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) 275 2589

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 departments of Aboriginal Student Centre, International Centre for Students, Student Advocacy and Resource Services [Advocacy, Chaplains, Disability Services and Play-Care], Student Counselling and Career 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 (Student 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, 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 possible between 12:00 and 5:00 pm subject to counsellor availability.

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/resources/.

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 15 years, 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

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/

Acting Director: Lynn Smith

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 afterhours 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, 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 gymnasias (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 and homes4students.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 will be located on 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. Operation is subject to change.

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, gymnasias 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. An-

swers 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 27,000 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 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 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 **Web:** www.umsudigitalcopycentre.com

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 \$226.55 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 Halloween 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.

Scholarship and Bursary Fund \$30.00: All students, full and part time, pay this 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.

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.

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 \$11.00: Paid by 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

\$226.55: Full-time graduate and undergraduate students are automatically members of UMSU's Health & Dental Plan.

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).

Canadian Federation of Students

\$12.46: All students are members of this provincial and national students' organisation which provides cost-saving services and strong representation for students.

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, Misericordia Health Centre Library, and the Riverview Health Centre Virtual 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

Braaksm, 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)

Integrated Library System (ILS) Librarian, LETS

LaRue, S., B.A.(Auckland) Post Graduate Diploma of Librarianship (Wellington)

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

The Libraries online catalogue called BISON is accessible through public computers in the libraries, work stations at any of the Academic Computing and Networking’s computing areas, or through personal computers for those who can connect to the campus network. In the Libraries’ BISON catalogue, all books, journals, microforms, government publications, and special collections are integrated into a single database/ Users can determine whether the libraries have specific books or journals, what materials the library has in particular subjects, and whether or not the materials on loan, and if so, “holds” can be placed.

Electronic resources, including e-journals, databases, and e-books are also accessible by clicking on the E-Library link on the Libraries’ home page www.umanitoba.ca/libraries. Access is provided to over 22,000 e-journals and over 230 bibliographic and full-text databases.

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 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 Office 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, E.K. Williams Law, William R. Newman Agriculture, Neil John Maclean Health Sciences, and Sciences and Technology.

Copyright Warning

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● 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:

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- 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 materi-

al, 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).

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.

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. 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. 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

Aho, V., B.Ed. (Calgary), Pre-M.Ed. (Manitoba), M.L.I.S. (UBC); **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); **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

(vacant)

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).

Bill Larson Library (Grace General Hospital)

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.

Academic Librarian

Osterreicher, A., B.Sc. (Toronto), M.L.S. (Toronto).

Blanchard, L., B.A. (Winnipeg), M.L.S. (McGill).

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

Macdonald, K., B.A. (Trent), M.L.S. (Western).

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 Libraries

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).

WRHA Outreach Librarian

Gottschalk, T., B.A. (Alberta), M.L.S. (Illinois).

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

Vacant

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).

Riverview Health Centre Virtual Library

Telephone: (204) 478 6873

This virtual library at the Riverview 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).

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

Acting Academic Advising Services Coordinator: Lesley Friesen

Academic Advisors: Christine Adams, Daniel Bowers, Soon Kong, Carla Loewen, Wendy McLean, Kristin Suffield, Kathy Synkiw, Ashley Tolton

Advising Assistant: Shayla Barr

Communication Specialist: Jackie Duhard

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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*. The University 1 Student Help Centre will begin mailing the *STARTbook* to admitted students in June. 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. Completion of Start@U1 is required for all new students prior to registration. Start@U1 is available via an online tutorial. These sessions guide students through the process of course selection and registration. Start@U1 teaches students what they need to know when choosing courses, planning a timetable and using the Aurora Student registration system (Aurora Student). 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. Newly admitted students should complete Start@U1 (see Section 3.4 in this chapter) prior to consulting with a University 1 Academic Advisor.

The Student Help Centre is located in 205 Tier Building. Hours of operation 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. Advisors can assist students:

- 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.

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 writing or study skills, learning, memory, and reading issues. 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 and have a minimum cumulative Grade Point Average (GPA) of 2.0, 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 applicants must have high school graduation with five full credits at the Grade 12/Senior 4 level, in courses designated S (Specialized), G (General), or U (Dual Credit – University), with a minimum of three of these credits in S or U courses. In addition, students must complete one of the following sets (A, B or C) of requirements:

Set A:

One credit of Grade 12/Senior 4 S or U English with a minimum grade of 60 per cent, and a minimum average of 70 per cent over three Grade 12/Senior 4 S or U credits.

or

Set B: (limited admission)

One credit of Grade 12/Senior 4 S or U English, with a minimum grade of 60 per cent, and a minimum average of 63-69 per cent over three Grade 12/Senior 4 S or U credits.

or

Set C: (limited admission)

A minimum average of 70 per cent over three Grade 12/Senior 4 S or U credits, but lacking the Grade 12/Senior 4 S or U English requirement.

Note:

i) Admission under Set B or C 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 complete one of the following sets:

Set A:

A minimum average of 70 per cent over the top three Grade 12 university preparatory courses and a minimum final grade of 60 per cent in Grade

12 University preparatory English.

or

Set B: (limited admission)

A minimum average of 63 per cent (65 per cent for Saskatchewan and 2.5 for Quebec) to 69.9 per cent over the top three Grade 12 university preparatory courses and a minimum final grade of 60 per cent in Grade 12 university preparatory English.

or

Set C: (limited admission)

A minimum average of 70 per cent over the top three Grade 12 university preparatory courses, but lacking the Grade 12 university preparatory English or final grade less than 60 per cent .

Note:

i) Admission under Set B or C 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.

2.4 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 this calendar, plus any one of the following options outlined below:

Option 1: Senior-level English (minimum 60%) 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 (minimum 60%) and an overall average of 63-69% (C+).

Option 4: A minimum of 70% (B) average but lacking English.

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*.

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 over the best three different Grade 12/Senior 4 S or U credits. 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 Equivalent to Manitoba High School Standing in Section 3.2 in the Admissions chapter in 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 this calendar. See Section 5.1 in the Admissions chapter in 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 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). Students with less than 24 credit hours remain in University 1 for their next registration and may register for a full course load.

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.

The University 1 *STARTbook* describes in detail 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 programs after University 1 are summarized in each faculty or school section in 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 normally 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 normally exit University 1 before registering in summer courses. Students with more than 30 credit hours who have not met specific academic requirements may be required to remain in University 1 until those requirements are met. The specific academic standards are outlined in Section 4.10 of this chapter.

Students with a minimum cumulative grade point average (GPA) of 2.0 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 this *Calendar* and the *STARTbook*. See The Registration System: Aurora Student section 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 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 this *Calendar* and in the University 1 *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 this *Calendar*.

3.4 Guide to Course Selection

Start@U1 and the STARTbook

New University 1 students are **required to complete a Start@U1** registration tutorial **before registering** for courses. Start@U1 is available beginning June 2007 via an online tutorial. The Start@U1 tutorial will teach students to choose 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 addressed.

Start@U1 details will be mailed mid-May to all University 1 applicants for 2007-2008 Regular Session, in the Fall to January 2008 applicants, and in the Spring to Summer 1 & 2 2008 applicants. Detailed information will also be available online at umanitoba.ca/u1.

Course selection information for University 1 students is found in the University 1 *STARTbook*, which is mailed to new University 1 students beginning in June.

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 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 this *Calendar*. Normally, a minimum grade of "C" is required in all courses listed as prerequisites, except as otherwise noted in the course descriptions.

Some prerequisite courses may be taken concurrently. In this instance, the course description will indicate that a specific course is a pre- or corequisite for the course in which you wish to register. If you have not previously taken the course, you may register for it in the same term.

Corequisite: If a first course is a corequisite for a second course, the first course **must** be completed in the same term as the second course. To determine if a course has a corequisite, see the course descriptions in the Faculty chapters in this *Calendar*.

3.6 Courses Available to University 1 Students

The complete list of courses available to University 1 students is found 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. The course list may also be found in the University 1 *STARTbook*, however this list includes only those courses being taught during the Fall/Winter 2007/2008 terms.

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 Fac-

ulty of Nursing. Mathematics in Art: FA 1020/MATH 1020 may not be used as a Science course (for admission purposes) for Environmental Design.

Returning University 1 student, it may be able to structure their course selection so that they can complete the admission requirements for their target faculty or school and begin to work on Year 2 degree requirements. See the target faculty's chapter in this *Calendar* or the Academic Advisors at the U1 Student Help Centre for help with course selection. Students may also be referred to the advising office of the target faculty.

Students may seek permission to take courses that do not appear on the University 1 course list. In some cases, courses that are not on the University 1 course list are not acceptable for credit in all faculties. This means that, although a grade is awarded in the course and it appears on the student's academic record, it does not form part of the academic record in University 1. Credit will be granted for the course if the student transfers 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 for information about specific courses.

3.6.1 Introduction to University: Arts 1110

Introduction to University: Arts 1110 is a three credit hour course designed to help students 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 students 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 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 2007/2008 session.

SECTION 4: University 1 Regulations

The provisions of the General Academic Regulations and Requirements chapter, and the University Policies chapter in 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 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. Dropping a course may adversely affect eligibility to transfer to a target faculty.

VW deadline dates can be found in Part XX 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. AWs do not automatically 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 AWWs see Section 6.2.2 in the General Academic Regulations and Requirements chapter in 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 this *Calendar*.

4.4 Final Examinations

See Section 4.2 in the General Academic Regulations and Requirements chapter in 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.

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 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 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 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).

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 official 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. In most cases, students will be permitted to repeat a course in which they have received a final grade **only once**. This includes taking a course considered to be equivalent to the course originally attempted.

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. University 1 students who wish to repeat a course must consult with a University 1 Academic Advisor prior to registration. 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 Academic Performance

Grades obtained in University 1 become a part of the student's permanent record and will appear on the official transcript. See the General Academic Regulations and Requirements chapter of this *Calendar* for a description of how Grade Point Averages (GPAs) are calculated. 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 4.10 in this chapter for details).

Performance Level

University 1 students who have completed 9 credit hours or more of attempts will have their academic performance assessed informally 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. Formal academic assessments are performed following each April and August examination series for all University 1 students who have completed 24 credit hours or more of attempts. As a result of this assessment students will be determined to be in "good standing", "on probation" or on "academic suspension".

Good Standing

University 1 students who have completed 24 credit hours or more of attempts must achieve a cumulative Grade Point Average of 2.00 or greater at each point of assessment in order to be in "good standing" in University 1. Students in 'good standing' may be eligible to enter their target faculty and are encouraged to contact their target faculty or a University 1 Academic Advisor for admission information.

Probation

Students who do not achieve a cumulative Grade Point Average of 2.00 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 or terms. At each point of assessment, students "on probation" must achieve an average term GPA of 2.00 in order to proceed and a cumulative GPA of 2.00 to clear probation. While "on

probation", students must consult with a University 1 Academic Advisor prior to registration and on a regular basis until probation is cleared. Support services and referrals may be suggested in order to improve academic 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 (See below).

Students with a cumulative GPA of less than 2.00 are not eligible for admission to a faculty or school and must remain in University 1 for their next registration, regardless of the number of credit hours completed.

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. Students must return to University 1 once the term of the suspension has been served.

4.10 University 1 Honour List

Students enrolled in 12 credit hours or more who achieve a Term Grade Point Average of 3.50 or higher will be placed on the University 1 Honour List. The University 1 Honour List will be calculated after each term (i.e. Fall, Winter, Summer 1 and Summer 2).

The University 1 Honour List designation will appear on the student's transcript of marks.

4.11 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 this calendar for information specific to each faculty. University 1 students who wish to challenge a course for credit must consult with a University 1 Academic Advisor prior to registration. For additional information on challenging a course for credit see Section 4.3.2 in the General Academic Regulations and Requirements chapter in this *Calendar*.

4.12 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 this *Calendar*.

SECTION 5: Registration

5.1 New Students

Registration times for newly admitted University 1 students

Registration begins July 16, 2007 and concludes September 19, 2007 for three credit hour (Fall Term) courses and six credit hour (Fall/Winter Term) courses. For three credit hour (Winter Term) courses, registration starts July 16, 2007 and ends January 18, 2008. 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 16, 2007 and July 19, 2007. All new University 1 students are required to successfully com-

plete Start@U1 before registering for courses. Start@U1 is available beginning June 2007 via an online tutorial. See Section 3.4 in this chapter for more information about Start@U1.

Determining your initial access time:

On July X, 2007, 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 chapter of this *Calendar* for more details on registration and determining your initial access time.

5.2 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, 2007 you have completed less than 24 credit hours, your registration in the Fall/Winter 2007/2008 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 5.2.1 below). If you have achieved a cumulative GPA of 2.0 or greater and have completed 30 credit hours or more you must exit from University 1 before you register for the Fall/Winter 2007/2008 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 5.2.2 or 5.2.3 below). Students with a cumulative GPA less than 2.0, must remain in University 1 on probation. See Section 4.9 in this chapter for information about academic performance, probation and academic suspension.

5.2.1 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 2007/2008 session. When choosing courses, review your target faculty or school's chapter in this *Calendar* or refer to the 2007 - 2008 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 3.4 in this chapter for more information.

5.2.2 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 XX, 2007 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 19, 2007 if you have registered for courses in Fall/Winter 2007/2008. If you plan to begin classes in January you may transit to the Faculty of Arts or Science after September 19, 2007 with the assistance of a University 1 Academic Advisor or an advisor in your intended faculty.

5.2.3 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.

5.3 Determining When Courses are Offered and Building a Timetable

Information on building timetables is covered in Start@U1 tutorials 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 using the online catalogue in Aurora Student. A paper copy of the timetable will be available for student use in the University 1 Student Help Centre, 205 Tier Building.

5.4 Registering for Courses with 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 of this *Calendar* and the use of Aurora Student will be described in detail in the Start@U1 tutorial sessions.

Aurora Student will not allow you to: (1) repeat a course in which you have previously received a grade; (2) register for Challenge for Credit courses; (3) register for a laboratory exemption; (4) take courses that are not on the University 1 course list. If you want to register in any of these categories, you must contact the University 1 Student Help Centre for registration assistance.

5.5 University 1 Orientation 2007: Tuesday, September 4 and Wednesday, September 5

Information about University 1 Orientation 2007 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

5.6 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.

5.7 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.

5.7.1 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.

5.8 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/Winter Term) courses is from September 6 - 19, 2007 and for three credit hour (Winter Term) courses is from January 7 - 18, 2008.

5.9 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 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 2007-2008 session. Students with a GPA of 2.0 or higher who have completed more than 51 credit hours at the end of the Fall/Winter 2007-2008 session must

transit to the Faculty of Arts or the Faculty of Science before registering for summer courses.

5.10 College Membership

For information about membership, services and academic programs in one of the following colleges, consult the chapter on College Membership in 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.

5.10.1 University 1 course offerings at St. John's College

Students can meet the requirements for University 1 by selecting Faculty of Arts and Faculty of Science courses offered at the College. St. John's College (SJC) students who have declared themselves as SJC members using Aurora Student will have access to special advance registration for all courses held in SJC, as well as corresponding lab sections held outside of the College. Students intending to enter a professional faculty (e.g., Medicine, Dentistry, Pharmacy) can meet their first year pre-professional requirements by registering in the courses offered in SJC. Contact the SJC registrar for more information on the timetable. For instruction on how to designate college membership see The Registration System: Aurora Student section.

5.10.2 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.

5.11 Registration Reminders

Things to do before classes start:

- Complete a Start@U1 session. (for new U1 students)
- Determine your initial access time. (see above)
- Create a timetable.
- 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 4 and 5.
- 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 5, 2007 fee payment deadline. Do not wait for a fee statement to be mailed to you. For payment options see Fees, Payments and Refunds section.

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 in [Part X of this Calendar](#). Faculties and schools are listed in alphabetical order. 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 2007-2008 Fall and Winter Terms refer to umanitoba.ca/calendar and the University 1 *STARTbook*. Students

may be permitted to take courses not on this list with permission of the teaching faculty or school and University 1.

For a list of courses available at *Collège universitaire de Saint-Boniface* see a University 1 Academic Advisor or refer to umanitoba.ca/calendar.

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
 EVDS 1XXX Visual Literacy – *pending Senate approval* 3

Faculty of Arts

In addition to the 1000 level courses listed below, University 1 students may take any 2000, 3000 and 4000 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
 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
 GRK 1330 The Acts of the Apostles 3

Latin

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

Drama - see Theatre

Economics

ECON 1200 Principles of Economics 6
 ECON 1210 Introduction to Canadian Economic Issues and Policies 3
 ECON 1220 Introduction to Global Environmental Economic Issues and Policies 3

English

ENGL 0930 English Composition (**Note:** This course is not acceptable for credit in the Faculties of Engineering, Nursing and Pharmacy). 3
 ENGL 0940 Writing About Literature (**Note:** This course is not acceptable for credit in the Faculties of Engineering, Nursing and Pharmacy). 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

Film Studies

FILM 1290 The Art of the Film 1 3
 FILM 1300 The Art of the Film 2 (*delete pending Senate Approval*) 3
 FILM 1ABC Film History (*pending Senate Approval*) 3

French, Spanish and Italian

French

FREN 1150 Introductory French 6
 FREN 1190 Francais 6
 FREN 1200 French 1 6
 FREN 1250 Francais Oral 1 6

Spanish

SPAN 1180 Introductory Spanish 6
 SPAN 1260 Intermediate Spanish Language Review 3
 SPAN 1270 Spanish Oral 1 3
 SPAN 1280 Spanish for Native Speakers 3
 SPAN 1XXL Accelerated Intermediate Spanish (*pending Senate approval*). 6

Italian

ITLN 1080 Introductory Italian 6

German and Slavic Studies

German

GRMN 1120 Beginning German 6
 GRMN 1240 German for Reading Knowledge 6
 GRMN 2100 Intermediate German 6
 GRMN 2120 Introduction to German Culture 1 (*pending Senate approval*) 3
 GRMN 2130 Introduction to German Culture 2 (*pending Senate approval*) 3
 GRMN 2140 Exploring German Literature (*pending Senate approval*) 3

Russian

RUSN 1300 Introductory Russian 6
 RUSN 1330 Introductory Russian 2 3
 RUSN 2810 Intermediate Russian 6
 RUSN 2820 Intermediate Russian 2 3

Ukrainian

UKRN 1230 Language Seminar in Ukraine 1 3
 UKRN 1270 Conversational Ukrainian 6
 UKRN 1310 Introductory Ukrainian 6
 UKRN 1320 Introductory Ukrainian 2 3
 UKRN 2720 Intermediate Ukrainian 6
 UKRN 2730 Intermediate Ukrainian 2 3

Polish

POL 1890 Introductory Polish 6
 History
 HIST 1200 An Introduction to the History of Western Civilization 6
 HIST 1260 New Directions in History: Inquiries into the Cultural Basis of the Modern World 3
 HIST 1270 New Directions in History: Inquiries into the Power Relations of the Modern World 3
 HIST 1310 Canada-United States: Contemporary Problems in Perspective: Initial Problems 3
 HIST 1320 Canada-United States: Contemporary Problems in Perspective: Current Problems 3
 HIST 1350 An Introduction to the History of Western Civilization to 1500 3

HIST 1360	An Introduction to the History of Western Civilization from 1500	3	LING 1440	Rules of English Grammar	3
HIST 1370	An Introduction to Modern World History: 1500-1800	3		Native Studies	
HIST 1380	An Introduction to Modern World History: 1800-Present	3	NATV 1000	Orientation Course: The Colonizers and the Colonized	3
HIST 1390	History of Colonial Canada: 1500-1885	3	NATV 1200	The Native Peoples of Canada	6
HIST 1400	History of the Canadian Nation Since 1867	3	NATV 1220	The Native Peoples of Canada, Part 1	3
HIST 1410	Asian Civilizations	6	NATV 1240	The Native Peoples of Canada, Part 2	3
HIST 1420	Asian Civilizations to 1500	3		Native Languages	
HIST 1430	Asian Civilizations from 1500	3	NATV 1250	Introductory Cree 1	3
HIST 1440	History of Canada	6	NATV 1260	Introductory Cree 2	3
HIST 1500	An Introduction to Modern World History: 1500 - Present	6	NATV 1270	Introductory Ojibway 1	3
			NATV 1280	Introductory Ojibway 2	3
HIST 2050	South Asia since 1947	3	NATV 1290	Introductory Inuktitut	3
HIST 2080	The Byzantine Empire and the Slavic World	3		Near Eastern and Judaic Studies	
HIST 2130	Emergence of Modern South Asia: 1757-1947	3		Semitic Languages and Literature	
HIST 2140	Colonial Latin America	3	SEM 1120	Biblical Hebrew	6
HIST 2150	Independent Latin America	3	SEM 1250	Hebrew 1	6
HIST 2180	The History of Catholicism to 1540	3	SEM 1260	Hebrew 2	6
HIST 2210	History of Britain, 1485 to the Present	6		Yiddish	
HIST 2230	History of the United States from 1607	6	YIDD 1220	Yiddish	6
HIST 2240	History of Antisemitism and the Holocaust	6		Philosophy	
HIST 2280	Aboriginal History of Canada	6	PHIL 1200	Introduction to Philosophy	6
HIST 2370	History of Europe since the French Revolution	6	PHIL 1290	Critical Thinking	3
HIST 2380	The Twentieth-Century World	6	PHIL 1320	Introductory Logic	6
HIST 2410	History of India	6	PHIL 1330	Introduction to Symbolic Logic	6
HIST 2420	The Medieval World	6	PHIL 1510	Historical Introduction to Philosophy	6
HIST 2490	History of Russia	6		Political Studies	
HIST 2520	A History of Germany since the Reformation	6	POLS 1500	Introduction to Politics	6
HIST 2570	Nationalism in Modern Times	3		Psychology	
HIST 2580	A History of Fascism: The Politics and Culture of the Radical Right	3	PSYC 1200	Introduction to Psychology	6
				Religion	
HIST 2600	Introduction to the Ukraine	3	RLGN 1120	Biblical Hebrew	6
			RLGN 1320	Introduction to World Religions	6
HIST 2610	Making of Modern Ukraine	3	RLGN 1350	The History of Eastern Christianity	6
			RLGN 1390	Readings in Biblical Hebrew 1	3
HIST 2650	Modern China and Japan	6	RLGN 1400	Readings in Biblical Hebrew 2	3
HIST 2660	History of the Soviet Union	3	RLGN 1410	Death and Concepts of the Future	3
HIST 2670	History of Capitalism	3	RLGN 1420	Ethics in World Religions	3
HIST 2680	A History of Socialism from the French Revolution to the Present	3	RLGN 1430	Food: Religious Concepts and Practices	3
			RLGN 1440	Evil in World Religions	3
HIST 2690	The Common People in Industrial Society	6	RLGN 1450	Religion and The Media	3
HIST 2710	Women in History	6		Sociology	
HIST 2720	The World Since 1945	6	SOC 1200	Introduction to Sociology	6
HIST 2760	History of the United States from 1877	3		Theatre	
HIST 2820	An Introduction to Historical Method	6	THTR 1220	Introduction to Theatre	6
HIST 2840	A History of Russia to 1917	3		Women's Studies	
HIST 2890	Imperialism	6	WOMN 1530	Introduction to Women's Studies in the Humanities	3
HIST 2900	Topics in Social History	6	WOMN 1540	Introduction to Women's Studies in the Social Sciences	3
HIST 2930	The History of the British Isles, 412-1485	6	WOMN 2560	Women, Science and Technology	3
HIST 2950	Early Canada: from the Earliest Settlement to 1867	6		Asper School of Business	
HIST 2960	The New Dominion: 1867 to 1921	6		Accounting & Finance	
HIST 2970	Modern Canada: 1921 to the Present	6	ACC 1100	Introductory Financial Accounting	3
HIST 2990	The History of Catholicism since 1540	3		Business Administration	
			GMGT 2030	Administrative Theory	3
Icelandic			GMGT 2070	Introduction to Organizational Behaviour	3
ICEL 1220	Introduction to Icelandic Culture and Civilization	6	GMGT 2080	Introduction to Management and Organization Theory	3
ICEL 1240	Modern Icelandic 1	6		Marketing	
Interdisciplinary			MKTG 2210	Fundamentals of Marketing	3
ARTS 1110	Introduction to University (Note: This course is not acceptable for credit in the Faculty of Engineering.)	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.	
ARTS 1120	Reading and Writing Across the Disciplines	6		Faculty of Engineering	
ARTS 1140	European Literature 1	3	ENG 1460	Introduction to Thermal Sciences	3
ARTS 1150	European Literature 2	3	ENG 1450	Introduction to Electrical and Computer Engineering	3
Labour Studies			ENG 1440	Introduction to Statics	3
LABR 1270	Introduction to the Political Economy of Labour	3	ENG 1430	Design in Engineering	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			

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.

Clayton H. Riddell Faculty of Environment, Earth, and Resources

In addition to the 1000 level courses listed below, University 1 students may take any 2000, 3000 and 4000 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 Geography	3
GEOG 1200	Introductory Geography	6
GEOG 1280	Introduction to Human Geography	3
GEOG 1290	Introduction to Physical Geography	3
Geological Sciences		
GEOL 1340	The Dynamic Earth	3
GEOL 1350	The Evolving Earth	3
GEOL 1360	Environmental Earth Science	3
GEOL 1370	The Earth in Space	3
GEOL 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
NURS 2610	Health and Physical Aspects of Aging	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 5.18 in the Faculty of Science chapter in 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

PHED 2610	Health and Physical Aspects of Aging Recreation Studies	3
REC 1200	Introduction to Leisure Travel	3
REC 1400	Concepts of Recreation and Leisure	3
REC 2650	The Social Aspects of Aging	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 1000 level courses listed below, University 1 students may take any 2000, 3000 and 4000 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 (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.)	3
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		
MBIO 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
	SWRK 2650	The Social Aspects of Aging	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: Merv Pritchard, Karin Wittenberg

Manager of Finance and Administration: Harminder Dhanjal

Student Services Office

160 Agriculture Building

Telephone: (204) 474 9295

Student Advisor: Meg Brolley

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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); **Krause**, D.O., B.Sc. Agric. (Stellenbosch), M.Sc., Ph.D. (Illinois); **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); **Ominski**, K.H., B.Sc., Ph.D. (Manitoba); **Plaizier**, J.C.B., B.Sc., M.Sc. (Wageningen), Ph.D. (Guelph).

Senior Instructor

Onischuk, L.A., B.S.A., Ph.D. (Manitoba)

Biosystems Engineering

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 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.; **Levin, D.B.** (David), B.E.S. (Waterloo), M.Sc. (Guelph), Ph.D. (McGill); **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. (Bosphorus), 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); **Treva, 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); **Brülé-Babel, A.L.**, B.S.A., Ph.D. (Saskatchewan); **Fernando, W.G.D.**, B.Sc. (Peradeniya), M.Sc. (Kelaniya), Ph.D. (Oregon State); **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); **Scarth, R.**, B.A., M.Phil., Ph.D. (Cambridge).

Associate Professors

Daayf, F., B.Sc. (Marrakech), M.Sc., Ph.D. (Montpellier), D. d'fat (Marrakech); **Fristensky, B.W.**, B.A. (Cornell), Ph.D. (Washington State).

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); **Razem, F.A.**, B.Sc. (Hebron), M.Sc. (Saskatchewan), Ph.D. (Western Ontario); **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

Bouw, J. Dip.Agric. (Manitoba); **Corbett, S.**, Dip.Agric. (Manitoba); **Korošcil, 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 Tech-

nology (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 Animal Systems, Entomology, Food Science, Plant Biotechnology and Soil 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)

² Economics (6 credit hrs)

ECON 1200 or (ECON 1210 and ECON 1220)

² Mathematics (6 credit hrs)

MATH 1680 or (MATH 1520 or MATH 1500, and MATH 1310 or MATH 1300)

² Agriculture (9 credit hrs)

ABIZ 1000

AGRI 1500

AGRI 1510

² Biology (6 credit hrs)

BIOL 1020

BIOL 1030

² Open Electives (3 credit hrs)

B.Sc. (Agriculture), B.Sc. (Agroecology), B.Sc. (Food Science)

² Chemistry (6 credit hrs)

CHEM 1300 and CHEM 1310 or CHEM 1320

² Economics (6 credit hrs)

ECON 1200 or (ECON 1210 and ECON 1220)

² Mathematics (6 credit hrs)

MATH 1680 or (MATH 1520 or MATH 1500, and MATH 1310 or MATH 1300)

² Biology (6 credit hrs)

BIOL 1020

BIOL 1030

² Agriculture (6 credit hrs)

AGRI 1500

AGRI 1510

² 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

School of Agriculture graduates who have obtained a GPA of 3.0 in the Agriculture Diploma program are eligible for 60 credit hours of transfer into the following degree programs: Bachelor of Science (Agribusiness), Bachelor of Science (Agroecology), Bachelor of Science (Agriculture) – Agronomy or Animal Systems, when transferring into the same stream. If students choose to change streams it may not be possible to transfer the entire 60 credit hours due to program requirements; students should contact the Student Services Office for details. Grade will be transferred for those courses considered on a one-to-one basis (see below); the remaining credit hours will be transferred without grades. This transfer articulation is applicable to diploma graduates who have entered the degree program as of September 2005.

Students wishing to enter a degree program without the above qualifications will be evaluated on a course-by-course basis (below).

The Bachelor of Science (Agriculture), Plant Biotechnology, and the Bachelor of Science (Food Science) are not part of this articulation. Students should contact the Student Services Office for details on transfer into these programs.

Transfers of Credit (currently under review)

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

BIOE 0600 Farm Machinery

Degree

BIOE 2090 Machinery for Ag Production

ANSC 0420 Animal Biology & Nutrition
 ANSC 0670 Beef Production and PLNT 0750 Forage & Pasture Mgmt or ANSC 0680 Dairy Cattle Production & Mgmt and PLNT 0750 Forage & Pasture Mgmt
 ANSC 0600 Animal Health and Welfare and ANSC 0690 Swine Production or ANSC 0600 Animal Health & Welfare and ANSC 0700 Poultry Production
 ENTM 0620 Pest Mgmt & Farm Insects
 PLNT 0410 Cereal & Oilseeds
 PLNT 0790 Landscape Horticulture and PLNT 0800 Diversification with Horticultural Crops
 PLNT 0770 Weed Mgmt
 SOIL 0420 Soil Productivity & Land Use and DAGR 0420 Intro Soils & Crops
 SOIL 0620 Soil Conservation & Mgmt and BIOE 0690 Water Mgmt
 ABIZ 0440 Ag Econ & Marketing 1 and ABIZ 0450 Ag Econ & Marketing 2
 ABIZ 0730 Financial Risk Mgmt
 ABIZ 0680 Ag Business Mgmt
 ABIZ 0720 Farm Business Mgmt
 065.064 Mgmt Plan Project I and 065.065 Mgmt Plan Project II
 DAGR 0680 Mgmt Plan I and DAGR 0690 Mgmt Plan Project II
 DAGR 0420 Intro Soils & Crops
 DAGR 0020 Unallocated
 DAGR 0410 Communications & Learning Skills (min B grade)
 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.

ANSC 2500 Animal Production
 ANSC 4520 Ruminant Production Systems Meat or ANSC 4530 Ruminant Production Systems Milk
 ANSC 4540 Monogastric Production Systems or ANSC 4550 Avian Production Systems
 ENTM 0010 Unallocated
 PLNT 2500 Crop Production
 PLNT 2510 Fundamentals of Horticulture
 PLNT 3540 Weed Science
 SOIL 3600 Soils and Landscapes in Our Environment
 SOIL 4510 Soil & Water Mgmt
 ABIZ 2510 Agricultural Marketing
 ABIZ 3120 Commodity Futures Markets
 ABIZ 1000 Ag Business Mgmt
 ABIZ 3530 Farm Management
 ABIZ 0010 Unallocated
 ABIZ 0010 Unallocated
 AGRI 1500 Natural Resources & Ag Production
 AGRI 1510 Utilization of Ag Prod
 AGRI 2030 Technical Communications

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:

² When a student fails to obtain 12 Weighted Grade Points in the first year program; or

² When a student fails to meet the probational standards after attempting a minimum of 24 credit hours while on probation; or

² 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:

² 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;

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).

² 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) MKT 2210 Fundamentals of Marketing should 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	Elements of Biochemistry 1 (MBIO 2770)	3
PLNT 2520	Genetics	3
AGEC 2370	Principles of Ecology (BOTN 2370)	3
	or	
ZOOL 2370)		
Total credit hours		9

Agromony 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	Elements of Biochemistry 2 (MBIO 2780)	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	Elements of Biochemistry 2 (MBIO 2780)	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	Elements of Biochemistry 1 (MBIO 2770)	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 (BOTN 2370 or ZOO 2370)	3
	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 4400	Soil Ecology (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: J. D. House

Office: 231 Animal Science Building

Telephone: 204-474-9523

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.

The Faculty also offers a minor in Animal Systems. Refer to Section 5.9.1 for details.

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 (BOTN 2370 or ZOO 2370)	3
	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

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)	

Group 4

Two courses (six credit hours) from the following:

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 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

5.2.3 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.

The faculty also offers a minor in Plant Biotechnology. Refer to section 5.9.4 for details.

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)	3
or		
ZOOL 2370)		
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

5.3 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 4400	Soil Ecology (3)

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)

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)	
Free Electives		3
		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 faculty also offers a minor in Food Science. Refer to section 5.9.3 for details.

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**	3
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

Restricted Electives

Group 1

Three credit hours from the following:

AGRI 2190	Toxicology Principles (1.5)	
Plus		
ANSC 2530	Nutritional Toxicology (1.5)	
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.

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.

² 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.

² 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.)

² 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: PHIL 1290, PHIL 2740, PHIL 2750, PHIL 2830.

Second Year

CHEM 1310	University 1 Chemistry: An Introduction to Physical Chemistry	3
CHEM 2770 (MBIO 2770)	Elements of Biochemistry 1	3
CHEM 2780 (MBIO 2780)	Elements of Biochemistry 2	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. Course requirements are outlined in sections below. 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, Agronomy 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.

Minors in the Faculty of Agricultural and Food Sciences

5.9.1 Animal Systems

Students may obtain a minor in Animal Systems (18 credit hours) by completing ANSC 2500 Animal Production plus an additional 15 credit hours in Animal Science courses.

5.9.2 Entomology

Students may obtain a minor in Entomology (18 credit hours) by completing ENTM 2050 Introductory Entomology plus an additional 15 credit hours from the following list of courses: ENTM 1000 World of Bugs, ENTM 3160 Veterinary and wildlife entomology, ENTM 3170 Crop protection entomology, ENTM 3162 Manitoba's insect fauna, ENTM 4280 Aquatic entomology, ENTM 4320 Pollination biology, ENTM 4500 Insect taxonomy and morphology, ENTM 4520 Physiological ecology of insects

5.9.3 Food Science

Students may obtain a minor in Food Science (18 credit hours) by completing FOOD 1000 Food Safety Today and Tomorrow and FOOD 2500 Food Chemistry plus an additional 12 credit hours in FOOD courses excluding FOOD 4230 Food Research and FOOD 4120 Food Science Seminar.

5.9.4 Plant Biotechnology

Students may obtain a minor in Plant Biotechnology (18 credit hours) by completing PLNT 2530 Plant Biotechnology plus an additional 15 credit hours from the following list of courses: PLNT 3140 Introductory Cytogenetics, PLNT 3520 Principles of Plant Improvement, PLNT 3570 Fundamentals of Plant Pathology, PLNT 4330 Intermediate Plant Genetics, PLNT 4540 Plant Genomics, PLNT 4550 Developmental Plant Biology, PLNT 4560 Secondary Plant Metabolism, PLNT 4570 Research Methods in Plant Pathology, PLNT 4580 Molecular Plant-Microbe Interactions, PLNT 4590 Physiology of Crop Plants, PLNT 4600 Issues in Agricultural Biotechnology.

5.9.5 Soil Science

Students may obtain a minor in Soil Science (18 credit hours) by completing SOIL 3600 Soils and Landscapes in our Environment plus an additional 15 credit hours from the following list of courses: SOIL 3060 Introduction to Agrometeorology, SOIL 3520 Pesticides: Environment, Economics and Ethics, SOIL 4060 Physical Properties of Soils, SOIL 4120 Soil Microbiology, SOIL 4130 Soil Chemistry and Mineralogy, SOIL 4400 Soil Ecology, SOIL 4500 Remediation of Contaminated Land, SOIL 4510 Soil and Water Management, SOIL 4520 Soil Fertility.

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:

² Cumulative Credit Hours includes courses passed and failures not removed by supplemental exams or successful reattempts.

² When both a final and supplemental exam are written the higher grade obtained will be used to determine Grade Point Averages.

² 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.

Probational 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 op-

tions 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	4
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 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 0680 Agribusiness Management	4
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.

² 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.

² 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.)

² 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.

SECTION 8: Registration Information: Faculty of Agricultural and Food Sciences

8.1 Access Times

Students are referred to the chapter "Registration Information: Aurora Student."

8.2 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

8.3 Registration and Choosing Your Courses

All students in Faculty of Agricultural and Food Sciences degree programs must register through the website. Students are referred to the chapter "Registration Information: Aurora Student:" *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.

8.4 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 20th. 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).

8.5 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 20th. 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.

8.6 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.

8.7 Students on Probation or Attempting Reinstatement

Before registering, you must have your course selection approved no later than June 20th, by the Student Advisor in 160 Agriculture Building, (204) 474 8269.

8.8 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".

8.9 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?
- 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.

8.10 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.

Limited Access

Faculty of Agricultural and Food Sciences are not Limited Access courses.

Students who take courses in other faculties are governed by their limited access policies.

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.

SECTION 9: Registration Information Agriculture Diploma

9.1 Access Times

Students are referred to the chapter "Registration Information: Aurora Student".

9.2 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.

9.3 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 14, 2007. 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.

9.4 Registration and Choosing Your Courses

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:".

9.5 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

9.6 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.

9.7 Returning Students

9.7.1 Full-Time Students

Returning students should review the instructions in the chapter "The Registration System: Aurora Student:".

9.7.2 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.

9.7.3 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.

9.8 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, 2007 to register in person.

9.9 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.

9.10 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?
- 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.

9.11 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

General Office

216 Architecture 2 Building

Telephone: (204) 474 9386

Fax: (204) 474 7533

E-mail: shakhan@cc.umanitoba.ca

Website: www.umanitoba.ca/faculties/architecture

Dean: David R. Witty

Associate Dean (Academic): Richard Perron

Associate Dean (Research): Rae Bridgman

Environmental Design Chair: Eduard Epp

Program Assistant: Shamina Khan

Student Advisor: Lori Amedick

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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

Senior Scholar:

Thompson, H., B.Arch. (North Dakota State), M.Arch. (Illinois).

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.; **Harrop, P.**, Dip.Des.(Ottawa), B.Arch. (Carleton), M.Arch. (McGill), M.A.A.; **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); **Kramer-Wolfart, C.**, B.A. (Calvin), B.Sc. Arch. (Michigan), M.Arch. (Princeton); **Neveu, M.**, B.Arch. (Wentworth), M.Arch. (McGill).

Part-time Staff:

Chon, J.S., B.Sc. Arch. Eng. (Yonsei), Grad.Dip.Housing (McGill), M.Arch. (Manitoba); **Coar, L.**, BS Civil Engineering, BS Arch Engineering (Pennsylvania), BS; **Minuk, N.**, B.A., M.Arch.(Manitoba).

City Planning

Professor Emeritus:

Carvalho, M., B.Arch. (Howard), M.C.P. (Pennsylvania), Ph.D. (Edinburgh), FCIP.

Senior Scholar:

Rotoff, B., B.Sc. (C.E.), M.C.P. (Manitoba), MCIP.

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).

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.; **Karpan, C.**, B.I.D., M.Ed., Ph.D. (Manitoba); **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); **Close, S.**, B.F.A. (Saskatchewan), M.A. (Carleton), Ph.D. (The Netherlands); **Mallory-Hill, S.**, B.E.S., M.Arch (Manitoba), Ph.D. (Eindhoven); **Roshko, T.**, B.Sc. (Middle East Tech.), B.I.D., M.Sc. (Manitoba), N.C.I.D.Q., LEED™ A.P., P.I.D.I.M., I.D.C.

Part-time Staff:

Ackerman, S. B.E.S., M. Arch. (Manitoba); **Bouchard, A.**, B.I.D. (Manitoba), M.A. (Ontario).

Landscape Architecture

Professor Emeritus:

Ratray, Alexander E., B.Arch. (Manitoba), M.Land.Arch. (Pennsylvania), A.S.I.A., F.C.S.L.A., M.A.L.A.

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. I.D. (Manchester), M.A.L.A., C.S.L.A., P.P.L.I.

Assistant Professors:

Brown, B., B.F.A. (Virginia Commonwealth), M.A., M.F.A. (Iowa), M.L.A. (Champagne Urbana); **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).

Within the Faculty of Architecture, the Environmental Design Program is a non-professional degree program leading to graduate studies in Architecture, City Planning, Interior Design and Landscape Architecture, at this institution and beyond.

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

PENDING PROGRAM REVISIONS

For students planning entry to the Environmental Design Program for September 2008, the following Regulations will be implemented. Students will be required to fulfil the following:

PART A: 12 credit hours of required courses offered by the Faculty of Architecture

U1 EVDS 1600 Introduction to Environmental Design

U1 EVDS 1660 History of Culture, Ideas and Environment 2

U1 EVDS 1670 History of Culture, Ideas and Environment 2

U1 EVDS 1602 Visual Literacy

PART B: 18 Credit of required courses from the Faculties of Arts and Sciences

6-12 credit hours from the Faculty of Arts

(Recommended courses that will also satisfy the Faculty of Arts requirement): ANTH 1220 or 1520, CDN 1130, ECON 1220, ENGL 0930 (W) or 1310 (W), FILM 1290, HIST 1260 (W), HIST 2280 (W), PHIL 1290.

6-12 credit hours from the Faculty of Science

(Recommended courses that will also satisfy the Faculty of Science requirement): BIOL 1010, FA 1020 (M), MATH 1300 (M), PHYS 1410, ZOOL 1320; ENVR 1000*, GEOG 1280* or 1290*, GEOL 1360*.

*Courses offered through the Clayton H. Riddell Faculty of Environment, Earth, and Resources.

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.

The minimum GPA for consideration will be 2.5 with no grade less than C+ in the four required courses listed in Part A.

Please Note: Students are currently asked to declare a specific program option after the second year of studies in the Environmental Design Program. These include Architecture, Community Design, Interior Environments, and Landscape Architecture. Effective September 2008, and subject to Senate approval, the Environmental Design Program is being reformed to encourage students to declare a specific program option after the first year of studies in the Environmental Design Program. Students entering the program should be aware that entry into the options will be assigned on a competitive basis, and that not all students may be successfully placed in their first option.

SECTION 4: Academic Regulations

4.1 Undergraduate Scholastic Standards

A Grade Point Average (GPA) of 2.5 is required as an acceptable standard of performance.

A minimum grade of 'C' is required to pass all courses offered by the Environmental Design Program and by the Departments within the Faculty. All courses offered by the Environmental Design Program stipulate a grade of "C" in the prerequisite course(s).

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.

4.3 Dean's Honour List

Students who achieve a term GPA of 4.0 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' elected 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 Environmental Design program of studies.

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 Environmental Design program of studies.

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 Environmental Design program of studies.

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

Students contemplating entry to the Landscape Architecture option should meet with the department head in Landscape Architecture prior to the end of their second year Environmental Design program of studies.

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*.

SECTION 6: Registration Information

6.1 Initial Access Times

Please check Aurora Student on or after July 2, 2007 for your initial access time.

6.2 Registration Assistance

6.3 For All New and Returning Students

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.

6.4 Registration Exceptions

Students 'on probation' and students seeking reinstatement must see an advisor before registering.

6.5 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.

6.6 Registration Information

6.7 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 Aurora Student 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. This sequence may differ from what is in the General Calendar. Please follow the course sequence listed below

It is the student's 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
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.

6.8 Environmental Design Students Taking Courses in Other Faculties and Schools

Environmental Design students may choose their electives from the faculties of Arts, Science, Engineering, Fine Arts, Management and Agriculture.

6.9 Students From Other Faculties or Schools Registering for Courses in Environmental Design

The following Environmental Design courses are available to students not registered in the Environmental Design Program.

EVDS 1600 Introduction to Environmental Design

EVDS 1660 History of Culture, Ideas and Environment 1 (also available in Summer 1)

EVDS 1670 History of Culture, Ideas and Environment 2 (also available in Summer 2)

EVDS 1602 Visual Literacy

6.10 Checklist

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.

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

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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

Archambault, R.W., B.F.A. (Bowling Green, Ohio), M.F.A. (New York State, Alfred); **Amundson, D.O.**, B.F.A. (Manitoba), M.F.A. (Arkansas); **Werner, C.A.**, B.F.A. (Manitoba), M.A. (Psych.) (North Dakota State), M.A. (North Dakota), Ph.D. (Manitoba); **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); **Eyland, C.**, B.F.A. (Nova Scotia); **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).

Assistant Professors

Bugslag, J.F.P., B.A. (Victoria), M.A. (Victoria), Ph.D. (East Anglia); **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); **Nunoda, S.K.**, B.F.A. (Western), M.F.A. (Calgary); **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 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 Entrance requirements: Studio programs

Bachelor of Fine Arts (Honours), and Bachelor of Fine Arts

Most applicants apply to our studio programs directly from high school through our portfolio competition. The School encourages and appreciates applications from people of diverse backgrounds and cultures. Other ways to apply without a portfolio 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 and other faculties (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 Entrance 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 Literature (3 credit hours at 100-level or above. ENGL 1200, ENGL 1300 or any other English course with "Literature" or "Literary" in the title)

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

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 (Writing about Art, FA 2620, (3 c.h.) is strongly recommended)	6
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

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, which 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 ½	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 1, 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 3180	History of Photography	3
FAAH 3190	History of Ceramics	3
FAAH 3200	Art in New Media	3
FAAH 3202	Contemporary Art History	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

SECTION 6: Registration Information for all New and Returning Students

All students are directed to the University of Manitoba website (www.umanitoba.ca) for information on how to find out their initial access times. This information will be available after July 2, 2007 under the "Aurora Student" link. Please refer to the Academic Schedule at the beginning of this Calendar for a timetable of registration, revision, examination, holidays and end of term dates.

Student Responsibility: Determine program requirements from the School or Art chapter of the current *Undergraduate Calendar*. New students are recommended to download their Diploma or Degree Course Requirement Worksheet located by clicking on the "Students" link from the School of Art website (www.umanitoba.ca/schools/art). It is your responsibility to be familiar with all the requirements of your diploma or degree. There is no minimum of courses required per year; the student chooses his/her own schedule, and it is students' responsibility to ensure that they comply with degree program requirements and to understand all regulations, policies and practices that affect them. Completion of degree requirements is the sole responsibility of the student. Should you encounter difficulty registering, or choosing courses, please contact the student advisor in 203 FitzGerald Building (204) 474-8294.

Obtain any written approvals necessary (prerequisite waivers, special permission forms, Special Topics 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.

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. The School of Art will not be able to get you into courses that are full. Please refer to the Academic Schedule at the beginning of this Calendar for revision dates to add first, second and spanned term courses.

Special Permission or Written Consent: If you need special permission or written consent to take any course, obtain the necessary form from the School of Art General Office first. Once you have the instructor's signature, return it to the 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. The Aurora system will remind you that a studio/lab section must be chosen.

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: STDO 1200 (054.120) Fundamentals of Drawing; STDO 1220 (054.122) Basic Design; Introduction to Art 1B (FAAH 1050 or 054.105) and Introduction to Art 2B (FAAH 1060 or 054.106); or Drawing for Non-Majors (STDO 1260) 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.

Returning Students not registered in 2006 – 2007 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.

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 10, 2007 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.

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.

Faculty of Arts

General Office

306A Fletcher Argue Building

Telephone: (204) 474 9100

Fax: (204) 474 7590

E-mail: arts_inquiry@umanitoba.ca

Website: www.umanitoba.ca/arts

Dean: Richard Sigurdson

Associate Dean (Undergraduate): Linda Wilson

Associate Dean (Graduate): Barry Ferguson

Associate Dean (Research): Janice Ristock

Executive Assistants to the Dean: Elisabeth Ross, Janet Sealey

Administrative Assistants: Vicky Warkentin

Student Advisors: Shari Campbell, Cecile Foster, Nancy Swaine

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-

Registration Information

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, University 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 hon-

our 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

3.1 Degrees Offered

Bachelor of Arts

Minimum time to graduate: ninety credit hours of coursework including work completed in University 1. 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: one hundred twenty credit hours of coursework including work completed in University 1. 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: between one hundred eight and one hundred twenty credit hours of coursework including work completed in University 1. 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 warning.

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, and have a minimum cumulative grade point average of 2.00, 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

Students who have completed 24 hours of coursework or more may choose to transfer to the Faculty of Arts or Faculty of Science subject to:

- Students who do not exceed 30 credit hours of "F" grades or 42 credit hours of "F" and "D" grades will be allowed to transit to Arts.
- Students who exceed 30 credit hours of "F" grades or 42 credit hours of "F" and "D" grades will not be allowed to transit to Arts. Following a one

year suspension they may apply to the Dean's Office to enter the Faculty under the options set out in Section 5.12.

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 have not exceeded the maximum number of "F" and "D" grades permitted on courses acceptable for credit in Arts (see Section 5.12). Those students who have less than the maximum number of "F" and "D" grades will be admitted in good standing. Those students who exceed the permitted maximum number of "F" and "D" grades will not be admitted. Following a one year suspension they may reapply for admission under the options set out in section 5.12. 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. The waiting period will be increased to two years if the student has been placed on suspension more than once in consecutive years. For information regarding transfer credit see 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 undergraduate degree from a recognized university program. For information regarding possible transfer credit, if any, see Section 5.16.

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 term 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.

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*.

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).

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, 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 30 credit hours 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, 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 students complete 60 credit hours, they must have 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 and at least three credit hours in a course in mathematics. (See the Chapter General Academic Regulations and Requirements, Appendix A: List of Approved Written English and Mathematics Courses, or search Aurora Student for the course attributes "Written English Requirement" or "Mathematics Requirement.")

3) Section 5.12 provides a summary of the maximum number of "F" and "D" grades allowed before incurring academic suspension.

4.1.4 Eleven Faculty Requirements for Graduating with a B.A. General Degree

1) A student must successfully complete 90 credit hours from among the courses acceptable for credit in the Faculty of Arts (see Section 5.2) with a minimum Grade Point Average of 2.00 (i.e. "C" or better) on these 90 credit hours.

The remaining ten faculty requirements for graduating should be understood as pertaining to the above 90 credit hours.

2) There must be at least 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 six credit hours from a subject field designated Humanities, at least six credit hours from a subject field designated Social Science, and at least six credit hours from a subject field designated Science (see Section 5.1).

4) Major: There must be 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 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 60 credit hours can be from the two subject fields used to fulfil the Major and Minor requirements. Hence, no more than 42 credit hours can be in the Major field, or no more 30 credit hours can be in the Minor field. (A student who has 30 credit hours 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 18 credit hours 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 42 credit hours can be from one subject field.

9) There must be at least 60 credit hours (subject to Senate approval) that have been taught by the Faculty of Arts (which, for the purpose of this regulation, includes up to 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 30 credit hours numbered at or above the 2000 level.

11) A student must successfully complete a minimum number of credit hours that are taken and successfully completed at the University of Manitoba: either 48 credit hours taken here at various times in a student's career, or 30 credit hours taken here as the final courses being offered towards the required 90 credit hours. 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 provided the student has successfully completed six credit hours in each of four different subject fields.

2) 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). 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).

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) see the specific listing for the relevant department in Sections 8 and 9.

3) 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 and at least three credit hours in a course in mathematics. (See the Chapter General Academic Regulations and Requirements, Appendix A: List of Approved Written English and Mathematics Courses, or search Aurora Student for the course attributes "Written English Requirement" or "Mathematics Requirement.")

2) When students register again after completing 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) **See Section 5.12 for the maximum number of "F" and "D" grades permitted in courses acceptable for credit in Arts before incurring academic suspension.**

4.2.4 Eleven Faculty Requirements for Graduating with a B.A. Advanced Degree

1) A student must successfully complete 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 Grade Point Average of 2.00 for these 120 credit hours.

The remaining ten faculty requirements for graduating should be understood as pertaining to the above 120 credit hours.

2) There must be at least 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 six credit hours in a Humanities subject field, at least six credit hours in a Social Science subject field, and at least six credit hours in a Science subject field (see Section 5.1).

4) Major: There must be at least 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 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 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 18 credit hours in more than one subject field can declare only one of them as his/her Minor.

6) No more than 78 credit hours can be from the two subject fields used to fulfil the Major and Minor requirements. Hence, no more than 60 credit hours can be in the Major field, or no more than 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 60 credit hours can be from one subject field.

9) There must be at least 81 credit hours (subject to Senate approval) that have been taught by the Faculty of Arts (which, for the purpose of this regulation, includes up to 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 42 credit hours numbered at or above the 2000 level.

11) There must be at least 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 six credit hours in each of four different subject fields (see Section 5.1), with a minimum 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 and at least three credit hours in a course in mathematics. (See the Chapter General Academic Regulations and Requirements, Appendix A: List of Approved Written English and Mathematics Courses, or search Aurora Student for the course attributes "Written English Requirement" or "Mathematics Requirement".)

3) To continue in an Honours program, the student must maintain a Degree 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 Degree 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 to 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 credit hours which a student must present (with a passing grade) in order to receive an Honours degree ranges from 108 to 120, 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 Degree 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 six credit hours 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 six credit hours in a Humanities subject field, at least six credit hours in a Social Science subject field, and at least six credit hours 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 Aurora Student.

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 Aurora Student:

May Graduation: end of revision period for Winter Term course changes

October Graduation: August 1

February Graduation: end of revision period for Fall Term course changes

Section 5: Additional Faculty Regulations and Policies

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 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 in 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 an 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

There are three 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 Other Faculties or Schools at the University of Manitoba:

The following information is subject to Senate approval:

All degree credit courses offered by other Faculties or Schools at the University of Manitoba are acceptable for credit in Arts (excludes Pass/Fail courses) subject to the Faculty of Arts overall degree requirements. Such courses taken prior to admission to Arts will be included on transfer and will also be used in determining eligibility for admission. For details see Section 5.3.

Students should note that written permission from the faculty or school offering the course may be required.

5.2.3 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 (excludes Pass/Fail courses) 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 in which the student received a final grade 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, all of these courses will count in determining eligibility for admission to Arts in accordance with Sections 3.3, 3.4 and 5.12 and they will all be taken into account when determining the student's Grade Point Averages in accordance with Sections 5.10 and 5.12. In addition, they will all count towards the minimum number of credit hours 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 who has not completed at least 24 hours of coursework at the University of Manitoba or who is on academic warning or academic suspension. Commencing September 1999 grades earned in courses at other universities are taken into account in the cumulative hours when determining the Grade Point Averages at the University of Manitoba. Grades earned at other universities will not be used in determining eligibility for awards (see Section 5.13 and 5.14 for details).

b) All completed courses that are deemed acceptable for credit in any degree program at the University of Manitoba (excludes Pass/Fail courses) 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 and transfer credit. That is, all of these courses will count in determining admissibility, in accordance with Sections 3.3, 3.4 and 5.12.

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 count towards the maximum number of "F" and "D" grades permitted in an Arts degree (see Section 5.12). Grades earned at other universities will appear on the University of Manitoba transcript and will not be used in determining eligibility for awards (see Section 5.13 and 5.14 for details). Effective September 2006, there is no limit on attempts in any degree program.

All completed courses that are deemed acceptable for credit in any degree program at the University of Manitoba (excludes Pass/Fail courses), which were taken by a student at another university or college prior to transferring to the Faculty of Arts and are outside the ten-year period prior to admission and registration in the Faculty of Arts, will not be used for purposes of determining admissibility, advanced 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 48 credit hours of the required 90 credit hours (these 48 credit hours may be taken at various points in the student's career); or by successfully completing at the University of Manitoba itself no fewer than the last 30 credit hours of the required 90 credit hours.

2) To receive the B.A. Advanced degree, the student must successfully complete at least 60 credit hours of the required 120 credit hours at the University of Manitoba.

3) 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).

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 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.

Year Equivalent	Credit Hours Passed (General Degree)	Credit Hours Passed (Advanced/Honours Degree)
1	fewer than 24 credit hours	fewer than 24 credit hours
2	24 credit hours to fewer than 54 credit hours	24 credit hours to fewer than 54 credit hours
3	54 credit hours or more	54 credit hours to less than 84 credit hours
4	not applicable	84 credit hours or more

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 any term and has obtained a Degree Grade Point Average of 2.75 and is in good standing, he/she may apply at the general office to be allowed to take 3 additional credit hours in any term.

5.8 Prerequisite, Corequisite, and Course Availability

Prerequisite: Minimum grades of "C" are required in all courses listed as prerequisites, except as otherwise noted in the chapter, Course Descriptions, in this *Calendar*. If a course is prerequisite for a second course, the prerequisite must be met in order to continue in the second course.

Some prerequisite courses may be taken concurrently. In this instance, the course description will indicate that a specific course is a pre- or corequisite for the course in which you wish to register. If you have not previously taken the course, you may register for it in the same term.

Corequisite: Where a course identifies another course as a corequisite it means that you must enrol in both courses at the same time.

Course availability: All courses listed in this *Calendar* are not offered every year. The course(s) being offered for the current terms are available at www.umanitoba.ca

5.9 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 Registration Information located at the end of this chapter. 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 warning or academic suspension are not permitted to challenge courses for credit.

5.10 Repeating a Course

The following information is subject to Senate approval:

A student may repeat a course only once. If a student wishes to repeat a course, he/she should be aware of the following:

- All completed courses will appear on the student's transcript and will be used to calculate the student's attempted hours. Courses that have been repeated will appear on the transcript but only the grade on the last attempt on the course will be used in calculating the cumulative grade point average.
- Repeating a course will not remove the original 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.

5.11 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 term 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.”

5.12 Maximum Number of "F" and "D" Grades Permitted on Courses Acceptable for Credit in Arts

Each student in the Faculty of Arts will be placed on academic suspension if they have:

more than 30 credit hours of “F” grades, or

more than 42 credit hours of a combination of “F” and “D” grades.

Following the one year suspension, the student may apply to the Dean’s Office to return to the Faculty by selecting one of the following irreversible options:

(a) to continue with no possibility of further “F” or “D” grades. Any further “F” or “D” grades will result in academic suspension for two years. (Following the two year suspension, the student may apply to the Dean’s Office to return to start afresh.)

Or

(b) start afresh, with their previous work not counting towards satisfying degree requirements.

(In either case this does not mean that the previous coursework will be removed from the student history or transcript.)

5.13 Dean’s Honour List and Graduating With Distinction or First Class Honours

Dean’s Honour List

To qualify for this list a student must complete at least 9 credit hours offered by the University of Manitoba during a term and attain a minimum term average of 3.55. 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 Degree 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 Degree 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

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 Degree 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.

5.14 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 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 Fall/Winter terms prior to graduation (with each Fall/Winter 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 Fall/Winter terms and

2) has a minimum 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 degree 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 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 Fall/Winter terms 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 Fall/Winter terms and

2) has a minimum 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 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.

5.15 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*.

5.16 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, fourth, etc., 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 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

Wiest, R.E., B.A. (Tabor College), M.A., Ph.D. (Oregon).

Senior Scholars

Koolage, W.W., Jr., A.B. (Dartmouth), M.A., Ph.D. (North Carolina); **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), F.R.S.C.; **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 College), F.R.S.C.

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); **Leinaweaver, J.B.,** B.A. (Whitman Col-

lege), 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, Department Code: 076

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.

8.2 Asian Studies Centre

Associate Director: William Lee

Centre Office: 357 University College

Telephone: 204 474 7047

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

Kayama, Y., B.A. (International Christian University), M.A. (Syracuse), Ph.D. (McGill); Li, H., B.A. (Harbin Engineering University), M.A. (UBC).

8.2.2 Program Information

Asia is home to approximately 60 percent of the world's population. Asian nations have emerged 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, Program Code: 150

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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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.)
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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
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Course No.	Courses Acceptable for Asian Studies Credit	Credit Hours
List A		
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

*indicates course no longer offered.

8.3 Canadian Studies Program

Program Coordinator: Barry Ferguson

Program Office: 306 Fletcher Argue

Telephone: 204 474 9055

E-mail: fergb@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.

The “List of Approved Courses in Canadian Studies” below identifies courses that may be used toward partial fulfillment of the requirements for Canadian Studies. These courses are also identified on Aurora Student with the course attribute of “Canadian Studies Requirement”.

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 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 six credit hours 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) 24 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 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, Program Code: 151

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 (6 credit hours are required in three subject fields), plus 12 credit hours in ancillary options	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 ancillary options	18 credit hours from the list of approved Honours courses in Canadian Studies plus 6 credit hours in ancillary 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	6
CDN 3730	Canadian Identity: An Interdisciplinary Approach	3
CDN 4410	Seminar in Canadian Studies (H)	6
Anthropology		
ANTH 2040	Native North America: A Sociocultural Survey (B)	3
ANTH 2041	Les Amérindiens de l'Amérique du nord: une étude socioculturelle (B) (CUSB)	3
ANTH 2640	Manitoba Prehistory	3
ANTH 3460	Native North American Ethnology (B)	3
ANTH 3461	Ethnologie des Amérindiens de l'Amérique du Nord (B) (CUSB)	3
ANTH 3500	Peoples of the Arctic (B)	3
ANTH 3501	Peuples de l'Arctique (B) (CUSB)	3
ANTH 3550	Canadian Subcultures	3
ANTH 3551	Sous-cultures canadiennes (CUSB)	3
ANTH 3910	Archaeological Field Training (D,E)	6
Economics		
ECON 1210	Introduction to Canadian Economic Issues and Policies	3
ECON 1211	Introduction aux politiques et aux problèmes économiques canadiens (CUSB)	3
ECON 2280	Social Welfare and Human Resources	6
ECON 2310	Canadian Economic Problems	6
ECON 2311	Les problèmes économiques du Canada (CUSB)	6
ECON 2350	Community Economic Development	3
ECON 2360	Women in the Canadian Economy	6
ECON 3300	Canadian Economic History	6
ECON 3301	Histoire économique du Canada (CUSB)	6
ECON 3510	Industrial Relations (Cross-listed with Labour Studies LABR 3510)	6
ECON 3690	Economic Issues of Health Policy	3
ECON 3720	Urban and Regional Economics and Policies	3
018.352*	Introductory Regional Economics	3
018.353*	Intermediate Regional Economics	3
018.357*	Health Economics	3
018.360*	Workshop in the Economy of Canada	6
English		
ENGL 2270	Canadian Literature	6
ENGL 3270	Studies in Canadian Literature	3
ENGL 3271	Studies in Canadian Literature	3
004.275*	Canadian Literature (H)	6
004.288*	Canadian Literature to 1967	3
004.289*	Canadian Literature after 1967	3
004.377*	Canadian Poetry	6
004.378*	The Canadian Novel	6
004.388*	Studies in Canadian Literature	6
Film Studies		
FILM 2430	The Canadian Film <i>Français (CUSB)</i>	3
FRAN 2831	L'individu et le pays (CUSB)	3
FRAN 2881	Civilisation canadienne-française (CUSB)	3
FRAN 3531	Le théâtre québécois (CUSB)	3
FRAN 3541	Le théâtre de l'Ouest (CUSB)	3
FRAN 3831	L'époque de la contestation (CUSB)	3
FRAN 3841	La révolution tranquille et le roman (CUSB)	3
FRAN 3851	Le théâtre de l'Ouest: poésie, nouvelles (CUSB)	3
FRAN 3861	Le théâtre de l'Ouest: romans (CUSB)	3
FRAN 4831	Littérature de l'Acadie et des Cajuns (CUSB)	3
French, Spanish and Italian		
FREN 2700	Poésie et théâtre canadiens-français (B)	3
FREN 3140	Roman canadien-français (B)	3
FREN 3850	Civilisation canadienne-française (C)	3
044.247*	French-Canadian Literature in Translation	6
044.348*	Littérature canadienne-française (H)	3
044.353*	Littérature canadienne-française (B)	3
History		

HIST 1390	History of Colonial Canada: 1500-1885 (C)	3
HIST 1400	History of the Canadian Nation Since 1867 (C)	3
HIST 1440	History of Canada (C)	6
HIST 1441	Histoire du Canada (CUSB)	6
HIST 2191	Histoire économique et sociale canadienne du XIXe siècle (CUSB)	6
HIST 2280	Aboriginal History of Canada (C)	6
HIST 2950	Early Canada: from the Earliest Settlement to 1867 (C)	6
HIST 2951	Les origines du Canada: depuis la première colonie jusqu'en 1867 (CUSB)	6
HIST 2960	The New Dominion: 1867 to 1921 (C)	6
HIST 2961	Le nouveau Dominion: de 1867 à 1921 (CUSB)	6
HIST 2970	Modern Canada: 1921 to the Present (C)	6
HIST 2971	Le Canada moderne: de 1921 à nos jours (CUSB)	6
HIST 3050	Canada since 1945 (C)	6
HIST 3220	The History of Canadian-American Relations (A,C)	6
HIST 3250	Canada and the World, 1867 to the Present (C)	6
HIST 3690	History of Northern Canada (C)	6
HIST 3721	Histoire du Manitoba (C) (CUSB)	6
HIST 3730	A History of Western Canada (C)	6
HIST 3780	Studies in Canadian History 1 (C)	3
HIST 3781	Études choisies en histoire du Canada 1 (CUSB)	3
HIST 3790	Studies in Canadian History 2 (C)	3
HIST 3791	Études choisies en histoire du Canada 2 (CUSB)	3
HIST 3910	The Ukrainians in Canada (C)	3
HIST 4060	Gender History in Canada (C) (H)	6
HIST 4280	Topics in the Cultural History of Canada (C)	6
HIST 4340	Introduction to Archival Science (G)	6
HIST 4390	The History of White Attitudes and Policies towards Native Peoples in North America (C) (H)	6
HIST 4700	Canada, 1896 to the Present (C) (H)	6
HIST 4720	History of Manitoba (C) (H)	6
HIST 4890	Canadian Social History (C) (H)	6
HIST 4900	The Hudson's Bay Company and British North America (C) (H)	6
HIST 4950	History of Quebec (C) (H)	6
011.133*	History of Canada from 1534 (C)	6
011.133F*	Histoire du Canada (CUSB)	6
011.254*	North American Indian (A,C,S)	6
011.324*	Protestantism and the Development of the Canadian Community, 1749-1970 (C,S)	6
011.438*	Intellectual History of Canada (C) (H)	3
011.449*	The New Canada, 1867-96 (S) (H)	6
Icelandic		
ICEL 2230	Contemporary Icelandic-Canadian Literature	3
ICEL 2300	Icelandic-Canadian Literature (H)	6
ICEL 3460	Laura Goodman Salverson	3
ICEL 4440	The Icelanders in Canada (H)	3
012.445*	Stephan G. Stephansson (H)	3
Labour Studies		
LABR 3510	Industrial Relations (Cross-listed with Economics ECON 3510)	6
Native Studies		
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	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
NATV 2020	The Métis of Canada	3
NATV 2040	Native Peoples of the Northern Plains	3
NATV 2060	The Native Peoples of the Eastern Woodlands	3
NATV 2070	The Native Peoples of the Subarctic	3
NATV 2080	Inuit Society and Culture	3
NATV 2220	Native Societies and the Political Process	3
NATV 2250	Intermediate Cree	6
NATV 2270	Intermediate Ojibway	6
NATV 2300	Cree Literature	3
NATV 2320	Structure of the Cree Language	3
NATV 2410	Canadian Native Literature	3
NATV 2420	Inuit Literature in Translation	3
NATV 2450	Images of Indians in North American Society	3

NATV 3000 Selected Topics	3	019.356*	Canadian Foreign Policy	6
NATV 3240 Native Medicine and Health	3	019.366*	Quebec and the Canadian Political System (H)	3
NATV 3270 The Métis Nation	3	019.368*	Canadian Defense Policy	3
NATV 3280 Aboriginal Peoples and the Canadian Justice System	3	019.476*	Manitoba Politics and Voting Behaviour	6
NATV 3300 Native Language Planning and Development	3	019.487*	Government and Public Sector Unionism (H)	6
NATV 3310 Canadian Law and Aboriginal Peoples	3		Religion	
NATV 3320 Aboriginal Organizations	3	RLGN 2410	Religion in Canada (C)	6
NATV 3340 Circumpolar Cultures and Lifestyles	3	RLGN 2411	Les religions au Canada (CUSB)	6
NATV 3370 Political Development in the North	3	RLGN 2590	Religion and Social Issues (C)	3
NATV 3380 Cultural Constructions of Gender in Canadian Aboriginal Societies	3	RLGN 2591	La religion et les problèmes sociaux (CUSB)	3
NATV 4200 First Nations Government	3	020.272*	Dimensions of Religiosity in Contemporary Canadian Literature	6
NATV 4210 Seminar in Contemporary and Historical Métis Issues	3		Slavic Studies	
NATV 4220 Environment, Economy and Aboriginal People	3	UKRN 2420	Ukrainian Canadian Literature	3
NATV 4230 Traditional Knowledge and Native Studies Research	3	UKRN 2430	Ukrainian Canadian Folklore	3
NATV 4240 Arctic Lifestyles	3		Sociology	
NATV 4250 Topics on Aboriginal Identities	3	SOC 2320	Canadian Society and Culture	3
NATV 4260 Sacred Lands and Sacred Spaces of Indigenous Peoples	3	SOC 2321	La société Canadienne et sa culture (CUSB)	3
NATV 4280 Missionaries, Colonialism and Aboriginal Peoples	3	SOC 2370	Ethnic Relations	3
032.090* Introductory Cree	6	SOC 2371	Rapports ethniques (CUSB)	3
032.091* Introductory Ojibway	6	SOC 2531	Sociologie du Manitoba (CUSB)	6
032.121* Intermediate Ojibway	6	SOC 2610	Sociology of Criminal Justice and Corrections	3
032.130* Intermediate Cree	6	SOC 2620	The Sociology of Aging	3
032.205* Coastal Indians of Canada	3	SOC 3470	Political Sociology	3
032.220* Native Societies and the Political Process	3	SOC 3471	Sociologie politique (CUSB)	3
032.321* The Native Identity	6	SOC 3700	Sociology of Law	3
032.323* Native Peoples and the Law 2	3		Ukrainian Canadian Heritage Studies	
032.325* Native Peoples and the Law 1	6	UCHS 3100	The Ukrainian Arts in Canada	3
032.373* Art of the North American Native Peoples	3		School of Art	
Political Studies		FAAH 3260	Canadian Art and Architecture to World War II	3
POLS 2070 Introduction to Canadian Government	6	FAAH 3270	Canadian Art Since World War II	3
POLS 2071 Introduction au système gouvernemental Canadien	6	FAAH 3430	Inuit Art	3
POLS 2561 Questions d'actualité en politique Canadienne (CUSB)	6	054.358*	Inuit Culture and Art	3
POLS 2570 Introduction to Public Administration	6	054.375*	Canadian Art 1	3
POLS 2571 Initiation à l'administration publique (CUSB)	6	054.376*	Canadian Art 2	3
POLS 3100 Gender and Politics in Canada	3		Clayton H. Riddell Faculty of Environment, Earth, and Resources	
POLS 3170 The Canadian Charter of Rights and Freedoms	3		Geography	
POLS 3520 Canadian Foreign and Defence Policy	6	GEOG 2450	The Making of the Prairie Landscape (A)	6
POLS 3561 Politique étrangère Canadienne (CUSB)	6	GEOG 2570	Geography of Canada (A)	3
POLS 3670 Canadian Political Parties	3	GEOG 3431	Géographie du Canada (CUSB)	3
POLS 3860 Canadian Federalism	3	GEOG 3480	Canadian Problems	3
POLS 3960 Canadian Politics	6	GEOG 3481	Particularités de la géographie du Canada (CUSB)	3
POLS 4180 Provincial Politics in Canada	3	GEOG 3700	Canada: The Making of the Human Landscape (A)	6
POLS 4190 Manitoba Politics and Government	3	GEOG 3701	Canada: évolution de l'écoumène (CUSB)	6
POLS 4660 The State in the Economy (H)	6	053.369*	Historical Geography of Indian Peoples in the Canadian Fur Trade	6
POLS 4860 The Canadian Policy Process (H)	6	053.378*	Historical Geography of Canadian Indians (A)	6
019.156* Introduction to Canadian Government	6	053.470*	Historical Geography of the Ojibway Indians (H)	3
019.156F* Introduction au système gouvernemental Canadienne (CUSB)	6		For course descriptions, see the chapter entitled Course Descriptions in this <i>Calendar</i> .	
019.206* Urban and Local Politics	6		NOTE: Courses annotated by appearing in the various departmental course listings, may be used toward partial fulfilment of the requirements for Canadian Studies.	
019.256* Issues of Canadian Politics	6			
019.266* Human Rights and Civil Liberties	6			
019.286* Canadian Political Parties	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, Program Code: 160

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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MINOR TOTAL: 18 CREDIT HOURS

CATH 1190 and at least 3 credit hours from the List of Approved Courses in Catholic Studies	<ul style="list-style-type: none"> ● RLGN 3870 ● 9 credit hours from the List of Approved Courses in Catholic Studies
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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 2010 Literature and Catholic Culture 1	3
CATH 2020 Literature and Catholic Culture 2	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 2991 Histoire de l'Église catholique depuis 1540 (G)	3
HIST 4820 The Crusades (D)	6

Philosophy

PHIL 2320 Thomas Aquinas and Medieval Philosophy	6
PHIL 2780 Thomas Aquinas	3

Religion

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
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

8.5 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 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 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, Program Code: 099S

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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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 or List B	18 credit hours from List B below, of which at least 6 credit hours must be taken from each of 2 different departments
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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 or List B	36 credit hours from List B below, of which at least 12 credit hours must be taken from each of two different departments
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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 or List B	6 credit hours from List B below
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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 or List B

- 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: RUSN 2280, RUSN 2290, UKRN 2770, UKRN 2780
- 12 credit hours in other Honours field
- 6 credit hours in options

- either RUSN 3930 or both URKN 3950 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 German and Slavic Studies 6

GRMN 2120 Introduction to German Culture 1 3

GRMN 2130 Introduction to German Culture 2 3

GRMN 3260 Representations of the Holocaust 3

GRMN 3270 Studies in Contemporary German Cinema 3

GRMN 3280 Sex, Gender and Cultural Politics in the German-Speaking World 3

GRMN 3290 History in Literature in German-Speaking Countries 3

GRMN 3390 German Representations of War 3

RUSN 2280 Russian Culture 1 3

RUSN 2290 Russian Culture 2 3

RUSN 2740 Literature and Revolution 3

RUSN 2750 Contemporary Russian Literature and Film 3

RUSN 2770 Masterpieces of Russian Literature in Translation 3

SLAV 2240 East European Literature 1 3

SLAV 2250 East European Literature 2 3

SLAV 2260 Russia, Ukraine and Poland – Cultures in Dialogue 1 3

SLAV 2270 Russia, Ukraine and Poland – Cultures in Dialogue 2 3

UKRN 2770 Ukrainian Culture 1 3

UKRN 2780 Ukrainian Culture 2 3

UKRN 3670 Contemporary Ukrainian Literature 3

UKRN 3850 Ukrainian Short Story 3

History

HIST 2490 History of Russia 6

HIST 2600 Introduction to Ukraine 3

HIST 2610 Making of Modern Ukraine 3

HIST 2660 History of the Soviet Union (E) 3

HIST 2661 Histoire de l'Union soviétique (E) 3

HIST 2840 A History of Russia to 1917 3

HIST 2841 Histoire de la Russie jusqu'en 1917 (E) 3

HIST 3030 Issues in Ukrainian History 3

HIST 3060 German and German Jewish History, 1780-1933 (E) 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

Religion

RLGN 1350 The History of Eastern Christianity (A) 6

Clayton H. Riddell Faculty of Environment, Earth, and Resources

Geography

GEOG 3600 Geography of Ukraine 3

School of Art

FAAH 3160 Topics in 20th Century Art (only when topic focuses on Central and Eastern Europe) 3

FAAH 3280 Early Byzantine Art and Architecture 3

FAAH 3290 Later Byzantine Art and Architecture 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: 364 University College

Telephone: 204 474 9502

E-mail: classics@umanitoba.ca

Website: www.umanitoba.ca/classics

8.6.1 Academic Staff

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 Professors

Chlup, J., B.A.(Hons.) (New Brunswick), M.A. (Dalhousie), Ph.D. (Durham); **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 continuing 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 approved 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, Program Code: 003C			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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, see the chapter entitled Course Descriptions in this *Calendar*.

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, Program Code: 003G			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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, Program Code: 003L

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

8.7 Cross-Disciplinary Programs

The Faculty of Arts offers the following Cross-Disciplinary programs. For course descriptions and prerequisites, see the chapter entitled Course Descriptions 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 9.1
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
Women's Studies	See Section 8.32

8.8 Drama Program

Program Chair: Chris Johnson
General Office: 364 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, Program Code: 099D

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
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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 ● 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 1220	Introduction to Theatre 6
THTR 2150	Theatrical Techniques: Onstage 6
THTR 2160	Theatrical Techniques: Backstage 6
THTR 2170	Specialized Practical Training 1 3
THTR 2180	Specialized Practical Training 2 3
THTR 2470	Fundamentals of Dramatic Analysis 3
THTR 2480	Theatre History 3
THTR 2490	Specialized Practical Training 3 3
THTR 2600	Special Studies 1 3
THTR 2610	Special Studies 2 3
THTR 3460	Theory of Drama and Performance 3
THTR 3470	Text and Performance 3
THTR 3610	Special Studies 3 3
THTR 3620	Special Studies 4 3
THTR 3630	Theatre Practicum 1 3
THTR 3640	Theatre Practicum 2 6

List A

English	
ENGL 1200	Representative Literary Works 6
ENGL 1300	Literature since 1900 6
ENGL 2270	Canadian Literature 6
ENGL 2760	Introductory Creative Writing 3
ENGL 2960	Drama 1 3
ENGL 3010	Shakespeare 6
ENGL 3500	Creative Writing [not available for credit with ENGL 2760] 6
ENGL 3520	Studies in the Forms of Discourse 3
ENGL 3790	Advanced Creative Writing [not available for credit with ENGL 2760] 6
ENGL 3960	Drama 2 3
ENGL xxxx	English Department Special Studies courses approved in advance by the chair of the Theatre Program.
004.126*	Twentieth-Century Literature in English 6
004.235*	American Literature of the Twentieth Century 6
004.238*	Practical Criticism 6
004.244*	Twentieth-Century British Literature 6
004.250*	Poetry and Prose of the Sixteenth Century 3
004.251*	Elizabethan and Jacobean Drama 3
004.297*	Drama 2 3
004.310*	Studies in Shakespeare 6

004.322*	Shakespeare 1 (Introductory Topics)	3
004.323*	Shakespeare 2 (Advanced Topics)	3
004.332*	Shakespeare	6
004.333*	Drama	6
004.353*	Forms of Discourse	6
004.359*	Fourteenth-Century Literature	3

* Indicates courses no longer offered.

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 the case with the former 004.311 Studies in Renaissance Literature, and the former 004.326 Studies in the Restoration and Eighteenth Century.

Film Studies

FILM 1290	The Art of the Film 1	3
FILM 1300*	The Art of the Film 2	3
FILM 1310	Film History	3
FILM 2280	Film and Literature	6
FILM 2300	The Popular Film	3
FILM 2330	Film and Contemporary Thought	3
FILM 2370	Experimental Cinema	3
FILM 2380	The International Cinema 1	3
FILM 2390	The International Cinema 2	3
FILM 2400	The American Film to 1950	3
FILM 2410	The American Film from 1950	3
FILM 2420	Realism and Film	3
FILM 2430	The Canadian Film	3
FILM 2460	Film Genres	3
FILM 3250	Selected Topics in Film 1	3
FILM 3260	Selected Topics in Film 2	3
FILM 3270	Special Topics in Film 3	6
FILM 3400	The Director's Cinema 1	3
FILM 3410	The Director's Cinema 2	3
FILM 3420	Film Theory	3
FILM 3430	Screenwriting	3
FILM 3440	Filmmaking	3
FILM 3450	The Animated Film	3
FILM 3460	Acting for the Camera	3
099.121*	The Art of the Film	6
099.224*	Studies in the Experimental Cinema	6
099.226*	Studies in the International Cinema	6
099.227*	The American Film	6
099.231*	The Documentary and Canadian Film	6
099.232*	Film Genres	6
099.320*	Studies in the Director's Cinema	6
099.328*	The Theory and History of Narrative Film	6

* 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), F.R.S.C.; **Sepehri, A.,** B.A. (National University of Iran), M.A., Ph.D. (Alberta); **Simpson, W.,** Ph.D. (London).

Associate Professors

Baragar, F., B.A. (Winnipeg), M.A. (Manitoba), Ph.D. (Utah); **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); **Hudson, I.,** B.A. (Manitoba), M.A. (Carleton),

Ph.D. (Manitoba); **Lipnowski**, I.F., M.A. (Manitoba), Ph.D. (London); **Mason**, G.C., Ph.D. (UBC); **Troutt**, E., B.S. (Cornell), M.A., Ph.D. (Wisconsin-Madison); **Vorst**, J. I., Ph.D.(Equiv.) (Netherlands School of Economics).

Assistant Professors

Camfield, D., B.A., M.A., Ph.D. (York); **Compton**, J., B.A. (Concordia), M.A. (Dalhousie), M.A., Ph.D. (Washington, St. Louis); **Compton**, R., B.A. (Winnipeg), M.D.E. (Dalhousie), M.A., Ph.D. (Washington, St. Louis); **Gunnay**, H., B.S., M.S. (METU– Turkey), M.A., Ph.D. (Iowa); **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, Department Code: 018

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 1220⁹

- 36 credit hours in Economics courses, to include the following:
 - 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, Program Code: 136E

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

JOINT HONOURS TOTAL: 120 CREDIT HOURS

● 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 "Written English" course

● ECON 2700, ECON 2800, MATH 2200, MATH 2352, MATH 2750, MATH 2800

● Plus 6 credit hours of approved electives⁶

● 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, COMP 1010, 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, Program Code 005E

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 "Written English" course	<ul style="list-style-type: none">● ECON 2700, ECON 2800, MATH 2200, MATH 2352, 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.

8.10 Department of English

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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 Scholar

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); **Brydon**, D.L., B.A.(Hons.), M.A. (Toronto), Ph.D. (Australian National), Canada Research Chair; **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

Austin-Smith, B.L., B.A. (Acadia), M.A. (Victoria), Ph.D. (Manitoba); **Calder**, A.C., B.A. (Saskatchewan), M.A., Ph.D. (Western Ontario); **Cariou**, W., B.A.(Hons.) (Saskatchewan), M.A., Ph.D. (Toronto); **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); **Muller**, A., B.A. (Calgary), M.A. (Alberta), Ph.D. (McGill); **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

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); **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 1900 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*.

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.

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.

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.

D- Advanced Courses (3000 level)

E- Honours Courses

8.10.3 English, Department Code: 004

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 1900 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 1900 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 1900 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	<ul style="list-style-type: none"> ● ENGL 2640 (in Year 2) ● 24 credit hours of literature prior to 1900⁵, 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	<ul style="list-style-type: none"> ● ENGL 2640 (in Year 2) ● 18 credit hours of literature prior to 1900⁵ ● 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 1310 (or the former 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 of literature in translation courses (ENGL 2490, CLAS 3610, CLAS 3620, ICEL 3320, ICEL 3330) to satisfy requirements for a General Major, Advanced Major, Single Honours or Double Honours. Students may offer up to 3 credit hours of literature in translation courses to satisfy the "literature prior to 1900" requirement for a General Major, Advanced Major, Single Honours or Double Honours. Students may not offer literature in translation courses 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 1900

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			004.210*	English Literature of the Sixteenth Century	3
ENGL 2070	Literature of the Sixteenth Century	6	004.215*	English Literature of the Seventeenth Century	3
ENGL 2080	Medieval Literature	6	004.226*	English Literature of the Restoration and Eighteenth Century	3
ENGL 2090	Literature of the Seventeenth Century	6	004.228*	Literature of the Romantic Period	3
ENGL 2120	Literature of the Restoration and Eighteenth Century	6	004.229*	Literature of the Victorian Period	3
ENGL 2130	Literature of the Romantic Period	6	004.253*	A History of Critical Theory	3
ENGL 2140	Literature of the Victorian Period	6	004.286*	American Literature to 1900	3
ENGL 2170	American Literature to 1900	6	004.306*	Studies in Middle English	6
ENGL 3000	Chaucer	6	004.307*	Studies in Chaucer	6
ENGL 3010	Shakespeare	6	004.310*	Studies in Shakespeare	6
ENGL 3020	Milton	6	004.311*	Studies in Renaissance Literature	6
ENGL 3030	Studies in Sixteenth-Century Literature	3	004.315*	Studies in Seventeenth-Century Literature	6
ENGL 3050	Studies in Old English	6	004.316*	Studies in Milton	6
ENGL 3080	Studies in Medieval Literature	3	004.326*	Studies in the Restoration and Eighteenth-Century Literature	6
ENGL 3090	Studies in Seventeenth-Century Literature	3	004.328*	Studies in the Romantics	6
ENGL 3120	Studies in Restoration and Eighteenth-Century Literature	3	004.329*	Studies in the Victorians	6
ENGL 3130	Studies in the Romantics	3		NOTE: Restrictions apply to the following courses regarding their use for credit in English (ENGL 2490) and for fulfillment of the literature prior to 1900 requirement. See program note 5. Contact the department for further information on restrictions.	
ENGL 3140	Studies in the Victorians	3		Classics (Classical Studies)	
ENGL 3180	Studies in Renaissance Literature	3	CLAS 3610	Greek Literature in Translation (taught with ENGL 2490)	3
004.206*	Medieval Literature	3	CLAS 3620	Latin Literature in Translation (taught with ENGL 2490)	3
			003.269*	Greek Literature in Translation	3
			003.270*	Latin Literature in Translation	3
				Icelandic	
			ICEL 3320	Old Norse Mythology (taught with ENGL 2490)	3
			ICEL 3330	Icelandic Sagas in Translation (taught with ENGL 2490)	3

* Indicates course no longer offered.

8.11 Film Studies Program

Chair: George Toles

Program Office: 364 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).

Associate 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 21st 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 and 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 1310 (or the former 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 1310 (or the former FILM 1300).

8.11.3 Film Studies, Program Code: 152

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

GENERAL MAJOR TOTAL: 30 CREDIT HOURS

FILM 1290 and FILM 1310 24 credit hours in Film Studies courses, including FILM 3420

ADVANCED MAJOR TOTAL: 60 CREDIT HOURS

FILM 1290 and FILM 1310 ● 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 1310 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.

8.12 Department of French, Spanish and Italian**Acting Head:** Enrique Fernandez**General Office:** 430 Fletcher Argue Building**Telephone:** 204 474 9313**E-mail:** fsi@umanitoba.ca**Website:** www.umanitoba.ca/fsi**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. (Chi-

cago), Officier Ordre Palmes Acad.

Senior Scholars**Allen, J.,** B.A. (SUNY Buffalo), M.A. (Syracuse), Ph.D. (Michigan); **Annan-****dale, E.T.,** B.A.(Hons.) (Manitoba), Ph.D. (London); **Norell, D.,** B.Comm.,

B.A., M.A., Ph.D. (Manitoba).

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); **Fernández, 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

Beaulieu, E., B.A., M.A. (Laval), Ph.D. (McGill); **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., P.B.C.E. (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 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 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.

Other

The three areas of study are identified in the course listings 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.

French, Spanish and Italian, Department Code: 044

8.12.4 French, Program Code: 044F

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^{1,2}			
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 4710 or FREN 4730 ● 9 additional credit hours of French courses numbered at the 4000 level ● 6 additional credit hours of French courses numbered at the 3000 or 4000 level ● 6 credit hours of ancillary options

HONOURS DOUBLE^{1,2}

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"> ● FREN 4710 or FREN 4730 ● 6 additional credit hours of French courses numbered at the 4000 level ● 3 additional credit hours of French courses numbered at the 3000 or 4000 level ● 12 credit hours from second Honours field
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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 Ancillary options are courses taken from outside the Honours field of study.

8.12.5 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 SPAN 1290), 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 (or SPAN 1290) 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 SPAN 1290), 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.

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.

For information regarding the Minor program in Latin American Studies, see Section 8.20.

8.12.6 Spanish, Program Code: 044S

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR (OPTION 1)¹ TOTAL: 30 CREDIT HOURS			
SPAN 1180	SPAN 1260 and SPAN 1270, or SPAN 1290	<ul style="list-style-type: none"> ● 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, or SPAN 1290	<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: 48 CREDIT HOURS			
SPAN 1180	SPAN 1260 and SPAN 1270, or SPAN 1290	<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 	15 credit hours from Spanish courses numbered at the 3000 level

ADVANCED MAJOR (OPTION 2)¹ TOTAL: 48 CREDIT HOURS			
SPAN 1260 and SPAN 1270, or SPAN 1290	<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 	15 credit hours from Spanish courses numbered at the 3000 level
ADVANCED MAJOR (OPTION 3)² TOTAL: 48 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 	15 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, or SPAN 1290	6 credit hours from Spanish courses numbered at the 2000 level	
MINOR (OPTION 2)¹ TOTAL: 18 CREDIT HOURS			
SPAN 1260 and SPAN 1270, or SPAN 1290	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.			

8.12.7 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.

8.12.8 Italian, Program Code: 044I			
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	

8.12.9 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.

8.12.10 Italian Studies, Program Code: 044C			
UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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	
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	
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 2350	Europe 1789-1870 (E)	3	
HIST 2360	Europe 1870 to the Present (E)	3	
HIST 2370	History of Europe since the French Revolution (E)	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 3140	Medieval Italy (D)	6	
HIST 3270	Roman Law in Medieval Europe (D)	3	
HIST 3680	Europe, 1870-1945 (E)	6	
HIST 3682	Europe 1870-1918 (E)	3	
HIST 3684	Europe 1918-1945 (E)	3	
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 the chapter entitled Course Descriptions in this *Calendar*.

8.13 Geography Program

Acting Head: Richard Baydack
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, Department Code: 053

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	• GEOG 2220 • GEOG 2530 • 9 additional credit hours in Geography courses numbered at the 2000 or 3000 level • 12 credit hours in ancillary options ²	• 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 options ²	• GEOG 4660 • 12 credit hours in Geography courses numbered at the 4000 level • 6 credit hours in ancillary options ²
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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	6	Geography of Natural Hazards
GEOG 2540	3	Weather and Climate
GEOG 2541	3	Météorologie et climatologie
GEOG 2550	3	Geomorphology
GEOG 2551	3	Géomorphologie
GEOG 2620	3	Geography of Environmental Changes
GEOG 3411	3	Géographie de l'eau
GEOG 3440	6	Applied Climatology
GEOG 3580	6	Landforms
GEOG 3610	6	Climatic Change

Human Geography (HS)

GEOG 2210	6	Economic Geography
GEOG 2211	6	Géographie économique
GEOG 2410	6	Geography of Tourism and Recreation
GEOG 2430	6	Political Geography
GEOG 2480	6	Population Geography
GEOG 2481	6	Géographie de la population
GEOG 2520	3	Geography of Natural Resources
GEOG 2630	3	Geography of Culture and Environment
GEOG 2640	3	Geography of Culture and Inequality
GEOG 2651	3	Géographie politique 1
GEOG 2661	3	Géographie politique 2
GEOG 3421	3	L'eau, enjeu géostratégique
GEOG 3460	6	Urban Geography
GEOG 3510	6	Agricultural Geography
GEOG 3520	6	Energy and Society
GEOG 3530	6	An Introduction to Land-Resource Management
GEOG 3540	6	Regional Development Planning Theory and Practise
GEOG 3710	3	Population and the Third World
GEOG 3720	3	Refugees, Displacees, Exiles
GEOG 3800	3	Geography of Transportation Development
GEOG 3821	3	Les territoires de la Francophonie mondiale
GEOG 3831	3	L'espace Francophone panaméricain
GEOG 3841	3	Les espaces Francophones de l'Afrique, de l'Asie et de l'Océanie

Techniques (TS)

GEOG 2220	6	Introductory Cartography and Map Interpretation
GEOG 2221	6	Introduction à la cartographie et analyse de la carte numérique
GEOG 2530	3	Introduction to Scientific Geographic Research

GEOG 3680	6	Research Methods in Geography
GEOG 3730	3	Geographic Information Systems
GEOG 3740	6	Field Studies in Geography
GEOG 3750	3	Field Studies in Geography
Area Studies (Regional) (A)		
GEOG 2350	6	Latin America
GEOG 2450	6	The Making of the Prairie Landscape
GEOG 2460	6	Geography of Africa
GEOG 2490	3	Geography of Modern China
GEOG 2560	6	Geography of North America
GEOG 2570	3	Geography of Canada
GEOG 2580	3	Geography of the United States
GEOG 3431	3	Géographie du Canada
GEOG 3480	3	Canadian Problems
GEOG 3481	3	Particularités de la géographie du Canada
GEOG 3500	6	A Geography of Europe
GEOG 3501	6	Géographie de l'Europe
GEOG 3590	6	Geography of Developing Countries
GEOG 3591	6	Géographie des pays en voie de développement
GEOG 3600	3	Geography of Ukraine
GEOG 3700	6	Canada: The Making of the Human Landscape
GEOG 3701	6	Canada: évolution de l'écoumène
GEOG 3740	6	Field Studies in Geography
GEOG 3750	3	Field Studies in Geography
GEOG 3821	3	Les territoires de la Francophonie mondiale
GEOG 3831	3	L'espace Francophone panaméricain
GEOG 3841	3	Les espaces Francophones de l'Afrique, de l'Asie et de l'Océanie

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 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.

8.14 Department of German and Slavic Studies

Head: Cheryl Dueck

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, Department Code: 008

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 ● GRMN 4570 ● 6 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 ● GRMN 4570 ● 3 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 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).

8.14.6 Russian, Program Code: 052R

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 (RUSN) or Slavic Studies (SLAV) courses of which at least 6 credit hours must be in language 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 (RUSN)

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 2770, RUSN 3330, RUSN 3580, RUSN 3770, RUSN 3780, RUSN 3790, RUSN 3900, RUSN 3980, SLAV 2240, SLAV 2250, SLAV 2260, SLAV 2270, SLAV 3920.

8.14.7 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).

8.14.8 Ukrainian, Program Code: 052U

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 (UKRN) or Slavic Studies (SLAV) courses of which at least 6 credit hours must be in language 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 (UKRN) 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, UKRN 1310, 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 2260, SLAV 2270, SLAV 3920.

8.14.9 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.

8.14.10 Polish, Program Code: 052P

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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POLISH MINOR¹ TOTAL: 18 CREDIT HOURS

POL 1890	POL 2890	6 credit hours from the following Polish/Slavic Studies courses: POL 2320, POL 3890, SLAV 2260, SLAV 2270	
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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 POL 2890.**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, Program Code: 157

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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GENERAL MAJOR TOTAL: 60 CREDIT HOURS

- Anthropology: ANTH 2390; ANTH 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 or SOC 3838 or SOC 3870; 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 or SOC 3838 or SOC 3870; SOC 3810 or Anthropology ANTH 3320

List of Courses for Global Political Economy

For course descriptions, see the chapter entitled Course Descriptions in this *Calendar*.

Course	Credits	Global Political Economy	Credits
Anthropology		Global Political Economy	
ANTH 2390 Social Organization in Cross-Cultural Perspective (B)	6	GPE 2700 Perspectives on Global Political Economy	3
ANTH 3320 Women in Cross-Cultural Perspective (B)	3	GPE 4700 Studies in Global Political Economy	6
ANTH 3750 Globalization and the World-System (B)	3	History	
Economics		HIST 1370 An Introduction to Modern World History: 1500-1800 (M)	3
ECON 1200 Principles of Economics or both	6	HIST 1380 An Introduction to Modern World History: 1800 - Present (M)	3
ECON 1210 Introduction to Canadian Economic Issues and Policies and	3	HIST 1500 An Introduction to Modern World History: 1500 - Present (M)	6
ECON 1220 Introduction to Global and Environmental Economic Issues and Policies	3	HIST 2380 The Twentieth-Century World (G,M)	6
ECON 2540 Political Economy 1: Production and Distribution	3	HIST 2720 The World Since 1945 (G,M)	6
ECON 2550 Political Economy 2: Economic Growth and Fluctuations in a Global Economic Environment	3	Political Studies	
ECON 2630 An Introduction to the World's Economies	6	POLS 1500 Introduction to Politics	6
ECON 3390 Development Economics	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	HIST 2710	Women in History (G)	6
SOC 2290	Introduction to Research Methods	6	HIST 3580	Topics in Recent World History 1 (M)	3
SOC 3470	Political Sociology	3	HIST 3590	Topics in Recent World History 2 (M)	3
SOC 3690	Sociology of the Developing Societies	3	HIST 4010	Imperialism, Decolonization and Neo-Colonialism, 1700 to the Present (G,M)	6
SOC 3810	Sociological Perspectives on Gender and Sexuality	3	HIST 4320	Studies in World History since 1945 (G,M)	3
SOC 3838	Ecology and Society	3	011.341*	The British Empire and Commonwealth Since 1815 (G)	6
SOC 3870	Social Inequality	3	Labour Studies		
SOC 3871	Inégalités sociales	3	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
			LABR 3090	Globalization and Labour	3
List of Suggested Electives			Political Studies		
Faculty of Arts			POLS 2040	Introduction to International Relations	6
Anthropology			POLS 2041	Introduction aux relations internationales	6
ANTH 1220	Cultural Anthropology (A)	3	POLS 2070	Introduction to Canadian Government	6
	or		POLS 2071	Introduction au système gouvernemental canadien	6
ANTH 1520	Critical Cultural Anthropology (A)	3	POLS 2530	Elements of Foreign Policy	6
ANTH 2460	Peasantry in a Changing World (B)	3	POLS 3200	International Security and Conflict Management	6
ANTH 2510	Anthropology of Economic Systems (B)	3	POLS 3880	Comparative Foreign Policy	3
ANTH 2530	Anthropology of Political Systems (B)	3	POLS 4530	Regionalism in International Politics	3
ANTH 2570	Urban Anthropology (B)	3	POLS 4660	The State in the Economy	6
ANTH 3320	Women in Cross-Cultural Perspective (B)	3	019.156*	Introduction to Canadian Government	6
ANTH 3380	Anthropology and Contemporary Social Issues (B)	3	019.273*	International Conflict Resolution	6
076.244*	Peasant Society and Culture (B)	3	Sociology		
Asian Studies			SOC 2480	Population Problems	3
ASIA 1420	Asian Civilizations to 1500 (Cross-listed with History HIST 1420)	3	SOC 3470	Political Sociology	3
ASIA 1430	Asian Civilizations Since 1500 (Cross-listed with History HIST 1430)	3	SOC 3690	Sociology of the Developing Societies	3
ASIA 2070	South Asian Civilization	6	SOC 3810	Sociological Perspectives on Gender and Sexuality	3
150.211*	East Asian Civilization	6	SOC 3838	Ecology and Society	3
Economics			SOC 3840	Community and Social Reconstruction	3
ECON 2420	Economics of the Labour Process and Labour Relations (Cross-listed with Labour Studies LABR 2420)	3	SOC 3870	Social Inequality	3
ECON 2490	Economic Accounting	3	SOC 3871	Inégalités sociales	3
ECON 2560	Corporations in the Global Economy	3	Clayton H. Riddell Faculty of Environment, Earth, and Resources		
ECON 2630	An Introduction to the World's Economies	6	Geography		
ECON 3390	Development Economics	6	GEOG 1280	Introductory Human Geography	3
ECON 3660	Economic Ideas and Social Institutions	6	GEOG 2210	Economic Geography	6
ECON 3710	Sustainable Development: Issues and Policy	3	GEOG 3590	Geography of Developing Countries	6
ECON 4510	Economy and State in a Modern Period: Western Europe and North America	6	GEOG 3800	Geography of Transportation Development	3
History			GEOG 4640	Models in Urban Geography	3
HIST 2670	History of Capitalism (M)	3			
HIST 2671	Histoire du capitalisme (M)	3			
HIST 2680	History of Socialism from the French Revolution to the Present (M)	3			

*indicates course no longer offered.

8.16 Department of History

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E-mail: history@umanitoba.ca

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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

Bailey, P.C., B.A.(Hons.), M.A. (Oxford), Ed.Cert. (Manchester), Ph.D. (UBC); **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

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); **Chen**, T.M., B.A. (Toronto), M.A., Ph.D. (Wisconsin); **Elvins**, S., B.A. (Hons.) (Queen's), M.A., Ph.D. (York); **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); **Churchill**, D.S., B.A. (Hons.)(Trent), M.A. (Toronto), Ph.D. (Chicago); **Cossar**, R., B.A.(Hons.) (McGill), M.A., Ph.D. (Toronto); **Frank**, C., B.A.(Hons.) (Portland State), M.A., Ph.D. (York); **Jones**, E., B.A.(Hons.) (Saskatchewan), M.A., Ph.D. (Manitoba); **Kuffert**, L.B., B.Ed., B.A. (Hons.) (Saskatchewan), M.A. (UBC), Ph.D. (Mc-

Master); **Nállim**, J.A., M.A., Ph.D. (Pittsburgh); **Vaitheespara**, R., 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.

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.

8.16.3 History, Department Code: 011			
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	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 	
or 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level			
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	18 credit hours in History courses numbered at the 2000 level	18 credit hours in History courses numbered at the 3000 level,	6 credit hours in History courses numbered at the 4000 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 3000 level and 6 credit hours in History courses numbered at the 2000 level, 12 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 4000 level 	
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	6 credit hours in History courses numbered at the 2000 level	6 credit hours in History courses numbered at the 2000 or 3000 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			

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

● 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

● 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

● 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

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

● 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

● 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

● 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

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.

8.17 Department of Icelandic

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8.17.1 Academic Staff

Associate Professor

Bjarnadóttir, 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, Department Code: 012

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

MAJOR (OPTION 1) TOTAL: 30 CREDIT HOURS

ICEL 1240¹

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 1240¹

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.

8.18 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
Women's Studies	See Section 8.32

8.19 Labour Studies Program**Program Coordinator:** Julie Guard**Program Office:** 117 Isbister**Telephone:** 204 474 8356**E-mail:** labour_studies@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 interdisciplinary program examines the social, economic and political realities of work. We study how work is organized, the dynamics of power in the workplace, workers' rights and the political economy of labour. We explore the past, present, and future of the labour movement in Canada and globally. Using theoretical and practical approaches, we examine the forces that shape working people's lives.

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 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, Program Code: 153

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

GENERAL MAJOR TOTAL: 30 CREDIT HOURS

LABR 1270 and LABR 1290

- 6 credit hours of LABR courses at the 2000 level
- 6 credit hours of LABR courses at the 3000 level
- 12 credit hours from LABR courses and/or the list of electives below

ADVANCED MAJOR TOTAL: 54 CREDIT HOURS

LABR 1270 and LABR 1290

- 6 credit hours of LABR courses at the 2000 level
- 21 credit hours of LABR courses at the 3000 level
- LABR 4510 and LABR 4520
- 12 credit hours from LABR courses and/or the list of electives below

MINOR TOTAL: 18 CREDIT HOURS

LABR 1270 and LABR 1290

- 6 credit hours of LABR courses at the 2000 level
 - 6 credit hours of LABR courses at the 3000 level
-

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
ECON 3170	Introduction to Quantitative Methods in Economics	3
ECON 3300	Canadian Economic History	6
ECON 3360	Labour Economics	6
ECON 3510	Industrial Relations (same as Labour Studies LABR 3510)	6
ECON 3660	Economic Ideas and Social Institutions	6

History

HIST 2670	History of Capitalism (M)	3
HIST 2671	Histoire du capitalisme (M)	3
HIST 2680	A History of Socialism from the French Revolution to the Present (M)	3
HIST 2690	The Common People in Industrial Society (G)	6
HIST 2710	Women in History (G)	6
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

Native Studies

NATV 3320	Aboriginal Organizations	3
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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

MGMT 2030	Administrative Theory	3
MGMT 2080	Introduction to Management and Organization Theory	3
MGMT 3030	Contemporary Social Issues in Business	3
HRIR 2440	Human Resource Management	3
HRIR 3430	Selected Topics in Industrial Relations	3
HRIR 3450	Labour and Employment Relations (or the former 027.341)	3
HRIR 4420	Compensation	3
HRIR 4480	Collective Bargaining and Administration	3
HRIR 4520	Comparative Industrial Relations and Human Resource Management	3

Interdepartmental Courses

IDM 3000	Aboriginal Business Context: Influences and Impacts	3
IDM 4090	Aboriginal Business Leadership	3

* No longer offered

For course descriptions, see the chapter entitled Course Descriptions in this *Calendar*.

8.20 Latin American Studies Program

Program Code: 099L

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 18 credit hours 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 3680	Anthropological Perspectives on Current Issues in Latin America (B)	3
076.366*	Latin American Culture History	3
076.369*	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.

8.21 Department of Linguistics

Acting Head: Terry Janzen

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

Ghomeshi, 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 subconsciously, 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.

For course descriptions, see the chapter entitled Course Descriptions in this *Calendar*.

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 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, Department Code: 126

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

GENERAL MAJOR TOTAL: 30 CREDIT HOURS

LING 1200¹

- 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 1200¹

- 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 1200¹

- 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
ANTH 1220	Cultural Anthropology (A)	3
	or	
ANTH 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 continua-

tion 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

8.22 Medieval and Renaissance Studies Program

Program Code: 099M

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.

8.23 Department of Native Studies

Head: Wanda Wuttunee
General Office: 204 Isbister 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); **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.

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.

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, Department Code: 032			
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 entitled Course Descriptions 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, Program Code: 032G

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 3120, NATV 3310, NATV 3350, NATV 4200, 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. • 15 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 1110, 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 faculties/schools for partial fulfilment of the Major and Minor in Native Studies are given below.

Asper School of Business

IDM 3000 Aboriginal Business Context: Influences and Impacts 3

IDM 4090 Aboriginal Business Leadership 3

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

033.386* Topics in Music (when the topic is "Music in Traditional Aboriginal Society") 3

* Indicates course no longer offered

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, Program Code: 055

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

YDSH 1220

YDSH 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 SEM 1260 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.

8.25 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); **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); **Stack**, M.F., B.A., M.A. (Saskatchewan), Ph.D. (Duke); **Warmbrod**, W.K., A.B.(Hons.), Ph.D. (North Carolina).

Assistant Professors

McArthur, N., B.A. (McGill), M.A. (Western Ontario), Ph.D. (Southern California); **Tillman**, C., B.A. (Missouri-Columbia), M.A., Ph.D. (Rochester).

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.

Other

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.

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.

8.25.3 Philosophy, Department Code: 015

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

- 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:

- 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

- 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

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

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

- 6 credit hours from Group 2 (History of Philosophy)
- PHIL 2430 or PHIL 2760
- 18 credit hours outside Philosophy

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

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.

8.26 Department of Political Studies

Head: Radhika Desai

General Office: 532 Fletcher Argue

Telephone: 204 474 9733

E-mail: political_studies@umanitoba.ca

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); Neville, W.F.W., B.A.(Hons.) (Manitoba), M.A. (Oxford); 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); Desai, R., B.A.(Hons.) (Maharaja Sayajirao University of Baroda), M.A., Ph.D. (Queen's); Sigurdson, R.F., B.A., M.A. (Manitoba), Ph.D. (Toronto); 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); Knysch, 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); 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); **Ladner**, K., B.A. (Calgary), M.A. (Saskatchewan), M.A., Ph.D. (Carleton), Canada Research Chair; **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.

Honours courses are open to Honours students and other advanced undergraduate students with written consent of instructor or department head.

8.26.3 Political Studies, Department Code: 019

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	<ul style="list-style-type: none"> ● 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 	<ul style="list-style-type: none"> ● 12 credit hours in Political Studies courses numbered at the 3000 level² ● an additional 12 or 18 credit hours depending on other Honours field 	<ul style="list-style-type: none"> ● 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.

8.27 Department of Psychology

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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); **Leboe, J.,** B.A.(Hons.), M.A. (Simon Fraser), Ph.D. (McMaster); **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.); **Vorauer, J.,** B.A. (UBC), M.A., Ph.D. (Waterloo); **Whiteley, J.H.,** B.A. (Hons.) (Toronto), M.A. (Western Ontario), Ph.D. (Iowa); **Wilson, J.R.,** B.A. (Northern Illi-

nois), 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); **Glenwright, M.,** B.A.(Hons.) (Winnipeg), M.Sc., Ph.D. (Calgary); **Kruk, R.,** B.Sc., M.A., Ph.D. (Toronto); **Mackenzie, C.,** B.A. (Alberta), M.A., Ph.D. (Queens); **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); **Montgomery, J.,** B.Ed. (Saskatchewan); **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.

Other

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.

8.27.3 Psychology, Department Code: 017

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
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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 3340 or PSYC 3630● 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
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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 3340 or PSYC 3630● 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
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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 3350, 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).

8.28 Department of Religion

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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 sys-

tems, 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 RLG 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, Department Code: 020

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.

8.29 Department of Sociology

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8.29.1 Academic Staff

Professors Emeriti

Driedger, L., A.B. (Kansas), B.D. (Bethany Biblical Seminary), M.A. (Chicago), Ph.D. (Michigan State), F.R.S.C.; **Kwong**, J., B.A. (Hong Kong), M.Ed. (Alberta), Ph.D. (Toronto), F.R.S.C.

Senior Scholars

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).

Professors

Albas, D.C., B.A. (Alberta), Ph.D. (Colorado); **Comack**, A.E., B.A. (Winnipeg), M.A. (Queen's), Ph.D. (Alberta); **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); **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); **Wilkinson**, L., B.A., M.A. (Saskatchewan), Ph. D. (Alberta); **Woolford**, A., B.A. (Victoria), M.A. (Western Ontario), Ph.D. (UBC).

Assistant Professors

Bookman, S., B.A. (Winnipeg), M.A., Ph.D. (Manchester); **Fries**, C., B.A. (Regina), M.A. (Guelph), Ph.D. (Calgary); **Peter**, T., B.A., B.A.(Hons.) (Winnipeg), M.A. (Queen's), Ph.D. (Manitoba); **Powell**, C., B.A. (Toronto), M.A., Ph.D. (Carleton).

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 in-

roduces 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, Department Code: 077			
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 SINGLE ¹			
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 4560, SOC 4570 and SOC 4580 ● 6 credit hours in ancillary options

HONOURS DOUBLE ¹

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 4560, SOC 4570 and SOC 4580
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NOTES:

¹ Ancillary options are courses taken from outside the Honours field of study.

8.30 Theatre (Minor) Program

Program Chair: Chris Johnson
Program Office: 364 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 pro-

gram 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), Program Code: 154

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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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
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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, or 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, Program Code: 155

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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GENERAL MAJOR TOTAL: 30 CREDIT HOURS

6 credit hours from List A	<ul style="list-style-type: none">● 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	<ul style="list-style-type: none">● 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 3

and

FAAH 1040 Introduction to Art 2A 3

or

FAAH 1050 Introduction to Art 1B 3

and

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.

8.32 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**8.32.1 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)

The following entries contain information which is not contained in Sec-

Assistant Professors**Kalbfleisch, J.**, B.A.(Hons.), M.A.(Waterloo), Ph.D. (Emory); **Millward, E.**, B.A.(Hons.) (Nottingham), M.A., Ph.D. (York).**8.32.2 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.

tion 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 term.

UNIVERSITY 1		YEAR 2	YEAR 3	YEAR 4
8.32.3 Women's Studies, Program Code: 156				
GENERAL MAJOR TOTAL: 30 CREDIT HOURS				
WOMN 1530 or WOMN 1540	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● 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	<ul style="list-style-type: none"> ● 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 			
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 			

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 20th 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	SOC 2471	Les fréquentations et le mariage (CUSB)	3
Philosophy			SOC 3770	Women, Health and Medicine	3
PHIL 3220	Feminist Philosophy	3	SOC 3790	Women, Crime and Social Justice	3
Political Studies			SOC 3810	Sociological Perspectives on Gender and Sexuality	3
POLS 3100	Gender and Politics in Canada	3	SOC 3811	Sociologie de la sexualité et des rôles sexuels (CUSB)	3
POLS 3240	Feminist Political Theory	3	School of Art		
Psychology			FAAH 2110	Women and Art	3
PSYC 2390	Psychology of Women	3	FAAH 4090	Seminar on Contemporary Issues in Art	3
PSYC 2400	The Psychology of Sex Differences	3		Acceptable for credit only when the topic is "Women Artists."	
Religion			Faculty of Music		
RLGN 2680	Women and Religion 1	3	MUSC 4130	History of Women in Music	3
RLGN 2690	Women and Religion 2	3	Faculty of Nursing		
Slavic Studies			NURS 3330	Women and Health	3
RUSN 2350	Russian Women's Writing from the 1950s to the Present Day	3		For course descriptions, see the chapter entitled Course Descriptions in this <i>Calendar</i> .	
RUSN 3980	Women and Russian Literature	3	NOTE:	List A courses are identified in Aurora Student with the course attribute of "Women's Studies Requirement".	
UKRN 3970	Women and Ukrainian Literature	3			
Sociology					
SOC 2470	Courtship and Marriage	3			

Section 9: Courses and Programs Offered by Other Faculties and Schools Acceptable for Credit in Arts

Courses

The following information is subject to Senate approval:

All degree credit courses offered by other Faculties or Schools at the University of Manitoba are acceptable for credit in Arts (excludes Pass/Fail courses) subject to the Faculty of Arts overall degree requirements. Such courses taken prior to admission to Arts will be included on transfer and will also be used in determining eligibility for admission. For details see Section 5.3. For course descriptions see the chapter entitled Course Descriptions 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 School of Art: History of Art

Program Coordinator: L. Stirling
Program Office: 349 University College
Telephone: 204 474 7357

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.

9.1.1 Program Information

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 4: Basic Faculty

9.1.2 History of Art, Program Code: 054A

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	<ul style="list-style-type: none"> ● FA 1990 ● 12 credit hours from either List A or List B 		

Introductory Courses

FAAH 1030	Introduction to Art 1A	3	FAAH 1050	Introduction to Art 1B	3
FAAH 1040	Introduction to Art 2A	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

These courses may not be used for the major or minor in History of Art

FA 1020	Mathematics in Art	3
STDO 1200	Fundamentals of Drawing	9
STDO 1220	Basic Design	9
STDO 1260	Drawing for Non-Majors	6

* No longer offered

9.2 Clayton H. Riddell Faculty of Environment, Earth, and Resources

Three Minors offered by the Clayton H. Riddell Faculty of Environment, Earth, and Resources can be used as satisfying the Faculty of Arts requirement of a Minor: Environmental Science, Geography and Geological Sci-

ences; (for details, see the Clayton H. Riddell Faculty of Environment, Earth, and Resources chapter of this Calendar).

9.3 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.

Minor in Business (119)

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.

9.4 Faculty of Music

9.4.1 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.

9.4.2 Faculty of Music, Program Code: 033

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 A³

MINOR¹ (OPTION 2) TOTAL: 18 CREDIT HOURS

MUSC 1110 and MUSC 1120 12 credit hours of Music courses
from List A³

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 the chapter entitled Course Descriptions in this *Calendar*. For information contact the Faculty of Arts general office.

9.5 Faculty of Science

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, Arts 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*.

9.5.1 Mathematics, Department Code: 136

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

- one of MATH 1300, MATH 1310
 - one of MATH 1500, MATH 1510, MATH 1520, MATH 1530
 - one of MATH 1690, MATH 1700, MATH 1710, MATH 1730
 - 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

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.

9.6 Interfaculty Option in Aging

An Interfaculty Option in Aging is offered by: Architecture (Interior Design), Arts, Human Ecology, Nursing, Kinesiology and Recreation Management, and Social Work. To complete the option, Arts students will need to complete each of the following: a) The Social Aspects of Aging, HMEC 2650 or REC 2650 or SWRK 2650; b) Health and Physical Aspects of Aging, NURS 2610 or KIN 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.

Registration Information

Initial Access Times

New and returning students are referred to the Aurora Student website for initial access time information.

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, Dean's 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.

Department/Program Offices

Please refer to the department/program entries in this chapter.

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 *Un-*

dergraduate 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 Dean's 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 confirm 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 8.

4.3 Registration Office Hours

In person registration is only available to students who wish (and are eligible) to register for courses that are not available through Aurora Student. All other students *must* register using Aurora Student.

During the months of July and August, the Arts Dean's Office is open from Monday thru Friday from 8:30 a.m. until 4:00 p.m., except on statutory holidays. Student Advisors are available on a drop-in basis only.

General Office, 3rd Floor Fletcher Argue Building

4.4 Maximum Number of Courses During a Term

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 Fall/Winter Terms and obtained a Grade Point Average of 2.75 (with no failures) in these Terms, 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 Dean's Office. Contact the Dean's Office at 474 9100 for information.

4.5 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 Dean's 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 six credit hour-course equivalents) you must have at least one six credit hour-course equivalent 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	
Anthropology	ANTH 1210	3	Fifth
		plus	
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*	
Anthropology	ANTH 1210	3*	
Religion	RLGN 1320	6	Fourth

* Not six credit hour-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 Dean's Office for clarification and assistance.

4.8 Voluntary Withdrawals

Please see Part 1, the *Undergraduate Calendar*, "Section 6.2: Withdrawal from Courses and Programs." Effective January 2006, there is no longer a limit on the number of Voluntary Withdrawals a student may have.

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 Dean's Office, either by letter, or by appearing in person and completing a Registration Revision Form.

4.9 New Academic Standing Rules

Effective September 2006, the Faculty of Arts implemented new academic standing rules which limit the number of unsatisfactory grades, i.e., "F" and "D" grades permitted in an Arts degree.

All students currently in the Faculty of Arts are subject to the new academic standing rules which replace the minimum performance table previously used to assess a student's academic performance. An assessment of a student's academic performance in accordance with the new academic standing rules will be carried out at the conclusion of the Fall/Winter Terms and Summer 1/Summer 2 Terms if a registration has occurred. For details of the new academic assessment rules, see Section 5.12 Maximum Number of "F" and "D" Grades Permitted on Courses Acceptable for Credit in Arts, located in the Calendar Information in this chapter.

4.10 Attend the Correct Section

Please see the chapter Other Important Things to Do and Know – Section 2

4.11 Course Outlines

Some departments have course outlines provided by individual instructors. Consult departmental general offices for further information.

4.12 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 Dean's Office and seek advice concerning their status and the action they need to take.

4.13 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.

4.14 Final Examinations

Please see the chapter Other Important Things to Do and Know – Section 3

4.15 Deferred Final Examinations

Please see the chapter Other Important Things to Do and Know – Section 3

4.16 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.

4.17 Repeating Courses

Students who wish to repeat a course must obtain Faculty approval prior to registration. 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.

4.18 Students Taking Courses Offered by Other Faculties and Schools

The following information is subject to Senate approval:

All degree credit courses offered by other Faculties or Schools at the University of Manitoba are acceptable for credit in Arts (excludes Pass/Fail courses) subject to the Faculty of Arts overall degree requirements. Students should be aware that other Faculties and Schools may restrict registration in their courses.

4.19 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 Dean's 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

Aurora Student will stop accepting graduation applications at approximately these dates

- May Graduation: end of revision period for Winter Term course changes
- October Graduation: August 1
- February Graduation: end of revision period for Fall Term course changes

If you have missed your deadline, or have other questions, please contact the Dean's 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 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, 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. 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 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, Dean's 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 at the following website "<http://umanitoba.ca/faculties/arts/student/index.html>"

If you are planning a four-year Advanced degree or an Honours program, request assistance from departmental advisors or student advisors in the Dean's 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.

6.2 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 this *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 Enrolment and Academic Records, then on Declarations.

NOTE:

Not all Majors and Minors are available through Aurora Student. Consult the Dean's 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 Dean's Office.

Business Minor and Limitations in Asper School of Business Courses

Students who wish to declare a minor in Business must report to the Dean's Office, Faculty of Arts commencing July 3, 2007. 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 14, 2007.

6.3 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 Dean's Office in person to apply.

6.4 Business Minor Students

Arts students who have previously been admitted to the Business Minor program may register for Business courses commencing on their stated registration date. Such students must provide the Dean's Office prior to their registration date, a list of the Business courses in which they wish to register.

SECTION 7: Former Arts Students Not Registered During Fall 2006/Winter 2007 Terms

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 Term.

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, 2007, or delivered *in-person* by July 3, 2007, with complete official documentation. Assessment of possible transfer credit may not be completed prior to registration.

Re-registration: Dean's Office, Faculty of Arts

Students previously admitted to Arts but not registered during Fall 2006/Winter 2007 Terms should contact the Dean's Office in person or complete and submit the form at the following website "http://umanitoba.ca/faculties/arts/media/request_to_re-register.pdf" to have their records reactivated.

Former students in the Faculty of Arts who have been academically suspended at the end of the Fall2006/Winter 2007 Terms or the end of the 2007 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.

SECTION 8: Information for Visiting, Second Degree, Special and Auditing Students Only

8.1 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 seeking a second degree. Second degree students are advised to contact an Arts Student Advisor prior to registration to determine transfer credits. 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.

8.2 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 Dean's Office before registration. You may then register through Aurora Student for the courses approved on your Letter of Permission.

8.3 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 Dean's Office at the time of in-person registration commencing.

SECTION 9: 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 10: 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 Dean's 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 11: Challenge for Credit

11.1 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 Dean's 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 19, 2007.

The final date to register and pay fees for challenge for credit where the final examination is held during the April series is January 18, 2008.

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 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 ex-

amination 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 Registrar, scheduled and administered by the department, or scheduled by the Registrar and administered by the department. If scheduled by the Registrar, 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.

11.2 Available Courses: Challenge for Credit

None of these challenge for credit course sections are available for Aurora Student registration. Students who wish to challenge for credit must report to the Dean's 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 1	A91	Fall Term	3	December	A written two or three hour final examination.
	GRK 1010	Introduction to the Reading of Ancient Greek 1	A92	Winter Term	3	April	
	GRK 1020	Introduction to the Reading of Ancient Greek 2	A91	Fall Term	3	December	
	GRK 1020	Introduction to the Reading of Ancient Greek 2	A92	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 1	A92	Winter Term	3	April	
	ECON 2460	Microeconomic Theory and Its Applications 2	A92	Winter Term	3	April	
	ECON 2470	Microeconomic Theory and Its Applications 1	A92	Winter Term	3	April	
	ECON 2480	Microeconomic Theory and Its Applications 2	A92	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 12: Courses Offered by Other Faculties and Schools Acceptable for Credit in the Faculty of Arts

The following information is subject to Senate approval:

All degree credit courses offered by other Faculties or Schools at the University of Manitoba are acceptable for credit in Arts (excludes Pass/Fail courses) subject to the Faculty of Arts overall degree requirements. Such courses taken prior to admission to Arts will be included on transfer and will also be used in determining eligibility for admission. For details see Section 5.3.

Students should note that written permission from the Faculty or School offering the course may be required.

SECTION 13: Lecture and Laboratory Class Schedule

For class schedule 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 class schedule, consult the Faculty of Arts Dean's Office, 3rd Floor Fletcher Argue Building, telephone 474 9100.

Changes in the Class Schedule

As this class schedule is assembled a considerable time before the opening of the Fall/Winter Terms, the Faculty reserves the right to make changes without notice, including cancellation and addition of courses and/or sections.

If a course or section you have registered in is subsequently cancelled, the Dean's 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.

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/dentalhygiene

Director: Salme Lavigne

Administrative Assistant: Lisa Chrusch

Student Advisors: Jean Lyon, Susan Petras

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SECTION 5: Program Requirements

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SECTION 1: Academic Staff

Professors:

Fleming, N., B.Sc. (Belfast), Ph.D. (East Anglia); **McNicol**, A., B.Sc., Ph.D. (Glasgow); **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); **Banerjee**, A., M.Sc., Ph.D., (India); **Bonstein**, T., D.M.D. (Hungary), M.Sc. (Buffalo, NY); **Lo**, E., M.D. (Toronto).

Senior Instructor:

Wener, M., R.D.H. (Kentucky), B.S. (Kentucky), M.Ed. (Manitoba).

Instructors:

Belows, 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); **Goulet**, T., Dip. D.H. (Manitoba); **Grasby**, H., 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); **Issa**, I., B.Sc. Dent Hyg (Alberta); **Legary**, K., Dip. D.H. (Manitoba); **Penner**, C., D.D.S. (Missouri), F.R.C.D. (C.); **Sanders**, C., Dip. D.H. (Manitoba); **Schmidt** D., Dip. D.H. (Manitoba); **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, 2007. 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 1200

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, 2007 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 and Bloodborne Diseases Policy

Note: This policy is under review. Please consult the on-line Calendar after July 2, 2007 or the School of Dental Hygiene for further information.

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 certification by October 15 of each year. The CPR Certification level required by the School of Dental Hygiene is: Basic Life Support (BLS) for Healthcare Providers. This certification must be maintained up to the date of graduation.

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 Term 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 Term GPA of a 2.0 must also be obtained.

A student who has obtained a grade of "F" in more than two subjects or who fails to obtain a Term 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

Note: This policy is under review. Please consult the on-line Calendar after July 2, 2007 or the School of Dental Hygiene for further information.

A student who has failed in not more than two subjects at the regular final examinations of any year, or who fails to obtain a Term 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. The passing grade in supplemental examinations is "C" in each subject.

A student must maintain a minimum Term 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 Term 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

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 2100-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 – Current not including changes Pending Senate Approval – that listing enclosed in separate document

First Year

Course No.		Credit Hours
HYGN 1232	Oral and Dental Anatomy	3
HYGN 1234	Preclinical Dental Hygiene	2
HYGN 1236	Dental Hygiene Theory and Practice I	4
HYGN 1238	Clinical Dental Hygiene I	3
HYGN 1242	Dental Hygiene Theory and Practice II	4
HYGN 1262	Radiology	3
HYGN 1270	Biology of the Head and Neck	3
HYGN 1280	Microbiology and Infectious Diseases	3
HYGN 1292	Dental Hygiene Preclinical Restorative	2
HYGN 1320	Dental Materials	2
HYGN 1340	Communications	2
HYGN 1352	Community Health I	3
HYGN 1360	Periodontology I	2
	Total credit hours	36

Second Year

HYGN 2100	Dental Hygiene Portfolio*	2
HYGN 2280	Pharmacology	2
HYGN 2312	Clinical Dental Hygiene II	4
HYGN 2314	Clinical Dental Hygiene III	4

HYGN 2316	Dental Hygiene Theory and Practice III	4
HYGN 2318	Dental Hygiene Theory and Practice IV	5
HYGN 2340	Periodontology 2	2
HYGN 2350	Biology of Oral Tissues	2
HYGN 2362	Community Health II	3
HYGN 2370	Nutrition in Dentistry	2
HYGN 2380	Pain Management	2
	Total credit hours	35

* Registration in HYGN 2100, Dental Hygiene Portfolio will also occur within the first year of the Dental Hygiene program. However, no grade will be assigned and it will not be factored into GPA calculations.

SECTION 6: Registration Information

Initial Access Times

Students are referred to the chapter, "Registration Information: Aurora Student," Section 4.

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 School of Dental Hygiene 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 Dentistry

Dean's Office

D113 Dentistry Building, Bannatyne Campus

Telephone: (204) 789 3631

Fax: (204) 789 3912

E-Mail: dean_dent@umanitoba.ca

Website: www.umanitoba.ca/faculties/dentistry

Acting Dean: Randall Mazurat

Associate Dean (Academic): Randall Mazurat

Associate Dean (Research): Elliott Scott

Business Manager: Linda Chartier

Administrative Assistant: Sandra Iwankow

Student Advisors: Jean Lyon (Admissions), Susan Petras

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-

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).

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.; **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

Blight, T., D.D.S. (Toronto), Dip. O.M.S. (Manitoba); **Chahal**, O., M.D. (Louisiana), Residency OMS (New York), DDS (Quebec); **Chimlar**, 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.; **Ghiabi**, M., D.M.D., M.Sc., F.R.C.D.(C), Diplomate, Am Bd of Periodontology; **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); **Cot-tick**, C., B.Sc., D.M.D. (Manitoba); **Dillon**, J., B.D.S. (NUI), F.I.C.D.; **Corbett**, T., D.D.S. (Western), Dip. Perio (Manitoba); **Dods**, S., C.D.A., R.D.H.; **Fogel**, H., D.M.D. (Manitoba) M.Sc. (Oregon), F.R.C.D. (C.); **Gilmartin**, T., D.M.D. (Manitoba); **Girardin**, D., Dip.D.H. (Manitoba); **Guan**, X., D.M.D. (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); **Short**, F., D.D.S. (Toronto), M.S.D. (Indiana); **Rosenbaum**, H., R.D.H.; **Toporowski**, B., D.M.D. (Manitoba); **Yak-iwchuk**, 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).

Associate Professors

Kirouac, G.J., B.A., M.Sc., Ph.D. (Manitoba).

Assistant Professors

Banerjee, A., M.Sc., Ph.D., (India); **Lo**, E., M.D. (Toronto).

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.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); **Dumore**, T., D.M.D. (Manitoba), M.Sc. Ortho (San Francisco); **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

Athanasopoulos, C., D.M.D., M.Sc. Ortho (Manitoba); **Bales**, J., D.D.S. (Western), M.Sc. Ortho (Manitoba); **Cohen**, B., B.Sc. (Toronto), D.D.S. (Western), M.Sc. Ortho (Manitoba); **Diamond**, R., D.M.D., Cert Paed (Manitoba), Cert Paed (Connecticut); **Dobbs**, T., B.S., D.D.S. (Tennessee), Cert. Pedo. (Manitoba); **Gill**, N., D.M.D. (Manitoba); **Ionescu**, D., D.M.D. (Toronto); **Lau**, L., D.M.D. (Manitoba); **McManus**, M., D.M.D. (Manitoba), Cert. Paedo (Minnesota); **McManus**, P., D.M.D. (Manitoba); **Patel**, S., D.M.D. (Manitoba); **Pesun**, R., 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; **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.

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.; **Pesun**, I.J., D.M.D. (Manitoba), Cert. Prosthodontics, M.Sc. (Georgia), F.A.C.D.(USA); **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); **Blight**, N., B.Sc.(H) (Manitoba), D.M.D. (Manitoba); **Braun**, J.V., B.Sc., D.M.D. (Manitoba), F.I.C.D.; **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); **Buettner**, M. A., D.M.D. (Manitoba), F.I.C.D.; **Cadigan**, G., D.M.D. (Manitoba); **Chaaban**, D., D.D.S., D.U-A. (Lebanese), D.M.D. (Manitoba); **Chuchman**, A., D.M.D. (Manitoba); **Colina**, T., D.M.D. (Manitoba); **Cottick**, C., 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); **Glow**, S., D.M.D. (Manitoba); **Grant**, A., D.M.D. (Manitoba); **Hai-Santiago**, K., D.M.D. (Manitoba); **Hamin**, K., D.M.D. (Manitoba); **Huynh**, H., D.M.D. (Manitoba); **Jay**, M., D.M.D.

(Manitoba); **Kalia**, I., 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); **Mao**, P., D.M.D. (Manitoba); **McClarty**, C., D.M.D., B.Sc. (Manitoba); **McIntosh**, R., D.M.D., (Manitoba); **Mulhern**, J., B.Sc. (Dublin), M.S.D., Cert.Endo (Indiana); **Nelson**, M., D.M.D. (Saskatchewan); **Nowakowski**, A., B.Sc., D.M.D. (Manitoba); **Nurbakhsh**, B., 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); **Rihal**, A., D.M.D. (Manitoba); **Robertson**, R., D.M.D. (Manitoba); **Rohalsky**, W., D.M.D. (Manitoba); **Ruiz**, M., D.M.D. (Manitoba); **Salama**, H., B.D.S. (Alexandria), F.D.S., R.C.S. (U.K.), D.M.D. (Manitoba); **Samhat**, K., B.Sc. (Western), D.D.S. (Iberoamerican), D.M.D. (Manitoba); **Santos**, R., D.M.D. (Manitoba); **Schafer**, A.M., B.A.(Hons.) (Manitoba), B.Lit (Oxford); **Solmundson**, K., D.M.D. (Manitoba), F.I.C.D.; **Tough**, R., D.M.D. (Manitoba); **Tsang**, R., D.M.D. (Manitoba); **Van Woensel**, M., D.M.D., L.L.B. (Manitoba); **Warkentin**, R., D.M.D. (Manitoba); **Wood**, M., D.M.D. (Manitoba), F.I.C.D.; **Wong**, E., D.M.D. (British Columbia); **Yonza**, M., D.M.D. (Manitoba); **Zhu**, R., 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.

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 1020 and 1030
CHEM 1300 and CHEM 1310
CHEM 2210 and 2220
MBIO 2360 and CHEM 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 a maximum of 7 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 (Requirements are under review, for further information please see

the IDDP Applicant Information Bulletin available at the Dean's Office, or on-line via www.umanitoba.ca/faculties/dentistry).

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, 2007 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 Instruments Computers and Textbook Software

Students entering the Faculty of Dentistry will be expected to purchase a specified laptop computer and Vital Source Technology software. This expenditure is approximately \$3500 for the first year of the program. Each following year of the program, students will be required to purchase additional software licensing/updates for a cost of approximately \$900/year. These costs replace former textbook expenditures.

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 computer, software, kit or kit items should a student leave the Faculty for whatever reason.

4.2 Immunization and Bloodborne Diseases Policy

Note: This policy is under review. Please consult the on-line Calendar after July 2, 2007 or the Faculty of Dentistry for further information.

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

Accepted candidates will be required to show proof of CPR certification by October 15 of each year. The CPR Certification level required by the Faculty of Dentistry is: Basic Life Support (BLS) for Healthcare Providers. This certification must be maintained up to the date of graduation.

4.4 Financial Aid

A number of loan and bursary funds, including 12 bursaries for first year students, are available to dental students. Applications and further information are available in the Dean's Office (late September).

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. Computer Software and Computer Kit fees are non-refundable. 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

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 term 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 term 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 satis-

factory 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 term 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

5.1 First Year

DDSS 1020	Periodontology
DDSS 1140	Radiology 1
DENT 1010	Early Clinical Experience
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
PDSD 1020	Orthodontics 1
RSTD 1070	Dental Materials 1
RSTD 1100	Operative Dentistry 1
RSTD 1110	Dental Anatomy and Occlusion
RSTD 1120	Introduction to Dentistry

5.2 Second Year

DDSS 2010	Oral Pathology
DDSS 2020	Pain and Anxiety Control
DDSS 2120	Periodontology
DDSS 2180	Radiology 2
DENT 2430	Introduction to Comprehensive Care
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
PDSD 2020	Orthodontics 2
PDSD 2070	Pediatric Dentistry 1
PDSD 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

5.3 Third Year

DDSS 3030	Medicine
DDSS 3200	Oral Diagnosis and Radiology
DDSS 3210	Oral and Maxillofacial Surgery
DDSS 3220	Periodontology
DDSS 3230	Pain and Anxiety Control
ORLB 3020	Pathology and Microbiology 2
ORLB 3060	Pharmacology and Dental Therapeutics
PDSD 3040	Orthodontics 3
PDSD 3050	Pediatric Dentistry 2
PDSD 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

5.4 Fourth Year

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
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

SECTION 5: Registration Information

Initial Access Times

Students are referred to the chapter, "Registration Information: Aurora Student," Section 4.

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

Dean's Office

230 Education Building

Telephone: (204) 474 9004

Fax: (204) 474 7551

Email: education@umanitoba.ca

Website: www.umanitoba.ca/education

Dean: John Wiens

Associate Deans: David Mandzuk (Undergraduate), Zana Lutfiyya (Graduate & Research)

Assistant Dean: Carolyn Crippen (PBDE)

Student Services

B. Ed. Programs

Telephone: (204) 474-9004

Fax: (204) 474-7551

E-mail: bachofed@umanitoba.ca

Website: www.umanitoba.ca/education

Student Services Coordinator: Rosanna Caruso

Student Advisor: Luna Jackson

Post Baccalaureate Diploma in Education (PBDE)

Telephone: (204) 474-7886

Fax: (204) 474-7551

E-mail: pbde@umanitoba.ca

Website: www.umanitoba.ca/education

Student and Administrative Services Coordinator: Louise Graham

Academic and Professional Bridging Program for Internationally Educated Teachers

Telephone: (204) 474-9004

Fax: (204) 474-7551

E-mail: education@umanitoba.ca

Website: www.umanitoba.ca/education/iet

IET Program Coordinator: Clea Schmidt

Student and Administrative Services Coordinator: Rosanna Caruso

Program Assistant: Ana Menijvar

Graduate Studies in Education

Telephone: (204) 474-7886

Fax: (204) 474-7551

E-mail: edgradpr@umanitoba.ca

Website: www.umanitoba.ca/education

Student and Administrative Services Coordinator: Louise Graham

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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); **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

Babiuk, G., B.A. (Royal Military), M.Ed. (Alberta), Ph.D. (OISE/ Toronto); **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); **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) (Luzonian), 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); **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) (Luzonian), M.Ed. (Sydney), M.A., Ph.D. (Wisconsin); **Morphy, D.R.**, B.A. (Alberta), M.A. (Calgary), Ph.D. (Michigan State); **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); **Kirby, D.M.**, B.Sc., Ed.Cert. (London), M.Ed. (Memorial), Ph.D. (London); **Piquemal, N.**, DEUG, Licence, Maitrise, D.E.A. (Strasbourg), Ph.D. (Alberta).

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); **Renaud, R.**, B.A. (Hons.), M.A.,

Ph.D. (Western Ontario); **Wallin, D.**, B.Ed., B.A., M.Ed., Ph.D. (Saskatchewan).

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 – 12) 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 Internationally Educated Teachers Program; 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 2009. 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 ESL (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.

Internationally Educated Teachers (IET) Program

The Academic and Professional Bridging Program for Internationally Educated Teachers (also known as the "IET Program") is a University of Manitoba, Faculty of Education pilot program. It is designed for individuals with international teaching credentials who require additional coursework in Education to be certified to teach in Manitoba.

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 Education complementary courses (see Section 8). Students who hold a recognized degree from an accredited institution may also take 5000-level courses, however, permission must be obtained from an Education advisor. Graduate students do not require any permission.

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 was 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

4.1 Admission Requirements

A first degree of a minimum of 90 credit hours and the requirement for teachable subjects as follows:

Early and Middle Years

- 18 credit hours in a teachable major,
- 12 credit hours in a teachable minor,
- 6 credit hours English or French literature,
- 6 credit hours Social Studies (History or Geography),
- 9 credit hours Mathematics (or Statistics) and Science (Biology, Chemistry, Environmental Science, Geology or Physics).

Senior Years

- 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 and in breadth component coursework, if required. The GPA is calculated on the basis of the courses used toward the teachable major/minor and if required, breadth coursework.

- Experience profile and writing skills exercise.
- References and a criminal record self-declaration.

Selection criteria: 69.0% on GPA; and 31.0% 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, 2009.

Special Consideration Category (currently under review)

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 2007-2008 session only. Please refer to the Faculty website for updates to the admission criteria for subsequent sessions.

Early Years (Kindergarten - Grade 4)

NOTE: Potential applicants in the process of completing their first degree are advised that meeting the teachable major/minor requirements and the breadth coursework 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.

All applicants must present a breadth of coursework that includes English/French Literature – 6 credit hours; Social Studies (History or Geography) – 6 credit hours; Mathematics (Mathematics or Statistics) and Science (Biology, Chemistry, Geology, Environmental Science, or Physics) – 9 credit hours with a minimum 3 credit hours from Mathematics and a minimum 3 credit hours from Science. A minimum grade of “C” is required in courses fulfilling the breadth component.

Teachable Subject	Major (18 credit hours)	Minor (12 credit hours)	Major/Minor Notes
Anthropology		X	
Art	X	X	
Classics		X	
Dance		X	
Developmental Studies (Family Studies and Developmental Psychology)			
Earth Science (Geological Science)		X	
Economics		X	
(pending approval of Senate)			
English (Language Arts)	X	X	
Environmental Science (Environmental Studies)		X	
French	X	X	

General Science	X		Must include 3 separate Science disciplines with at least 3 credit hours at the 2000 level or above. A minimum of 3 credit hours is required in each of the 3 disciplines.
Geography	X	X	6 credit hours of Canadian or North American Geography are required in the major or minor
History	X	X	6 credit hours of Canadian or North American History are required in the major or minor
Law		X	
Mathematics	X	X	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	X	X	
Native Studies	X	X	May include 6 credit hours of a Native Language course
Philosophy		X	
Physical Education	X	X	All Physical Education courses at the University of Manitoba are identified with department designation PHED. Recreational Studies courses (REC) are not acceptable
Political Science (Political Studies)		X	
Psychology		X	
Second Language	X	X	Major or minor in a language other than English or French
Sociology		X	
Drama/Theatre	X	X	

Middle Years (Grades 5 – 8)

NOTE: Potential applicants in the process of completing their first degree are advised that meeting the teachable major/minor requirements and the breadth coursework 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.

All applicants must present a breadth of coursework that includes English/French Literature – 6 credit hours; Social Studies (History or Geography) – 6 credit hours; Mathematics (Mathematics or Statistics) and Science (Biology, Chemistry, Geology, Environmental Science, or Physics) – 9 credit hours with a minimum 3 credit hours from Mathematics and a minimum 3 credit hours from Science. A minimum grade of “C” is required in courses fulfilling the breadth component.

Teachable Subject	Major (18 cred- it hours)	Minor (12 Major/Minor credit hours)	Notes
Anthropology		X	
Art	X	X	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
Classics		X	
Computer Science	X	X	
Dance		X	
Developmental Studies (Family Studies and Developmental Psychology)		X	
Earth Science (Geological Science)		X	
Economics		X	
(pending approval of Senate)			
English (Language Arts)	X	X	
Environmental Science (Environmental Studies)		X	
French	X	X	

General Science	X		Must include 3 separate Science disciplines with at least 3 credit hours at the 2000 level or above. A minimum of 3 credit hours is required in each of the 3 disciplines.
Geography	X	X	6 credit hours of Canadian or North American Geography are required in the major or minor
History	X	X	6 credit hours of Canadian or North American History are required in the major or minor
Human Ecology (Home Economics)	X	X	
Law		X	
Mathematics	X	X	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	X	X	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	X	X	May include 6 credit hours of a Native Language course
Philosophy		X	
Physical Education	X	X	All Physical Education courses at the University of Manitoba are identified with department designation PHED. Recreational Studies courses (REC) are not acceptable
Political Science (Political Studies)		X	
Psychology		X	
Second Language	X	X	Major or minor in languages other than English or French
Sociology		X	
Drama/Theatre	X	X	

Senior Years (Grades 9 – 12)

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	X	X	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	X	X	
Chemistry	X	X	
Computer Science	X	X	
English (Language Arts)	X	X	
French	X	X	
General Science	X	X	Major: Must include 2 separate Science disciplines with at least 3 credit hours of coursework at the 3000 level or above. A minimum of 3 credit hours is required from each of the 2 disciplines. Minor: Must include 2 separate Science disciplines with at least 6 credit hours of coursework at the 2000 level or above. A minimum of 3 credit hours is required from each of the 2 disciplines.
Geography	X	X	

History	X	X	
Human Ecology (Home Economics)	X	X	Students with a major and minor must have two areas of concentration selected from: Clothing and Textiles, Family Social Sciences, Human Nutritional Sciences. Effective February 1, 2008 applicants may not declare a major and minor in Human Ecology.
Mathematics	X	X	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	X	X	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). Effective February 1, 2008 applicants may not declare a major and minor in Music.
Native Studies	X	X	May include 6 credit hours of a Native Language course
Physical Education	X	X	All Physical Education courses at the University of Manitoba are identified with department designation PHED. Recreational Studies courses (REC) are not acceptable
Physics	X	X	
Second Language	X	X	Major or minor in languages other than English or French
Drama/Theatre	X	X	

4.1.1 Adult Criminal Records and Child Abuse Registry

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.

(Pending Senate Approval)

In addition to the above self-declaration and pending approval of the University of Manitoba Senate, all successful applicants will be conditionally admitted pending clearance of an official Criminal Record Search and clearance from the Child Abuse Registry.

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.

Pending approval of Senate and effective February 1, 2007 all continuing students will be required to complete and submit a *Self-Declaration of Adult Criminal Records and Listing on Child Abuse Registry* form prior to registration for every year they are enrolled in the Bachelor of Education program.

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

EDUB 1970	Middle Years School Experience 1 (Two separate blocks - 2 weeks & 4 weeks)	3
EDUB 1990	Teacher and Technology	3
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
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 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

EDUB 2110	Teaching Social Studies in Middle Years	3
EDUB 2120	Teaching Art in the Middle Years	2
EDUB 2970	Middle Years School Experience 2 (Two separate blocks - 4 weeks & 4 weeks)	9
EDUB 2100	Teaching Language Arts in the Middle Years	3
EDUB 2140	Teaching Mathematics in the Middle Years	3
EDUA 2810	School and Society 2: The Administrative Foundations of Education	3
	Complementary Course	3
Total Credit Hours		26

NOTE:

EDUB 2970 Middle Years School Experience continues into year three.

Year 3

EDUB 2130	Teaching Science in Middle Years	3
EDUB 2970	Middle Years School Experience 2 (Two separate blocks - 1 week & 4 weeks)	2
EDUB 2400	Teaching in the Middle Years	2
EDUB 2150	Teaching Physical Education in the Middle Years	2
EDUB 2970	Middle Years School Experience 2 (Third block - 5 weeks)	3
EDUA 2800	Psychology of Learning and Instruction 2: Inclusive Special Education	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 and <i>all of the following</i> :	3
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 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) Courses EDUB 2320 Teaching Physics in Senior Years, EDUB 2330 Teaching Computer Science in Senior Years, EDUB 1350 and 2350 Teaching a Heritage, Aboriginal or International Language I and II 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.	6
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	6
Total credit hours	30

SECTION 5: Bachelor of Music/ Bachelor of Education Integrated

5.1 Admission Requirements

(currently under review)

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).

(Pending Senate Approval)

In addition to the above self-declaration and pending approval, all successful applicants will be conditionally admitted pending clearance of an official Criminal Record Search and clearance from the Child Abuse Registry.

Other Requirements

- Experience profile and writing skills exercise.
- References and a criminal record self-declaration.

Selection criteria: 69.0% on GPA; and 31.0% 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.

Effective February 1, 2009, all continuing students will be required to complete and submit a *Self-Declaration of Adult Criminal Records and Listing on Child Abuse Registry* form prior to registration for every year they are enrolled in the Bachelor of Education program.

Students choose either:

- 1) Music 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 (under review)

Pending clarification from the Minister of Education, Citizenship and Youth and effective February 1, 2009 students must choose one Music specialization and a subject from the Senior Years selection for their teachable minor.

Students planning to take School Experience (EDUB 1940, EDUB 1950) during the Spring Session must make application for a School Placement no later than December 1. Forms will be distributed or available for pick up in mid-October. Failure to apply for School Placement by December 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	3
	Teachable Minor* or second Music specialization** (see above note re: changes effective February 1, 2008)	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	3
	Music Specialization	9
EDUB 1200	Teaching the Arts in Senior Years	3
EDUB 1600	Teaching General Music	3
	Teachable Minor* or second Music specialization** (see above note re: changes effective February 1, 2008)	6

Total credit hours 34

Summer Session

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	3
	Music Specialization	12
	Teachable Minor* or second Music specialization**	6

Total credit hours 34

Summer Session

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. Pending clarification from the Minister of Education, Citizenship and Youth and effective February 1, 2008 students must choose one Music specialization and a subject from the Senior Years selection for their teachable minor.

**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 was the 2006-2007 academic session.)

6.1 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 Human Ecology Electives*	3 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 Education Complementary Course	3 3
	Free electives (any faculty including Education complementary courses)	6
Total credit hours		27

Intersession

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	

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: The Academic and Professional Bridging Program for Internationally Educated Teachers (IET Program)

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.

The IET Pilot Program is intended to serve internationally educated teachers who have applied to the Certification Branch of the Department of Education, Citizenship and Youth (MECY) and have received official notification that they require additional university coursework to be certified to teach in Manitoba. The program will admit up to 12 applicants. The deadline date for application is March 15, 2007.

The program will begin in September 2007. Courses and workshops will be held in the Education Building at the University of Manitoba. In-school experiences will take place in middle years (Grades 5-8) schools within one or more School Divisions in Winnipeg. The time to complete the program will depend on the number of courses required by the Certification Branch of the Department of Education, Citizenship and Youth.

In order to be admitted to the program, and IET student must:

- be a permanent Manitoba resident;
- be a graduate of a degree program from an accredited university recognized by the University of Manitoba with a minimum overall grade point average of 2.0);
- be have received a written evaluation of teaching credentials from the Manitoba Professional Certification Branch. The assessment must conclude that additional coursework in Education is required to be certified to teach in Manitoba;
- have successfully passed the Canadian Test of English for Scholars and Trainees (CanTEST)

SECTION 8: Academic Regulations for Bachelor of Education

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.

8.1 Academic Regulations for All Bachelor of Education Programs

(See also sections 8.2, 8.3)

Academic Requirement for Graduation

A cumulative Grade Point Average of 2.0 is required for graduation in the Bachelor of Education.

Academic Standing (currently under review)

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 12 credit hours within a single term and who achieve a sessional Grade Point Average of 3.5 or better will be included in the Dean's Honour List.

(pending approval)

Grades for coursework taken on a letter of permission and used towards the Bachelor of Education degree will be used in meeting the eligibility requirements for the Deans Honour List.

Students receiving failing grades in education coursework where such coursework is required to earn the Bachelor of Education degree and/or student teaching will not be eligible for the Dean's Honour List.

Debarment

See the chapter, General Academic Regulations and Requirements, Attendance at Class and Debarment.

Degree with Distinction (currently under review)

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. Education courses may only be repeated once. 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.

8.2 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.

8.3 Academic Regulations for the Integrated B.Mus./B.Ed. and B.H.Ecol./ B.Ed. (see also 8.1)

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 9: 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 1870 Practical Work in School Science

EDUB 2160 Teaching Music in Early/Middle Years

SECTION 10: Post Baccalaureate Diploma in Education

In the Bachelor of Education program, 5000 level courses may not be used to fulfil the degree requirements.

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. Effective August 31, 2007, the Faculty will cease to approve external professional courses. 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. 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.

10.1 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.

10.2 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)

10.3 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. Effective August 31, 2007, the Faculty will cease to approve external professional courses. 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.

10.4 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 Degree Grade Point Average of 2.00 to continue in the program. A student whose Degree Grade Point Average falls below 2.00 will be placed on academic suspension for two years. Reapplication is required for re-admission 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.

10.5 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.

10.6 Courses Grouped by Subject

Ungrouped courses

EDUB 5870 Mentoring for Teachers Cr.Hrs.3

EDUB 5940 Instructional Product Development Cr.Hrs.3

Adult Education

EDUA 5300 Introduction to Adult Education Cr.Hrs.3

Early Years Education

EDUA 5900 Education and the Developmental Process 1 Cr.Hrs.3

EDUA 5910 Education and the Developmental Process 2 Cr.Hrs.3

EDUA 5920 Children's Play Cr.Hrs.3

EDUA 5930 Observing Child Behaviour Cr.Hrs.3

EDUA 5940 Language and Symbolic Process Cr.Hrs.3

Educational Administration

EDUA 5010 Introduction to Educational Administration Cr.Hrs.3

EDUA 5020 Principles of Curriculum Development Cr.Hrs.3

EDUA 5030 Management of Educational Institutions Cr.Hrs.3

EDUA 5040 Personnel Administration in Education Cr.Hrs.3

EDUA 5060 Principles of Instructional Supervision Cr.Hrs.3

EDUA 5070 Organizational Behaviour in Educational Institutions Cr.Hrs.3

EDUA 5080 Recent Developments in Educational Administration 1 Cr.Hrs.3

EDUA 5090 Recent Developments in Educational Administration 2 Cr.Hrs.3

EDUA 5100 Issues in the Administration of Education Cr.Hrs.3

Educational Psychology

EDUA 5700 Social Psychology of Education Cr.Hrs.3

EDUA 5710 Readings in Educational Psychology 1 Cr.Hrs.3

EDUA 5720 Readings in Educational Psychology 2 Cr.Hrs.3

EDUA 5730 Recent Developments in Educational Psychology 1 Cr.Hrs.3.

EDUA 5740 Recent Developments in Educational Psychology 2 Cr.Hrs.3

EDUA 5750 Psychology of Learning in Educational Contexts Cr.Hrs.3.

EDUA 5760 Psychology of Instruction in Educational Contexts Cr.Hrs.3

Educational Technology

EDUB 5840 Internet Pedagogy Cr.Hrs.3

EDUB 5850 Theory and Practice of Designing and Developing Web-based Courses Cr.Hrs.3

EDUB 5860 Project Management in Education and Training Cr.Hrs.3

English as a Second Language

EDUB 5510 ESL Materials Development and Practicum Cr.Hrs.3

EDUB 5520 Grammar in ESL Learning and Instruction Cr.Hrs.3

EDUB 5530 ESL and Content Instruction Cr.Hrs.3

EDUB 5540 Vocabulary and Pronunciation Instruction Cr.Hrs.3

EDUB 5580 Fundamentals of ESL (English Second Language) Instruction Cr.Hrs.3

EDUB 5830 Developing ESL/Bilingual Literacies Cr.Hrs.3

Expressive Arts

EDUB 5010 Theory and Practice of Teaching Dramatic Arts Cr.Hrs.6

EDUB 5040 Theory and Practice of Teaching Art (Elementary) Cr.Hrs.6

EDUB 5060 Theory and Practice of Teaching Art in the Senior Years 1 Cr.Hrs.3

EDUB 5070 Theory and Practice of Teaching Art in the Senior Years 2 Cr.Hrs.3

EDUB 5120 Music in the Early Years/Middle Years School 1 Cr.Hrs.3

EDUB 5130 Music in the Early Years/Middle Years School 2 Cr.Hrs.3

EDUB 5140 Special Methods in Music 1 Cr.Hrs.3

EDUB 5150 Special Methods in Music 2 Cr.Hrs.3

EDUB 5160 School Band Cr.Hrs.3

EDUB 5190 School Music Productions Cr.Hrs.3

EDUB 5240 Music: Advanced Vocal Methods Cr.Hrs.3

EDUB 5250 Music: Advanced Choral Methods Cr.Hrs.3

Guidance and Counselling

EDUA 5480 Counselling Skills Cr.Hrs.3

EDUA 5490 Field Placement in Counselling Cr.Hrs.3

EDUA 5500 Theories and Issues in School Counselling Cr.Hrs.3

EDUA 5510 Elementary School Counselling Cr.Hrs.3

EDUA 5520 Ethics in Counselling Cr.Hrs.3

EDUA 5530 Secondary School Counselling Cr.Hrs.3

EDUA 5540 Groups in Guidance Cr.Hrs.3

EDUA 5550 Psychology of Human Relationships Cr.Hrs.3

EDUA 5570 Family Life Education Cr.Hrs.3

EDUA 5580 Career Development Cr.Hrs.3

EDUA 5590 Career Information Cr.Hrs.3

Inclusive Special Education

EDUA 5600 Introduction to Inclusive Special Education Cr.Hrs.6

EDUA 5610 Field Experience in Inclusive Special Education Cr.Hrs.6

EDUA 5620 Teaching Children Through Alternative and Augmented Communication Cr.Hrs.3

EDUA 5630 Assessment and Instruction in Inclusive Special Education Cr.Hrs.6

EDUA 5640 Inclusive Special Education: Early and Middle Years Cr.Hrs.3

EDUA 5650 Inclusive Special Education: High School and Transition to Adult Life Cr.Hrs.3

EDUA 5660 Organization and Delivery of Resource Program and Support Services Cr.Hrs.3

EDUA 5670 Strategies for Organizing Inclusive Classrooms and Schools Cr.Hrs.3

EDUA 5680 Promoting Responsible Behaviour in Educational Settings Cr.Hrs.3

EDUA 5690 Focus on Exceptionality: Gifted and Talented Cr.Hrs.3

EDUA 5770 Focus on Exceptionality: An Ecological Approach to FAS/E Cr.Hrs.3

Instructional Design and Evaluation

EDUA 5800 Introduction to Educational Research Cr.Hrs.3

EDUA 5810 Theory of Test Construction Cr.Hrs.3

EDUA 5820 Test Administrative Analysis Cr.Hrs.3

EDUA 5850 Computer Application in Education 2 Cr.Hrs.3

Library Science

EDUB 5550 Library Reference and Informational Materials Cr.Hrs.6.

EDUB 5560 School Library Organization and Administration Cr.Hrs.3

Mathematics

EDUB 5760 Recent Developments in Mathematics Education Cr.Hrs.3

EDUB 5770 Diagnosis and Remediation in Elementary School Mathematics Cr.Hrs.3

Post Secondary Education

EDUA 5400 The Development of Higher Education Cr.Hrs.3

EDUA 5410 Contemporary Issues in Higher Education Cr.Hrs.3

EDUA 5420 Teaching and Learning in Post-Secondary Institutions Cr.Hrs.3

Readings in Curriculum

EDUB 5200 Readings in Curriculum, Teaching and Learning 1 Cr.Hrs.3

EDUB 5210 Readings in Curriculum, Teaching and Learning 2 Cr.Hrs.3

EDUB 5220 Recent Developments in Curriculum, Teaching and Learning 1 Cr.Hrs.3

EDUB 5230 Recent Developments in Curriculum, Teaching and Learning 2 Cr.Hrs.3

EDUB 5470 Recent Developments in Curriculum: Mathematics and Natural Sciences 1 Cr.Hrs.3

EDUB 5480 Recent Developments in Curriculum: Mathematics and Natural Sciences 2 Cr.Hrs.3

Reading/Language Arts

EDUB 5330 Teaching Language and Literacy in the Content Areas Cr.Hrs.3

EDUB 5340 Foundations of Literacy Cr.Hrs.3

EDUB 5350 Current Issues in Language and Literacy Cr.Hrs.3

EDUB 5360 Children's Literature Cr.Hrs.3

EDUB 5370 Adolescent Literature Cr.Hrs.3

EDUB 5380 Theory and Practice in Written Composition Cr.Hrs.3

EDUB 5390 The Teaching of Written Composition Cr.Hrs.3

EDUB 5400 Diagnostic and Remedial Techniques in Language Arts Cr.Hrs.6

EDUB 5820 Literacy in Adult Education Cr.Hrs.3

Science

EDUB 5780 Theory of Teaching Science: Elementary Cr.Hrs.3

EDUB 5790 Theory of Teaching Science: Secondary Cr.Hrs.3

Social Foundations of Education

EDUA 5200 Readings in Educational Foundations Cr.Hrs.3

EDUA 5210 Recent Developments in Educational Foundations 1 Cr.Hrs.3

EDUA 5220 Alternatives in Education Cr.Hrs.6

EDUA 5230 Studies in International Education Cr.Hrs.3

EDUA 5240 Problems in Cross-Cultural Education Cr.Hrs.3

EDUA 5250 Perspectives on the Education of Minorities in Canada Cr.Hrs.3

EDUA 5260 Education in the Middle Ages Cr.Hrs.3

EDUA 5270 Education from the Renaissance Cr.Hrs.3

Social Studies

EDUB 5570 Recent Developments in Teaching History Cr.Hrs.3

EDUB 5590 The Theory and Development of Geographic Education Cr.Hrs.3

EDUB 5600 The Teaching of Social Studies in the Early and Middle Years Cr.Hrs.3

EDUB 5630 The Teaching of Canadian Studies in Schools Cr.Hrs.3

EDUB 5660 Theoretical Foundations of Social Studies Cr.Hrs.3

Technical/Vocational

EDUB 5100 Developing Competency Skills in Enterprise Education 1 Cr.Hrs.3

EDUB 5110 Developing Competency Skills in Enterprise Education 2 Cr.Hrs.3

EDUB 5690 Seminar in Business Education Cr.Hrs.6

EDUB 5700 Seminar in Industrial Education Cr.Hrs.6

SECTION 11: Registration

11.1 Initial Access Time

Students are referred to the chapter, "Registration Information: Aurora Student", Section 4.

11.2 Registration Assistance

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

Post Baccalaureate (PBDE) 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

Academic and Professional Bridging Program for Internationally Educated Teachers

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: education@umanitoba.ca

Website: www.umanitoba.ca/education/iet

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.

11.3 Orientation Sessions

First Year B.Ed. Students – Wednesday, September 5, 2007

Second Year B.Ed. Students - Thursday, August 30, 2007

Fifth Year B.Mus./B.Ed and B.H.Ecol./B.Ed. Students – Thursday, August 30, 2007

Weekend College Students – TBA

Times and locations will be posted on the faculty website
www.umanitoba.ca/education

11.4 Registration Information

11.4.1 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, 2007. If not received by that date, students are directed 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 2006/2007.

Call 474-9004 or e-mail bachofed@umanitoba.ca if you do not receive a package by June 15, 2007.

Students are encouraged to refer to the faculty website
www.umanitoba.ca/education
where any updates or revisions will be posted.

11.4.2 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, 2007 – July 31, 2007. 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.

11.5 Course Selection

Students are responsible for ensuring the accuracy of their 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.

11.6 Post Baccalaureate Diploma in Education (PBDE)/Post Baccalaureate Certificate in Education (PBCE) Students

Students are encouraged to register for both Fall 2007 and Winter 2008 courses by mid-August as courses are subject to cancellation if there is insufficient enrolment. Cancellation decisions are generally made three 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 university website www.umanitoba.ca and click on Aurora Student.

11.7 Visiting Students

Visiting students are referred to the chapter, "The Registration System: Aurora Student".

11.8 Students Registered in Other Faculties or 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.

5000 level courses are restricted to students holding a degree. Those students must obtain permission by completing the form 'PBDE & Graduate Permission Slip' available at website <http://www.umanitoba.ca/education/current/index.shtml> or from Room 227 Education Building.

Students are referred to the chapter, "The Registration System: Aurora Student".

SECTION 12: Additional Information

12.1 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.

12.2 Registration, Voluntary Withdrawal and Fee Refund Deadlines

Education courses may have unique start and end dates. Students are referred to "Course Changes" on the faculty website www.umanitoba.ca/education.

12.3 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

12.4 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

General Office

E2-290 EITC (Engineering Information and Technology Complex)

Telephone: (204) 474 9809

Fax: (204) 275-3773

E-mail: eng_info@umanitoba.ca

Website: www.umanitoba.ca/faculties/engineering

Dean: Douglas Ruth, P.Eng.

Associate Deans: Ron Britton, P.Eng. (Design Engineering);

Ahmed Shalaby, P.Eng. (Undergraduate);

Joe LoVetri, P.Eng. (Research)

Student Advising Office: E1-284 EITC

Telephone: (204) 474-9807

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SECTION 1: Academic Staff

Biosystems Engineering

Biosystems Engineering academic staff are also listed under 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.; **Levin**, D.B., B.E.S. (Waterloo), M.Sc. (Guelph), Ph.D. (McGill); **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), P.Eng.; **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.

Instructors

Inglis, D., B.Sc., L.L.B. (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.; **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.; **Blatz**, J.A., B.Sc.(C.E.), Ph.D. (Manitoba), 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

Clark, S.P., B.Sc.(C.E.), Ph.D. (Manitoba); **El-Salakawy**, Ehab, B.Sc.(C.E.), M.Sc.(Menoufia), Ph.D. (Menoufia/Waterloo), P.Eng. (ON); **Gheorghiu**, C., B.Sc. (Iasi), M.Sc. (Tokyo), Ph.D. (Sherbrooke); **Gorczyca**, B., M.Sc. (Po-

land, 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.

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.; **Lehn**, W.H., B.Sc.(E.P.) (Manitoba), M.Sc.(E.E.) (Massachusetts), P.Eng; **Martens**, G.O., B.Sc.(E.E.) (Manitoba), M.A.Sc. (Toronto), Ph.D. (Illinois), P.Eng.; **Menzies**, R.W., B.Sc.(E.E.) (Hons.) (McMaster), Ph.D. (St. Andrews), P.Eng.; **Onyshko**, S., M.Sc. (Alberta), Ph.D. (Washington), 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

Shafai, L., B.E.Sc. (Tehran), M.A.Sc., Ph.D. (Toronto), F.I.E.E.E., P.Eng.

Senior Scholars

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.

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., F.E.I.C.; **Kuffel**, J. B.Sc. (EE) (Windsor), M.Sc. (EE) (Waterloo), Ph.D (Waterloo), P.Eng.; **Lovetri**, J., B.Sc., M.Sc. (Manitoba), M.A. (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); **Thomson**, D.J., B.Sc.(E.E.), M.Sc. (Manitoba), Ph.D. (Stanford).

Associate Professors

Hossain, E., B.Sc., M.Sc. (Bangladesh), Ph.D. (Victoria); **Moussavi**, Z., B.Sc. (Sharif U.), M.Sc. (Calgary), Ph.D. (Manitoba); **Oliver**, D., B.Sc. (Western Australia), Ph.D. (Monash U); **Shafai**, C., B.Sc.(E.E.) (Manitoba), M.Sc. (Manitoba), Ph.D. (Alberta).

Assistant Professors

Cai, J. B.Sc., M.Sc. (China) Ph.D. (Waterloo); **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); **Fung**, W., B.Eng., M.Sc., Ph.D. (Chinese University of Hong Kong); **Kordi**, B., B.Sc., M.Sc., Ph.D. (Amirkabir); **McNeill**, D., B.Sc., M.Sc. Ph.D. (Manitoba); **Noghianian**, S., B.Sc. (Sharif U), M.Sc., Ph.D., (Manitoba); **Okhmatovskii**, V., M.Sc., Ph.D. (Moscow Power Eng. Inst.); **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); **Yahampath**, 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; **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

Bibeau, E. L., B.Sc. (McGill), M.Sc., Ph.D. (British Columbia); **Chaturvedi**, M.C., B.Sc. (Met.) (Banara) M.Met., Ph.D. (Sheffield), P.Eng; **Wang**, Q., B.Sc. (Zhejiang), M.Sc., Ph.D. (Peking).

Professors

Balakrishnan, 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, FASM; **Chaturvedi**, M.C., B.Sc. (Met.) (Banara) M.Met., Ph.D. (Sheffield), P.Eng; **Kuhn**, D.C.S., B.Sc., M.Sc., Ph.D. (Queens); **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.) (Orléans); **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. (Northwestern); **Peng**, Q. B.Eng. M.Eng. (Xian Jiaotong Univ.), Ph.D. (Birmingham, UK); **Tachie**, M. F., M.Sc. Ph.D. (M.E.) (Saskatchewan); **Wang**, G., B.Sc., M.Sc. (H.U.S.T. China), Ph.D. (Victoria), P.Eng.; **Wang**, Q., B.Sc. (Zhejiang), M.Sc., Ph.D. (Peking); **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); **Elmekkawy**, 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); **Luo**, Y., B.Eng., M.Eng. (Beijing), Ph.D. (Stockholm); **Ojo**, O.A., B.Sc., (Obafemi Awolowu University), M.Sc. (M.E.), (Manitoba), Ph.D. (M.E.), (Manitoba); **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.K., M.Sc., Ph.D. (California); **Chen**, D. M.Sc. (China), Ph.D. (C.A.S.) (China) N.U.T.; **Garg**, A., M.Eng. (Villanova), Ph.D. (Michigan); **Gumel**, A., B.Sc. (Bayero), Ph.D. (Brunel); **Hao**, B., B.Sc., M.Eng. (China), Ph.D. (Manitoba); **Habibi**, H., B.Met., M.Met., Ph.D. (France); **Naterer**, G.F., B. Math, M.A.Sc. (M.E.), Ph.D. (M.I.E.) (Waterloo); **Shanker**, K., B.Tech. (Indian Inst Tech), M.S. (Denver), Ph.D. (Florida); **Speers**, E.A., M.Sc. (UBC), Ph.D. (Manitoba); **Strong**, D., B.Sc., M.Sc., Ph.D. (Toronto); **Wells**, R., M.Eng. (McMaster), Ph.D. (Manchester).

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:

A minimum of 8 of the 12 courses in the preliminary engineering program, section 5.2, each with a minimum grade of "C", and a minimum Grade Point Average of 2.0.

Please note that all 12 courses are required to complete the preliminary engineering program with the 8 as the basis of admission from University 1 and/or other faculties.

Other requirements

The university written English and mathematics requirements are satisfied by the English and mathematics courses in the preliminary engineering program.

Chemical 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 Student Advising Office, E1-284 EITC.

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.

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 experience, they are eligible to apply to the association for registration as a professional engineer in that province.

4.3 Students Transiting to Departments

Students will be accepted into department programs based on the following criteria. Direct entry students who have completed all 12 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 Engineering program. Students with less than 12 (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. Direct entry students must complete a program declaration form by May 1st in order to indicate their program of choice. Students from University 1 and other faculties must apply by May 1st through the Admissions Office.

4.4 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. Following is a list of assessments which will occur after each of the four terms (fall, winter, summer 1 and summer 2):

Term Grade Point Average (TGPA)

The TGPA is computed from all of the final grades in all courses completed during a given academic term.

Degree Grade Point Average (DGPA)

The DGPA is computed from the final grades obtained in all courses attempted as part of a student's current degree program and courses transferred from other faculties and other institutions. 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 final grades in all undergraduate courses attempted at the University of Manitoba and courses transferred from other faculties and other institutions.

Dean's Honour List

A continuing student who achieved a Term Grade Point Average (TGPA) of 3.50 or higher in their most recent academic assessment will be placed on the Dean's Honour List. The assessment is based on a minimum of 12 credit hours. The list will be updated at the end of each of the two regular session terms. A graduating student who achieved a Degree Grade Point Average (DGPA) of 3.50 or higher in their final academic evaluation will graduate on the Dean's Honour List.

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 Student Advising Office, E1-284 EITC.

4.5 Requirements for the Bachelor's Degree

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 DGPA 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.

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 (DGPA) above a minimum of 3.80, and is a recipient of the Program Gold Medal.

4.6 Categories of Students

A student shall normally register for three to six courses in a term. 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: Full-time students are those who are registered in at least 30 credit hours (considered 100 per cent) for the regular academic session of their specific programs. 80 per cent of a full course load is 24 credit hours; 60 per cent is 18 credit hours.

Part-Time Student: Part-time students are those who are registered for less than 30 credit hours for the regular academic session.

4.7 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 12 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. The academic assessments are as follows:

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:

- The student's TGPA drops below 2.00 for a fourth time, or;
- 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.

4.8 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 will require assistance with registration due to a block on the AURORA registration system which does not allow more than two repeats.
- 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.

4.9 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 DGPA. 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

Courses offered in Engineering may not be challenged for credit.

4.10 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 the Associate Dean (Undergraduate). Students wishing to appeal their academic status should write to the Associate Dean (Undergraduate), Committee on Standing and Appeals, E1-284 EITC before August 15th. Information regarding this process is available from the Student Advising Office, E1-284 EITC.

4.11 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 courses, in any term, becomes ineligible to proceed in Engineering or receives an Engineering Suspension will be withdrawn from his or her Intersession/Summer Session program.

4.12 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.

4.13 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).

4.14 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.

4.15 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.

4.16 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.

4.17 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) or 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) or MUSC 1290, 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.

4.18 Minor in Computer Science for Engineering Students

A Minor in Computer Science is available to Engineering students. The minimum requirement is 18 credit hours of computer science courses subject to the following constraints: (1) Courses COMP 1010, COMP 1020, and COMP 2140 are compulsory; (2) 9 additional credit hours of COMP courses at the 2000 or 3000 level; and (3) registration in computer science courses will be controlled by normal pre-requisites and class size restrictions.

4.19 Minor in Mathematics for Engineering Students

A Minor in Mathematics is available to Engineering students. The minimum requirements are 24 credit hours of mathematics courses subject to the following constraints: (1) the students must notify their home department that they are pursuing the minor; (2) up to 12 credit hours of mathematics courses in a student's engineering program may be counted toward the minor; (3) the student must complete at least 6 credit hours of courses from the mathematics department at the 3000 level or higher that are not included as part of the curriculum in the student's engineering program; and (4) approval of the Department of Mathematics is required for courses outside of the regular engineering program.

SECTION 5: Program Requirements

5.1 Engineering Access Program

General Office: E2-442 EITC

Telephone: (204) 474 9872

Toll Free: 1800 432 1960 ext. 9872

Fax: (204) 474 7518

E-mail: merrickc@cc.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

Student Advising Office: E1-284 EITC

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. Students in the preliminary engineering program or University 1 must complete at least 8 courses to be admitted to a degree granting engineering program. A student must complete the following list of 12 courses in order to graduate with a BSc degree from any of the engineering programs.

Course No.		Credit Hours
CHEM 1300	Structure and Modelling in Chemistry	3
COMP 1010	Introductory Computer Science	3
ENG 1430	Design in Engineering	3
ENG 1440	Introduction to Statistics	3

ENG 1450	Introduction to Electrical and Computer Engineering	3
ENG 1460	Introduction to Thermal Sciences	3
ENG 1310	Literary Topics 1	3
MATH 1210	Techniques of Classical and Linear Algebra	3
MATH 1510	Applied Calculus 1 or equivalent (Note 1)	3
MATH 1710	Applied Calculus 2 or equivalent (Note 2)	3
PHIL 1290	Critical Thinking 1	3
ENGL 1310	Literary Topics 1	3

Note:

- (1) MATH 1500 and MATH 1510 are regarded as equivalent to each other.
- (2) MATH 1700 and MATH 1710 are regarded as equivalent to each other.
- (3) MATH 1690 may be regarded as being equivalent to one course from (1) and one course from (2).
- (4) MATH 1300 is not an acceptable equivalent to MATH 1210

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 (or an equivalent), and the written English requirement by ENG 1310.

5.3 Common Courses Taught by the Faculty of Engineering

ENG 1420 Engineering Processes for Non-Engineering Students Cr. Hrs. 3 Develops an understanding of the engineering profession with emphasis on basic technical principles, the regulation of engineering in Canada, systems Engineering, and Project Management. Special emphasis will be placed upon the interface between management and engineering and the role that management plays in the conduct of technical projects and manufacturing.

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:* A minimum grade of 60% in pre-calculus Mathematics 40S, or the former Mathematics 40S, Physics 40S, and Calculus 40S.

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 Chemistry 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*.

5.4 Biosystems Engineering

General Office: E2-376 EITC

Telephone: 474 6033

Fax: 474 7512

Website: www.umanitoba.ca/faculties/afs/biosystems_engineering/

Head: Q. (Chong) Zhang

Associate Head: D. D. (Danny) Mann

Admin. Assistant: Ms. D. (Debby) Watson

Office Assistant: Ms. E. (Evelyn) Fehr

The Department of Biosystems Engineering offers a fully 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	Contemporary Statistics for Engineers	3
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
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 2XXX	Computer Aided Design (See Note)	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
AGEC 2370	Principles of Ecology	3
One course in Technology and Society		3
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
BIOE 4LB0	Design of Light-Frame Building Systems	4
BIOE 4IS0	Imagine and Spectroscopy for Abstemious	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

NOTE: Pending Senate approval, a new 2 or 3 credit hour core course in Computer Aided Design (CAD) will be introduced at the second year level starting September 2007. Further details were not available at the time of printing of the Calendar. Please check with the departmental office or the online Calendar for information.

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 as their science elective. They will also need to take CHEM 2360 Biochemistry 1 and CHEM 2370 Biochemistry 2 as their two free electives.

Co-operative Education Program in Biosystems Engineering

Coordinator: N. (Nazim) Cicek

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 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 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 completes both work terms and the required work term reports will have the words "Co-operative Education."

5.5 Civil Engineering

General Office: E1-368 EITC

Telephone: (204) 474-9220

Fax: (204) 474-7513

E-mail: Civil_Eng@umanitoba.ca

Website: www.umanitoba.ca/civil

Head: Dr. Peter Rasmussen, P.Eng.

Associate Head: Dr. James Blatz, P.Eng.

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.

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	Introduction to Probability and Statistics	3
GEOL 2250	Geology for Engineers	4
CIVL 2760	Introduction to Environmental Engineering (See Note 1)	5
CIVL 2770	Civil Engineering Materials	5
CIVL 2780	Civil Engineering Systems	4
CIVL 2790	Fluid Mechanics	4
CIVL 2800	Solid Mechanics 1	4
CIVL 2830	Graphics for Civil Engineers	2
CIVL 2840	Civil Engineering Geomatics	3
CIVL 3590	Numerical Methods for Engineers	4
CIVL 3690	Environmental Engineering Analysis	4
CIVL 3700	Environmental Engineering Design	4
CIVL 3710	Finite Element Analysis	4
CIVL 3730	Geotechnical Materials and Analysis	4
CIVL 3740	Hydraulics	4
CIVL 3750	Hydrology	4
CIVL 3760	Structural Analysis	4
CIVL 3770	Structural Design 1	4
CIVL 3790	Transportation Engineering 1	4
CIVL 4050	Engineering Economics	3
CIVL 4220	Geotechnical Design	4
CIVL 4250	Groundwater Hydrology	4
CIVL 4380	Infrastructure Engineering and Construction Management	4
CIVL 4390	Structural Design 2	4
CIVL 4400	Transportation Engineering 2	4
CIVL 4460	Technology, Society and the Future	3
CIVL 4590	Design Project	6
ENG 2010	Technical Communications	3
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
xxxx xxxx	Civil Engineering: Complementary Studies Elective (see Note 2)	3
	Environmental Option: Environmental Ethics	3
PHIL 2750		3

Plus 3 of the following technical electives (see Note 3)

Civil Engineering Technical Electives: (3)		
CIVL 4030	Structural Design 3	4
CIVL 4040	Structural Dynamics	4
CIVL 4100	Engineering Management and the Environment	4
or		
BIOE 4480	Environmental Impact Assessment	4
CIVL 4180	Environmental Systems	4
CIVL 4200	Groundwater Contamination	4
CIVL 4230	Geotechnical Engineering	4
CIVL 4330	Graduation Project	4
CIVL 4350	Hazardous Waste Treatment	4
CIVL 4410	Transportation Systems	4
CIVL 4420	Highway Pavement Design	4
CIVL 4470	Watershed Processes	4
BIOE 4560	Structural Design in Wood	4
Environmental Option Technical Electives: (3)		
CIVL 4100	Engineering Management and the Environment	4
or		
BIOE 4480	Environmental Impact Assessment	4
SOIL 4090	Chemical Analysis of Soils	3
SOIL 4500	Remediation of Contaminated Land	3
CIVL 4180	Environmental Systems	4
CIVL 4200	Groundwater Contamination	4
CIVL 4330	Graduation Project	4
CIVL 4350	Hazardous Waste Treatment	4
CIVL 4470	Watershed Processes	4
BIOE 4460	Air Pollution Assessment and Management	4

1) Pending Senate approval CIVL 2760 will be replaced by CHEM 2XXX Water Quality Analysis for Engineers (3 credit hours).

2) Students are required to 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.

3) 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

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.

5.6 Electrical and Computer Engineering

General Office: E2 – 390 EITC

Telephone: (204) 474 9603

Fax: (204) 261 4639

E-mail: <mailto:ecedept@ee.umanitoba.ca>

Website: www.ee.umanitoba.ca

Head: Dr. J. Kuffel, P.Eng.

Associate Head (Computer Engineering): Dr. W. Kinsner, P.Eng.

Associate Head (Electrical Engineering): Dr. U. Annakkage, P.Eng.

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: Dr. R. McLeod, P.Eng.

Coordinator: C. Decruyenaere

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 ECE 4720 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 capstone group design project, 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 ecology, technology 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
MATH 2120	4
STAT 2220	3
MATH 2130	3
MATH 2132	3
MATH 3132	3
MATH 3110	4
MATH 3120	3
CIVL 4050	3
ECE 2130	4
ECE 2160	5
ECE 2220	5
ECE 2260	4
ECE 3530	4
ECE 3590	4
ECE 3600	4
ECE 3610	4
ECE 3650	5
ECE 3670	4
ECE 3710	4
ECE 3780	4
ECE 3720	4
ECE 4150	4
ECE 4240	4
ECE 4260	4
ECE 4830	4
ECE 4600	6
ANTH 2430	3
ENG 2010	3

Technical Electives (5 Required) (see Notes 3,4)

ECE 4140	4
ECE 4160	4
ECE 4190	4
ECE 4200	4
ECE 4250	4
ECE 4270	4
ECE 4280	4
ECE 4290	4
ECE 4300	4
ECE 4310	4
ECE 4370	4
ECE 4390	4
ECE 4610	4
ECE 4420	4
ECE 4580	4
ECE 4750	4
ECE 4760	3

ECE 4770	4
ECE 4780	3
MECH4860	5
Computer Engineering Courses (1 required)	
ECE 3760	4
ECE 3770	4
ECE 4440	4
ECE 4740	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 100 level or above from either the faculties of Arts or Management. However, ARTS1110 (formerly 099.111) 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 ecology, technology 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.)

Department Program

Course No.	Credit Hours
STAT 2220	3
MATH 2130	3
MATH 2132	3
MATH 2120	4
MATH 3132	3
MATH 3110	4
MATH 3120	3
CIVL 4050	3
ECE 2160	5
ECE 2220	5
ECE 2260	4
ECE 3610	4
ECE 3670	4
ECE 3700	4
ECE 3740	4
ECE 3750	4
ECE 3760	4
ECE 3770	4

ECE 3780	Signal Processing 1	4
ECE 3790	Engineering Algorithms	4
ECE 4150	Control Systems	4
or		
ECE 4260	Communication Systems	4
ECE 4240	Microprocessor Interfacing	4
ECE 4740	Digital Systems Implementation	4
ECE 4830	Signal Processing 2	4
ECE 4600	Group Design Project (See Note 1)	6
COMP 1020	Computer Science 2	3
ANTH 2430	Ecology, Technology and Society	3
COMP 2140	Data Structures and Algorithms	3
COMP 3430	Introduction to Operating Systems	3
ENG 2010	Technical Communications	3
Computer Engineering Electives (2 required) (see Notes 3,4)		6 to 8
ECE 4250	Digital Communications	4
ECE 4420	Digital Control	4
ECE 4440	Computer Vision	4
ECE 4530	Parallel Processing	4
ECE 4520	Simulation and Modeling	4
Computer Science Courses (1 required)		
COMP 2150	Object Orientation	3
COMP 2160	Programming Practices	3
COMP 3010	Distributed Computing	3
COMP 3190	Introduction to Artificial Intelligence	3
COMP 3290	Introduction to Compiler Construction	3
COMP 3380	Databases Concepts and Usage	3
COMP 3490	Computer Graphics 1	3
COMP 3710	User Interfaces	3
COMP 4300	Computer Networks	3
COMP 4360	Machine Learning	3
COMP 4490	Computer Graphics 2	3
Electrical Engineering Courses (1 required)		
ECE 2130	Electric Fields	4
ECE 3600	Physical Electronics	4
ECE 3720	Electric Power and Machines	4
ECE 4390	Engineering Computations IVE	4
ECE 4610	Biomedical Instrumentation and Signal Processing	4
ECE 4150	Control Systems	4
ECE 4260	Communication Systems	4
Complementary Studies Elective (1 required) (see Note 2)		3
Total credits for Graduation		172-173

NOTES:

1. Course continuing through both terms. Credit on completion of course.
2. The complementary studies elective can be any course at the 100 level or above from either the faculties of Arts or Management. However, ARTS 1110 (formerly 099.111), 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.

5.7 Mechanical and Manufacturing Engineering

General Office: E2 -327 EITC

Telephone: (204) 474 9804 / 6630

Fax: (204) 275 7507

Website:

www.umanitoba.ca/faculties/engineering/mech_and_ind/dept.htm

Head: D. Kuhn

Associate Head: N. Sephri

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 basic training in the sciences, mathematics and fundamental engineering subjects followed by more specialized subjects related directly to the 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: G. Wang

Co-op Coordinator: Bernice Ezirim

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 may 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
CIVL 4050	Engineering Economics (former 23.483)	3
ELEC 3680	Introduction to Digital Systems	4
	Or	
ELEC 3720	Electric Power and Machines	4
MECH 2XXX	Computer Aided Design (See note)	2
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	Measurements and Control	4
MECH 3470	Heat Transfer 3M	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	Graduation Thesis (See Note 4)	3
MECH 4650	Machine Design 4M	4
MECH 4680	Energy Conversion and Utilization	4
MECH 4820	Computational Methods for Thermofluids	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 (B)	3
ENG 2010	Technical Communications	3
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 3132	Engineering Mathematical Analysis 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.
- NOTE: Pending Senate approval, a new 2 or 3 credit hour core course in Computer Aided Design (CAD) will be introduced at the second year level starting September 2007. Further details were not available at the time of printing of the Calendar. Please check with the departmental office or the online Calendar for information.

Technical Electives in Mechanical Engineering

Course No.	Credit Hours	
MECH 3520	Aerodynamics	4
MECH 3550	Robotics and Computer Numerical Control	4
MECH 3560	Modeling 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 Performance Dynamics (former 025.351)	3
MECH 4530	Strength of Materials 4M	3
MECH 4550	Noise Control	4
MECH 4560	Selected Topics in Fluid Mechanics 4M	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:

1. 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.
2. 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.
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 course-changing date.
4. 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.
5. MECH 3600 will be offered through Red River College as an equivalent course. Credit will be granted upon completion of the RRC course taken on a Letter of Permission. See department for details.

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
CIVL 4050	Engineering Economics (former 023.483)	3
MECH 2XXX	Computer Aided Design (See Note)	2
MECH 2120	Mechanics of Machines	4
MECH 2200	Thermodynamics 2M	4
MECH 2220	Stress Analysis and Design 2M	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 and Design	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 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 4450	Aircraft and Spacecraft Performance 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 (B)	3
ENG 2010	Technical Communications	3
MATH 2130	Engineering Mathematical Analysis 1	4
MATH 2132	Engineering Mathematical Analysis 2	4
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 3132	Engineering Mathematical Analysis 3	3
	One Complementary Studies Elective	
	One Technical Elective	

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.
5. NOTE: Pending Senate approval, a new 2 or 3 credit hour core course in Computer Aided Design (CAD) will be introduced at the second year level starting September 2007. Further details were not available at the time of printing of the Calendar. Please check with the departmental office or the online Calendar for information.

Mechanical Engineering and Aerospace Option Co-op Courses

MECH 2050	Mechanical Engineering Co-op Education Assignment 1
MECH 3050	Mechanical Engineering Co-op Education Assignment 2
MECH 4050	Mechanical Engineering Co-op Education Assignment 3
MECH 4060	Mechanical Engineering Co-op Education Assignment 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
CIVL 4050	Engineering Economics (former 023.483)	3
ELEC 3680	Digital Systems	4
or		
ELEC 3720	Electric Power and Machines	4
MECH 2XXX	Computer Aided Design (See Note)	2
MECH 2120	Mechanics of Machine	4
MECH 2200	Thermodynamics 2M	4
MECH 2220	Stress Analysis and Design 2M	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 3M	3
MECH 3540	Modern Engineering Materials	4
MECH 3550	Robotics and Computer Numerical Control	4
MECH 3560	Modeling 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 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 System Design	4
MECH 4960	Manufacturing Process I	4
MECH 4970	Manufacturing Process II	4
ANTH 2430	Ecology, Technology and Society (B)	3
ENG 2010	Technical Communications	3
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 3132	Engineering Mathematical Analysis 3	3
	One complementary studies elective	3/4
	Three technical electives or two technical electives and a graduation thesis project	3/4

NOTES:

- Students are required to select either ELEC 3720 Electric Power and Machines or ELEC 3680 Introduction to Digital Systems.
- 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.
- 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.
- NOTE: Pending Senate approval, a new 2 or 3 credit hour core course in Computer Aided Design (CAD) will be introduced at the second year level starting September 2007. Further details were not available at the time of printing of the Calendar. Please check with the departmental office or the online Calendar for information.

Technical Electives in Manufacturing Engineering4

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 3M	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 and Systems Engineering	3
MECH 4190	Aerospace Materials and Advanced Manufacturing Process	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	3
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	4
BIOE 4390	Unit Operations 1	4
ECOL 3420	Apparel Manufacturing	4

List B

ACC 1100	Introduction to Financial Accounting	3
MKT 2210	Fundamentals of Marketing	4
MKT 3240	Selected Topics in Marketing	3
LABR 3060	Workplace Health and Safety or	3
LABR 3070	Labour Relations and Occupational Safety and Health Law	3

NOTES:

- 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.
- 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.
- 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.
- 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 Cooperative Education Assignment 1
MECH 3920	Manufacturing Cooperative Education Assignment 2
MECH 4910	Manufacturing Cooperative Education Assignment 3
MECH 4920	Manufacturing Cooperative Education Assignment 4

NOTES:

- Co-op students must complete the same number of technical electives as the non-visites: ENG 1120 (or 130.112), 136.151 and MATH 1710 (or 136.171).

SECTION 6: Registration Information

6.1 Initial Access Times

Students are referred to the chapter, "Registration Information: Aurora Student".

6.2 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: E1-284 EITC
(Engineering Innovation and Technology Centre)
(204) 474 9807; and Toll Free Canada and USA 1(800)278-9591

Engineering Access Program: E2-442 EITC, (204) 474 9872

Biosystems Engineering: E2-276 EITC, (204) 474 6033

Civil Engineering: E1-368 EITC, (204) 474 9220, E1- EITC, (204) 474-6251

Electrical and Computer Engineering: E2-390 EITC, (204) 474 7237

Mechanical and Manufacturing Engineering: E2-327 EITC, (204) 474 6630

6.2.1 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 fall term will, for the most part, have the opportunity to obtain credit for them in the winter term. Depending on need, the winter 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.

6.2.2 Program Declarations

Student Program Declaration forms will be e-mailed out in March 2007 to all Engineering students in their preliminary year. Students are required to declare their program of choice to the Undergraduate Student Advising Office, E1-284 EITC before the end of the winter 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.

6.2.3 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 2007. There is a \$75.00 registration fee charged at this time.

6.2.4 Course Load Definitions

100% course load = 30 credit hours (credit hours per regular session), 80% course load = 24 credit hours, 60% course load = 18 credit hours.

6.2.5 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*.

6.2.6 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. ENGL 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.

6.2.7 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? Student Advising Office, E1-284 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.

6.2.8 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.

6.2.9 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 Student Advising Office, E1-284 EITC, 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 MAY not apply for an Examination Deferral.

6.2.10 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 Obtaining a University of Manitoba email account*). 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.

6.2.11 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.

6.2.12 Need A Locker?

Go to the UMES office (E2-292 EITC). You will have to find your own locker partner.

6.3 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 number of Pre-planned 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.

(Check Engineering website for registration instructions)

Students can withdraw from courses during the first two weeks of classes without financial or academic penalty. Contact the Student Advising Office (474-9807) for more information.

6.3.1 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.

6.3.2 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 Undergraduate Student Advising Office, Room E1-284 EITC. Where necessary, an appointment can be made to meet with the Associate Dean of Engineering (Undergraduate).

6.3.3 Prerequisites and Corequisites

Students who do not obtain standing in fall term courses (D, F or VW) may normally register for the course in winter term. A schedule of sections offered in winter 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 winter term course that you are already registered in, you must withdraw from that course – it will not be done automatically.

6.3.4 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)

Full time students are required to register for three to six courses per term. If you have difficulty with the course load in the fall term, consider taking fewer courses in the winter term.

6.3.5 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 the winter term.

There are two options to consider:

Option 1: Register for COMP 1020 and withdraw from one of your courses in winter term. Most courses in the winter term are offered during Intersession (May-June, 2007).

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

General Office

440 Wallace Building

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Email: Faculty_Environment@umanitoba.ca

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Associate Dean (Academic): Mary Benbow

Associate Dean (Research): David Barber

External Liaison Officer: Merlin Shoesmith

Executive Assistant to the Dean: Darlene Smith

Student Affairs Coordinator: Jason Jorgenson

Student Advisor: Jacey Scott

Student Services Assistant: Betty-Ann Wiebe

Cooperative Education Coordinator: Leslie Goodman

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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 Noble Purpose, Mission, and Vision

Statements. 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, Dr. 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.

Interdisciplinarity - 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 7 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) Bachelor of Science in Geological Sciences (General);

The Faculty offers 8 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, 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 include, *inter alia*:

- Applied Geography
- Earth Observation 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
- Issues in Environmental Law
- 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 with 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. Promoting 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, Churchill, Delta Marsh, Star Lake, Vancouver Island to Thompson, Labrador, the United States, India, Dominica, or 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 counselling 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 that follow. 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 program in University 1. In University 1, students will select courses from a wide variety of offerings in Faculties across campus. 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 entry is based on a Degree Standards Table found in section 5.2.2 in this chapter

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 advanced 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.

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 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.

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.

3.1 Degrees Offered

Geography

Bachelor of Arts in Geography

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 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

Bachelor of Science in Geological Sciences

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.

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.

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

or 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 registered in the B.A. Geography (General; Advanced) and B.Sc. Geological Sciences (General) are required to complete a minor prior to graduation. Students may not, however, declare both their Major and Minor from the same subject area. 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.

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 that 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, 6 credit hours from the Faculty of Science, and 6 credit hours from the Clayton H. Riddell Faculty of Environment, Earth, and Resources or the Faculty of Science or the Faculty of Arts. 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, Prerequisite or Concurrent Requirement, 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 department head.

Some prerequisite courses may be taken concurrently. In this instance, the course description will indicate that a specific course is a pre- or corequisite

for the course in which you wish to register. If you have not previously taken the course, you may register for it in the same term.

Corequisite: If a first course is a corequisite to a second course, the first course must be taken in the same term as 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, prerequisite or concurrent requirement or corequisite may be waived with written consent of the department head 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), *GEOG 3760 Special Topics in Geography* (6), *ENVR 3000 Multidisciplinary Topics in Environmental Science* (3), *ENVR 3010 Field Topics in Environmental Science 1* (1.5), *ENVR 4010 Field Topics in Environmental Science 2* (1.5), 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

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 cumulative and degree Grade Point Average, unless otherwise stipulated by the degree program. Students may not repeat a course more than once unless approved by the Faculty Student Appeals and Discipline Committee.

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 earned grades are transferred and form part of the degree Grade Point Average, when applicable. 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.

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 the Clayton H. Riddell Faculty of Environment, Earth, and Resources 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 each term.

To qualify for the Dean's Honour List, a student must complete a minimum of 12 credit hours in a term and achieve a term 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 degree 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 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 degree 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 Probationary Warning, Probation and Academic Suspension

Assessment will take place after each term only if a student completes more than 4.0 credit hours in any give term.

Students will receive a probationary warning if, at the point of assessment following a term, he/she fails to achieve the required minimum performance level. The notation "Probationary Warning" will be recorded on the student's transcript of marks.

While on probationary warning, student in the Faculty are permitted to register for two additional terms up to a maximum of 30 credit hours to attain the minimum performance requirements. Those who fail to meet this stand will be placed **on probation** for the next two terms of registration. The notation "On Probation", will be recorded on the students transcript of marks.

While on probation, students are permitted to register for two additional terms 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 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 duration of the suspension.

A student will be placed on **academic suspension for two years** under the following circumstances:

- Upon return from one year suspension, the student fails to attain a 2.00 degree grade point average following two terms after the probationary 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 probationary warning, 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 Advisor, 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.

3.21 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.

3.22 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.

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.

3.23 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.

3.24 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.

3.25 Registration

Before the initial access begins

- Review your program requirements outlined in of this *Calendar* and see a Faculty student advisor.
- 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*.

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, as an Auditor or as Challenge for Credit, you must add this course in-person in the Faculty general office within the normal deadlines for such activity.

SECTION 4: Department of Environment and Geography

Acting Department Head: Rick Baydack

Email: baydack@cc.umanitoba.ca

General Office: 211 Isbister Building

Telephone: (204) 474-6776

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

Brierley, J.S., B.A. (Victoria), Dip.Ed. (Oxford), M.A. (Alberta), Ph.D. (Edinburgh); **Brown, W.J.,** B.Sc.(Hons.), Ph.D. (London); **Catchpole, A.J.W.,** B.Sc.(Hons.), Ph.D. (Durham); **Foster, R.H.,** B.A. (Berkeley), 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); **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. (Berkeley); **Wang, F.,** B.Sc. (Wuhan), Ph.D. (Peking).

Assistant Professors

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 an increasing human population, the sustainability of resource use, degradation caused by pollution and disturbance, and the endangerment and extinction of species and natural sys-

tems. 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 Studies*.

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, 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 private, government, research, or not-for-profit sectors.

SECTION 5: Bachelor of Arts in Geography Degree Regulations and Program Description

Acting Department Head: Rick Baydack

General Office: 211 Isbister Building

Telephone: (204) 474- 6776

Fax: (204) 474-7699

Website: www.umanitoba.ca/environment/envirogeog/

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5.1 Program Information

There are four broad categories of courses in the Geography 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 of a particular place; 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 and geomorphology, environmental perceptions, health and healthcare, and biogeography. Therefore, by selecting courses from within the department, as well as complementary courses from other academic units 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 rea-

sonable 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]. *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 must attain a grade of "C" or better in the minor prerequisite course(s).

Students must complete 5 subject fields with 6 credit hours in each (30 credit hours). 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.

Students must also complete 6 credit hours in Humanities and 6 credit hours in Sciences (which may include Geological Sciences or Environmental Sciences). 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 including 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, Zoology, Geological Sciences, and Environmental Sciences.

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; 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 degree Grade Point Average of 2.00 on Geography courses as well as the 90 credit hours that 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 (Advanced) degree, students must complete 120 credit hours including: all courses and performance requirements in their Geography advanced major; a chosen minor field; 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 degree 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 (Honours) designation, students must complete 120 credit hours including: all course and performance requirements; the requirements in the five 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 degree 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 degree Grade Point Average of 2.00 based on the Degree Standards Table in Section 5.2.2 to be eligible for admission to the B.A. in 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 consult with the Faculty student advisor in the Faculty general office.

5.2.1 Entry Requirements				
Degree Program in B.A. Geography	Minimum Number of Credit Hours	Minimum Degree Grade Point Average	Maximum Credit Hours of Repeated/ Failed courses	Additional Entrance Requirements
General	24	2.00 ¹	48	grade of “C” in GEOG 1200 ² (or in each of GEOG 1280 and GEOG 1290)
Advanced	24	2.00	18	
Honours	24	3.00	18	
¹ Minimum Grade Point Average for entry into the General degree program is calculated using the Degree Standards Table in 5.2.2.				
² GEOG 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

General degree students in the B.A. Geography must attain a minimum 2.00 Grade Point Average at each point of assessment. The Degree Standards 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 each term.

5.2.2 Degree Standards Table	
Credit hours	Minimum Degree GPA
24-30	1.80
33-45	1.85
48-60	1.90
63-75	1.95
78-90	2.00
93+ hours	2.00

5.3 Minimum Performance Requirements

A student’s academic performance is assessed first with his/her application for admission to the Faculty and then following each *term* in which the student is registered in more than 4.0 credit hours. 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 Degree Standards 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 degree 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 performance standards and graduation requirements outlined in 5.3.1 following either their last *term of registration* 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 receive a probationary warning, be placed on probation or academic suspension as defined in section 3.14 Probationary Warning, 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 Withdraw from the Honours Program”, recorded on their transcript of marks. Similarly, students withdrawn from the Advanced program will have the notation, “Required to Withdraw from the Advanced Program”, recorded on their transcript of marks.

5.3.1 Minimum Performance Requirements for Continuation and Graduation					
Degree Program (Cr.Hrs.)	Minimum Performance Requirements			Additional Graduation Requirements	
	Minimum Degree Grade Point Average (GPA)	Maximum Cr. Hrs. Failures/ Repeated Courses	Minimum Degree GPA in Geography Courses ⁴	Geography Courses Cr. Hr. Requirement (see 5.5 also)	Residence Requirement (Cr. Hrs.) (see section 3.10 also)
General ^{2,3} (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 ^{2,1} (120)	3.00	18	3.00	72	60
¹ The courses required in this program will satisfy the university mathematics requirement.					
² Within 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.					
³ General and Advanced degree students are required to maintain a Degree 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 12 credit hours of coursework during a term and who achieve a term 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 degree 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 degree 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 degree 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. Geography ⁶			
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 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 Plus 6 additional credit hours in Geography at the 2000-level or above
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	
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:			
¹ Entry into the Honours and Advanced degree programs is summarized in 5.2.1. The courses required in this program will satisfy mathematics requirement.			
² Entry into the General degree program is summarized in 5.2.1 and 5.2.2.			
³ Ancillary options are chosen in consultation with the department head.			
⁴ Among the 2000- and 3000-level courses, at least 6 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.			
⁵ Among 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.			
⁶ 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. 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 2490 and GEOG 3590 (Asian Studies program) and GEOG 2350 (Latin American Studies program). In addition, courses GEOG 2450, GEOG 2570, GEOG 3431, GEOG 34806 and GEOG 37006 may be used in combination with the Honours, Advanced, and Minor programs in Canadian Studies.			
<ul style="list-style-type: none"> ● To fulfill 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 System-

atics (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 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 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: éducation 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 in geomorphology 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 biome cycles and components, as well as human interaction with the physical environment are all topical areas in biogeography.

Geomatics is an emerging field referring to the techniques of spatial data acquisition, handling, and analysis. Included within this 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) programs 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 degree grade point average of 2.00. Major (Coop) students must attain a minimum degree 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 and Honours Coop), a student must complete 120 credit hours with passing grades ("D" or better) and a minimum degree 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 Faculty student 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, each over a minimum period of four 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 Coop Work Term 1 (0)	ENVR 3910 Coop Work Term Report 1 (1.5)
ENVR 3990 Coop Work Term 2 (0)	ENVR 3920 Coop Work Term Report 2 (1.5)
Optional	
ENVR 4980 Coop Work Term 3 (0)	ENVR 4910 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 consult the Faculty student advisor.

6.2.1 Entry Requirements			
Degree Program in Physical Geography	Minimum Number of Credit Hours	Minimum Degree 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} (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 ³ (or PHYS 1050), PHYS 1030 ³ (or PHYS 1070), MATH 1300 ³ (or MATH 1310) and MATH 1500 ^{2,3} (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 1510 or MATH 1520, MATH 1680 or MATH 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 *term* thereafter. The Faculty student advisor must approve a student's registration each Fall/Winter and Summer I/II term. 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 degree 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 Degree 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 Degree 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)	3.00	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 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)
Honours Coop (120)	3.00				

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 (e.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 term of registration 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 probationary warning, probation or academic suspension as defined in section 3.14 Probationary Warning, 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 Withdraw from the Honours Program," recorded on their transcript of marks. Similarly, students withdrawn from the Major program will have the notation, "Required to Withdraw 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 12 credit hours of course work during a term and achieve a term Grade Point Average of 3.50 or higher will be placed on the **Dean's Honour List**.

Students graduating with a B.Sc. Physical Geography (Major) degree will have their degree granted "With Distinction" if they have a minimum Degree Grade Point Average of 3.50 on all coursework.

The term Degree with Distinction will appear both on the parchment and on the student's transcript of marks.

Students in the Honours program will have their degree granted with "First Class Honours" if they have a minimum Degree grade Point Average of 3.50 based on all acceptable coursework. 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
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 ^{4,7} 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 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 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 ^{4,7} not yet taken	GEOG 4660
It is recommended that students complete the W course 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 ^{4,7} 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 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 ^{4,7} not yet taken 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 ^{4,7} not yet taken ENVR 3900, ENVR 3980 ENVR 3910	GEOG 4660 ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
It is recommended that students complete the W course 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 ^{4,7} 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 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 ^{4,7} 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 ^{4,7} not yet taken	
It is recommended that students complete the W course 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 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 ^{4,7} 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 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 ^{4,7} not yet taken 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 ^{4,7} not yet taken ENVR 3900, ENVR 3980 ENVR 3910	ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
It is recommended that students complete the W course 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 ⁸)	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 Chapter.		

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 1680, may be used in lieu of MATH 1500. or MATH 1690 may be used in place of MATH 1500 (or equivalent) and MATH 1700.

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).

⁹GEOG 2221 may be used in lieu of GEOG 2200 and GEOG 2250.

● 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.

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, Engineering, Architecture, 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 studies. 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.

The B.Env.Sc. and B.Env.St. 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 in a Focus Area; Major and Major Coop students complete 30 credit hours in a Focus Area; and Honours and Honours Coop students complete 39 credit hours in a Focus Area. Other Focus Area requirements are defined in the graduation requirements in section 7.3.1 in this *Chapter*.

General

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 degree 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 degree grade point average of 2.00. Focus Area requirements are as follows: 33 credit hours of which 21 credit hours must be completed at the 3000- or 4000-level; 2.00 degree Grade Point Average. Major (Coop) students must attain a minimum degree 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 degree grade point average of 3.25. Focus Area requirements are as follows: 33 credit hours of which 21 credit hours must be completed at the 3000- or 4000-level; 3.00 degree Grade Point Average and minimum "C+" grades. 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.

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 Focus Area. 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 Faculty student 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, each over a minimum period of four 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 Coop Work Term 1 (0)	ENVR 3910 Coop Work Term Report 1 (1.5)
ENVR 3990 Coop Work Term 2 (0)	ENVR 3920 Coop Work Term Report 2 (1.5)
Optional	
ENVR 4980 Coop Work Term 3 (0)	ENVR 4910 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 consult with 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 ² and BIOL 1030 ² or CHEM 1310 ² 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 2650, STAT 1000 ² , STAT 2000 ² , BOTN 2370 ² (ZOOL 2370 ² or AGEC 2370), ECON 2390 (ABIZ 2390), BIOL 1020 ² , BIOL 1030 ² and one of GEOG 1290 ² or GEOL 1340.
Major	24	2.00	12 credit hours in ENVR 1000, ENVR 2000, BIOL 1020 ² , BIOL 1030 ² , CHEM 1300 ² , CHEM 1310 ² , STAT 1000 ² , STAT 2000 ² , MATH 1500 ² (or MATH 1200 ² , MATH 1300 ² , MATH 1310, MATH 1510, MATH 1520, MATH 1530), one of GEOG 1290 ² or GEOL 1340, PHYS 1020 ² (or PHYS 1050 ²), PHYS 1030 ² (or PHYS 1070 ²), 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 2650, STAT 1000 ² , STAT 2000 ² , BOTN 2370 ² (ZOOL 2370 ² or AGEC 2370), ECON 2390 (ABIZ 2390), BIOL 1020 ² , BIOL 1030 ² , and one of GEOG 1290 ² or GEOL 1340.
General	48	2.00	
¹ Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information. ² Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified course identified in the entry requirements chart. Collège universitaire de Saint-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 ² (GEOG 1200 ²) and GEOG 1290 ² (GEOG 1200 ²), ENVR 2650, with a grade of "C+" or better in six of the 15-credit hours, and a grade of "C" or better in the remaining nine 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, ENVR 2XY0, GEOG 1280 ² (GEOG 1200 ²) and GEOG 1290 ² (GEOG 1200 ²), ECON 2390 (ABIZ 2390), STAT 1000 ² , one of BOTN 2280 (ZOOL 2290) or BOTN 2370 ² (ZOOL 2370 ² or AGEC 2370), and one of BIOL 1010 ² , BIOL 1020 ² , or BIOL 1030 ² .

Major	24	2.00	12 credit hours taken from ENVR 1000, ENVR 2000, BIOL 1010 ² (or BIOL 1020 ² or BIOL 1030 ²), STAT 1000 ² , NATV 1220, NATV 1240, 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, ENVR 2650, GEOG 1280 ² (GEOG 1200 ²) and GEOG 1290 ² (GEOG 1200 ²); ECON 2390 (ABIZ 2390), STAT 1000 ² , one of BOTN 2280 (ZOOL 2290) or BOTN 2370 ² (ZOOL 2370 ² or AGECE 2370), and one of BIOL 1010 ² , BIOL 1020 ² or BIOL 1030 ² .
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.

²Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified course identified in the entry requirements chart. Collège universitaire de Saint-Boniface courses end in the number '1' (e.g. GEOG 1201).

7.3 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 *term* thereafter. The Faculty student advisor must approve a student's registration each Fall/Winter and Summer I/II term. 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 degree 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	
Degree Program (Credit Hours)	Minimum Cumulative Grade Point Average (GPA)	Maximum Credit Hours of Failures/ Repeated Courses	Focus Area	Minimum credit hours of course work completed at the 3000- and 4000-levels	Coop Option Courses
General (90)	2.00	48	9 credit hours		
Major (120)	2.00	18	33 credit hours of which 21 must be at the 3000- or 4000-level; minimum cumulative GPA of 2.00.	33 credit hours	
Major (Coop) (120)	2.50				ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)
Honours (120)	3.25	18	33 credit hours of which 21 must be at the 3000- or 4000-level; minimum cumulative GPA of 3.00; minimum "C+" grade in each course.	39 credit hours	
Honours (Coop) (120)	3.25				ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)

¹Students 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 of 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 term of registration and satisfy all degree course requirements in the foundation, environment 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 of Environmental 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 Probationary Warning, Probation and Academic Suspension in this *Chapter*.

Students required to withdraw out of the Honours degree program will have the statement "Required to Withdraw from the Honours Program" recorded on their transcript of marks. Similarly, students required to withdraw out of the Major degree program will have the statement "Required to Withdraw 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 12 credit hours of course work during a term and achieve a term Grade Point Average of 3.50 or higher will be placed on the **Dean's Honour List**.

Students graduating with a Bachelor of Environmental Science or Bachelor of Environmental Studies (General) degree will have their degree granted "With Distinction" if they have a minimum Degree Grade Point Average of 3.50 on all coursework.

Students graduating with a Bachelor of Environmental Science or Bachelor

of Environmental Studies (Major) degree will have their degree granted "With Distinction" if they have a minimum Degree Grade Point Average of 3.50 on all coursework.

The term Degree with Distinction will appear both on the parchment and on the student's transcript of marks.

Students in the Honours program will have their degree granted with "First Class Honours" if they have a minimum Degree Point Average of 3.50 based on all acceptable coursework. 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^{1,2,8}

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500 ³ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁴	ENVR 2170, ENVR 2650, BOTN 2370 (ZOO 2370 or AGE 2370), ECON 2390 (ABIZ 2390), PHYS 1020 ⁵ , STAT 2000 One of PHYS 1030 ⁵ , MATH 1200, MATH 1300 ⁶ , MATH 1700 ⁶ One of GEOG 1290 or GEOL 1340 (OR GEOL 1440)	ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area ⁷	
It is recommended that students complete the W course in University 1 or Year 2			
HONOURS COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500 ³ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁴	ENVR 2170, ENVR 2650, BOTN 2370 (ZOO 2370 or AGE 2370), ECON 2390 (ABIZ 2390), PHYS 1020 ⁵ , STAT 2000, ENVR 2900 One of PHYS 1030 ⁵ , MATH 1200, MATH 1300 ⁶ , MATH 1700 ⁶ One of GEOG 1290 or GEOL 1340 (OR GEOL 1440)	ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area ⁷ ENVR 3900, ENVR 3980, ENVR 3990, ENVR 3910, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)	
It is recommended that students complete the W course in University 1 or Year 2			
MAJOR 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500 ³ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁴	ENVR 2170, ENVR 2650, BOTN 2370 (ZOO 2370 or AGE 2370), ECON 2390 (ABIZ 2390), PHYS 1020 ⁵ , STAT 2000 One of PHYS 1030 ⁵ , MATH 1200, MATH 1300 ⁶ , MATH 1700 ⁶ One of GEOG 1290 or GEOL 1340 (OR GEOL 1440)	ENVR 4110 Plus 33 credit hours in an approved Focus Area ⁷	
It is recommended that students complete the W course in University 1 or Year 2			
MAJOR COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500 ³ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁴	ENVR 2170, ENVR 2650, BOTN 2370 (ZOO 2370 or AGE 2370), ECON 2390 (ABIZ 2390), PHYS 1020 ⁵ , STAT 2000, ENVR 2900 One of PHYS 1030 ⁵ , MATH 1200, MATH 1300 ⁶ , MATH 1700 ⁶ One of GEOG 1290 or GEOL 1340 (OR GEOL 1440)	ENVR 4110 Plus 33 credit hours in an approved Focus Area ⁷ ENVR 3900, ENVR 3980, ENVR 3990, ENVR 3910, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)	
It is recommended that students complete the W course in University 1 or Year 2			
GENERAL 90 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500 ³ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁴	ENVR 2170, ENVR 2650, BOTN 2370 (ZOO 2370 or AGE 2370), ECON 2390 (ABIZ 2390), PHYS 1020 ⁵ , STAT 2000 One of PHYS 1030 ⁵ , MATH 1200, MATH 1300 ⁶ , MATH 1700 ⁶ One of GEOG 1290 or GEOL 1340 (OR GEOL 1440)	ENVR 4110 Plus 9 credit hours in an approved Focus Area	
MINOR 18 CREDIT HOURS			
ENVR 1000, ENVR 2000	12 credit hours of ENVR courses number at the 2000-level or above.		

NOTES:

¹Entry into the degree programs is summarized in 7.2.1 of this *Chapter*.

²The courses required in this program will satisfy the university mathematics requirements.

³MATH 1510, MATH 1520, MATH 1530 or MATH 1680 may be taken in place of MATH 1500 (or equivalent) and MATH 1700.

⁴It is recommended that students consider a selection from List A below when selecting courses from the Faculty of Arts.

⁵PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030, respectively.

⁶MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700, respectively.

⁷Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in section 7.3 of this *Chapter*.

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.

NOTES:

• To fulfill 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 course identified in the entry requirements chart. Collège universitaire de Saint-Boniface courses end in the number '1' (e.g. CHEM 1301).

7.6 Bachelor of Environmental Studies^{1,2,9}

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280 ³ , GEOG 1290 ³ , NATV 1220 ⁴ , BIOL 1010 ⁵ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁶	ENVR 2350, ENVR 2650, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290) ⁵ Plus 3 credit hours from List B7	GEOG 3680, ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area ⁸	
It is recommended that students complete the W course in University 1 or Year 2			
HONOURS COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280 ³ , GEOG 1290 ³ , NATV 1220 ⁴ , BIOL 1010 ⁵ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁶	ENVR 2350, ENVR 2650, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290) ⁵ , ENVR 2900, Plus 3 credit hours from List B7	GEOG 3680, ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area ⁸	ENVR 3900, ENVR 3910, ENVR 3920, ENVR 3980, ENVR 3990 (ENVR 4980 and ENVR 4920 are optional)
It is recommended that students complete the W course in University 1 or Year 2			
MAJOR 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280 ³ , GEOG 1290 ³ , NATV 1220 ⁴ , BIOL 1010 ⁵ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁶	ENVR 2350, ENVR 2650, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290) ⁵ Plus 3 credit hours from List B7	GEOG 3680, ENVR 4110 Plus 33 credit hours in an approved Focus Area ⁸	
It is recommended that students complete the W course in University 1 or Year 2			
MAJOR COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280 ³ , GEOG 1290 ³ , NATV 1220 ⁴ , BIOL 1010 ⁵ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁶	ENVR 2350, ENVR 2650, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290) ⁵ , ENVR 2900 Plus 3 credit hours from List B7	GEOG 3680, ENVR 4110 Plus 33 credit hours in an approved Focus Area ⁸	ENVR 3900, ENVR 3910, ENVR 3920, ENVR 3980, ENVR 3990 (ENVR 4980 and ENVR 4920 are optional)
It is recommended that students complete the W course in University 1 or Year 2			
GENERAL 90 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280 ³ , GEOG 1290 ³ , NATV 1220 ⁴ , BIOL 1010 ⁵ , STAT 1000 Plus 6 credit hours from the Faculty of Arts ⁶	ENVR 2350, ENVR 2650, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOOL 2290) ⁵ Plus 3 credit hours from List B7	GEOG 3680, ENVR 4110 Plus 9 credit hours in an approved Focus Area	
MINOR 18 CREDIT HOURS			
ENVR 1000, ENVR 2000,	12 credit hours of ENVR courses number at the 2000-level or above.		

NOTES:

¹Entry into the degree programs is summarized in 7.2.2.

²The courses required in this program will satisfy the university mathematics requirements.

³GEOG 1200, GEOG 1201, GEOG 1281 and GEOG 1291 may be used in lieu of GEOG 1280 and GEOG 1290.

⁴Students are permitted to substitute NATV 1220 with another 3 credit hours from the department or approved alternative course. See the student advisor for assistance.

⁵Students with an interest in the Conservation and Biodiversity Focus Area are advised to complete the combination of BIOL 1020 and BIOL 1030 as well as BOTN 2370 (ZOO 2370 or AGEC 2370) instead of BOTN 1010 and BOTN 2280 (ZOO 2290).

⁶It is recommended that students consider a selection from List A below when selecting courses from the Faculty of Arts

⁷Students must complete 3 credit hours of course work containing significant international content. Students are referred to List B for a list of available courses. Students may substitute with another course as approved by the student advisor.

⁸Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in section 7.3 of this *Chapter*.

⁹**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.

NOTES:

² To fulfill prerequisite requirements, a grade of “C” must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

² 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.

² 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.

² Equivalent courses offered through Collège universitaire de Saint-Boniface may be used in lieu of the specified course identified in the entry requirements chart. Collège universitaire de Saint-Boniface courses end in the number ‘1’ (e.g. GEOG 1281).

GENERAL 90 CREDIT HOURS

ENVR 1000, ENVR 2000, GEOG 1280 ³ , GEOG 1290 ³ , NATV 1220 ⁴ , BIOL 1010 ⁵ , STAT 1000	ENVR 2350, ENVR 2650, ECON 2390 (ABIZ 2390), BOTN 2280 (ZOO 2290) ⁵	GEOG 3680, ENVR 4110
Plus 6 credit hours from the Faculty of Arts ⁶	Plus 3 credit hours from List B	Plus 9 credit hours in an approved Focus Area

MINOR 18 CREDIT HOURS

ENVR 1000, ENVR 2000,	12 credit hours of ENVR courses number at the 2000-level or above.
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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 requirements.

³GEOG 1200, GEOG 1201, GEOG 1281 and GEOG 1291 may be used in lieu of GEOG 1280 and GEOG 1290.

⁴Students are permitted to substitute NATV 1220 with another 3 credit hours from the department or approved alternative course. See the student advisor for assistance.

⁵Students with an interest in the Conservation and Biodiversity Focus Area are advised to complete the combination of BIOL 1020 and BIOL 1030 as well as BOTN 2370 (ZOO 2370 or AGEC 2370) instead of BOTN 1010 and BOTN 2280 (ZOO 2290).

⁶It is recommended that students consider a selection from List A below when selecting courses from the Faculty of Arts

⁷Students must complete 3 credit hours of course work containing significant international content. Students are referred to List B for a list of available courses. Students may substitute with another course as approved by the student advisor.

⁸Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in section 7.3 of this *Chapter*.

⁹**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.

NOTES:

- To fulfill 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 course identified in the entry requirements chart. Collège universitaire de Saint-Boniface courses end in the number ‘1’ (e.g. GEOG 1281).
-

Other Note 1: Electives Lists A and B

List A: Recommended List of Faculty of Arts Electives: Students may wish to consider courses from the following list when identifying appropriate selections from the Faculty of Arts.

- ANTH 1210 Human Origins and Antiquity Cr.Hrs.3
- ANTH 1220 Cultural Anthropology Cr.Hrs.3
- ANTH 1520 Critical Cultural Anthropology Cr.Hrs.3
- ECON 1200 Principles of Economics Cr.Hrs.6
- ECON 1210 Introduction to Canadian Economic Issues and Policies Cr.Hrs.3
- ECON 1220 Introduction to Global and Environmental Economic Issues and Policies Cr.Hrs.3
- NATV 1200 The Native Peoples of Canada Cr.Hrs.6

- NATV 1220 The Native Peoples of Canada, Part 1 Cr.Hrs.3
- NATV 1240 The Native Peoples of Canada, Part 2 Cr.Hrs.3
- PHIL 1200 Introduction to Philosophy Cr.Hrs.6
- PHIL 1290 Critical Thinking Cr.Hrs.3
- PHIL 1320 Introductory Logic Cr.Hrs.6
- PHIL 1330 Introduction to Symbolic Logic Cr.Hrs.6
- PHIL 1510 Historical Introduction to Philosophy Cr.Hrs.6
- RLGN 1420 Ethics in World Religions Cr.Hrs.3
- RLGN 2180 Theory of Nature Cr.Hrs.3

List B: Courses containing significant international content:
ABIZ 1010 Economics of World Issues and Policies Cr.Hrs.3

ECON 2550 Political Economy 2: Economic Growth and Fluctuations in a Global

Economic Environment Cr.Hrs.3

ECON 3670 International Trade Cr.Hrs.3

POLS 2040 Introduction to International Relations.Hrs.6

POLS 3220 Globalization and the World Economy Cr.Hrs.3

POLS 3250 International Political Economy Cr.Hrs.3

GEOG 4260 Sacred Lands Cr.Hrs.3

or approved by the student advisor

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); **Cern**, 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.; **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).

Associate Professors

Fayek, M., B.Sc. (Hons.) (Carleton), Ph.D. (Saskatchewan), Canada Research Chair; **Sokolova**, E., Dipl. (Hons.), Ph.D. (St. Petersburg), P. Geo.

Assistant Professors

Bekker, A., Dipl. (Leningrad Mining Institute), M.Sc. (Minnesota), Ph.D. (Virginia Polytechnic); **Camacho**, A., B.Sc. (Hons.), M.Sc. (La Trobe), Ph.D. (Australian National); **Chakhmouradian**, A., M.Sc., Ph.D. (St. Petersburg State University); **Frederiksen**, 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 ma-

ior 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.

The three-year General program in Geological Sciences is designed to give students a basic understanding of the discipline in combination with a concentration of courses in a second subject area. The General Program is not intended for those students who seek a career in the geosciences. Rather it is a useful consideration for students planning to enter the Bachelor of Education program (see Faculty of Education in this calendar) or other programs which require an undergraduate degree for admission. Students intending to pursue a career in the geosciences or graduate study should hold an Honours or Major degree (comprising at least 120 credit hours) in Geology or Geophysics.

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

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 degree grade point average of 2.00 as indicated in the Graduation Requirements Table (see section 8.3.5). 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 the Clayton H. Riddell Faculty of Environment, Earth, and Resources, the Faculty of Arts or the Faculty of 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 Entry and Continuation Requirements Table (see section 8.3.4). 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 *term* 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 Entry and Continuation Requirements Table (section 8.3.4). Students are not limited in the number of repeated courses and failures. Students who do not meet the minimum performance requirement will be placed on probationary warning, probation or academic suspension as outlined in section 3.14 Probationary Warning, Probation and Academic Suspension in this *chapter*. Students who do not maintain this minimum average to remain in the program will be required to withdraw from the Major program. Students will have the notation "Required to Withdraw from the Major Program", recorded on their transcript of marks.

Failed courses: A student is required to repeat those failed courses that are specified as required courses for the program. Students may not repeat a course more than once. Students who need to repeat a course more than once to fulfil degree requirements must make application to the Faculty Appeals and Discipline committee.

Program approval

The department head (or designate) and Faculty student advisor in the Faculty general office 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 the Graduation Requirements Table (see section 8.4.4). This is defined as a minimum Degree (Passed Hours) 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 Clayton H. Riddell Faculty of Environment, Earth, and Resources.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in a minimum of 12 credit hours of course work during a term and achieve a term Grade Point Average of 3.50 or higher 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 Degree Grade Point Average on all courses constituting the Major de-

gree. 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-time 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 Degree Grade Point Average as stipulated in the Entry and Continuation Requirements Table (section 8.3.4). 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 *term* 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 Entry and Continuation Requirements Table (section 8.3.4). Students are not limited in the number of repeated courses and failures. Students who do not meet the minimum performance requirement will be placed on probationary warning, probation or academic suspension as outlined in section 3.14 Probationary Warning, Probation and Academic Suspension in this *chapter*. Students who do not maintain this minimum average to remain in the program 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 Withdraw 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 the Graduation Re-

quirements Table (see section 8.4.4). This is defined for the Honours Geology program as a minimum Degree (Passed Hours) Grade Point Average of 3.00 on 120 credit hours which constitute the degree and for Honours Geophysics as a minimum Degree (Passed Hours) 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 12 credit hours of course work during a term and achieve a term 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 achieve a Degree 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, AGECE 2370), CIVL 4250, SOIL 4060, SOIL 4120, SOIL 4130, SOIL 4500, GEOL 4290, GEOL 4370, GEOL 4630, GEOG 3610, ENVR 2180 (BOTN 2180, ZOOL 2180 or AGECE 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 B.Sc. in Geological Sciences (General)

Degree Program Structure

- A Geological Sciences component consisting of a minimum of 30 credit hours.
- A minor concentration of 18 credit hours (minimum) in a different department or an interdisciplinary program. In general, this will normally correspond to a minor as structured by a specific department or program, e.g. in the Clayton H. Riddell Faculty of Environment, Earth, and Resources, or the Faculty of Arts, or the Faculty of Science.
- Students will normally have completed University 1 requirements, which include 6 credit hours from the Faculty of Arts, 6 credit hours from the Faculty of Science and 6 credit hours from either Arts, Science or the Clayton H. Riddell Faculty of Environment, Earth, and Resources. Students who have not met these requirements while in University 1, must meet the requirements prior to graduation.

High School Requirements

It is important to note that the equivalent of Manitoba 40S Chemistry or CHEM 0090 will be required to proceed in the program as GEOL 2540 stipulates this course as a prerequisite.

Entrance to the General

To be admitted to the General program, a student must have completed at least 24 credit hours with a minimum Cumulative Grade Point Average of 2.00. In addition, a student must have a minimum of 2.00 ("C" average) on 6 credit hours of introductory Geological Sciences courses (Table 8.6).

Continuation in the General

A student's academic performance is assessed first with his/her application for admission to the Faculty and then following each term in which the stu-

dent is registered. To be in good standing and permitted to continue in the degree program, a student must maintain a minimum Degree Grade Point Average of 2.00 as stipulated in the Entry and Continuation Requirements Table (section 8.3.4). Students are not limited in the number of repeated courses and failures, but must meet a minimum Degree grade point average as specified in Table (section 8.3.4). Students who do not meet the minimum performance requirement will be placed on probationary warning, probation or academic suspension as outlined in section 3.14 Probationary Warning, Probation and Academic Suspension in this chapter.

Failed courses: A student is required to repeat those failed courses that are specified as required courses for the program. Students may not repeat a course more than once. Students are subject to the University of Manitoba regulations on repeating a course (see General Academic Regulations and Policy, Repeating a Course) and the Clayton H. Riddell Faculty of Environment, Earth, and Resources regulations with regard to eligibility to repeat a course. Students who need to repeat a course more than once to fulfill degree requirements must make application to the Faculty Appeals and Discipline committee.

Graduation in the General

To qualify for the degree, students must complete 90 credit hours, inclusive of Geological Sciences courses, a minor in a second department or program, and any University 1 requirements. Minimum performance requirements include passing grades ("D" or better) in each course, a minimum degree grade point average of 2.00 in Geological Sciences courses, and an overall degree grade point average of 2.00 on the 90 credit hours which constitute the degree. Note: Where a Geological Sciences course listed in the calendar has required prerequisites, a student must hold a minimum grade of "C" in each prerequisite course.

Residence Requirement for General Students

Students must complete a total of 48 credit hours at the University of Manitoba, or they must complete their final 30 credit hours at the University of Manitoba in order to satisfy the residency requirement. The courses used to satisfy the requirement must be acceptable for credit in the Clayton H. Riddell Faculty of Environment, Earth, and Resources.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in a minimum of 12 credit hours of course work during a term and achieve a term Grade Point Average of 3.50 or higher 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 Degree Grade Point Average on all courses constituting the General degree. The term Degree with Distinction will appear both on the parchment and on the student's transcript of marks..

8.3.4 Geological Sciences Entry and Continuation Requirements		
Degree Program in B.Sc. Geological Sciences	Minimum Degree Grade Point Average	Additional Entry and Continuation Requirements
Major (Geology)	2.00	GEOL 1340 or GEOL 1440 and one of: GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum average grade of "C+ "
Major (Geophysics)	2.00	GEOL 1340 or GEOL 1440 and one of: GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum average grade of "C+ "
Honours Geology	3.00	GEOL 1340 or GEOL 1440 and one of: GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum average grade of "B"
Honours Geophysics	2.80	GEOL 1340 or GEOL 1440 and one of: GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum average grade of "B"
General (Geological Sciences)	2.00	GEOL 1340 or GEOL 1440 and one of: GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum average grade of "C"

8.3.5 Geological Sciences Graduation Requirements	
Degree Program in B.Sc. Geological Sciences	Minimum Degree (Passed Hours) Grade Point Average
Major (Geology) (120)	2.00
Major (Geophysics) (121)	2.00
Honours (Geology) (120)	3.00
Honours (Geophysics) (121)	2.80
General (Geological Sciences) (90)	2.00

8.5 B.Sc. Geological Sciences (Geophysics) ^{4,5,7}

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS GEOPHYSICS 121 CREDIT HOURS			
GEOL 1340(B) ⁶ 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 1210 ¹ (B), MATH 1510 ¹ (B), and MATH 1710 ¹ (B) [or MATH 1500(B) and MATH 1700(B) ¹]	GEOL 2060, GEOL 2440, GEOL 2520, GEOL 2530, GEOL 2540 PHYS 2390, PHYS 2490, MATH 2130 ² , MATH 2132 ² , COMP 1010	GEOL 3130, GEOL 3740, GEOL 3810, GEOL 4670, GEOL 4740 ⁴ , GEOL 4810, GEOL 4870, CHEM 1300, PHYS 2600, MATH 2120 ³ ,	9 credit hours of Geological Sciences Geophysics Electives from List A, 6 credit hours of Geological Sciences Geophysics Electives from List P and 9 credit hours of Geological Sciences Geophysics Electives from List B.
Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course			

30 Credit Hours	30 Credit Hours	61 Credit Hours for Year 3 and 4 ³
MAJOR GEOPHYSICS 121 CREDIT HOURS		
GEOL 1340(C+) ⁶ or GEOL 1440(C+) and one of: GEOL 1350, GEOL 1360, or GEOL 1370(C+) PHYS 1050(C+) [or PHYS 1020(B)], PHYS 1070(C), MATH 1210 ¹ , MATH 1510 ¹ (C+), and MATH 1710 ¹ (C) [or MATH 1500(C+) and MATH 1700(C) ¹]	GEOL 2060, GEOL 2440, GEOL 2520, GEOL 2530, GEOL 2540 PHYS 2390, PHYS 2490, MATH 2130 ² , MATH 2132 ² , COMP 1010	GEOL 3130, GEOL 3740, GEOL 3810, GEOL 4670, GEOL 4810, GEOL 4920, CHEM 1300, PHYS 2600, MATH 2120 ³ , GEOL 4740 ⁴
6 credit hours from the Faculty of Arts, which should include the required "W" course		

NOTES:

¹MATH 1680 or MATH 1690 may be taken in place of MATH 1500 or MATH 1510 and MATH 1700 or MATH 1710 and MATH 1300 may be taken in place of MATH 1210.

²MATH 2720 and MATH 2730 may be taken in place of MATH 2130 and MATH 2132. Students should note that MATH 1300 is a prerequisite to MATH 2720 and a corequisite to MATH 2730.

³MATH 2600 may be taken in place of MATH 2120

⁴GEOL 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 Term.

⁵The courses required in this program satisfy the university mathematics requirement.

⁶GEOL 1340 (or the former 007.123) is recommended for students wishing to take any Geological Sciences program. The courses contains a lab component which will ease the student's transition to advanced level courses.

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).

NOTES:

- 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.

Other Note 1: Geological Sciences - Geophysics Electives Lists A and B
List A Electives: Honours students are required to complete a minimum of 9 credit hours; Major students must complete a minimum of 6 credit hours from the following courses:

GEOL 4250	Theory and Application of Geophysical Inversion Methods (3)L
GEOL 4320	Physics of the Earth: Seismology and Heat Flow (3)
GEOL 4330	Physics of the Earth: Geomagnetism and Gravity (3)

List B Electives: Honours students are required to complete a minimum of 9 credit hours; Major students must complete a minimum of 6 credit hours from the following courses:

- GEOL 2390 Environmental Geology (3)
- GEOL 2770 Principles of Inorganic Geochemistry (3)L
- GEOL 3110 Petrogenesis of Igneous Rocks (3)L
- GEOL 3290 Metamorphic Structure and Tectonics (3)L
- GEOL 3420 Engineering Geology (3)
- GEOL 3490 Glacial Geology and Geomorphology (3)L
- GEOL 3750 Geology and Geophysics of the Planets (3)L
- GEOL 3900 Sedimentology (3)L
- GEOL 3910 Introduction to Field Mapping (3)
- GEOL 4270 Advanced Studies in Earth Sciences (3)
- GEOL 4300 Mineral Deposits (3)L
- GEOL 4370 Global Change (3)
- GEOL 4520 Petroleum Geology (3)L
- GEOL 4830 Remote Sensing and Geological Information Systems (3)L

- GEOL 4890 Basin Analysis (3)L
 - GEOL 4910 Advanced Field Mapping (3)
- Any List A or P not already taken, or any advanced level Geological Sciences, Physics or Mathematics course(s) approved by department.

List P Electives: Honours students are required to complete a minimum of 6 credit hours; Major students must complete a minimum of 3 credit hours from the following courses:

- CHEM 2290 Chemical Energetic and Dynamics: Macroscopic Descriptions (3)L
 - MECH 2260 Introduction to Fluid Mechanics (3)L
 - PHYS 2610 Circuit Theory and Introductory Electronics (3)L
 - PHYS 2650 Classical Mechanics 1 (3)
 - PHYS 3630 Electro - and Magnetostatic Theory (3)
 - PHYS 3670 Classical Thermodynamics (3)
- Or alternate physical Science course(s) approved by department.

8.6 B.Sc. Geological Sciences (General)		
UNIVERSITY 1	YEAR 2	YEAR 3
GENERAL 90 CREDIT HOURS		
GEOL 1340 ¹ or GEOL 1440 plus one of GEOL 1350, GEOL 1360, or GEOL 1370 with a minimum grade of "C" A minimum grade of "C" on 6 credit hours from a second department or program for a minor ³ Meet any University 1 requirements ⁵	GEOL 2540 ² plus a further 21 credit hours in Geological Sciences courses numbered at the 2000-level or above A further 12 credit hours for the minor at the 2000- level or above ⁴	
It is recommended that students complete the M and W course in University 1 or Year 2.		
MINOR GEOLOGICAL SCIENCES 18 CREDIT HOURS		
GEOL 1340 or GEOL 1440 and one of GEOL 1350, GEOL 1360, or GEOL 1370	Plus 12 credit hours chosen from 2000- and 3000-level courses	
Notes: ¹ GEOL 1340 is recommended for students wishing to take any Geological Sciences program. This course contains a lab component which will ease a student's transition to advanced level courses. ² GEOL 2500 may be used in lieu of GEOL 2540. Manitoba 40S Chemistry, CHEM 0090 or equivalent is a prerequisite for GEOL 2540 and GEOL 2500. CHEM 1300 is highly recommended and should be taken in U1. ³ Students should determine their minor prior to the end of the Year 2 of the program. ⁴ A minor will normally correspond to a Minor as outlined in a program chart for a specific department or program, e.g. refer to program charts for departments in the Clayton H. Riddell Faculty of Environment, Earth, and Resources, or in the Faculty of Arts, or in the Faculty of Science ⁵ Any U1 requirements not met in Year 1 must be completed before graduation. <ul style="list-style-type: none"> • 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. GEOG 1281). 		

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: Lori Wallace

Associate Dean: Kathleen Matheos

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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); **Wallace, L.**, B.A. (Winnipeg), M.Ed. (Manitoba), Ph.D. (Minnesota)

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);

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); **Lafreniere, 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. (Regi-

na), B.A., M.Ed. (Manitoba), Ph.D. (Open University); **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); **Olson, S.**, M.A. (Mannheim); **Paisley, J.**, B.Sc. (Lakehead), M.B.A. (Manitoba); **Rocke, C.**, B.S.W., M.S.W. (Manitoba); **Stroud, C.**, B.Sc. (Ottawa), M.D.E. (Athabasca); **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: Howard Davidson

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 technology 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 provides 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 newly revised degree credit program provides a professional development opportunity in community wellness for Aboriginal health and wellness service workers and those wishing to enter the field. 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. The diploma is designed to meet the educational needs for generic and specialized fields of practice (e.g., addictions).

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)

The 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. www.umanitoba.ca/education

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: Cheryl McLean
General Office: 188D Extended Education Complex
Telephone: 204 474 8012
Website: www.umanitoba.ca/distance

Each year, over 5000 university students 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; Engineering; 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 2007-08 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 are also offered for groups coming from Mexico, Japan and Korea. 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.

English Language Studies offers IBT TOEFL preparation courses several times a year and has recently become an official IBT TOEFL testing site.

The area also offers conversational language courses in French, Spanish, German and Japanese from a beginner to an advanced level. Courses are part-time and are scheduled for September – December, January – April, and April – June. In addition, the area runs lunch hour French classes for students and staff on the Fort Garry Campus and a language partner program, which gives learners the opportunity to practice their language skills outside the classroom.

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 Assessment Policy

Assessment of the academic standing of students enrolled in Extended Education, General Studies will take place at the end of each term of studies following the completion of a minimum cumulative total of 42 credit hours. At each point of assessment, a student will be considered to be in Good Standing if a minimum cumulative grade point average 2.00 (CGPA) has been achieved.

The following will apply to students who fail to achieve Good Standing:

- The first time a student's CGPA falls below 2.00 the student shall be placed on Probation Warning.
- If, in the next applicable term of study, the student fails to achieve the minimum of CGPA of 2.00, the student shall be placed on Probation.
- Following the third term in which the student fails to achieve a minimum of CGPA of 2.00, the student shall be placed on Suspension Warning.
- If a student fails to achieve the minimum CGPA of 2.00 for a fourth term of study, the student shall be placed on Academic Suspension for two academic years. Following the suspension period students may re-apply 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

Coordinator: Barry Gordon

General Office: 188 Extended Education Complex

Telephone: 204 474 8005

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. The terms are:

Summer 1

Day 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.

Summer 1 (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 2

Summer 2 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 provides 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 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.

4.7 Engineering

Post Baccalaureate Certificate in Manufacturing Engineering (PBCME)

The PBCME is offered in partnership with the Faculty of Engineering, Extended Education and Red River College. 3 years part-time study.

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.

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 2007-08 Distance and Online Education Guide, call 474 6742, toll free in Canada at 1 888 216 7011, ext. 6742 or visit the website at 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.

Flexible Study

Flexible Study allows you to study independently (using print-based or online course materials) while participating in scheduled on-campus tutorials that focus on content areas where students often have questions or problems. Most flexible study courses have four to six evening tutorials spread out over the term.

Campus Manitoba

Campus Manitoba (CMB) offers courses at a variety of locations around the province through a consortium that includes: 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. Courses are offered using 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 may require a VCR/television, an audiocassette tape player, 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 (3 cr. hrs.)	September 2007 - December 2007
Winter (3 cr. hrs.)	January 2008 - April 2008
Fall/Winter (6 cr. hrs.)	September 2007 - April 2008
Dist Ed Winter/Summer 1 (6 cr. hrs.)	January 2008 - July 2008
Dist Ed Summer 1/Summer 2 (3 cr. hrs.)	May 2008 - August 2008

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, 2007 (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: Tuition Fees for the 2007-08 academic year are not available until May 2007; therefore the 2006-2007 fees are listed for reference. For information regarding additional compulsory fees (e.g., Registration Fee, Library Fee, Student Services Fees, please refer to www.umanitoba.ca/registrar or call 474-9420. Undergraduate International Students are subject to an International Differential Fee of 180%.

2006/2007 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 xxxxx, August xx, 2007. 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 2007-2008 Regular Session. We encourage you to read the *Undergraduate Calendar* and *Registration* for information about registration, course descriptions, 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: (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: Registration Information

3.1 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 AURORA found in the registration section of Calendar. 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.

3.2 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* and *Registration Guide*. If you need help with course selection or have any concerns about your status, please contact the General Studies student advisor before you apply.

3.3 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.

3.4 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 4: Information Applicable to All General Studies Students

4.1 Academic Assessment Policy

The overall assessment 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 information can be obtained from the *Undergraduate Calendar* and *Registration Guide* in the General Studies section, the General Studies Information Guide, or by contacting the General Studies Office.

4.2 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.

4.3 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.

4.4 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* and *Registration Guide*.

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 Kinesiology and Recreation Management

Faculty of Social Work (students with less than 30 credit hours)

School of Art

Off-Campus Study

Section 1: Initial Access Times

You can register for Off-Campus Study and on-campus courses in the same transaction. 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 or please refer to the registration information in this Calendar.

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 the U of M Bannatyne Campus, Vincent Massey Collegiate, the University of Manitoba Downtown: Aboriginal Education Centre and the Canadian Mennonite University.

Students can register for Off-Campus Study courses on-line at umanitoba.ca. See the information in this Calendar or 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, for 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 Fall and Winter (September 2007 - April 2008)

Registration for all courses scheduled in Fall and Winter begins, July, 2007 in accordance with the initial access times that apply to your faculty or school of registration as outlined in this Calendar, and continues until Wednesday, September 5, 2007 for courses beginning in September, and until Friday, January 18, 2008 for courses beginning in January.

The period for late registration and registration revisions is September 6-19, 2007 for all Fall and Fall/Winter courses. A late fee will be assessed on all registrations during this period.

2.3 Fee Information

Fee information published in this Calendar 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 Extended 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 Calendar listed by faculty and department. Courses may be added after the publication of this Calendar. Check our website for up-to-date course listings and information: umanitoba.ca/extended/off-campus

Faculty of Arts

English

ENGL 0930 English Composition (3)

ENGL 2760 Introductory Creative Writing (3)

German and Slavic Studies

POL 1890 Introductory Polish (6)

UKRN 1310 Introductory Ukrainian (6)

YDSH 1220 Yiddish (6)

YDSH 2320 Yiddish Language and Literature (6)

Labour Studies

LABR 1270 Introduction to the Political Economy of Labour (3)

LABR 1290 Introduction to the Canadian Labour Movement (3)

Native Studies

NATV 1220 Native Peoples of Canada I (3)

NATV 1240 Native Peoples of Canada II (3)

NATV 2100 Aboriginal Spirituality (3)

NATV 2430 Indigenous Women's Stories (3)

NATV 3000 Selected Topics: Photography and Colonialism: A Survey of Theoretical and Practical Approaches to Reading Colonial Visual Texts (3)

NATV 3100 Aboriginal Healing Ways (3)

NATV 3240 Native Medicine and Health (3)

Faculty of Human Ecology

Human Nutritional Sciences

HNSC 1200 Food: Facts and Fallacies (3)

HNSC 1210 Nutrition for Health and Changing Lifestyles (3)

HNSC 2130 Nutrition Through the Life Cycle (3)

Faculty of Nursing

NURS 1260 Human Growth and Development (3)

NURS 1280 Introduction to Nursing (3)

Faculty of Science

Chemistry

CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry (3)

CHEM 1310 University 1 Chemistry: An Introduction to Physical Chemistry (3)

Physics and Astronomy

PHYS 0900 Preparing for University Physics (0)

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

Associate Dean: Michael Eskin

Administrative Assistant: Carol Falk

Student Affairs Coordinator: Brigitte Wiebe

Student Advisor: Crystal Anderson

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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

Bond, J.B., B.Sc. (Illinois), M.S., Ph.D. (Purdue); **Brockman, L.M.**, B.A. (Saskatchewan), M.A. (Windsor), Ph.D. (Cornell); **Higgitt, N.**, B.H.Ecol., M.Sc., Ph.D. (Manitoba). **Watts, B.M.**, B.Sc.(H.Ec.), M.Sc., Ph.D. (Manitoba).

Family Social Sciences

Professors

Berry, R.E., B.H.E. (UBC), M.S. (Pennsylvania State), 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

Mignone, J.J., Lic. Psic. (Salvador), M.H.S.A. (Alberta), Ph.D. (Manitoba); **Shoostari, S.**, B.Sc., M.S.P.H. (Iran), 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); **Taylor, C.G.**, B.H.Ecol. (Manitoba), Ph.D. (Guelph).

Associate Professors

Aluko, R.E., B.Sc., M.Sc. (Lagos), Ph.D. (Guelph); **Aukema, H.**, B.Sc., M.Sc., Ph.D. (Guelph); **House, J.D.**, B.Sc., Ph.D. (Guelph); **Moghadasian, M.**, D.V.M. (Shiraz), M.Sc., Ph.D. (British Columbia).

Assistant Professors

Lengyel, C.O., B.Sc. (Alberta), Ph.D. (Saskatchewan); **Suh, M.**, B.Sc., M.Sc. (Korea), Ph.D. (Alberta); **Tappia, P.S.**, B.Sc. Pharmacology (Hons.) (Sunderland), Ph.D. (Wolverhampton); **Thiyam, U.**, B.Tech., MS (India), Ph.D. (Germany).

Textile Sciences

Associate Professors

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. 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 Health Sciences

Bachelor of Health Studies

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). Last intake to the program was September, 2006.

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 required for University level courses in certain programs: Mathematics 40S (pre-calculus or applied) and Chemistry 40S are required for the science requirements in Human Nutritional Sciences, the Interdisciplinary Health program, and textiles 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 Adjusted 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

Health Sciences

BIOL 1020

BIOL 1030

CHEM 1300

CHEM 1310

PSYC 1200

STAT 1000

ZOOL 1320

ZOOL 1330

3 credit hours of free electives

Health Studies

ANTH 1210

ANTH 1220

BIOL 1020

BIOL 1030

PSYC 1200

SOC 1200

STAT 1000

3 credit hours of free electives

Human Ecology Program

ECON 1200 or ECON 1210 and 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

6 credit hours of free electives

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 1430 or ENG 1440

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

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. Some inactive (legacy) courses may be used as prerequisites. Please check with a Student Advisor in Human Ecology.

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. Human Ecology courses at the 3000 and 4000 level are available only to students registered in the Faculty of Human Ecology or one of the minors or options associated with the Faculty.

4.2 Scholastic Standards

Graduation and Grade Point Average

To graduate, a student must have passed 120 credit hours acceptable for credit in the current degree program 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 (DGPA) 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 DGPA
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 degree 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 term 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 per term 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 Procedures Relating to Student Academic Records

See Section 5 of the chapter, University Policies.

4.11 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 six programs:

- Family Social Sciences Program
- Health Sciences Program
- Health Studies Program
- Human Ecology Program
- Human Nutritional Sciences Program
- Textile Sciences Program

In order to qualify for a degree, students must complete the 120 credit hours (123 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 if the student requests. The program advisor will be a faculty member from the student's department or program. Individual programs of study for returning students will be planned in consultation with departmental representatives at sessions scheduled in March of each year. All returning students in the Faculty of Human Ecology must submit a program plan for the succeeding year before the end of the Winter 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 (123) 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 3000 or 4000 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 families, communities, 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. Family Social Sciences graduates are permitted to complete any option after their degree.

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
<i>One of:</i>		3
STAT 2000 or COMP 1260	Basic Statistical Analysis 2, Introductory Computer Usage 1, or any other Science course	
<i>One of:</i>		3-6
ECON 1200, ECON 1210 or ECON 1220	Principles of Economics, 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 (3000 or 4000 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:		
FMLY 3220	Death and the Family	3
FMLY 3240	Families in the Later Years	3
At least 3 credit hours from:		
NURS 2200	Selected Topics in Aging and Health	3
PSYC 2370	Developmental Psychology from Adolescence to Old Age	3
PSYC 3460	Abnormal Psychology	3
PSYC 3490	Individual Differences	3
PSYC 3610	Memory	3
KIN 4500	Physical Activity and Aging	3
REC 4130	Leisure Services for the Aging	3
RLGN 1410	Death and Concepts of the Future	3
SOC 2490	Sociology of Health and Illness	3
SOC 2620	The Sociology of Aging	3
SOC 3510	Population Dynamics and Change	3
SOC 3540	The Sociology of Health Care Systems	3

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:		
FMLY 2800	Family Violence	9
FMLY 3610	Developmental Health of Children and Youth	9
FMLY 3800	Conflict Resolution in the Family	9
FMLY 3802	Intimate Partner Violence	9
FMLY 3330	Parenting and Developmental Health	9
FMLY 4330	Management of Family Stress	9
FMLY 4480	Work and Family Issues	9
HNSC 1210	Nutrition for Health and Changing Lifestyles	9
HNSC 2130	Nutrition through the Life Cycle	9
PSYC 2440	Behaviour Modification Principles	9
PSYC 2450	Behaviour Modification Applications	9

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:		
HMEC or SWRK or REC 2650	Social Aspects of Aging	3
FMLY 2800	Family Violence	3
FMLY 3240	Families in the Later Years	3
FMLY 3450	Consumer Problems and Influences	3
FMLY 3800	Conflict Resolution in the Family	3
FMLY 4330	Management of Family Stress	3
FMLY 4450	Family Economic Resources and Functions	3
FMLY 4600	Risk and Resilience in Behavioural and Social Development	3
FMLY 4480	Work and Family Issues	3
At least 6 credit hours from:		
ANTH 1220	Cultural Anthropology	6
ANTH 2390	Social Organization in Cross-cultural Perspective	6

ANTH 2570	Urban Anthropology	
ANTH 3380	Anthropology and Contemporary Social Issues	
EVCP 3340	History of the City	
EVCP 3350	Planning and Design for Shelter	
EVDS 1610	Theory of Design 1	
GEOG 2640	Geography of Culture and Inequality	
GEOG 3460	Urban Geography	
SOC 2320	Canadian Society and Culture	
SOC 2390	Social Organization	
SWRK 2050	Community and Organizational Theory	
OR at least 6 credit hours from:		
NATV 1200	The Native Peoples of Canada	6
NATV 1220	The Native Peoples of Canada, Part 1	6
NATV 1240	The Native Peoples of Canada, Part 2	6
NATV 2100	Aboriginal Spirituality	6
NATV 3240	Native Medicine and Health	6
NATV 4230	Traditional Knowledge and Native Studies Research	6
OR at least 6 credit hours from:		
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:		
FMLY 3450	Consumer Problems and Influences	9
FMLY 4330	Management of Family Stress	9
FMLY 4450	Family Economic Resources and Functions	9
FMLY 4460	Family Financial Counselling	9
FMLY 4480	Work and Family Issues	9
At least 9 credit hours from (at least 3 credit hours must be selected from courses numbered 3000 or 4000):		
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 Economy 1: 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 Social Sciences Electives (see note 7)	15-18
STAT 1000 Basic Statistical Analysis (see note 8)	3
TOTAL	60

NOTES:

1. The same entrance requirements will be applied to ADP students in order to maintain current Faculty of Human Ecology standards.
2. Basic social science knowledge is assumed because ADP students have previously completed an undergraduate degree; waiving U1 requirements for FSS courses acknowledges the skills, background and maturity of this particular group of students.
3. This choice provides students who have previously taken a research methods course with the option of avoiding redundancy in their program. Students are free to take all three core courses if they feel it would benefit them. If students select 9 credit hours of core courses, the FSS electives component is reduced to 15 credit hours.
4. This set of courses is currently required of all undergraduate FSS students and is required for students in the ADP.
5. Students are required to take a minimum of any two (6 credit hours) of the introductory level courses across options. Review the list of options found in the 120 credit hour undergraduate degree program to assist with planning for prerequisites for higher level courses.
6. Each FSS option is a total of 18 credit hours; ADP students will have taken at least one 2000 level course (3 credit hours) required by the chosen option as part of their program requirements, leaving the remaining 15 credit hours to be completed to fulfil the option. Completion of the option may include courses external to the Faculty of Human Ecology that are required to complete an option
7. ADP students are encouraged to specialize in two options simultaneously to strengthen and broaden their expertise. If a second option is chosen, these credit hours may include courses external to the Faculty of Human Ecology that are required to complete the option. If students have completed the 2000 level course required for the second option, the requirement to complete the option is 15 credit hours. If a second option is not chosen, then these credit hours must be taken within the department.
8. Students who have previously completed an undergraduate statistics course can either transfer it in directly (if already assessed as equivalent) or can request to have it assessed for advanced standing; if successful, students will be required to add 3 credit hours to their program from courses selected from the Department of Family Social Sciences.

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 (at least 3 credit hours must be selected from courses numbered 3000 or 4000):		
ANTH 3380	Anthropology and Contemporary Social Issues	
FMLY 3610	Developmental Health of Children and Youth	
FMLY 3802	Intimate Partner Violence	
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 After Degree Program in Family Social Sciences

An After Degree Program (ADP) in Family Social Sciences is offered to students who have completed a previous undergraduate degree. ADP students must complete 60 credit hours in total to earn their second degree in Family Social Sciences. All Family Social Sciences U1 prerequisites are waived. In order to facilitate ADP students completing the program in a timely manner, they will automatically be permitted (without special permission from the course instructor) to take Family Social Sciences 2000 level prerequisites as corequisites for any required Family Social Sciences 3000 and/or 4000 level courses. Please consult with the Student Advisor when planning programs prior to registration. ADP students are required to choose at least one option to specialize in and meet its requirements at the second year level and beyond. These 18 credit hours may include courses external to the Faculty of Human Ecology that are required to complete an option. If a second option is not chosen, then these credit hours must be taken within the department. There are no free electives in the ADP.

Students admitted in January 2007 or Later

Faculty of Human Ecology Core Courses (any 6 credit hours. See Note 3):

At least 6 credit hours from:

HMEC 2030,	Human Ecology: Perspectives & Communication,	6 - 9
HMEC 2050,	Introduction to Research in Human Ecology, Com-	
HMEC 3100	munication for Professional Practice (see note 3)	
Family Social Sciences Requirements (see note 4):		
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 Evaluation of Programs for Children and Families	3
And a minimum of 6 credit hours from (see note 5):		
FMLY 2600	Foundations of Childhood Developmental Health	
FMLY 2800	Family Violence	
FMLY 2900	Families, Housing & Community: A Development Perspective	
HMEC or	The Social Aspects of Aging	
SWRK or		
REC 2650		
Family Social Sciences Option (see note 6)		15

5.6 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 1000 level, and at least three (3) credit hours in Family Social Sciences at the 2000 level, and at least three (3) credit hours in Family Social Sciences at the 3000 and/or 4000 level, with no more than 6 credit hours at the 1000 level.

Students must check with their home Faculties to see if the Family Social Sciences minor is available in their programs.

5.7 Human Ecology Program

Chair: Gustaaf Sevenhuysen

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.

The last intake for the Human Ecology/Education Integrated program was in September, 2007, and program information is available in the Faculty of Education chapter of this Calendar.

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	HNSC 3330	Ingredient Technology for Designed Foods	3
HMEC 2050	Introduction to Research in Human Ecology	3	HNSC 4160	Seminar in Foods and Nutrition	3
HMEC 3100	Communication for Professional Practice	3	HNSC 4290	Food, Nutrition and Health Policies	3
HNSC 1200	Food: Facts and Fallacies	3	PSYC 1200 or	Introduction to Psychology or Introduction to	6
HNSC 1210	Nutrition for Health and Changing Lifestyles	3	SOC 1200	Sociology or Combination of the two areas	
HNSC 2130	Nutrition through the Life Cycle	3	STAT 1000	Basic Statistical Analysis 1	3
NATV 1200	The Native Peoples of Canada, or	6	STAT2000	Basic Statistical Analysis 2	3
NATV 1220 and	The Native Peoples of Canada Part 1 and		ZOOL 1320	Anatomy of the Human Body	3 - 6
NATV 1240	The Native Peoples of Canada Part 2			Or	
STAT 1000	Basic Statistical Analysis 1	3	BIOL 1020 and	Biology 1 and 2 (If Biology 1 and 2 are taken, the ad-	
PSYC 1200	Introduction to Psychology	6	BIOL 1030	ditional 3 credit hours are considered to be free	
Or	Or			electives)	
SOC 1200	Introduction to Sociology		ZOOL 1330	Physiology of the Human Body (See Note 4)	3
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	24			
	level; HMEC 4090, Practicum, highly recommended)				
	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			

5.8 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. A new option, the Food Industry Option (FIO) will begin in September, 2007. 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. Review the section on academic requirements for eligibility to apply for a dietetic internship for students admitted in September, 2007 and later. 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	Introduction to Psychology or Introduction to	6
SOC 1200	Sociology or Combination of the two areas	
STAT 1000	Basic Statistical Analysis 1	3
STAT2000	Basic Statistical Analysis 2	3
ZOOL 1320	Anatomy of the Human Body	3 - 6
	Or	
BIOL 1020 and	Biology 1 and 2 (If Biology 1 and 2 are taken, the ad-	
BIOL 1030	ditional 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	24
	Restricted Faculty Electives (see Note 6)	

Foods Option

HNSC 3300	Vitamins and Minerals in Human Health	3
	Or	
HNSC 3310	Macronutrients and Human Health	
HNSC 3260	Food Quality Evaluation	3
HNSC 3350	Culture and 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)	

Food Industry Option

FOOD 4310	Introduction to HACCP	3
GMGT 2070	Introduction to Organizational Behaviour	3
HNSC 3260	Food Quality Evaluation	3
HNSC 3300	Vitamins and Minerals in Human Health	3
or	or	
HNSC 3310	Macronutrients and Human Health	
HNSC 4280	Food Product Development	3
HNSC 4364	Foods Industry Option Practicum	6
MKT 2210	Fundamentals of Marketing	3

NOTE: HNSC 4290 is not a requirement for students in the Food Industry Option. Students in the Food Industry Option must complete one of the following concentrations (15 credit hours). Select 15 credit hours of course work from the list that follows.

Quality Assurance Concentration

AGRI 2190	Toxicology Principles	1.5
ANSC 2530	Nutritional Toxicology	1.5
FOOD 4280	Food Microbiology II	3
FOOD 4500	Food Safety and Regulations	3
HNSC 4270	Sensory Evaluation of Food	3
STAT 3170	Statistical Quality Control	3

Food Product Development Concentration

FOOD 4500	Food Safety and Regulations	3
FOOD 4520	The Packaging of Food	3
HNSC 4270	Sensory Evaluation of Food	3
HNSC 4290	Food, Nutrition and Health Policies	3
HNSC 4540	Functional Foods and Nutraceuticals	3

Food Industry Management Concentration

ACC 1100	Introductory Financial Accounting	3
GMGT 2080	Introduction to Management and Organization Theory	3
GMGT 3010	Management Decision-Making	3
HRIR 2440	Human Resource Management	3
MKT 3220	Marketing Research	3

Electives (see Advising Information for suggested electives). 15

Note that students selecting BIOL 1020 and 1030 are not required to complete ZOO 1320, and will decrease electives to 12 credit hours. The selection of BIOL 1020 and 1030 will have more options with regard to taking higher level Botany, Zoology and Microbiology courses as electives.

5.8.1 Pre-Professional Preparation

Students in the Human Nutritional Sciences program can complete the entrance requirements for several professional programs as part of the degree.

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 GMGT 2080)	3	Free Elective
HNSC 3342	Management for Food and Nutrition Professionals	3	Department Elective
HNSC 4140	Quantity Food Production and Management	3	Department Elective
HNSC 4XX0	One of HNSC 4300, HNSC 4310, HNSC 4362, 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. Students admitted prior to September, 2007 will follow current regulations regarding dietetic internship applications (information available on the Human Ecology web site and from the Dean's Office).

Students admitted to the Faculty of Human Ecology's Department of Human Nutritional Sciences in September, 2007, will be eligible to apply to be pre-selected by the Manitoba Partnership Dietetic Education Program (MPP) after completion of 60 credit hours. Pre-selection of students from the Nutrition option in the Department of Human Nutritional Sciences for the MPP will begin with students admitted to HNS in September, 2007, with applications going forward to the MPP beginning November 1, 2008. Details of the pre-selection process and the academic rating selection criteria will be published by the MPP and will be available in the Dean's Office of the Faculty of Human Ecology. If students are not pre-selected by the MPP, there are other opportunities to apply for internships following degree completion.

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** or MBIO 2360	Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy	3	Free Elective
CHEM 2370** or MBIO 2370	Biochemistry 2: Catabolism, Synthesis and Information Pathways	3	Free Elective
	Humanities requirement (Check the Faculty of Medicine's application information regarding the Humanities/Social Science requirement).		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.

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:

- Under required courses, students can take either CHEM 1320 (University 1: Introduction to Organic Chemistry) or CHEM 1310 (University 1: Introduction to Physical Chemistry).
- 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).
- 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 ZOO 1330 (Physiology of the Human Body) or ZOO 2530 (Human Physiology 1) and ZOO 2540 (Human Physiology 2).
- For students who do not take CHEM 2210 and CHEM 2220, CHEM 1320 is preferred.
- 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.
- 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	3
or	or	
HNSC 4540	Functional Foods and Nutraceuticals	

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
ZOO 1320	Anatomy of the Human Body	3-6
or	or	
BIOL 1020	Biology 1 and Biology 2 (see note 6)	
and	and	
BIOL 1030		
ZOO 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 3342	Management for Food and Nutrition Professionals	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:		
HNSC 4300,	Community Nutrition Intervention,	
HNSC 4310,	Nutrition and the Elderly,	
HNSC 4340	Maternal and Child Nutrition,	
or		
HNSC 4350	Nutrition in Exercise and Sport	
C. Foods		
HNSC 2150	Composition, Functional and Nutritional Properties of Foods	3
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 ZOO 1330 (Physiology of the Human Body) or ZOO 2530 (Human Physiology 1) and ZOO 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 Interdisciplinary Health Curriculum

Program Chairperson: Gustaaf Sevenhuysen

This curriculum consists of two degrees programs: the Bachelor in Health Sciences and the Bachelor in Health Studies. These degree programs offer new approaches to planning, administration and delivery of health services by fully integrating biological science and social science in understanding the health of people. Students will gain experience of dealing with health issues at the individual, community and institutional levels, as well as across the lifespan. The two degrees can serve as the foundation for careers in health care teams and community health management. They offer a general course of study, not a professional status. Students can use both degree programs to build the knowledge and prerequisites for entry into professional programs in the health and social science fields, such as medicine, dentistry and others.

5.11.1 Health Sciences Degree

Course No.	Course Name	Credit Hours
The following 30 credit hours are to be taken in U1		
BIOL 1020	Biology I	3
BIOL 1030	Biology II	3
CHEM 1300	University 1: Structure and Modeling in Chemistry	3
CHEM 1310	University 1: Introduction to Physical Chemistry	3
PSYC 1200	Introduction to Psychology	6
STAT 1000	Basic Statistical Analysis 1	3
ZOO 1320	Human Anatomy	3
ZOO 1330	Physiology of the Human Body	3
Electives		3

Required courses		
COMP 1260	Introductory Computer Usage I	3
ECON 1210	Introduction to Canadian Economic Issues and Policies	3
GEOG 4290	Geographies of Health and Health Care	3
GMGT 2070	Introduction to Organizational Behaviour	3
HEAL 2600	Integration: Individual Focus	3
HEAL 3600	Integration: Community Focus	3
HEAL 4600	Integration: Canada and World Focus	3
HEAL 4620	Health Sciences Capstone	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HMEC 2030	Human Ecology: Perspectives and Communication	3
HMEC 3xxx	Developmental Health	3
PHIL 1290	Critical Thinking	3
PHIL 2740	Ethics in Biomedicine	3
PSYC 2250	Introduction to Psychological Research	3
Elective Courses	To be taken from an approved list of Science courses (available on the Human Ecology web site and from the Dean's Office):	36
At least 21 credit hours are to be taken from the list of approved Science courses (Group A). At least 24 credit hours are to be taken at the 3000 and 4000 level.		
Free Electives		12

5.11.2 Health Studies Degree

Course No.	Course Name	Credit Hours
The following 30 credit hours are to be taken in U1		
ANTH 1210	Human Origins and Antiquity	3
ANTH 1220	Cultural Anthropology	3
BIOL 1020	Biology I	3
BIOL 1030	Biology II	3
PSYC 1200	Introduction to Psychology	6
SOC 1200	Introduction to Sociology	6
STAT 1000	Basic Statistical Analysis 1	3
Electives		3
Required courses		
COMP 1260	Introductory Computer Usage I	3
ECON 1210	Introduction to Canadian Economic Issues and Policies	3
GEOG 4290	Geographies of Health and Health Care	3
GMGT 2070	Introduction to Organizational Behaviour	3
HEAL 2600	Integration: Individual Focus	3
HEAL 3600	Integration: Community Focus	3
HEAL 4600	Integration: Canada and World Focus	3
HEAL 4610	Health Studies Capstone	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HMEC 2030	Human Ecology: Perspectives and Communication	3
HMEC 3xxx	Developmental Health	3
PHIL 1290	Critical Thinking	3
PHIL 2740	Ethics in Biomedicine	3
PSYC 2250	Introduction to Psychological Research	3
Elective Courses	To be taken from an approved list of Social Science courses (available on the Human Ecology web site and from the Dean's Office):	36
At least 21 credit hours are to be taken from the list of approved Social Science courses (Group A). At least 24 credit hours are to be taken at the 3000 and 4000 level.		
Free Electives		12

Notes:

- Before entering continuing years in the Faculty of Human Ecology, the overall program must be planned with academic advice. Sessions are held in March of each year.
- Students are strongly encouraged to seek the advice of Academic Advisors in the Faculty of Human Ecology in order to plan their programs to develop pathways of knowledge that will assist them in moving toward careers in chosen fields. Advice is available in the Dean's Office and on the Human Ecology web site.
- Students in both programs are required to structure their course selections as follows:
 In Health Sciences, students are required to take 21 credit hours of science and 12 credit hours of social science courses from 36 credit hours of Approved Electives.
 In Health Studies, students are required to take 21 credit hours of social science and 12 credit hours of science courses from 36 credit hours of Approved Electives.
 Students in both programs are required to take at least 24 credit hours at the 3000 and 4000 levels from 36 credit hours of Approved Electives. Students in both programs are

required to take at least 21 credit hours from List A, at most 6 credit hours from List B and at most 3 credit hours from List C from 36 credit hours of Approved Electives.

Students should consult the University Calendar to ensure that they have the appropriate pre- or corequisites before they attempt to register in a course. A number of courses are cross-listed between departments/faculties. The Student Advisor will give additional guidance.

5.12 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

5.12.1 Product Development Stream

Course No.	Credit Hours
CHEM 1000 Understanding the World through Chemistry	3
Or	Or
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, Products, 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

5.12.2 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, Products, 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 1430 Design in Engineering	4
Or	Or
ENG 1440 Introduction to Statics	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 1430 Design in Engineering	4
ENG 1440 Introduction to Statics	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	3
and	
BIOL 1030 Biology 2	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 and	3
BIOL 1030 Biology 2	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

5.13 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 KIN 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.

5.14 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.

5.15 The Voluntary Minor

Students in the Faculty of Human Ecology 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: Registration Information

6.1 Initial Access Times

Students are referred to the chapter "Registration Information: Aurora Student", Section 4 "Your Initial Registration Access Time" for registration dates. All Human Ecology students are required to register through The University of Manitoba's registration system, Aurora student.

6.2 Registration Assistance

6.2.1 Information Available in the General Office (209 Human Ecology Building)

Permission to Access Student's File form
(important for all 4th year students)
Minor Declaration form (important for anyone declaring a voluntary minor)
Program Guides
Course Permission Forms

Management Minor information
Option in Aging information
Scholarship information
Human Ecology program requirements checklists for all programs
Dietetic information

6.2.2 Online Information

The Faculty of Human Ecology website is www.umanitoba.ca/human_ecology/. The University website provides locations for your student history, the *Undergraduate Calendar*, and registration. You may also obtain program summary sheets for your program on the Human Ecology website.

6.2.3 Telephone Numbers

General Office: 474-8508
Faculty Student Advisor: (204) 474-6686
Email address: anders22@cc.umanitoba.ca
Registration Assistance: (204) 474-9759
Fax Number: (204) 474-7592

6.3 Orientation for Newly Admitted Students

All new students must ask for an orientation kit prior to being eligible to register. Call by telephone 474 8508 (message), or 474 9759, 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 2007-2008 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 in late June, Room 206 Human Ecology Building. Dates will be provided on your acceptance letter and on the Human Ecology website.

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 5, 2007, at 10:00 a.m. This session follows registration and is supplemental to orientation information.

6.4 Registration Information for all Human Ecology Students

6.4.1 Registration Time

The first date on which you can register depends on your grade point average. Human Ecology obtains reserved space in required courses, but be aware that you will need permission to repeat a course. Contact the Student Advisor.

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.

6.4.2 Program Selection

All new Human Ecology students must select a program from one of the following choices prior to entering any course selections:

A. Family Social Sciences
If you know the option you want, select at least one of the following:

- Aging Option
- Child and Adolescent Development Option
- Family, Housing and Community Studies Option
- Family Resource Management Option
- Family Violence and Conflict Resolution Option

- The After Degree Program (ADP) in Family Social Sciences
- Health Sciences Degree (Interdisciplinary Health Curriculum)
- Health Studies Degree (Interdisciplinary Health Curriculum)
- Human Ecology program (general degree)
- Nutrition Option in Human Nutritional Sciences
- Foods Option in Human Nutritional Sciences
- Food Industry Option in Human Nutritional Sciences
- Second Degree Option in Human Nutritional Sciences
- Product Development stream in Textile Sciences
- Textile Development stream in Textile Sciences

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 pro-

grams are outlined in the current *Undergraduate Calendar*, which is available from the Registrar's Office.

6.4.3 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. 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.

6.4.4 Returning Human Ecology 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. Students in the Health Sciences or Health Studies programs should consult with the Faculty Student Advisor.

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.

6.4.5 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 (or 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.

6.4.6 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 courses previously taken
- 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

6.5 Helpful Hints

6.5.1 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.

6.5.2 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.

6.5.3 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.

6.5.4 Reserved Courses

Reserves have been obtained in required 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. 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.

Check Aurora for reserves in required BIOL, CHEM, COMP, ECON, GM-GT, MKTG, PSYCH, SOC, STAT and ZOOLOG courses.

6.5.5 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.

6.5.6 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 degree 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.

6.5.7 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.

6.5.8 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 REC 2650.

In 2007-2008 the two required courses will be taught under the following numbers: KIN 2610 and REC 2650.

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.

6.5.9 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 6, 2007. 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 10, 2007). Any changes to this information will be provided in lectures during the first week of classes.

Faculty of Kinesiology and Recreation Management

General Office

102 Frank Kennedy Building

Telephone: (204) 474 9747

Fax: (204) 474 7634

Website: www.umanitoba.ca/physed/

Dean: Jane Watkinson

Associate Dean (Academic): Elizabeth Ready

Coordinator, Physical Education/Kinesiology: TBA

Coordinator, Recreation Management and Community Development:
TBA

Director, Athletic Therapy Program: Jackie Elliott

Confidential Secretary to the Dean: Agnès Gagné

Undergraduate Program Administrator/Advisor: Karin Nowak-Bailey

Student Advisor: Patti Dickieson

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SECTION 12: 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); Hrycaiko, D.W., B.P.E., Cert.Ed. (Manitoba), M.P.E., Ph.D. (Alberta); 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); Mactavish, J., B.P.E. (British Columbia), M.Sc. (Manitoba), Ph.D. (Minnesota); 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); Watkinson, E.J., B.P.E., B.A. (McMaster), M.A. (Western), Ph.D. (Michigan).

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); Halas, J., B.P.E. (Manitoba), M.Sc. (Ottawa), Ph.D. (Alberta).

Assistant Professors

Forsyth, J. B.A., M.A., Ph.D. (Western); Heine, M., Staatsexamen (Rhur-Universitat Bochum, Germany), M.A. (Western), 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); McGillivray, D.; 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: Kinesiology and Recreation Management

The mission of the faculty is to create, expand and disseminate knowledge, to prepare professionals, and to provide service to the community in the ar-

eas 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.

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 Kinesiology and Recreation Management

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)

Ph.D. in Applied Health Sciences

Please see the 2007-2008 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:

NOTE: The Faculty is introducing a revised curriculum beginning in 2007. Entering students who have not year completed all of the required University 1 courses may complete them during their program.

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 (with a minimum grade of "C"). **NOTE:** BPE students who have completed BIOL 1020 and BIOL 1030 or 071.125 Biology B will also be required to take ZOOL 1330, as ZOOL 1330 is a pre-requisite for PHED 3470.

Written English Requirement:

ENGL XXXX English Literature (6 credit hours)

Physical Education and Recreation Studies PERS 1500 (formerly PHED 1500) (strongly recommended)

Psychology PSYC 1200

A course that satisfies the mathematics requirement from Mathematics 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+"). Completion of BIOL 1020 and BIOL 1030 or BIOL 1000 and BIOL 1010 is required for admission to Athletic Therapy and strongly recommended for admission to Kinesiology.

3 credit hours to fulfil the written English requirement

Physical Education & Recreation Studies PERS 1200 (formerly PHED 1200) (strongly recommended)

Physical Education & Recreation Studies PERS 1400 (formerly REC 1400) (strongly recommended)

Physical Education & Recreation Studies PERS 1500 (formerly PHED 1500) (strongly recommended)

Psychology PSYC 1200

Statistics STAT 1000 (M)

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.

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 (30 recommended) in University 1. The following courses are suggested in order to complete the degree in the shortest time.

Psychology PSYC 1200

Statistics STAT 1000 (meets Mathematics requirement)

Physical Education and Recreation Studies PERS 1200 (formerly PHED 1200) (strongly recommended)

Physical Education and Recreation Studies PERS 1400 (formerly REC 1400) (strongly recommended)

Physical Education and Recreation Studies PERS 1500 (formerly PHED 1500) (strongly recommended)

Physical Education and Recreation Studies PERS 1300 Introduction to Leisure Travel (formerly REC 1200) (strongly recommended)

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 60 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, 2007 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 Kinesiology and Recreation Management 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 may result in the student being required to withdraw from the course or may result in an "F" being assigned. Unexcused absence of more than three hours of class time in a theory course may result in the student being required to withdraw from the course or may result in an "F" grade being assigned.

Dean's Honour List

To qualify for this list a student must have attained a Term G.P.A. (including Letter of Permission courses) of 3.5 or greater, with a minimum course load of 12 credit hours.

University Gold Medal and Program Medals

Gold Medal

The Kinesiology and Recreation Management 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 Kinesiology and Recreation Management 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

PERS 1500 Foundations of Physical Education and Kinesiology 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 PERS 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.

The Faculty is introducing a revised curriculum beginning in 2007. Students entering in 2007 will follow the revised curriculum. Students admitted between 1999 and 2006 will notice some changes to program requirements due to the curriculum transition. Contact the Undergraduate Coordinator if additional information is required.

SECTION 5: Faculty Program Requirements

The following requirements apply to students in all three undergraduate degree programs in the Faculty. Beginning in September 2007, the three programs will have a base of shared introductory core courses, as well as shared upper level courses with a professional focus. Shared core courses are intended to ensure students recognize the interconnections across our Faculty and its related fields of practice, and to facilitate the professional education of students.

Course Prefixes:

PERS	Denotes University 1 courses and core courses assigned common to all undergraduate degree programs
KIN	Denotes core and elective courses in the Kinesiology degree program
PHED	Denotes core and elective courses in the BPE degree program
REC	Denotes core and elective courses in the BRMCD degree program

Introductory Core Courses (18-21 credit hours):

PERS 1400	Concepts of Recreation & Leisure	3
PERS 1500	Foundations of Physical Education and Kinesiology	3
PSYC 1200	Introduction to Psychology	6

University Math Requirement:

STAT 1000	Basic Statistical Analysis	3
	(MATH XXXX Mathematics)	3)*

University Written Requirement:

	Any course satisfying Written English Requirement	3
	(ENGL XXXX English Literature)	6)*

Professional Core Courses (12-15 credit hours):

PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	3
PERS 3100	Inclusive Physical Activity and Leisure	3
PERS 3460	Sociology of Physical Activity and Leisure	3
	(PSYC 3660 Sport Psychology)	3)**
PERS 4100	Current Issues	3†

*Fulfills Mathematics and Written English requirements for BPE students only

**Fulfills social science requirement for Kinesiology-Athletic Therapy students only

†BKin and BRMCD only

Exit Requirement:

Current CPR and First Aid (list of eligible programs available in the General Office)

Areas of Emphasis:

Students in the BKin and the BRMCD degree programs are encouraged to select an area of emphasis (Community Development and Wellness, Aging, Culture and Diversity, Fitness Professional, Coaching, Sport and Event Management and Sustainable Tourism and Recreation). Please see the General Office for more information.

SECTION 6: Program Requirements for 1999-2006 Bachelor of Physical Education Degree

6.1 Requirements for Graduation – 1999-2006 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.

6.2 Scholastic Standards: 1999-2006 Bachelor of Physical Education

To remain in Good Standing students must achieve a minimum Term GPA of 2.0. Students with a Term GPA of less than 2.0 will be given an academic warning, and will be reinstated in Good Standing provided their following Term GPA is 2.0 or greater. Students who fail to be reinstated will be placed on Probation. Students on probation will be reinstated to Satisfactory Standing provided their next Term GPA is 2.0 or greater; if their Term GPA is less

than 2.0 they will be given a suspension warning. Following a suspension warning, students may be reinstated to Satisfactory Standing (Term GPA 2.0 or greater) or placed on suspension (Term GPA less than 2.0).

6.3 Program Requirements: 1999-2006

Bachelor of Physical Education

The required courses for the B.P.E. degree appear below. It is strongly recommended that ZOOL 1320 and ZOOL 1330 (with a minimum grade of "C") be completed during University 1 to enable the student to complete the Bachelor of Physical Education degree in three years, since it is a pre-requisite to several required courses. Note: BPE students who have completed BIOL 1020 and BIOL 1030 or 071.125 Biology B will not be required to complete ZOOL 1320, Anatomy of the Human Body, but will be required to take ZOOL 1330, as ZOOL 1330 is a pre-requisite for PHED 3470.

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 Activity Course Descriptions for a list of practical activity courses).

NOTE: One and two credit hour activity courses will be phased out between 2007 and 2009.

Year 1 – University 1: 30 credit hours

Course No.		Credit Hours
ENGL 1200	Representative Literary Works (6) or	6
ENGL 1300	Literature Since 1900 (6) (or 004.126) or	
ENGL 1310	Literary Topics (3) and	
ENGL 1340	Introduction to Literary Analysis (3)	
PERS 1500	Foundations of Physical Education & Kinesiology (formerly PHED 1500) (strongly recommended)	3
PSYCH 1200	Introduction to Psychology	6
ZOOL 1320	Anatomy of the Human Body	3
ZOOL 1330	Physiology of the Human Body	3
	Mathematics (Mathematics requirement from Mathematics or Statistics)	3
	Electives (in area of teachable minor)	6

Year 2: 35 credit hours

Required Theory Courses

Course No.		Credit Hours
PHED 2330	Biomechanics (formerly PHED 2310)	3
PHED 2320	Human Anatomy	3
KIN 3340	Philosophy of Physical Activity and Leisure (formerly PHED 2340)	3
PHED 2550	Growth and Motor Development	3
PHED 3100	Design and Assessment of Physical Activity - not offered in 2007-08* (to be deleted in 2008-09) *replace with 3 credit hours Faculty elective in 2007-08.	3
PHED 3440	Health Education (to be deleted in 2008-09 and replaced with PHED 3710) Non-Faculty Teaching Minor *Faculty Electives	3 6 8
Required Practical Courses		
PHED 2710	Human Movement Principles (replaces PHED 1420)	3
PHED 2720	Developmental Games and Activities (replaces PHED 2650)	3

Year 3: 35 credit hours

Required Theory Courses
PHED 3080 Principles of Planning and Administration in

	Physical Education (to be deleted in 2008-09 and replaced with PERS 2200)	3
PHED 3390	Adapted Physical Education (to be deleted in 2008-09 and replaced with PERS 3100)	3
PHED 3470	Exercise Physiology (formerly PHED 3430)	3
PHED 3450	Motor Learning Non-Faculty Teaching Minor	3 6
Required Practical Courses		
PHED 1360	Aquatics (to be deleted in 2008-09) (2 elective practical courses if student holds Bronze Medallion or equivalent)	2
PHED 2730	Gymnastics, Dance and Rhythmic Activities (replaces PHED 3120 and PHED 3140 and PHED 3410)	3
Elective Practical Courses:		
	Choose 3 or 6 practical credit hours.	3-6
	Elective Theory Courses	3-6
(choose one or two of the following four courses:)		
PHED 3050	Principles of Coaching (to be deleted in 2008-09 and replaced with PHED 3720) or	
PHED 3160	Pathology and Sport Medicine (formerly PHED 3060) or	
PHED 3090	Principles of Fitness Training or	
PHED 3460	Sociology of Sport (to be deleted in 2008-09 and replaced with PERS 3460) Free Elective (theory)	3 or 6 3

SECTION 7: Program Requirements for Bachelor of Physical Education

(To apply to students admitted in September 2007 or later).

7.1 Requirements for Graduation: Bachelor of Physical Education (To apply to students admitted in September 2007 or later).

To graduate with a three-year Bachelor of Physical Education degree, a student must have passed the 102 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 minimum grade of "C" is required to pass all required Faculty courses. Students will be permitted to repeat a failed required Faculty course only once.

A maximum of 132 credit hours may be attempted in order to obtain the 102 credit hours required for graduation with the Bachelor of Physical Education degree.

7.2 Scholastic Standards: Bachelor of Physical Education

To remain in Good Standing students must achieve a minimum Term GPA of 2.0. Students with a Term GPA of less than 2.0 will be given an academic warning, and will be reinstated in Good Standing provided their following Term GPA is 2.0 or greater. Students who fail to be reinstated will be placed on Probation. Students on probation will be reinstated to Satisfactory Standing provided their next Term GPA is 2.0 or greater; if their Term GPA is less than 2.0 they will be given a suspension warning. Following a suspension warning, students may be reinstated to Satisfactory Standing (Term GPA 2.0 or greater) or placed on suspension (Term GPA less than 2.0).

7.3 Program Requirements: Bachelor of Physical Education

For courses recommended in University 1, see Section 3, Admission to Kinesiology and Recreation Management. It is strongly recommended that ZOOL 1320 and ZOOL 1330 (with a minimum grade of "C") be completed during University 1 to enable the student to complete the Bachelor of Physical Education degree in three years, since they are prerequisites to several required courses. NOTE: BPE students who have completed BIOL 1020 and BIOL 1030 or 071.125 Biology B will be required to take ZOOL 1330, as ZOOL 1330 is a pre-requisite for PHED 3470.

Year 1 – University 1: 30 credit hours

Year 2: 36 credit hours

Course No.		Credit Hours
PERS 2100	Introduction to Professional Practice	3
PERS 1400	Concepts of Recreation & Leisure	3
PHED 2320	Human Anatomy	3
PHED 2330	Biomechanics	3
PHED 2550	Growth and Motor Development	3
PERS 2200	Program Planning Principles	3
	Required Experiential Learning Courses:	
PHED 2710	Human Movement Principles	3
PHED 2720	Developmental Games and Activities	3
PHED 2730	Gymnastics, Dance & Rhythmic Activities	3
PHED 2740	Fitness Theory and Practice	3
	Teachable minor	6

Year 3: 36 credit hours

Course No.		Credit Hours
PERS 3460	Sociology of Physical Activity and Leisure *	3
PERS 3100	Inclusive Physical Activity and Leisure *	3
PHED 3470	Exercise Physiology	3
PHED 3450	Motor Learning	3
PHED 3360	Culturally Relevant Physical Education and Health *	3
PHED 3090	Principles of Fitness Training	3
	Required Experiential Learning Course:	
PHED 3710	Active Health and Human Potential *	3
	Faculty Electives (must include at least 2 Experiential Learning Courses (ELC) - choose 2 or 3 of the following 8 courses)	9
PHED 3720	Coaching Theory and Practice (3)*	
PHED 3730	Advanced Coaching Theory and Practice (3)*	
PHED 3740	Resistance Training and Conditioning (3)*	
PHED 3760	Diverse Populations Mentorship (3)*	
PHED 3770	Aboriginal Games and Activities (3)*	
PHED 3750	Lifestyle Activities (3)*	
PHED 4710	Outdoor Education (3)**	
PHED 4720	Wilderness Adventures (3)**	
	Teachable Minor	6

*Courses to be introduced in 2008-09.

** Courses to be introduced in 2009-10.

SECTION 8: Program Requirements for 1999-2006 Bachelor of Kinesiology

8.1 Requirements for Graduation: POST 1999 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).

8.2 Scholastic Standards: 1999-2006 Bachelor of Kinesiology

To remain in Good Standing students must achieve a minimum Term GPA of 2.0. Students with a Term GPA of less than 2.0 will be given an academic warning, and will be reinstated in Good Standing provided their following Term GPA is 2.0 or greater. Students who fail to be reinstated will be placed on Probation. Students on probation will be reinstated to Satisfactory Standing provided their next Term GPA is 2.0 or greater; if their Term GPA is less than 2.0 they will be given a suspension warning. Following a suspension warning, students may be reinstated to Satisfactory Standing (Term GPA 2.0 or greater) or placed on suspension (Term GPA less than 2.0).

8.3 Program Requirements: 1999-2006 Bachelor of Kinesiology

Physical Health and Wellness stream, and Exercise and Sport Science stream, Years 1 and 2

It is strongly recommended that Biology 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. 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.

Year 1 – University 1: 30 credit hours

Course No.		Credit Hours
ENGL 1200	Representative Literary Works	6
	or	
ENGL 1300	Literature Since 1900 (6)	
	or	
ENGL 1310	Literary Topics (3)	
	and	
ENGL 1340	Introduction to Literary Analysis (3)	
PERS 1500	Foundations of Physical Education and Kinesiology (formerly PHED 1500)	3
PERS 1200	Physical Activity, Health and Wellness (formerly PHED 1200) (strongly recommended)	3
PSYC 1200	Introduction to Psychology	6
*BIOL 1020	Biology 1: Principles and Themes (3)	6
	And	
*BIOL 1030	Biology 2: Biological Diversity, Function and Interaction (with a minimum grade of "C" (3)	
	or	
*BIOL 1000	Biology: Foundations of Life (3)	
	and	
*BIOL 1010	Biological Diversity and Interaction (with a minimum grade of "C+" (3)	
	Mathematics requirement from Mathematics or Statistics	3
	Electives	3

* NOTE: Completion of BIOL 1020 and BIOL 1030 or BIOL 1000 and BIOL 1010 is required for admission to Athletic Therapy and strongly recommended for admission to Kinesiology.

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
KIN 2330	Biomechanics (formerly PHED 2310)	3
KIN 2320	Human Anatomy	3

KIN 3340	Philosophy of Physical Activity and Leisure (formerly PHED 2310)	3
PHED 2550	Growth and Motor Development	3
COMP 1260	Introduction to Computer Usage	3
REC 2010	Measurement and Evaluation (to be deleted in 2008-09 and replaced with KIN 3350)	3
	Theory Elective	3
	Practical Electives	3

Physical Health and Wellness stream, Years 3 and 4

Year 3: 30 credit hours

KIN 3160	Pathology and Sport Medicine (formerly PHED 3060)	3
KIN 3090	Principles of Fitness Training (formerly PHED 3090)	3
PHED 3390	Adapted Physical Education (to be deleted in 2008-09 and replaced with PERS 3100)	3
KIN 3XXX	Exercise Physiology (formerly PHED 3430)	3
PHED 3440	Health Education (to be deleted in 2008-09)	3
KIN 3450	Motor Learning	3
	*Theory/Practical Electives	12

Year 4: 30 credit hours

PSYC 3660	Sport Psychology	
or		
PHED 3050	Principles of Coaching (to be deleted in 2008-09 and replaced with KIN 3720)	3
PHED 3460	Sociology of Sport (to be deleted in 2008-09 and replaced with PERS 3460)	3
	*Theory/Practical Electives	24

***NOTES:** A minimum of 15 credit hours of theory elective courses must be selected from within the faculty (PERS, PHED, KIN or REC). A maximum of 18 credit hours of non-faculty electives may be selected.

Theory Electives available include (among others):

KIN 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 (to be deleted in 2008-09 and replaced with KIN 3720)	3
KIN 3160	Pathology and Sport Medicine (formerly PHED 3060)	3
KIN 3090	Principles of Fitness Training (formerly PHED 3090)	3
PHED 3390	Adapted Physical Education (to be deleted in 2008-09 and replaced with PERS 3100)	3
KIN 3470	Exercise Physiology (formerly PHED 3430)	3
KIN 3450	Motor Learning	3
KIN 4XXX	Advanced Biomechanics (formerly PHED 4360)	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 (to be deleted in 2008-09 and replaced with PERS 3460)	3
KIN 4470	Advanced Exercise Physiology (formerly PHED 4410)	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 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 Kinesiology and Recreation Management. Successful completion of BIOL 1020 and BIOL 1030, with a minimum grade of "C", or BIOL 1000 and BIOL 1010, 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 and KIN also be completed in the sequence and year indicated, otherwise an additional year may be required. Prior to registering in each Practicum (KIN 2910, KIN 3910, KIN 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/experiential learning courses are required including PHED 2620 Resistance Training (1) and KIN 2750 Athletic Therapy Skills (3) (replaces PHED 2020 and PHED 3180).

Year 1 – University 1: 30 credit hours

Course No.		Credit Hours
ENGL 1200	Representative Literary Works	6
or		
ENGL 1300	Literature Since 1900 (6)	
or		
ENGL 1310	Literary Topics (3)	
and/or		
ENGL 1340	Introduction to Literary Analysis (3)	
PERS 1500	Foundations of Physical Education and Kinesiology (formerly PHED 1500)	3
PERS 1200	Physical Activity, Health and Wellness (formerly PHED 1200) (strongly recommended)	3
PSYC 1200	Introduction to Psychology	6
*BIOL 1020	Biology 1: Principles and Themes (3)	6
and		
*BIOL 1030	Biology 2: Biological Diversity, Function and Interaction (with a minimum grade of "C" (3)	
or		
*BIOL 1000	Biology: Foundations of Life (3)	
and		
*BIOL 1010	Biological Diversity and Interaction (with a minimum grade of "C+" (3)	
"M" required course from Mathematics or Statistics Electives		3

*** NOTE:** Completion of BIOL 1020 and BIOL 1030 or BIOL 1000 and BIOL 1010 is required for admission to Athletic Therapy and strongly recommended for admission to Kinesiology.

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 (to be deleted in 2008-09 and replaced with KIN 3740)	1
KIN 3160	Pathology and Sport Medicine (formerly PHED 3060)	3
KIN 2750	Athletic Therapy Skills (replaces PHED 2020 and PHED 3180)	3
PHED 2910	Practicum: Field/Clinical (not available in 2007-08 – See Athletic Therapy Director)	8
	Faculty Electives (Practical)	4

Year 3: 36 credit hours

HNSC 1210	Nutrition for Health and Changing Lifestyles	3
KIN 2330	Biomechanics (formerly PHED 2310)	3
KIN 3470	Exercise Physiology (formerly PHED 3430)	3
KIN 3200	Basic Trauma and Emergency Support (formerly PHED 3200)	3
REHB 2410	Pathology and Clinical Manifestations	4
KIN 3300	Functional Assessment & Restoration	6
PT 2720	Electro-Physical Agents in Physical Therapy Management	3
REC 2010	Measurement and Evaluation (to be deleted in 2008-09 and replaced with KIN 3350)	3

PHED 3910 Practicum: Field/Clinical

8

Year 4: 35 credit hours

PSYC 3660	Sport Psychology	3
KIN 4160	Advanced Pathology and Sport Medicine (formerly PHED 4050)	3
KIN 3090	Principles of Fitness Training (formerly PHED 3090)	3
KIN 4330	Advanced Biomechanics (formerly PHED 4360)	3
KIN 4300	Health and Wellness Practices in Athletic Therapy formerly PHED 4300)	3
PHED 4910	Practicum: Field/Clinical	8
	Faculty Electives (Theory/Practical)	12

SECTION 9: Program Requirements for Bachelor of Kinesiology

(To apply to students admitted in September 2007 or later).

9.1 Requirements for Graduation: Bachelor of Kinesiology (To apply to students admitted in September 2007 or later).

To graduate with a four-year Bachelor of Kinesiology degree, 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 minimum grade of "C" is required to pass all required Faculty courses. Students will be permitted to repeat a failed required Faculty courses only once.

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.

Athletic Therapy

To graduate with a four-year Bachelor of Kinesiology degree specializing in Athletic Therapy, a student must have passed 132 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 maximum of 172 credit hours may be attempted in order to obtain the 132 credit hours required for graduation with the Bachelor of Kinesiology (Athletic Therapy).

9.2 Scholastic Standards: Bachelor of Kinesiology

To remain in Good Standing students must achieve a minimum Term GPA of 2.0. Students with a Term GPA of less than 2.0 will be given an academic warning, and will be reinstated in Good Standing provided their following Term GPA is 2.0 or greater. Students who fail to be reinstated will be placed on Probation. Students on probation will be reinstated to Satisfactory Standing provided their next Term GPA is 2.0 or greater; if their Term GPA is less than 2.0 they will be given a suspension warning. Following a suspension warning, students may be reinstated to Satisfactory Standing (Term GPA 2.0 or greater) or placed on suspension (Term GPA less than 2.0).

9.3 Program Requirements: Bachelor of Kinesiology

Year 1: University 1: 30 credit hours

For courses recommended in University 1, see Section 3.2.

Year 2: 30 credit hours

Course No.		Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
ZOOL 2530	Human Physiology 1	3
ZOOL 2540	Human Physiology 2	3
PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	3
KIN 2320	Human Anatomy	3
KIN 2330	Biomechanics	3
	Electives	9

Year 3: 30 credit hours

PERS 3460	Sociology of Physical Activity and Leisure	3
PERS 3100	Inclusive Physical Activity and Leisure	3
KIN 3340	Philosophy of Physical Activity and Leisure	3
KIN 3470	Exercise Physiology	3
KIN 3350	Introduction to Research	3
KIN 3740	Resistance Training and Conditioning	3
KIN 3090	Principles of Fitness Training	3
	Electives	9

Year 4: 30 credit hours

PERS 4100	Current Issues	3
KIN 4500	Physical Activity and Aging	3
KIN 3450	Motor Learning	3
	Electives	21*

* KIN 4630 Supervised Fieldwork Experience is strongly recommended

Athletic Therapy

(To apply to students admitted in September 2007 or later).

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", or BIOL 1000 and BIOL 1010, 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. It is strongly recommended that courses be completed in the sequence and year indicated, otherwise an additional year may be required. Prior to registering in each Practicum (KIN 2910, KIN 3910, KIN 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.

Year 1 – University 1: 30 credit hours

Year 2: 33 credit hours

Course No.		Credit Hours
ZOOL 2530	Human Physiology 1	3
ZOOL 2540	Human Physiology 2	3
PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	3
KIN 2320	Human Anatomy	3
KIN 2330	Biomechanics	3
KIN 3320	Advanced Human Anatomy	3
KIN 3200	Basic Trauma and Emergency Support	3
KIN 2750	Athletic Therapy Skills	3
KIN 2910	Athletic Therapy Practicum	6

Year 3: 36 credit hours

PERS 3100	Inclusive Physical Activity and Leisure	3
KIN 3470	Exercise Physiology	3
KIN 3340	Philosophy of Physical Activity and Leisure	3
KIN 3350	Introduction to Research	3
KIN 3740	Resistance Training and Conditioning	3
KIN 3300	Functional Assessment and Rehabilitation	6
KIN 3400	Therapeutic Modalities	3
KIN 3160	Pathology and Sport Medicine	3
KIN 3090	Principles of Fitness Training	3
KIN 3910	Athletic Therapy Practicum	6

Year 4: 33 credit hours

ABIZ 1000	Introduction to Agribusiness Management	3
HNSC 1210	Nutrition Health and Changing Lifestyles	3
PSYC 3660	Sport Psychology	3
PERS 4100	Current Issues	3
KIN 4160	Advanced Pathology and Sport Medicine	3
KIN 4500	Physical Activity and Aging	3
KIN 4330	Advanced Biomechanics	3
KIN 3450	Motor Learning	3
KIN 4400	Therapeutic Exercise Rehabilitation	3
KIN 4910	Athletic Therapy Practicum	6

SECTION 10: Program Requirements for 1999-2006 Bachelor of Recreation Management and Community Development

10.1 Requirements for Graduation

To graduate with a four-year Bachelor of Recreation Management and Community Development degree, a student must have passed 129 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 Recreation Management and Community Development courses.

A maximum of 161 credit hours may be attempted in order to obtain the 129 credit hours required for graduation with the Bachelor of Recreation Management and Community Development degree.

10.2 Scholastic Standards

To remain in Good Standing students must achieve a minimum Term GPA of 2.0. Students with a Term GPA of less than 2.0 will be given an academic warning, and will be reinstated in Good Standing provided their following Term GPA is 2.0 or greater. Students who fail to be reinstated will be placed on Probation. Students on probation will be reinstated to Satisfactory Standing provided their next Term GPA is 2.0 or greater; if their Term GPA is less than 2.0 they will be given a suspension warning. Following a suspension warning, students may be reinstated to Satisfactory Standing (Term GPA 2.0 or greater) or placed on suspension (Term GPA less than 2.0).

10.3 Course Requirements for the 1999-2006 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 1: University 1: 30 credit hours (recommended courses)

Course No.		Credit Hours
PERS 1300	Introduction to Leisure Travel (formerly REC 1200) (strongly recommended)	3
PERS 1400	Concepts of Recreation and Leisure (formerly REC 1400) (strongly recommended)	3
PSYC 1200	Introduction to Psychology	6
SOC 1200	Introduction to Sociology	6
	Written English requirement	3
	Mathematics requirement	3
	Electives	6

Year 2 (Sample): 33 credit hours

Course No.		Credit Hours
REC 2010	Measurement and Evaluation in Leisure Services (to be deleted in 2008-09 and replaced with REC 3350)	3
PERS 2200	Program Planning Principles (replaces REC 2530)	3
REC 2540	Major Recreation Program Areas (not offered) *take elective	
REC 2400	Management and Marketing of Leisure Services (replaces REC 3870)	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 Age	3
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)	6 or 9
	Activity Options	3 or 0

Year 3 (Sample): 33 credit hours

REC 3060	Introduction to Recreation and Special Populations (to be deleted in 2008-09 and replaced with PERS 3100)	3
REC 3070	Fieldwork Seminar	3
REC 3080	Supervised Fieldwork Experience	12
REC 3090	Foundations of Sustainable Nature-Based Tourism and Outdoor Recreation	3
REC 3850	The Planning of Recreation Areas and Facilities	3
REC 3860	The Administration of Leisure Services (to be deleted in 2008-09)	3
	Options (General Education)	0-3
	Supporting Minor	0-3
	Activity/Recreation Options	3-6

Year 4 (Sample): 33 credit hours

REC 4070	Community Development and the Leisure Delivery System	3
Supporting Minor		9
	Options (General Education)	9-15
	Activity/Recreation Options	9-15

SECTION 11: Program Requirements for Bachelor of Recreation Management and Community Development (To apply to students admitted in September 2007 or later).

11.1 Requirements for Graduation

To graduate with a four-year Bachelor of Recreation Management and Community Development degree, a student must have passed 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 Recreation Management and Community Development courses. A minimum grade of "C" is required to pass all required Faculty courses. Students will be permitted to repeat a failed required Faculty course only once.

A maximum of 158 credit hours may be attempted in order to obtain the 120 credit hours required for graduation with the Bachelor of Recreation Management and Community Development degree.

11.2 Scholastic Standards

To remain in Good Standing students must achieve a minimum Term GPA of 2.0. Students with a Term GPA of less than 2.0 will be given an academic warning, and will be reinstated in Good Standing provided their following Term GPA is 2.0 or greater. Students who fail to be reinstated will be placed on Probation. Students on probation will be reinstated to Satisfactory Standing provided their next Term GPA is 2.0 or greater; if their Term GPA is less than 2.0 they will be given a suspension warning. Following a suspension warning, students may be reinstated to Satisfactory Standing (Term GPA 2.0 or greater) or placed on suspension (Term GPA less than 2.0).

11.3 Course Requirements for the Bachelor of Recreation Management and Community Development (To apply to students admitted in September 2007 or later.)

Year 1: University 1: 30 credit hours

For courses recommended in University 1, see Section 3, Admission to Kinesiology and Recreation Management.

Registration Information

Initial Access Times *Students are referred to the chapter "Registration Information: Aurora Student", Section 5.*

Students admitted to the B.P.E. program for September 2007

Year 2 (BPE): 24 to 66 credit hours
Year 3 (BPE): 67+ credit hours
(maximum attempts: 132 credit hours).

Students admitted to the B.P.E. program from September 1999 to September 2006

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 for September 2007

Year 2 (KN): 24 to 59 credit hours
Year 3 (KN): 60 to 89 credit hours
Year 4 (KN): 90+ credit hours
(maximum attempts: 158 credit hours).

Year 2: 30 credit hours

Course No.		Credit Hours
SOC 1200	Introduction to Sociology	6
PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	3
REC 2400	Management and Marketing of Leisure Services	3
REC 3850	The Planning of Recreation Areas and Facilities	3
REC 3090	Foundations of SNBT	3
	Electives	9

Year 3: 30 credit hours

PERS 3460	Sociology of Physical Activity and Leisure	3
PERS 3100	Inclusive Physical Activity and Leisure	3
PERS 3340	Philosophy of Physical Activity and Leisure	3
REC 3350	Introduction to Research	3
REC 3600	Advanced Program Planning and Leadership	3
REC 4070	Community Development and LSDS	3
REC 4180	Socio and Psychological Aspects of Leisure	3
REC 4XXX	Advanced Recreation Courses	6
	Electives	3

Year 4: 30 credit hours

PERS 4100	Current Issues	3
REC 4XXX	Advanced Recreation Courses	6
	Electives	21*

* REC 4630 Supervised Fieldwork Experience (12) is strongly recommended.

SECTION 12: 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 KIN 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 Kinesiology and Recreation Management.

Students admitted to the B.KIN. program (Health and Wellness or Exercise and Sport Science) from September 1999 to September 2006

Year 2 (057A-K): 24 to 59 credit hours
Year 3 (057A-K): 60 to 89 credit hours
Year 4 (057A-K): 90+ credit hours
(maximum attempts: 158 credit hours).

Students admitted to the B.KIN. program (Athletic Therapy) for September 2007

Year 2 (KNA): 24 to 60 credit hours
Year 3 (KNA): 61 to 90 credit hours
Year 4 (KNA): 91+ credit hours
(Maximum attempts: 172 credit hours).

Students admitted to the B.KIN. program (Athletic Therapy) from September 1999 to September 2006

Year 2 (K): 24 to 60 credit hours
Year 3 (K): 61 to 90 credit hours
Year 4 (K): 91+ credit hours
(Maximum attempts: 178 credit hours).

Students admitted to the B.R.M.C.D. program for September 2007

Year 1 (RM): 24 to 59 credit hours
Year 2 (RM): 60 to 89 credit hours
Year 3 (RM): 90+ credit hours
(maximum attempts allowed is 158)

Students admitted to the B.R.M.C.D. program from September 1999 to September 2006

Year 1 (R): 24 to 59 credit hours
Year 2 (R): 60 to 89 credit hours
Year 3 (R): 90+ credit hours
(maximum attempts allowed is 161)

Information for All Students

Degree Requirements and Course Selection

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. Completion of degree requirements is the responsibility of the student. Returning students should contact their advisor if they have any questions concerning their curriculum.

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 advisors, 8:30 a.m. - 4:30 p.m. Monday - Friday.

Karin Nowak-Bailey, Undergraduate Program Administrator

108 Frank Kennedy Centre
telephone (204) 474 9277

Patti Dickieson, Student Advisor

102 Frank Kennedy Centre
telephone (204) 474 9748

Orientation Sessions: Physical Education, Kinesiology, Recreation Management and Community Development Students

All new students entering the B.P.E./B.KIN. (incl. AT) / B.R.M.C.D. degree programs must attend one of the following faculty Orientation Sessions or they will otherwise be blocked from registration:

Tuesday, June 26th, 2007; 6:00 – 8:30 p.m.; 136 Frank Kennedy Building

Wednesday, July 4th, 2007; 6:00 – 8:30 p.m.; 136 Frank Kennedy Building

At this session students will receive important information that includes registration details, confirmation of transfer credits, program outlines, and an orientation manual. Upon acceptance into the faculty, students from other provinces may be sent a manual and be informed by telephone, fax, or email of their transfer credits, and should make an appointment with an advisor to discuss registration in advance.

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.

Prerequisites and Co-requisites

Several Physical Education and Recreation Studies core courses require successful completion of, or concurrent registration with, another course in order to proceed with adding the course. Please check current and future catalogue course descriptions of courses in your program to ensure that you achieve what is necessary for enrolment in future terms.

Repeating Courses

When a course is repeated, the *most recent* attempt of that course will be included in the calculation of the degree grade point average; however, *both* grades will appear on a student academic history and official transcript. If a student wishes to repeat a course in which a grade has previously been assigned, they should contact an advisor for the necessary registration override prior to initial access.

Reserves

Each degree program requires courses from outside faculties and departments. Specific sections in required courses have been reserved for students from each of the programs in the following courses:

Recreation Management and Community Development: There are select reserved sections for PSYC 2290, PSYC 2410, PSYC 2420, SOC 1200, and MKTG 2210.

Kinesiology/AT: There are select reserved sections for ZOOL 2530, ZOOL 2540, PSYC 3660, HNSC 1200, HNSC 1210, HNSC 2130, HNSC 4350, STAT 1000, NURS 4200, BIOL 1020, BIOL 1030, and ABIZ 1000.

Physical Education: There are select reserved sections for ZOOL 1320, ZOOL 1330, ENGL 1200, and PSYC 1200.

Students with the appropriate program code, major and/or minor will be able to access the reserve section of a required course. These courses can be identified in the Class Schedule as having section codes that appear as R01, R02...

Minors

Students may choose a minor available from the Faculty of Arts (all listed by department), Human Ecology: Family Social Sciences, Faculty of Science (all listed by department), Faculty of Management (see your faculty advisor for details on eligibility), Faculty of Music, or School of Art.

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.

Note: No minor in Physical Education is offered.

Recreation Services Membership

Students report to the Frank Kennedy Customer Service Desk to obtain or renew a facility membership by presenting a current proof of registration. If you are registered for courses that require a facility pass, this should be done before classes begin.

Practical Courses (only for students admitted between 1999 and 2006)

The following practical courses are two credit hours in value, and are offered over one term (12 weeks in length):

PHED 1360 Aquatics

PHED 1380 Track and Field

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 confirm in which quarter you are registered and the class start date, as the faculty attendance policy also applies to practical courses.

First Quarter: September 6, 2007 to October 22, 2007.

Second Quarter: October 23, 2007 to December 7, 2007.

Third Quarter: January 7, 2008 to February 26, 2008.

Fourth Quarter: February 27, 2008 to April 11, 2008.

Aquatics (PHED 1360)

For students in some programs who were admitted before 2007 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 to an academic advisor. Presentation of RLSS certification does NOT equal credit hours; 2 cr. Hrs. of activity must be completed in lieu of aquatics.

Field work Fees

Foundations of Physical Education and Kinesiology (PERS 1500): TBD

Outdoor Activities (PHED 3150): TBD

Golf (PHED 3650): TBD

Cross Country Skiing (PHED 3670): TBD

Camping courses (PHED 3880 and PHED 3890): TBD

Probation and Suspension

Students whose last assessment was "On Probation" should review the B.P.E. / B.KIN. / B.R.M.C.D. scholastic standards in the current *Undergrad-*

uate Calendar. Students on Probation will be blocked from registering until they have contacted Karin Nowak-Bailey, Undergraduate Program Administrator, (474-9277) or Patti Dickieson, Student Advisor, (474-9748). This must be done prior to registration access.

Fieldwork Experience/Practicum

The field work practicum is a professionally supervised field experience that provides the student with the opportunity to apply knowledge gained in academic courses, and that provides exposure to a workplace environment in a related field during the final year of their degree.

All BRMCD students admitted between 1999-2006 are required to complete the fieldwork practicum.

All BKIN students and BRMCD students admitted 2007 and later: The 12-credit hour Supervised Fieldwork Experience is an elective in the BKIN degree program and for BRMCD students entering in 2007 and later. The Supervised Fieldwork Experience/Practicum is strongly recommended to those students who wish to pursue an area of emphasis.

Students in the B.KIN and B.R.M.C.D. programs may be eligible to apply for assignments provided they have achieved a minimum cumulative grade point average of 2.5 in the third year of their degree. Student placements are scheduled during the Fall Term. Information on the application process and deadlines are available from a faculty advisor.

CSEP-CEP Certification - Certified Exercise Physiologist (former PFLC – Professional Fitness and Lifestyle Consultant)

The Canadian Society for Exercise Physiology – Certified Exercise Physiologist is a nationally recognized health and fitness practitioner certification. Students who wish to apply to the CEP Apprenticeship course work as a supplemental learning opportunity to assist with preparing for the practical exam should contact the Undergraduate Program Administrator in order to obtain a recommended course list and later register for course KIN 4560, Advanced Fitness Appraisal and Lifestyle Counselling. Space is limited and admission to the apprenticeship is competitive. Applications will be available during the Winter Term at the faculty general office for entry to the apprenticeship in the following Regular Session.

Interfaculty Option in Aging

An Interfaculty Option in Aging is available to students registered in Kinesiology and Recreation Management as well as other faculties. Students are requested to declare their selection of the option to a faculty advisor at the time of registration.

The Option includes required and elective courses for a total of 18 credit hours:

Required Courses (6 credits):

PHED 2610 Health and Physical Aspects of Aging: Fall Term, Tuesday evening 6:30-9:30.

REC 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 Kinesiology and Recreation Management. Students are encouraged to select elective courses from the other 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 to recognize this area of emphasis.

Limitations

Students from other faculties wishing to register for courses other than PERS 1200, PERS 1300, PERS 1400, and PERS 1500 may seek departmental permission by visiting the faculty general office on or after the reserve release date at the end of August, 2007.

Faculty of Law

General Office

303 Robson Hall

Telephone: (204) 474 9773

Fax: (204) 474 7580

E-mail: um-Law@cc.umanitoba.ca

Website: www.umanitoba.ca/faculties/law

Dean: Harvey Sectar

Associate Dean: Lorna A. Turnbull

Associate Dean (Research and Graduate Studies): Michelle Gallant

Administrative Assistant (To The Dean): Bonnie McClelland

Administrative Assistant (Student Affairs): Linda Skoropata

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SECTION 1: Academic Staff

Dean Emeritus

Edwards, C.H.C., C.M., Q.C., LL.B. (Hons.) (London).

Professor Emeritus

Harvey, D.A.C., Q.C., B.A. (Toronto), LL.B., LL.M. (Osgoode).

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); **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); **Secter, H.L., B.Comm., LL.B.** (Manitoba), LL.M. (Harvard), LL.D. (Hon.) (Winnipeg); **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

Heckman, G.P., B.A.Sc. (Laval), M.A.Sc. (Waterloo), LL.B. (Toronto), LL.M. (Queen's), [Ph.D. Candidate (Osgoode)]; **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. (Osgoode) 2007; **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 university 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 practising 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 selected 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 com-

plete an undergraduate degree before applying to Law, it is recommended 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 2006-2007 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
	Clinical Course (Compulsory)	
LAW 1540	Legal Methods	5
	Perspective Course (Compulsory)	
LAW 1530	Legal System	2
Total credit hours		33

5.2 Second Year Only

In Second Year each student must take:

Course No.	Doctrinal Courses (Compulsory)	Credit Hours
LAW 2600	Evidence	4
LAW 3530	Administrative Law	3
LAW 2670	Civil Procedure	2
LAW 2690	Corporations I	3
	Clinical Courses (Compulsory)	
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:

Course No.	Doctrinal Courses (Compulsory)	Credit Hours
LAW 2490	Trusts	3
LAW 2640	Family Law	3
LAW 2700	Income Tax Law and Policy	3
Total Credit Hours		9
	Perspective Courses (One Compulsory for each of Second and Third Years; more can be taken)	
LAW 3070	Gender and the Law	3
LAW 3090	Children and the Law	3
LAW 3162	Topics in Conflict Resolution	2
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	Current Legal Problems B	3
	L01 International Business Law	
	L02 International Trade Law	
	L07 Human Rights Law	
	Doctrinal Courses (Optional)	
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 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 3822	Scholarly Publication*	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	Current Legal Problems A	2
	L01 Advanced Issues in Intellectual Property	
LAW 3980	Current Legal Problems B	3
	L04 Corporations II	
	L05 Copyright	
	L06 Law of Homicide	
	L08 Miscarriage of Justice	
	L09 Trade Marks and Patents	

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	Current Legal Problems D	3
	L01 Clinical Family Law	
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 3240	Current Legal Problems C	2
	L01 Court of Appeal Clerkship*	
LAW 3360	Advanced Legal Research	3
LAW 3450	Remedies	3
LAW 3510	Corporate Tax	3
LAW 3520	Estate & Trusts Tax	3
LAW 3980	Current Legal Problems B	3
	L03 Advanced Family Law	
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: Registration

Students in the Faculty of Law are registered in Aurora by staff of the Faculty. First year students are registered in groups in August. Returning second and third year students must submit their online course selection forms by July 3, 2007. They will be registered in Aurora by staff of the Faculty during the last 2 weeks in July. All students should check their Aurora student account on a regular basis to confirm their registrations (it is the student's responsibility to verify that he/she meets Faculty of Law requirements for graduation as posted in the Exam Regulations) and access fee statements. Fall term fees are due by September 5, 2007.

I.H. Asper School of Business

Faculty of Management

General Office

268 Drake Centre

Telephone: (204) 474 6388

Fax: (204) 474 7529

E-mail: B_Comm@UManitoba.ca

Website: www.umanitoba.ca/asper

Dean: Glenn Feltham

Associate Deans: Reg Litz, Charles Mossman, Edward Tyrchniewicz

Undergraduate Program Manager: Laura Bean

Administrative Assistant/Advisor: Jennifer Jones

Student Advisors: Jenn Marchant, Tara Cleve

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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., CA

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), CGA; **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

Biscontri, R., B.Comm. (Australia), M.M., Ph.D. (Macquarie), FCPA; **Chen**, F., B.A., M.A. (China), M.S. (Utah), Ph.D. (Arizona); **Ciftci**, M., B.A. (Turkey), Ph.D. (Texas); **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. (Queen's); **Travica**, B., B. A. (Belgrade),

M. A. (State University of New York), Ph.D. (Syracuse); **Zheng, X.**, B.A. (China), M.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); **Lee, R.T.**, B.A., M.S. (San Francisco), Ph.D. (Wayne State); **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); **Turner, N.**, B.Comm., B.A., M.Sc. (Queen's), Ph.D. (Sheffield)

Assistant Professors

Bayyavarapu, H., BE (Osmania University), MBA (Calcutta), Ph.D. (Western Ontario); **Fassina, N.**, B.Sc. (Calgary), Ph.D. (Toronto); **Hershcovis, M.S.**, B.Comm. (Calgary), M.Sc., Ph.D. (Queen's); **Sonpar, K.**, B.A. (Jawaharlal), MBA (Netherlands), M.Sc. (Lethbridge), Ph.D. (Alberta); **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); **Foropon, C.**, M.Sc., Ph.D. (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).

Bachelor of Commerce (Honours) [Co-operative Education Option]

Minimum time to graduation: Five years (University 1 plus four 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 (Honours). Equivalent courses completed at other universities will be considered for admission and transfer credit only if the courses have been taken within the last 10 years. 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 [for September 2008 intake; 24 credit hours completed by April 30, pending Senate approval]

(Students must achieve a minimum grade of "C" on each course listed above.)

Track 1 with Guaranteed Admission from High School

Students who have a 90% or greater average on qualifying high school courses will be guaranteed admission to the Asper School after University 1 at the University of Manitoba on the condition that (a) they have completed all Track 1 qualifying requirements listed below and (b) they are in good academic standing.

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 [for September 2008 intake; 24 credit hours completed by April 30, pending Senate approval]

(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 encouraged 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 2007:

First Priority - Track 1 applicants who meet the guaranteed admission from high school criteria and those in the regular admission category 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.

Equivalent courses completed at other universities will be considered for admission and transfer credit only if the courses have been taken within the last 10 years.

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. Students must have graduated from the Diploma program within the last 5 years 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 and Co-operative Education Centre, 144 Drake Centre, University of Manitoba, Winnipeg, Manitoba R3T 5V4; Telephone: (204) 474 6596, Fax: (204) 474 8301.

4.2 Co-operative Education Centre

The Co-operative Education Centre assists students with the entire process from applying for the program option through graduation. The co-operative education option formally enables students to integrate academic studies with 'on the job' experience while meeting the recruitment needs of the employers. Students are employed full-time for a minimum period of four months and are actively engaged in productive work, rather than merely observing. Students will receive remuneration and constructive feedback in a facilitative learning environment. For information contact: Asper School of Business Career Services and Co-operative Education Centre, 144 Drake Centre, University of Manitoba, Winnipeg, Manitoba R3T 5V4; Telephone: (204) 474 6596, Fax: (204) 474 8301.

4.3 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.

4.4 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.

4.5 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 Ac-

countants 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 Undergraduate Program Office 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 current and upcoming academic year. Specific program information for the regular program and the co-operative education program option may be obtained from the Undergraduate 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 degree 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 that 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 degree GPA.

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. The maximum period for completion of degree requirements for students enrolled in the co-operative education option is currently under faculty review.

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 should 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 should 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 degree 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 degree 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 that 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.

Students enrolled in the co-operative education option are not permitted to take more than 3 credit hours during a co-operative work term.

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

Eligibility for the Dean's Honour List is currently under review; please contact the Undergraduate Program Office for more information. To be eligible for most 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. The degree "With Distinction" will be awarded to all students graduating with the B. Comm. (Hons.) Degree who attain a degree GPA of 3.80 or better on the following criteria:

- For students admitted to the Asper School of Business in 2000 and thereafter: The degree 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.

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 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 consideration 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.

SECTION 6: Program Requirements for the Asper School of Business Bachelor of Commerce (Honours) Program – Track 1 And Track 2

6.1 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) [for September 2008 intake; 24 credit hours completed by April 30, pending Senate approval]
- 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 and Track 1 with Guaranteed Admission from High School 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 should complete all outstanding Qualifying Year (Track 1) courses during their first year after admission to the Asper School of Business and must 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.

6.2 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

6.3 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
	Dean's Office	Aboriginal Business Studies
Supply Chain Management	Generalist	098G
	International Business	098N
	Logistics and Supply Chain Management	164L
Marketing	Operational Research/Operations Management	027L
	Entrepreneurship/Small Business Marketing	118E 118
Warren Centre for Actuarial Studies and Research	Actuarial Mathematics	010A

6.4 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 3350, 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.

Students admitted in Fall 2006 and thereafter are required to attain a minimum grade of "C+" in all Actuarial courses in order to graduate with a Actuarial Mathematics 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.

Students interested in pursuing the Management Information Systems Major are also encouraged, but not required, to complete COMP 1020.

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/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.

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. Students must have graduated from the Diploma program within the last 5 years to be eligible for admission. 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. Students must have graduated from the Diploma program within the last 5 years to be eligible for admission. 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. Students must have graduated from the Diploma program within the last 5 years to be eligible for admission. 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. Students must have graduated from the Diploma program within the last 5 years to be eligible for admission. 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 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/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), 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

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 3350, 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.

Students admitted in Fall 2006 and thereafter are required to attain a minimum grade of "C+" in all Actuarial courses in order to graduate with a Actuarial Mathematics Major.

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.

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

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

NOTE: Students in the ETP Joint Program who want to major in MIS will be required to take MIS 2000 as one of their Business options.

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.

Students interested in pursuing the Management Information Systems Major are also encouraged, but not required, to complete COMP 1020. 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/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.

School of Medical Rehabilitation

General Office

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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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Registration Assistance: Doris Weigel

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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.), M.Sc.(Rehab) (Manitoba); **Mendez, L.,** B.M.R.(O.T.) (Manitoba).

Sessional and Term Instructors:

Becker, P., B.A. (Winnipeg), B.M.R.(O.T.) (Manitoba); **Bergen, C.,** B.M.R.(O.T.) (Manitoba), M.A.(Marriage, Family and Child Counselling) (California); **Brown, C.,** B.M.R.(O.T.) (Manitoba); **Davies, E.,** B.A., 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); **Kowalski, B.,** B.M.R.(O.T.) (Manitoba); **MacLeod-Schroeder, N.,** B.Sc.(O.T.), M.Sc. (Western Ontario); **Miller, K.,** B.Sc.(O.T.) (Western Ontario); **Neufeld, J.,** B.M.R.(O.T.) (Manitoba); **Rogers, T.,** B.M.R. (O.T.) (Manitoba); **Skrabek, S.,** B.Ed. (Winnipeg), B.M.R.(O.T.) (Manitoba); **Smith, K.,** 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).

Instructor 2:

McMurray, M., B.P.E., B.M.R.(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); **Horbal, R.,** B.P.E. (Manitoba), Cert.Ed. (Brandon), B.M.R.(P.T.) (Manitoba); **Ryan-Arbez, N.,** B.M.R. (P.T.) (Manitoba); **Urban, L.,** B.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).

Term Instructors:

Abbott, B., B.M.R.(P.T.) (Manitoba), M.D. (Saskatchewan); **Fruehm, C.,** B.M.R.(P.T.) (Manitoba); **Lavallee, R.,** B.A., B.M.R.(P.T.) (Manitoba), (F)CAMT; **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); **Simonsen, M.,** Dip.(P.T.), B.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).

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); **Miniski**, 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).

Sessional and Term Instructors:

Dmitrowicz, S., R.R.T. (Health Sciences Centre); **Kresta**, P., B.Sc. (New Brunswick), M.H.Sc.(P.Eng.) (Toronto); **Mestdagh**, F., 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). Accreditation status was accorded the degree program in 2003. 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 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 College of Occupational Therapists of Manitoba (C.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.

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 within the first 2 weeks of classes for Occupational Therapy, by August 31 for Respiratory Therapy, and 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 within the first 2 weeks of classes of the academic year in which they commence classes. Second year students must provide proof of re-certification by October 1 of their second year in the program.

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 within the first 2 weeks of classes of the academic year in which they commence classes. Second year students must provide updated results by October 1 of their second year in the program.

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, some who may 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; 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: Registration

Occupational Therapy

See University of Manitoba Graduate Calendar for registration procedures for the Master of Occupational Therapy (M.O.T.) program.

Physical Therapy and Respiratory Therapy

Effective 2007-2008, undergraduate Physical Therapy (P.T.) and Respiratory Therapy (R.T.) students (Years 1 to 3) will be responsible for/required to register themselves through Aurora Student. Registration will no longer be done automatically by Doris Weigel (support staff who previously processed registrations). Because Aurora Student is available 7 days per week, 24 hours per day, students will have greater access/flexibility regarding the registration process.

To begin registration, go to the University of Manitoba home page (www.umanitoba.ca) and click on 'Aurora Student' under the Student Links section. Click on 'Enter Secure Area'. Log in using your student number and PIN (Personal Identification Number) from MyUMInfo. If you have forgotten your PIN number, please contact the Registrar's Office at (204) 474-9420 for assistance. If you do not yet have a PIN number, enter your birth date as instructed (YYMMDD). Follow all prompts to set your security access. Before continuing, you will be asked to agree to 'Terms of Use'. Once you agree, you will be taken to the 'Main Menu'. Under the 'Personal Information' tab, you can change your PIN and update your address, etc.

Click on 'Enrolment and Academic Records'. Select 'Registration', then 'Add/Drop Classes'. You will be asked to choose a 'Term', P.T. and R.T. undergraduate students are to register in the 'Full Year Term' (not Fall or Winter Terms), i.e. listed as '2007-2008 Bannatyne Undergrad'. Register for the courses that pertain to the respective year that you are entering into (note that you will only be required to enter the course reference number (CRN) that pertains to each of the courses listed in that specific year of the program; each year, new CRN's are assigned to courses).

Students are required to "Submit Changes" after Add/Drop transactions. To log out of the system, it is important that you click on the 'Exit' button. Use Aurora Student to obtain a fee assessment. Pay all fees by the fee payment deadline.

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 until instructed to do so. Students falling into this category should contact Doris Weigel at (204) 789-3248 or dweigel@cc.umanitoba.ca for further information.

PHYSICAL THERAPY

First Year P.T. Student Information

The courses in the first year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hrs.
Medical Rehabilitation	REHB	1200	3
Medical Rehabilitation	REHB	1480	3
Medical Rehabilitation	REHB	1490	2
Medical Rehabilitation	REHB	1500	3
Physical Therapy	PT	1700	6

Physical Therapy	PT	1730	10
* Physical Therapy	PT	1740	7
Physical Therapy	PT	1750	6
Physical Therapy	PT	1910	5

* The Clinical Co-ordinator will notify students as to their eligibility to register for this course. As such, please do not register until instructed to do so.

Total credit hours for First Year: 45

Second Year P.T. Student Information

The courses in the second year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hrs.
Medical Rehabilitation	REHB	2410	4
Medical Rehabilitation	REHB	2450	3
** Medical Rehabilitation	REHB	2460	3
Physical Therapy	PT	2720	3
Physical Therapy	PT	2750	2
Physical Therapy	PT	2760	6
Physical Therapy	PT	2770	6
* Physical Therapy	PT	2780	10
Physical Therapy	PT	2790	8
Physical Therapy	PT	2890	3

* The Clinical Co-ordinator will notify students as to their eligibility to register for this course. As such, please do not register until instructed to do so.

** See section on Transfer of Credit/Advanced Standing prior to registering for this course.

Total credit hours for Second Year: (full course load) 48;

(without REHB 2460) 45

Third Year P.T. Student Information

The courses in the third year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hrs.
Medical Rehabilitation	REHB	3410	3
Medical Rehabilitation	REHB	3460	3
Medical Rehabilitation	REHB	3930	3
Medical Rehabilitation	REHB	3940	3
Physical Therapy	PT	3730	3
Physical Therapy	PT	3740	3
Physical Therapy	PT	3750	6
Physical Therapy	PT	3760	7
Physical Therapy	PT	3880	8
* Physical Therapy	PT	3920	8

* The Clinical Co-ordinator will notify students as to their eligibility to register for this course. As such, please do not register until instructed to do so.

Total credit hours for Third Year: 47

Total program credit hours: 140

RESPIRATORY THERAPY

First Year R.T. Student Information

The courses in the first year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hrs.
Medical Rehabilitation	REHB	1200	3
Medical Rehabilitation	REHB	1480	3
Medical Rehabilitation	REHB	1490	2
Respiratory Therapy	RESP	1270	3
Respiratory Therapy	RESP	1280	2
Respiratory Therapy	RESP	1290	2
Respiratory Therapy	RESP	1320	3
Respiratory Therapy	RESP	1330	3
Respiratory Therapy	RESP	1360	3
Respiratory Therapy	RESP	1370	6
Respiratory Therapy	RESP	1380	4

Total credit hours for First Year: 34

Second Year R.T. Student Information

The courses in the second year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hrs.
Medical Rehabilitation	REHB	2450	3
** Medical Rehabilitation	REHB	2460	3

tion

Respiratory Therapy	RESP	2300	6
Respiratory Therapy	RESP	2310	3
Respiratory Therapy	RESP	2320	6
Respiratory Therapy	RESP	2330	3
Respiratory Therapy	RESP	2340	3
Respiratory Therapy	RESP	2350	3
Respiratory Therapy	RESP	2360	3
Respiratory Therapy	RESP	2370	3

** See section on Transfer of Credit/Advanced Standing prior to registering for this course.

Total credit hours for Second Year: (full course load) 36;

(without REHB 2460) 33

Third Year R.T. Student Information

The courses in the third year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hrs.
Medical Rehabilitation	REHB	3460	3
Respiratory Therapy	RESP	3300	3
Respiratory Therapy	RESP	3310	10
Respiratory Therapy	RESP	3320	3
Respiratory Therapy	RESP	3330	4
Respiratory Therapy	RESP	3340	1
Respiratory Therapy	RESP	3350	3
Respiratory Therapy	RESP	3360	3
Respiratory Therapy	RESP	3370	4
Respiratory Therapy	RESP	3380	4

Total credit hours for Third Year: 38

Total program credit hours: 108

Registration Assistance

When registering for courses, if problems are encountered that you cannot resolve on your own, contact Doris Weigel at (204) 789-3248 or dweigel@cc.umanitoba.ca. Your queries will be addressed as soon as possible.

Students on "Hold"

If your records are on "Hold", you are prevented from any registration transaction until you have cleared this status.

Transfer of Credit/Advanced Standing

A memo will be circulated (in January of each year) to students registered in Year 1 of the Physical Therapy and Respiratory Therapy undergraduate programs. At that time, students will be asked to submit a request for Transfer of Credit/Advanced Standing regarding a course (where passing grade obtained) that was previously taken and is equivalent to REHB 2460, Statistics (taught in second year of the curriculum).

The course will be evaluated as to whether it is transferable or whether advanced standing can be granted in lieu of course REHB 2460. If approval is granted, the student will be notified of the decision (memo to be placed in the student's SMR mailbox no later than mid-March) prior to second year registration occurring.

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. There is no longer a paper application. 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.

Change of Address

Effective 2007-2008, undergraduate Physical Therapy and Respiratory Therapy students (Years 1 to 3) will be able to/be responsible for updating their home/permanent addresses using Aurora Student. So as to keep your SMR personnel file up to date, also provide your address changes to the General Office of School of Medical Rehabilitation.

E-mail Accounts

All students are expected to have an e-mail account with the University of Manitoba. As a student in the School of Medical Rehabilitation, you are expected to check your e-mail regularly.

Faculty of Medicine

General Office

260 Brodie Centre, 260-727 McDermot Avenue Winnipeg MB R3E 3P5

Telephone: (204) 789 3557

Fax: (204) 789 3929

E-mail: registrar_med@umanitoba.ca

Website: umanitoba.ca/medicine

Dean: Dean Sandham

Associate Dean (Undergraduate): Bruce Martin

Associate Dean (Medical Education): William Fleisher

Associate Dean (Student Affairs): Leigh Fraser-Roberts

Assistant Dean (Admissions): Fred Aoki

Director of Operations: Keith McConnell

Manager Admissions and Student Affairs: Beth Jennings

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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 and Investigative Medicine, Health Equity, and Survival Tactics 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 Mani-

toba 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 humanities or social science. 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 be registered with the College of Physicians and Surgeons of Manitoba prior to any 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. Faculty of Medicine regulations and requirements change from time to time. Detailed information concerning the general regulations governing admissions, evaluation, academic progress and withdrawal for undergraduate 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 Progress Committee.

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 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.

The Faculty of Medicine has a Conscientious Objection Policy through which medical students may request exemption from specific medical procedures or services. Requests are evaluated and, if granted, do not absolve students from the following aspects of the procedure or service in question, including: cognitive knowledge (indications, contraindications, benefits and risks); full and nonselective disclosure to support Informed Consent by patients; patient non-abandonment; appropriate patient referral; and non-discrimination. A full list of criteria can be found on the Conscientious Objection application form. A Conscientious Objection cannot limit a student's educational experience such that his or her overall medical education will be compromised and all affected curricular time must be made up otherwise. For information, contact the Undergraduate Medical Education Office.

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 Progress Committee. 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 Practise 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

The College of Physicians and Surgeons of Manitoba is the regulation body for the physicians in Manitoba. All medical students must be registered with the College of Physicians and Surgeons of Manitoba throughout their academic program. For information on registration in Manitoba contact: 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), and Year 2 (Blocks 4-6)

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 six mandatory programs: Cognitive, Clinical Skills, Problem Solving, Medical Humanities and Laboratory and Investigative Medicine, Health Equity, 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, law, and palliative care and integrative medicine), the Laboratory and Investigative Medicine program, and Health Equity 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: 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, 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 also be mandatory at certain lectures. Attendance is taken at mandatory sessions; excessive absences are brought to the attention of the Associate Dean UGME.

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 clin-

ical 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: There are two major elective periods during clerkship. The first period occurs at the end of the core clinical rotations; the second occurs after the CaRMS National Interview Period and is generally restricted to the Province of Manitoba. Throughout the clerkship, students must pursue education in a minimum of three different disciplines with a minimum duration of two weeks each. Electives may be pursued in a setting of the student’s own choice, and must be approved by the faculty elective coordinator.

ACLS/ CaRMS Interviews / Floating Electives/Special Curriculum Initiatives: Following the winter holiday break students will participate in a mandatory ACLS course, attend their national CaRMS Interviews and, time permitting, also participate in floating electives and special curriculum initiatives.

MCCQE Part I Refresher course: 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 Progress Committee 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 Progress Committee, 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.
- Place students on Monitored Academic Status or Probation.
- 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 Progress Committee.

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 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. (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 Skills: The student’s performance in the Clinical Skills program will be assessed by observation of performance and by examination. There is a Clinical Skills evaluation committee, responsible to the COE Pre-Clerkship, that determines the standards of performance expected of students and de-

velops examinations. There will usually be an examination of Clinical Skills at the end of each year. The format of the examination will normally be an "objective structured clinical examination," (OSCE). The Clinical 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 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 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 an individual's 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 are expected to undertake remedial study at a time determined by the Faculty during the summer period. Following the remediation, they will sit a supplemental examination comparable but different to that failed. Students who fail the Clinical 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 Progress Committee 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).

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 and Investigative 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.

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 Learning Goals and Objectives.

Students must complete a self-evaluation Interim 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 (FITER) 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, and surgery. For internal medicine the NBME examination will take place after the internal medicine selective ro-

rotation. For surgery the NBME examination will take place following the major surgery rotation. 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 Rotation in Clerkship (MSR)

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 Rotation. 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 component of the MSR 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 evalua-

tion 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.

Failure of the Clerkship

The student will be determined to have failed the Clerkship Program if:

1. Failure of Clinical Assessments

The student has received failing evaluations in one or more of the following:

- a) Two major clerkships in different disciplines (Internal Medicine including selective, Surgery including selective, Pediatrics, Obstetrics/Gynecology, Psychiatry, and Family Medicine)

OR

- b) One major clerkship and:
 - i) its remedial, or
 - ii) an ITC remedial, or
 - iii) an MSR remedial, or
 - iv) an elective remedial

OR

- c) Remedials in two of the following:
 - i) Anesthesia
 - ii) Emergency Medicine
 - iii) Otolaryngology
 - iv) Ophthalmology
 - v) Elective
 - vi) ITC

2. 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, including its remediation.

3. 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.

Terms for the Repeat Clerkship

A student who fails the Clerkship Program, be it because of failure of clinical assessments, failure of examinations, or failure of remediation (as above), immediately ceases in the program, and will be required to repeat the Clerkship Program. The COE Clinical will examine the complete record of the student to design a Repeat Clerkship to correct the deficiencies (unless otherwise prohibited – see Section 3 Academic Relations), which will in any case last a minimum of 24 weeks. This Repeat Clerkship may include, if the COE Clinical deems appropriate, rotations and examinations already passed. Elective time may be included, at the discretion of the COE. The student must satisfactorily meet all clinical assessments, examinations, the CCE, as well as remedial rotations (as appropriate). The Repeat Clerkship will be submitted to the Progress Committee for review and final approval.

Terms for Failure of the Repeat Clerkship

The terms for failure of the Repeat Clerkship are the same as listed above in "Failure of a Student in the Clerkship Program." A student who has failed the Repeat Clerkship will be required to withdraw from the Faculty of Medicine program.

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 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. For example, on a 6-week rotation, this represents 4 days. Whenever a call-day is missed it is up to the discretion of the rotation director how and when this time is to be made up.

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.

Students who miss a statutory holiday because they are on-call that day are entitled to a day off in lieu. This day must be taken in the same rotation. When there is a difference between statutory holidays between the hospitals and the University, Clerkship students are expected to follow the hospital schedule.

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 representa-

tives 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 Progress Committee and presented by either the student representatives, the Associate Dean Student Affairs, or the Student Advocate. If the Progress Committee upholds the failure, then the student may appeal the result within 28 working days of receipt of the failure by submitting a written appeal to the Progress Committee.

On the receipt of such an appeal the Progress Committee 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: Academic Research in Medical Education

Part of the educational responsibility of the Faculty of Medicine is to perform research on innovations and effectiveness in medical education. Whenever students are the research subjects, all such research must have approval from the Faculty of Medicine Research Ethics Board. Where students are studied individually their participation will be voluntary. Research findings will not identify individuals.

SECTION 7: Other Undergraduate Programs

7.1 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.

7.2 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.

SECTION 8: Registration Information

Initial Access Times

Students in the Faculty of Medicine Undergraduate Medical Education Program will be given access time to the registration system (Aurora Student) in July and August.

For instructions on how to register online, please refer to the chapter, "Registration Information: Aurora Student. Registration must be complete prior to the first day of classes.

Please note that you are registering for the "2007-2008 Bannatyne Undergrad Session". Contact Admissions and Student Affairs at (204) 789-3499 should you encounter difficulties in registering.

Prior to Registration

New Students: All incoming students must complete application to the College of Physicians and Surgeons and submit immunization records prior to registration. If you are unable to submit these documents by the first day of classes please contact Admissions and Student Affairs.

Returning Students: All returning students must have active CPR certification on file in the Faculty of Medicine office prior to registration.

Web 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 web registration system. Students who fall into this category should contact the office for further information.

Bachelor Science in Medicine and Summer Early Exposure Programs

Students approved to participate in summer enrichment programs will be registered by the Faculty.

Courses for the Undergraduate Medical Education program are:

Program & Year	Faculty/School Codes	Course Information	Dept. Number & Course Number	Lecture Section	Lab Section
Medicine I	05	UGME 1000	L01	Not Applicable	
Medicine II	05	UGME 2000	L01	Not Applicable	
Medicine III	05	UGME 3000	L01	Not Applicable	
Medicine IV	05	UGME 4000	L01	Not Applicable	
		UGME 4990	L01	Not Applicable	

Section 9: 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.; **Duke**, P., M.D. (Manitoba), F.R.C.P.C., F.A.C.A.; **Jacobson**, F., MB., ChB. (South Africa), M.H.P.E. (Illinois), F.R.C.P.C.; **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

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.; **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. (Saskatchewan), 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.; **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.; **Dabrowski**, P., M.D. (Warsaw), 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.; **Giard**, J., B.Sc. (Hons) (Winnipeg), M.D. (Manitoba); **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.; **Harms**, S., M.B., Ch.B. (Orange Free State), F.R.C.P.C.; **Hawaleschka**, A., B.Sc., 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.; **Leen**, D., M.B., Ch.B., B.A.O. (Ireland); **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.; **Nair**, U., M.B., Ch.B. (Glasgow), F.F.A.R.C.S.; **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.; **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.; **Tenenbein**, P., B.Sc. (Med), 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.; **Docking**, L., B.Sc. (Med.), M.D. (Manitoba), F.R.C.P.C.; **Lambert**, D., B.Sc., M.D. (Manitoba), F.R.C.P.C.; **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.; **Muter**, T., B.Sc. (Med), M.D. (Manitoba), F.R.C.P.C.; **Wolfe**, S., B.Sc. (Med.), M.D. (Manitoba), F.R.C.P.C.

Biochemistry and Medical Genetics

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); **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.; **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); **Simard**, L., B.Sc. (McGill), Ph.D. (Toronto); **Szathmáry**, E., C.M., B.A. (Hons.), Ph.D., LL.D. (Toronto), D.Sc. (Western Ontario), D.Litt.S. (St. Michael's College), F.R.S.C.; **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); **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); **Hatch**, G., Ph.D. (Manitoba); **Hicks**, G., B.Sc., Ph.D. (Manitoba); **Leygue**, E., M.Sc. (Paul Sabatier), D.E.A., Ph.D. (P & M Currie); **Los**, M., M.D. (Kra-kow), 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); **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)

Lecturers

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.

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)

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. (Manitoba); **McIlraith**, 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. (Manitoba), Ph.D. (Ottawa); **Bow**, S., B.Sc. (Toronto), M.Sc. (Calgary), Ph.D. (Waterloo); **Dyck**, K. B.A., M.A. (Manitoba), Ph.D. (South Dakota); **Ellis**, E., M.A., Ph.D. (California); **Furer**, P. B.A., M.A., Ph.D. (Manitoba); **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. (Minnesota State), M.A., Ph.D. (North Dakota); **Brown-DeGagne**, A., B.A., Ph.D. (Dalhousie); **Cartwright**, H., B.A. (New Brunswick), M.A., Ph.D. (Lakehead); **Clancy**, C., B.A., M.A., Ph.D. (Toronto); **Cohen**, C., B.A., M.A., Ph.D. (Manitoba); **Cornock**, B., B.A. (Brandon), M.A., Ph.D. (Windsor); **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); **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); **Gibson**, G., B.A. (Winnipeg), M.A., Ph.D. (North Dakota); **Greenwood**, L., B.A. (Calgary), M.A., Ph.D. (Manitoba); **Hack**, T., B.Sc. (Calgary), M.A., Ph.D. (Manitoba); **Haugen**, M., B.A. (Brandon), M.A., Psy.D. (American School of Professional Psychology, Hawaii); **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); **Koven**, L., B.A. (Manitoba), 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. (Guelph), 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 School of Professional Psychology, Chicago); **Rallo**, J., B.A. (McMaster), M.A., Ph.D. (Manitoba); **Rhodes**, L., B.A. (Winnipeg), M.A., Ph.D. (Concordia); **Slusky**, A., 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. (Manitoba), M.A., Ph.D. (Simon Fraser); **Whitney**, D., B.A. (Winnipeg), M.A., Ph.D. (Saskatchewan).

Lecturers

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); **Butler-Jones**, D., M.D., M.H.Sc. (Toronto), C.C.F.P., F.R.C.P.C., F.A.C.P.M.; **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. (Otago), F.R.A.C.P., F.R.C.P. (London), 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. (UC San Francisco - Berkeley); **Orr**, P., M.Sc. (Manitoba), M.D. (Toronto), F.R.C.P.C.; **Postil**, 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), 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.Phil. (Oxford), F.R.C.P.C.

Associate Professors

Bartlett, J., M.Sc. (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); **Elliott**, L., M.D. (Manitoba), M.Sc. (Dalhousie), F.R.C.P.C., C.C.F.P.; **Finlayson**, M., B.M.R., M.Sc., Ph.D. (Manitoba); **Fowke**, K., Ph.D., B.Sc.(Hons.) (Manitoba); **Hammond**, G., B.Sc., M.D., C.M. (McGill), F.R.C.P.C.; **Kliewer**, 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); **Plourde**, P., M.D. (Ottawa), F.R.C.P.C.; **Plummer**, F., M.D. (Manitoba), F.R.C.P.C.; **Sevchenyus**, 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)

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Medicine

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SECTION 1: Academic Staff

Professor Emeritus:

Turner, R., B.Mus. (McGill), M.Mus. (Peabody), D.Mus. (McGill); Engbrecht, H., A.R.C.T., B.Mus. (Bethel College), M.Mus. (Southern Methodist)

Professors

Cooper, J.E., Dip. P. and O.T. (Toronto), B.O.T., M.Sc., Ph.D. (Manitoba); Jensen, K., B.Mus. (Saskatchewan), L.Mus. (Saskatchewan), Recital Dip. (Royal Academy of Music), L.R.A.M., Ph.D. (London); 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); Friesen, E., B.Mus., B.Ed., M.M., (Manitoba); 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); 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); Duggleby, J., B.A. Mus. (St. Francis Xavier); Dyer, S., B.Mus. (McGill), M.Mus. (DePaul); Enns-Braun, C., B.ChurchMus. (CMBC), B.Mus. (Manitoba), M.A. (Western Ontario); Evans, P., Licentiate Dip. (McGill); 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); Kula, J., B.Mus., B.Ed. (Manitoba); 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); Paley, R., B.Mus. (Manitoba); Pokhanovski, M., Artist Dip. (St. Louis); Pollard, G., B.Mus. Ed. (Bemidji), M.Mus. Ed. (Bemidji); Reimer, B., B.Mus. (McGill), M.Mus. (S.U.N.Y.); Ridd, L.; Roy, L.; Schellenberg, K., B.Mus, B.Ed. (Manitoba); Scholz, D., B.Mus. Ed. (Regina); Smith, S., B.Mus. Ed. (Saskatchewan), M.M. (Northwestern); Stafford, E.; Siwik, R., B.Sc. (Manitoba); 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 instill 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 giv-

en 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 Denzilwright 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. 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

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, Collegium 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

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 Student Handbook; 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. 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.

Supplemental examinations are not normally given in the Faculty of Music, with the following exception: 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 term 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 academic level by the end of the next term 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 Dean.

4.6 Dean's Honour List

B.Mus. students who achieve a term Grade Point Average of 3.55 and are registered in a minimum of nine credit hours per term 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
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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
	*students entering Year 1 must select a non-music teachable minor	

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 4180	Ensemble	2
MUSC 3960	Music of the 20th Century 1	3	MUSC 4190	Ensemble	2
MUSC 3970	Music of the 20th Century 2	3	MUSC 4470	Major Practical Study	6
	Music History elective	3	MUSC 3970	Music of the 20th Century 2	3
	Music Theory elective	3	EDUB 2240	Teaching Music in Senior Years	3
	Music or non-music elective	3	or		
	Non-Music electives	6	EDUB 2160	Teaching Music in Early/Middle Years Music Education (area of specialization)	12
Total Credit Hours 31				Teachable Minor or second Music specialization	6

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		

Interession:

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 (12 if MUSC 4160 is elected)	9
	Music or Non-Music Electives	6
	Non-Music Electives	6
Total Credit Hours 31		

Integrated Bachelor of Music (Music Education)/
Bachelor of Education Program

Total Credit Hours 34

Interession:

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		

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 (fulfills University "M" requirement)	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 3000 and 4000 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 3000 and 4000 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 by 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

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,

er, 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 in 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.

Registration Information

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 4. Specifics will be given in a letter that will be sent to you. 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. 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*. Music students fulfill the "M" requirement with MUSC 3230. 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 or a second Music specialization 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 afternoon
Ensemble Schedule	
Large Ensemble MUSC 1180, MUSC 2180, MUSC 3180, MUSC 4180, MUSC 5180 and MUSC 7180:	
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 MUSC 1190, MUSC 2190, MUSC 3190 and MUSC 4190:	
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 and XIE	Friday 2:30 - 4:30
*Recorder	TBA

Please Note: Ensemble times are subject to change

* offered when sufficient interest

Faculty of Nursing

General Office

Helen Glass Centre for Nursing

Telephone: (204) 474 7452 or (204) 474 8202 Information Line

Fax: (204) 474 7682

E-mail: nursing_info@umanitoba.ca

Website: www.umanitoba.ca/nursing

Dean: Dean Care

Associate Deans:

Undergraduate: Christine Ateah

Graduate: Pamela Hawranik

Research: Maureen Heaman

Program Coordinators:

International Affairs: Ruth Dean

Four-Year Program: Penny Davis

Learning Labs: Nicole Harder

BPRN/Placements: Sandy Gessler

Student Services Coordinator: Karen Dempsey, (204) 474 7334

Undergraduate Advisors:

Karen Nickerson (BPRN), (204) 474 6733

Martin Speight, (204) 474 6217

Terri Tauffenbach, (204) 474 6734

Grant Queskekapow, Norway House, (204) 359 6251

Registrar: Catherine Johnston, (204) 474 9955

Student Services Assistant: Eva Brasko, (204) 474 6655

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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).

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); Diehl-Jones, W., B.Sc. (Brandon), M.Sc., Ph.D. (Manitoba), B.Sc.N. (Western Ontario); 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), Woodgate, R., B.N., M.N., 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.); 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); Sawatzky, J.V., B.N., M.N., Ph.D. (Manitoba); Schultz, A., B.S.N. (Victoria), M.N. (Victoria), Ph.D. (BC); Scruby, L.S., B.N. (McGill), M.S. (Minnesota), Ph.D. (Manitoba); Temple, B., B.N. (Brandon), M.N. (Manitoba), Ph.D. (UBC); Wall, K., B.Sc.N., (McMaster), M.N. (Manitoba).

Lecturers

Lahaie, U., B.N., M.N. (Manitoba).

Instructors

Allman-Anderson, P., B.Sc. (Andrews), M.Sc. (Aston); Anderson, B., B.N. (Manitoba); Ashcroft, T., B.N., M.N. (Manitoba); Avery, L., B.N., M.N. (Manitoba); Bowser, T., B.N. (Manitoba); Butler, L., B.Sc.N., M.N. (Nova Scotia), Ph.D. (Ontario); Davis, P., B.Sc.N. (Saskatchewan), M.Ed. (Manitoba); Dean, R.A., B.N. (Manitoba), M.Sc. (Minnesota), Ph.D. (Manitoba); Denecheze, C., B.A. (Indiana), B.N. (Manitoba), M.Sc. (North Dakota); Dennis, C., B.Sc.N. (Toronto), M.Sc.N. (West Ont), Ph.D. (Toronto); Duff, E., B.Sc.N. (Brandon); Enns, C.L., B.N., M.N. (Manitoba); Enns, M., B.N.,

(Manitoba); **Fallis**, W., B.Sc.N. (Windsor), M.N. (Manitoba), Ph.D. (Washington); **Gessler**, S., R.N., B.A., M.P.A. (Manitoba/Winnipeg); **Goodwin**, B., B.A., B.N., M.N. (Manitoba); **Harder**, N., B.N., M.P.A. (Manitoba); **Hrabowych**, E., B.N. (Manitoba); **Jensen**, F., B.N. (Queens), M.N.Sc. (Pittsburgh); **Katz**, A., B.N., M.N., Ph.D. (Manitoba); **Klimczak**, M., B.N., M.N. (Manitoba); **Kluka**, S.M., B.N., M.N. (Manitoba), Ph.D. (UBC); **Kozun**, D., B.N. (Manitoba); **Leary**, K., B.E. (Manitoba), M.N. (York); **Lee**, A., B.N. (Athabasca), M.H.Sc.(N) (Australia); **Lees**, M., B.Sc.N (Victoria), M.S. (North Dakota); **Loewen**, L., B.A., B.N., M.N. (Manitoba); **MacDonald**, J., 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); **Nordick**, C., B.Sc., B.N., (Manitoba); **O'Rourke**, D., B.N., M.N. (Manitoba); **Pangman**, V.C., B.A., M.Ed., M.N. (Manitoba); **Peters-Watral**, B., B.N. M.N. (Manitoba); **Plouffe**, J., B.Sc.N. (Alberta), M.N. (Manitoba); **Russell**, C., B.Sc.N. (Ohio), M.S.N. (W. Virginia), Ph.D. (Arizona); **Sawatzky-Dickson**, D., B.N., M.N. (Manitoba); **Schoenborn**, B., B.N. (Manitoba); **Secco**, L., B.Sc.N. (St. Francis Xavier), M.N. (Manitoba), Ph.D. (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); **Sidloski**, T., B.N. (Manitoba); **Stenkes**, S., B.N., M.N. (Manitoba); **Taylor-Mendes**, C., B.A., M.Ed. (Manitoba); **Toth**, J., B.A., M.N. (Manitoba); **Venkatesh**, P., B.Sc.N. (Windsor), M.N. (Manitoba); **Von Aweyden**, F., B.Sc.N. (Lakehead); **Wallis**, B., B.N., 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 promoting and maintaining health, and provides 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 or the St. Boniface General Hospital, 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.

3.2 Admission Requirements: Four-Year Baccalaureate Nursing Program

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.

The adjusted grade point average (AGPA) for admission will be calculated on the most recent 60 credit hours of course work. If an applicant has less than 60 credit hours, the AGPA will reflect all credit hours completed (i.e.: a minimum of 30 credit hours to a maximum of 60 credit hours).

Courses completed at recognized universities other than the University of Manitoba must be assessed as exact equivalents in order to meet the specific course requirements. Note: It may not be possible to establish equivalency of courses completed over 10 years prior to application. In those situations, required courses may have to be repeated. Only courses completed within 10 years prior to the date of admission to the Faculty of Nurs-

ing will be considered for transfer credit; however, all courses (regardless of age) within the most recent 60 credit hours will be included in the calculation of AGPA.

Course requirements for admission: Four-Year Baccalaureate Nursing Program

Students must meet the entrance requirements under Option 1 or Option 2, and complete the University written English requirement to be eligible for admission (see Note 1). All required courses must be at a 1000 level or higher. "0900" level courses (e.g. ENGL 0930) are not accepted for admission or transfer credit. Preference will be given to Option 1 applicants. The lowest AGPA accepted in 2006 was 2.733 for Option 1, and 3.036 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 Anatomy of the Human Body
ZOOL 1330 Physiology of the Human Body
NURS 1260 Human Growth & Development
NURS 1280 Introduction to Nursing
MBIO 1220 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 [Introduction to University] is not a Humanities course. "0900" level courses are not accepted.

Note 3: Select from: Introduction to Psychology PSYC 1200 (6), **or** Introduction to Sociology SOC 1200 (6), **or** Human Origins and Anthropology ANTH 1210 (3) and Cultural Anthropology ANTH 1220 (3).

Note 4: With the exception of Geological Sciences (GEOL 1xx0), 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. 1000 level introductory Geological Sciences courses (GEOL 1xx0) now offered under the Clayton H. Riddell Faculty of Environment, Earth, and Resources, will be accepted as Science courses if taken prior to September 1, 2006.

Note 5: BIOL 1110 [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:

1000 level English (3 credit hours)
1000 level Science (3 credit hours)

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.

Applicants from Diploma and Degree Nursing Programs Category

Applicants who have attended a nursing diploma or degree program, the completion of which would result in the graduate's eligibility to write the

Canadian Registered Nurse Examination (or equivalent) in order to qualify for registration to practice as a Registered Nurse, must meet the admission requirements outlined below.

1. Meet admission requirements under Option 1 or Option 2, including the competitive AGPA in the year of application.

2. Submit, in writing, the reason for leaving the previous or current program and for applying to the Four-Year Baccalaureate Nursing Program at the University of Manitoba.

3. Submit a letter from the Director, Dean, Coordinator, or Head of the Nursing program in which the student was previously or is currently registered including the student's status in the previous or current nursing program (including matters pending) with regard to failures, probation, suspension, determination of professional unsuitability, disciplinary action, or other related matters. This letter will be requested by the Admissions Office.

The Admissions Committee reserves the right to deny admission to the University of Manitoba Nursing program based on any of the supplementary information.

Appeals of decision are limited to the question of procedural regularity only. The merits of the decision are not subject to review.

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 supplementary application form that is sent by the Admissions Office following submission of the regular application. The Supplementary Application and following information are due no later than June 1:

1. An autobiography
2. A typed personal statement that identifies the reasons for selecting Nursing as a career choice; describes their education, employment, and volunteer experience; relates the significance of these experiences to their choice of Nursing as a career; and provides their reasons for applying in the Special Consideration category.
3. Three professional letters of reference that address the applicants' suitability for Nursing and their potential for success. Examples of suitable references include a teacher, employer, clergy, and health professional, and should not include friends or family.

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 ad-

mission 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), 890 Pembina Highway, Winnipeg, MB R3M 2M8.

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 LPN 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 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.

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 Research Methods, NURS 4220 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 Baccalaureate Program for Registered Nurses.

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 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

Students entering second, third, and fourth years of the Four-Year Baccalaureate Nursing Program must have a minimum Degree GPA of 2.5 to proceed in the program and a minimum Program GPA of 2.5 to be eligible for graduation. 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 Baccalaureate Nursing 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.

4.2 Regulations Applicable to the Baccalaureate Program for Registered Nurses

Scholastic Progress

Students in the Baccalaureate Program for Registered Nurses must have a minimum Degree GPA of 2.5 to proceed in the program and a minimum Program GPA of 2.5 to be eligible for graduation. 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.

Criminal Record Search/Child Abuse Registry Check

Students in the BPRN are required to hold active registration with the CRNM which further requires a yearly self-declaration of any criminal charges or convictions. In addition, at any time prior to completing the BPRN (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. In addition, please note that some clinical practice sites require that students complete a Criminal Record search and/or a Child Abuse Registry check.

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 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 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 and July.

Degree with Distinction

Four-Year Baccalaureate Nursing Program: Students who obtain a Degree 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 Degree 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 minimum Term GPA of 3.5, including courses taken on a Letter of Permission, and who are registered for a minimum of 12 credit hours, will be placed on the Dean's Honor list. Note: The Dean's Honor list will be determined after each term of study.

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, including students who are certified at the Instructor level, must provide proof of re-certification annually by June 1 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 program 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.

"0900" Level Courses

Although students may register for "0900" 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 to not 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 enrolled in the Four-Year Baccalaureate Nursing program will be assessed after the Winter Term upon completion of a minimum of 24 credit hours. Students failing to achieve the minimum Degree GPA of 2.5 will be placed on probationary status.

Probationary students will be assessed at the end of the Winter Term after completion of a minimum of 15 credit hours. Students failing to achieve the minimum Degree GPA of 2.5 will be placed on academic suspension.

With special permission of the Associate Dean, Undergraduate Programs, Faculty of Nursing, a student on probation can request an early review of academic progress based on completion of less than 15 credit hours.

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

Students enrolled in the Baccalaureate Program for Registered Nurses will be assessed after the Winter Term upon completion of a minimum of 18 credit hours. Students failing to achieve the minimum Degree GPA of 2.5 will be placed on probationary status.

Probationary students will be assessed at the end of the Winter Term after completion of a minimum of 15 credit hours. Students failing to achieve the minimum Degree GPA of 2.5 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

Students admitted in September, 2004 and later are allowed only one voluntary withdrawal per nursing course in the Faculty of Nursing.

Students who voluntarily withdraw from a nursing course a subsequent time will have their withdrawal reversed and will be expected to complete the course. Any financial implications will be the responsibility of the student. Students planning to withdraw from any course are advised to speak with a student advisor regarding the implications of this decision.

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 Information* section of this *Calendar*.

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 a 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 Associate Dean, Undergraduate Programs 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.

Failures in Clinical Course Rotations

Students who fail a rotation of a clinical course in which there are multiple rotations will be withdrawn from the course immediately following that rotation and will receive a final grade of "F". These students will not be permitted to voluntarily withdraw from the course following receipt of the failed grade.

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
ZOOL 1330	Physiology of the Human Body (see Note 1)	3
MBIO 1220	Essentials of Microbiology (see Note 1)	3
	Social Science (six credits of) (see Note 1)	6
PSYC 1200	Introduction to Psychology (6)	
	or	
SOC 1200	Introduction to Sociology (6)	
	or	
ANTH 1210	Human Origins and Antiquity (3)	
	and	
ANTH 1220	Cultural Anthropology (3)	
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
NURS 1280	Introduction to Nursing (see Note 1)	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 Introduction to University is not a Humanities Course. "0900" 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 1xx0), 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. 1000 level introductory Geological Sciences courses (GEOL 1xx0) 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 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	(Last offered in 2006-2007)	34 credit hours
STAT 1000	Basic Statistical Analysis 1	3
NURS 2120	Nursing Health Assessment	4
NURS 2130	Nursing Skills Laboratory	2
NURS 2140	Health Promotion of Individuals	4
NURS 2150	Facilitation of Self Care	3
NURS 2160	Introduction to Legal and Ethical Foundations of Nursing Practice	3
NURS 2170	Prevention of Illness	3
NURS 2180	Clinical Nursing Practice 1	3
NURS 2190	Clinical Nursing Practice 2	3
NURS 2220	Pharmacology in Nursing Practice	3
NURS 3270	Health Promotion in Families	3
Year 3	(Final offering in 2007-2008)	29 credit hours
NURS 3210	Nursing Research Methods	3
NURS 3280	Nursing Skills Laboratory	2
NURS 3290	Health Restoration in Nursing	6
NURS 3300	Clinical Nursing Practice 3	3
NURS 3310	Health Maintenance in Nursing	6
NURS 3320	Clinical Nursing Practice 4	3
	Elective	3
	Elective	3
Year 4	(Final offering in 2008-2009)	39 credit hours
NURS 4170	Issues and Trends in Nursing and Health Care	3
NURS 4190	Leadership in Nursing Practice	3
NURS 4240	Health Promotion in the Community	4
NURS 4250	Palliative Nursing Care	3
NURS 4260	Nursing Care in Mental Health and Illness	3
NURS 4270	Clinical Nursing Practice 5	4
NURS 4280	Theories in Nursing Practice	3
	Elective	3
	Elective	3
NURS 4290	Clinical Practicum	10

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 Clinical Practicum

All courses in the curriculum must be successfully 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 – Commenced September, 2006

The curriculum was 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)	3
ZOOL 1330	Physiology of the Human Body (see Note 1)	3
NURS 1260	Human Growth and Development	3
NURS 1280	Introduction to Nursing	3
MBIO 1220	Essentials of Microbiology (see Note 1)	3
	Social Science (6 credits - see Note 1)	6
PSYC 1200	Introduction to Psychology (6)	
	or	
SOC 1200	Introduction to Sociology (6)	
	or	
ANTH 1210	Human Origins and Antiquity (3)	
	and	
ANTH 1220	Cultural Anthropology (3)	
	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 Introduction to University is not a Humanities Course. "0900" 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 1xx0), 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. 1000 level introductory Geological Sciences courses (GEOL 1xx0) now offered under the Clayton H. Riddell Faculty of Environment, will be accepted as Science courses if taken prior to September 1, 2006.

Note 5: The course, BIOL 1110 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.

Note 6: Six credits of the twelve credits of electives including the Native Studies and the Humanities electives, must be at the 2000 level or above.

Year 2		31 credit hours
STAT 1000	Basic Statistical Analysis 1	3
NURS 2120	Nursing Health Assessment	4
NURS 2130	Nursing Skills Laboratory	2
NURS 2180	Clinical Nursing Practice 1	3
NURS 2190	Clinical Nursing Practice 2	3
NURS 2220	Pharmacology in Nursing Practice	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	3
Year 3		29 credit hours
NURS 3210	Nursing Research Methods	3

NURS 3280	Nursing Skills Laboratory	2
NURS 3290	Health Restoration in Nursing	6
NURS 3300	Clinical Nursing Practice 3	3
NURS 3310	Health Maintenance in Nursing	6
NURS 3320	Clinical Nursing Practice 4	3
NURS 3450	Introduction to Legal and Ethical Foundations of Nursing Practice	3
	Elective – Department of Native Studies – selected options available (see Note 6):	3
NATV 1220	Native Peoples of Canada, Part I (3)	
	or	
NATV 1240	Native Peoples of Canada, Part II (3)	
	or	
NATV 2020	Metis of Canada (3)	
	or	
NATV 2220	Native Societies and the Political Process (3)	
	or	
NATV 2450	Images of Indian People in North American Society (3)	
	or	
NATV 3240	Native Medicine and Health (3)	
	or	
NATV 3360	Aboriginal Women of Canada (3)	
Year 4	(To be offered in 2008-2009)	29 + 10 credit hours
	TERM A (16 credit hours)	
NURS 4250	Palliative Nursing Care	3
NURS 4260	Nursing Care in Mental Health and Illness	3
NURS 4270	Clinical Nursing Practice 5	4
	Electives (see Note 6)	6
	TERM B (13 credit hours)	
NURS 4310	Nursing Leadership: Issues & Practices	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)	10

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 Clinical Practicum

All courses in the curriculum must be successfully 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 7). Of the total credit hours of electives, at least 12 credit hours must be at the 2000 level or higher. Electives offered by the Faculty of Nursing are:

Course No.		Credit Hours
NURS 2200	Topics in Aging	3
NURS 3330	Women and Health	3

NURS 3340	Providing Care in a Culturally Diverse Society	3
NURS 3350	Counselling Skills for Nurses	3
NURS 3400	Men's Health: Concerns, Issues and Myths	3

These "NURS" courses may be taken as electives only, and are not an alternative for a required nursing course.

Inter-Faculty Option in Aging	18
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SECTION 6: Program Requirements: Baccalaureate Program for Registered Nurses (BPRN)

The Faculty of Nursing BPRN was developed to recognize and value 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 and increasingly complex 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 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).

Students graduating with the minimum of 45 credit hours of coursework will be considered on an individual basis for admission to the graduate program in Nursing (Master of Nursing). For further information, contact the Graduate Program Assistant, Faculty of Nursing, 474-6216.

6.1 Special Student Status in Nursing

Students who are not admitted to the Baccalaureate Program for Registered Nurses may be eligible to apply to the Faculty of Nursing as a special student. 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

Students who are still completing this program should contact a Nursing Student Advisor for details on the program and courses.

6.3 BPRN

Program Effective September 2002

Note: Nursing electives may not be offered every year.

Course No.	Core Courses:	
NURS 3430	Seminar in Professional Nursing Foundations (see Note 1)	2
STAT 1000	Basic Statistical Analysis 1	3
NURS 3210	Nursing Research Methods	3
NURS 3220	Community Health Nursing 1 (see Notes 2 and 6)	4

or		
NURS 3360	Assessing the Health of Communities (see Notes 2 and 6)	4
NURS 4200	The Teaching-Learning Process in Nursing Practice	3
NURS 4210	Independent Study in Nursing Practice	4
NURS 4220	Law and Ethics in Nursing Practice	3
NURS 4310	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	Health Assessment of Individuals (3)
NURS Topics in Aging	(3)
NURS 3200	Nursing of Individuals and Families with Long-Term Illness and Disability (4)
NURS 3230	Perspectives on Mental Health Nursing (4)
NURS 3240	Adult Intensive Care Nursing 1 (4)
NURS 3330	Women and Health (3)
NURS 3340	Providing Care in a Culturally Diverse Society (3)
NURS 3350	Counselling Skills for Nurses (3)
NURS 3390	Nursing in Rural Environments (4)
NURS 3400	Men's Health: Concerns, Issues and Myths (3)
NURS 4160	Community Health Nursing 2 (4)
NURS 4250	Palliative Nursing Care (BPRN specific section only) (3)
NURS 4300	Promoting the Health of Communities (4)
NURS 3440	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 / KIN 2610	Health and Physical Aspects of Aging (3)
SWRK 2650/ IDES 2650/ HMEC 2650/ REC 2650	The Social Aspects of Aging (3)

NOTES:

- 1) NURS 3430 should be taken in the first 12 credit hours of the program. Students who have credit for the previous NURS 3190 may substitute this course for NURS 3430.
- 2) Students may select either NURS 3220 or NURS 3360 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 Essentials of Microbiology as a non-Nursing elective. Students who completed Anatomy and Physiology at a university level (equivalent to ZOOL 1320 and ZOOL 1330 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 and the former 090.324.
- 6) This course requirement is under review for graduates of the RRC DNA program. Please check the Faculty of Nursing website after July 1, 2007 for further information.

6.4 Clinical Courses and NURS 4210 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 project course (normally designated by the fact that it is a 4 credit hour project based course) involves 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 and NURS 4210, 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.

NURS 4210 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 any practicum component 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 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.**

Note: the prerequisite for this course is 35 credit hours of completed study in the program.

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

(In collaboration with St. Boniface General Hospital or the Health Sciences Centre)

Students intending to take all four collaborative adult intensive care courses must apply through the AICN Assistant, Adult Intensive Care Courses, Faculty of Nursing, 474-6266.

Students in the BPRN may register for NURS 3440 and/or NURS 3240 without special permission.

For students in the BPRN, course NURS 3240 may be used as a Nursing clinical elective (4 credit hours), courses NURS 3250 and NURS 3260 together may be used in lieu of NURS 4210 Independent Study in Nursing Practice, and NURS 3440 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

Inter-Faculty Option in Aging courses are 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 /HMEC 2650/REC 2650/SWRK 2650 The Social Aspects of Aging (3 credit hours)
 - b) NURS 2610/KIN 2610 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 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 will gain a greater awareness of the self and the therapeutic use of Community Health Courses

SECTION 8: Registration Information

8.1 Initial Access Times

Students are referred to the chapter, "The Registration System: Aurora Student, Section 4.

8.2 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
- 3) **All students should ensure their addresses (snail and email) and phone numbers are current to ensure you don't miss pertinent information.**

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 session, phone (204) 474-6655.

Baccalaureate Program for Registered Nurses

To reserve your orientation space, call (204) 474 6655.

Students registering as special students need not attend an orientation session.

Orientation Dates Four Year BN Students

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:**

<http://www.umanitoba.ca/faculties/nursing/studentarea/233.htm>

BPRN Orientation Dates

Dates will be scheduled in June, and/or July and will be included in the student's Certificate of Acceptance.

8.2 Information and Policies for All Nursing Students

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
- Four Year BN students who have not taken clinical or skills courses for one year or more
- Did not register for any courses the previous year
- Considering withdrawing from a course

- 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

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.

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 timetable layout concerns
- Registration following absence or non-registration the previous year
- Repeating any course previously withdrawn
- CPR and/or immunization concerns
- Instructor approvals
- Lab exemptions
- Registration for HSC re security
- 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 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 and Registration Guide* carefully to ensure compliance with degree program requirements. Final completion of degree requirements is the responsibility of the student.

Criminal Record and Child Abuse Registry Check

Refer to the *Undergraduate Calendar and Registration Guide*.

Personal Health Information Act Policies (PHIA)

Refer to the *Undergraduate Calendar and Registration Guide*.

Immunizations

Immunizations are a requirement mandated by the Winnipeg Regional Health Authority and apply to ALL students registered in the Faculty of Nursing. 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) and Nutrition for Health and Changing Lifestyles (HNSC 1210) are second year requirements.

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 Nursing Skills Laboratory spans both fall and winter terms and must be started in fall term if students wish to take a third year clinical course.
- **EITHER** NURS 3310 Health Maintenance in Nursing **AND** NURS 3320 Clinical Nursing Practice IV; **OR** NURS 3290 Health Restoration in Nursing **AND** NURS 3300 Clinical Nursing Practice III.

Winter term:

- NURS 3280 continues in winter term.
- **EITHER** NURS 3290 Health Restoration in Nursing **AND** NURS 3300 Clinical Nursing Practice III **OR** NURS 3310 Health Maintenance in Nursing **AND** NURS 3320 Clinical Nursing Practice IV.

Fall or Winter term

- NURS 3210 Nursing Research Methods (Statistics, STAT 1000 is a recommended pre- or co-requisite)
- NURS 3450 Introduction to Legal and Ethical Foundations of Nursing Practice.
- Native Studies Requirement

Fourth Year Courses

STUDENTS ARE EXPECTED TO HAVE ALL YEAR 1 & 2 COURSES AND ALL ELECTIVES COMPLETED BEFORE TAKING THESE FOURTH YEAR COURSES CONCURRENTLY WITH YEAR 3.

- NURS 4280 Theories in Nursing Practice – may be taken with the first term of third year (i.e., with NURS 3280, and either NURS 3310 AND NURS 3320 OR NURS 3290 AND NURS 3300), if NURS 3270/NURS 3210 have been completed prior to third year.
- NURS 4170 Issues and Trends in Nursing and/or NURS 4190 Leadership in Nursing Practice may be taken with the second term of third year provided that NURS 3270 and NURS 3210, **AND EITHER** NURS 3310 **AND** NURS 3320 **OR** NURS 3290 **AND** NURS 3300 have been completed and the first term of NURS 3280 has been successfully completed.

Students must contact a Student Advisor or Faculty Registrar prior to registering for 4th year courses for prerequisite overrides in Aurora student.

Registration in NURS 4270 Clinical Nursing Practice V

Fall term section:

- Eligible students will be required to register in fall term section until all available space is filled. Spaces will be held for all students requiring the course in fall term, except those blocked from registering to due immuni-

zation and/or CPR deficiencies. The balance of the space will remain available.

- Winter term space will be closed until all spaces in fall term are filled, with the exception of students completing the second term of year 3 in fall term. These students will be allowed to register NURS 4270 in winter term.
- Students may not withdraw from NURS 4270 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 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 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. 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 and Registration Guide* for the nursing voluntary withdrawal and failure policies.

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) or students who attend another faculty or institution must re-apply through Admissions. Note the policy in the *Undergraduate Calendar and Registration Guide* 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 an Extended 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. A01, A20), it may indicate different programs or delivery sites or delivery mode.

NOTE: Normally A20/21 sections are restricted to BPRN students; A41/A42 are restricted to UCN Joint Program students; A50 is restricted to RRC/UM Joint Program 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 by the student 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 and Registration Guide* Faculty of Nursing chapter for information.

Required Courses: 6 credit hours

KIN 2610 Health and Physical Aspects of Aging. This course will be offered in fall term, Tuesday evening 6:00 to 9:00 p.m. This course may also be offered as NURS 2610.

REC 2650 Social Aspects of Aging. This course will be offered in winter term, Tuesday evening 6:00 to 9:00 p.m. This course may also be offered as SWRK 2650 or IDES 2650 or HMEC 2650.

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). 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 4190 Leadership, NURS 4170 Issues and Trends and NURS 4280 Nursing Theories will be offered for the last time in 2008-2009.

Students should check the website and the bulletin 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.

The Faculty of Nursing does not guarantee students will obtain space in courses in desired sections. Please read your timetable carefully.

Fort Garry Campus

Orientations

Please Note: Health Assessment NURS 2120, Nursing Skills NURS 2130 and NURS 3280 do not start until the week of September 10, 2007. Clinical orientation information and locations are posted on the web and on the bulletin board across from Helen Glass 260 for details. Students must attend clinical orientations as they are mandatory.

- Year 2 students registered in NURS 2180 Clinical Nursing Practice 1 (Tuesday/Wednesday clinical) must attend a mandatory orientation Au-

gust 28, 2007; which continues September 4, 2007. Clinical rotation will begin September 11, 2007.

- Year 2 students registered in NURS 2180 Clinical Nursing Practice I (Thursday/Friday clinical) must attend a mandatory orientation August 29, 2007; which continues September 5, 2007. Clinical rotation will begin September 6, 2007.

- Year 2 students registered in NURS 2190 Clinical Nursing Practice II (Tuesday/Wednesday) must attend a mandatory orientation August 28, 2007; which continues September 5, 2007. Clinical rotation will begin September 11, 2007.

- Year 2 students registered in NURS 2190 Clinical Nursing Practice II (Thursday/Friday clinical) must attend a mandatory orientation August 29, 2007; which continues September 5, 2007. Clinical rotation will begin September 6, 2007.

First Week of Classes

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 6, 2007.

- First year students attend classes as scheduled.

- Year 2 students and students in theory courses **ONLY** should attend classes as scheduled. Students should attend the orientation for the year in which they are doing clinical.

² Reminder: lectures and labs in NURS 2120 – Health Assessment, and NURS 2130, NURS 3280 Nursing Skills labs will start the week of September 10, 2007. 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.

Students registered in NURS 3300 Clinical Practice III (Restoration) or NURS 3320 Clinical Practice IV Tuesday/ Wednesday in fall term will attend scheduled NURS 3280 and NURS 3290 or NURS 3310 lectures on September 6 and 7, 2007 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 and NURS 3310 September 11, 12, 18, and 19.**

Students registered in NURS 3300 Clinical Practice III (Restoration) or NURS 3320 Clinical Practice IV (Maintenance) Thursday/Friday in fall term will attend scheduled NURS 3280 and NURS 3310 or NURS 3290 lectures September 6 to 14, 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 and NURS 3310 September 6, 7, 13 and 14.**

Students registered in NURS 4270 Clinical Practice V in fall term should attend orientation September 6, 2007 and theory lectures on September 7. 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, 2007.** Other fourth year students should attend scheduled classes.

Criminal Record and Child Abuse Registry Check

Refer to the *Undergraduate Calendar and Registration Guide*.

CPR

Students admitted in 2007/2008 who are deficient in immunization and/or CPR on 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 registering and will be permitted to register **after** the initial access period **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, 2007**. Every effort will be made to accommodate eligible students who register for clinical courses by the specified deadline. However, available clinical space 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. **No space will 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 4280 4170 4190 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 located in Winnipeg and surrounding towns 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.

NURS 4290 SENIOR PRACTICUM

All students registering for NURS 4290 should be aware there are 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 aurala and must contact the registrar or student advisors after contacting the course leader in the event they are not completing this course.

As indicated in the *Undergraduate Calendar and Registration Guide* all courses in the program are prerequisite to Clinical Practicum NURS 4290; therefore, students will not be permitted to take courses concurrent with NURS 4290.

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.

International students require a work permit to complete NURS 4290 and should allow sufficient time prior to the start of the senior practicum.

September-November Section

Students taking the September-November section of NURS 4290 will register for this course in the initial registration period. These students should expect to attend information sessions for NURS 4290 in summer term and should watch the bulletin board across from HG260 for scheduled sessions. These students will be graduates as of February, 2008. They will attend convocation in May 2008.

January-March Section

Students taking the January-March section of NURS 4290 will register for this course in the initial registration period. These students should expect to attend orientation sessions for NURS 4290 in fall term and should watch the bulletin board across from HG260 for scheduled sessions. These students will convocate in May, 2008.

May-July Section

Students completing their final practicum NURS 4290 during the May-July session will register for this course in March 2008. This course is registered as Summer Session 2008. 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 2008. These students will convocate in October, 2008.

8.3 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 directly 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 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 Nursing Individuals and Families with Long Term Illness and Disability and/or NURS 3230 Perspectives on Mental Health Nursing: It is recommended students do not register for NURS 3200 and/or NURS 3230 concurrently due to the heavy time commitment for the clinical practice component.

NURS 4210 Independent Study In Nursing Practice: Students registering for NURS 4210 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 Course NURS 3200

Clinical experience for this course must be arranged by May 1, 2007 for fall term and by September 30, 2007 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, 2007 for courses beginning September 2007.
- November 1, 2007 for courses beginning January 2008.
- January 31, 2008 for courses beginning May 2008.

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.

To access a web based course, go to the University of Manitoba website: umanitoba.ca. Under "current students," click on webct on the drop down menu, and follow instructions.

8.4 Adult Intensive Care Courses

Students admitted to the Baccalaureate Program for Registered Nurses may register for NURS 3240 Adult Intensive Care Nursing 1, and NURS 3440

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 AIC 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 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 Aurora Student.

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.

8.5 Registration Information

All newly admitted U of M students must access the Aurora Student after July 2, 2007 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, "Registration Information: Aurora Student, Section 4.

Students must register for courses within one specific timetable layout. Students who deviate from the timetable layout by registering for courses among a number of timetable layouts, will be moved into one specific layout without notice in order that all lab and/or clinical space can be utilized.

Timetable Layouts

Timetable layouts will be posted at

http://www.umanitoba.ca/faculties/nursing/programs/reg_info/index.html and on the bulletin board across from HG 260.

8.6 Helpful Hints

Registration

Nursing students should register for **all** their courses (i.e. fall term and winter term) during the Initial Access Period.

Prior to registration period: Students requiring help with their PIN number should contact Registrar's Office at (204) 474 9420 or toll free in North America at 1 (877) 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 register during your initial access time to facilitate space in preferred courses and/or sections.

It is strongly recommended after every "drop" or "add", 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 Register 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, 2007.

On site sections: Beginning August 23, 2007.

Winter term Courses:

Teleconference sections: During the Initial

Access Period Independent Study sections: Beginning October 1, 2007.

On site sections: Beginning November 1, 2007.

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. Students should familiarize themselves with the Faculty of Nursing voluntary withdrawal policy.

Voluntary withdrawal dates are listed in the Academic Schedule of the current *Undergraduate Calendar and Registration Guide* and in the Fee Refund Section of this *Guide*. Students registered in courses with Irregular dates should pay attention to their specific voluntary withdrawal/refund schedule.

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.**

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 Course Offerings

Course offerings are available 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

General Office

202 Pharmacy Building

Telephone: (204) 474 9306

Fax: (204)474-7617

E-mail: Pharmacy@UManitoba.CA

Website: www.umanitoba.ca/faculties/pharmacy

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

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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); Hasinoff, B., B.Sc.(Hons.), Ph.D. (Alberta), F.C.I.C.; 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. L., B.Sc.(Hons.), (Phm.), (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); Bras, A., B.Sc. (Chem.) (Manitoba), Ph.D., (Manitoba); Coulter, A., B.Sc. (Pharm.) (Manitoba), Pharm.D. (Cincinnati); Davis, C., B.Sc. (Pharm.) (Manitoba), Pharm.D. (B.C.); Friesen, M., B.Sc. (Pharm.), M.Sc. (Manitoba), Pharm.D. (Toronto); Gin, A., B.Sc. (Pharm.) (Manitoba), Pharm. D. (SUNYAB); 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.); Strijack, C., B.Sc. (Pharm.) (Manitoba), B.Sc. (Manitoba); Thomson, P., B.Sc. (Pharm.) (UBC), Pharm.D. (Wayne State); Thurmeier, R., B.Sc., (Pharm.) (Manitoba); Trozzo, B.Sc. (Pharm.) (Manitoba); Van Domselaar, G., B.Sc. (Chem.), Ph.D. (Pharmacy/Pharmaceutical Sciences) (Alta.); 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

Ayotte, J., B.Sc. (Pharm.) (Manitoba), CAE; Brink, K., B.Sc. (Pharm.) (Manitoba); Cote, D., B.Sc., Ph.D. (Pharm.), M.Sc. (Manitoba); Durocher, R., Dip. Pharm. (Guyana), B.Sc., B.Sc. (Pharm.) (Manitoba); Kleiman, N., B.S.P. (Pharm.), MBA; Raymond, C, B.Sc. (Pharm.) (Alta.), Pharm.D. (B.C.) Treacy, S., M.Sc. (Saskatchewan).

Adjunct Professors

Friesen, A., B.Sc., M.Sc., Ph.D., (Manitoba); Leslie, W, B.Sc.(Hons.), M.Sc., MD (Manitoba).

SECTION 2: Pharmacy Education

Pharmacists are specialists in drug therapy and provision of pharmaceutical care. This involves not only the traditional function of preparing and dispensing medications but includes designing and monitoring drug therapy plans to optimize patient care. The Faculty of Pharmacy has been educating pharmacists for over one hundred years. It has dynamic faculty members characterized by their teaching expertise, research programs and practice partnerships in the health sciences field. Members of the Faculty are internationally recognized through their participation in research and various committees and agencies. Their research is funded through a variety of sources including, CIHR, NSERC, CRC, various other government agencies, and the pharmaceutical industry.

The undergraduate pharmacy program is meant to prepare students for entry-level practice in the profession of pharmacy by providing them with a

solid foundation in the basic, pharmaceutical and clinical sciences which is applied to the concept of pharmaceutical care. In addition, the program is designed to provide students with a broad experience in patient care through the nineteen weeks of practical experience in health orientated health care settings and hospital and community pharmacies. The experience is further enhanced with an open elective program in the final year of studies.

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 (University of Manitoba)

Chemistry CHEM 1300 and CHEM 1310

Biology 71.125 or BIOL 1020 & BIOL 1030

Mathematics MATH 1500, or MATH 1510 or MATH 1520, or MATH 1530

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% AGPA, 30% written essay/problem solving exercise. Only students with an essay score of five or more (out of a possible ten) will be ranked for admission.

Criminal Record Check/Child Abuse Registry Check

Many health care agencies where Pharmacy students are placed in a health care setting require a criminal record and/or child abuse registry check. As a result all successful applicants to the Faculty of Pharmacy are now required to provide a self-declaration of a Criminal Record and Child Abuse Registry listing following provisional admission, as well as an official Criminal Record Search and Child Abuse Registry Check. All documents must be submitted prior to registration for courses. 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 Pharmacy. Criminal offences will be reviewed by a sub-committee of the Pharmacy Admissions Committee for the implications of the conviction in view of the professional mandate to protect the public. Failure to disclose any adult criminal record or listing on the Child Abuse Registry will invalidate an application and shall result in automatic expulsion from the Faculty of Pharmacy if the applicant has been admitted. In addition, the Manitoba Pharmaceutical Association requires that all graduates of the Faculty of Pharmacy who wish to obtain a license to practice pharmacy in this province, must 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 Manitoba Pharmaceutical Association. The review process by the Faculty of Pharmacy is independent of the review process conducted by the Manitoba Pharmaceutical Association.

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 is 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.

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 Associate Dean (Academic) 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 letter 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 Associate Dean (Academic) 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 Associate Dean (Academic) 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 Associate Dean (Academic) of the faculty well in advance (normally 20 working days) of the scheduled examination; and that the Associate Dean (Academic) 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 Associate Dean (Academic) 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 O8R 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, chickenpox, Mantoux/Tuberculosis and hepatitis B. The influenza vaccination is recommended but not 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 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 by December 1st. 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.

INITIAL ACCESS TIMES

Students are referred to the chapter, Registration Information: Aurora Student, Section 4.

SECTION 6: Registration and General Information

1st Year Orientation

A formal orientation session will be held on Wednesday, September 5, 2007 for 1st Year Pharmacy Students. More information on the orientation session will be mailed out in mid August to all 1st year 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 you can contact the Aurora Student Help Line at (204) 474-9420, or 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 below under your section or you can check the Academic Schedule at the front of this book.

First Year Student Information

Registration for 1st year students is blocked until AFTER their Criminal Record Check and Child Abuse Registry documentation has been received by the Faculty of Pharmacy General Office. It is important to get this documentation in quickly so that you can register in the reserved space for the required Science courses if needed. All Pharmacy reserved space in Science will be held until the end of August.

When registering for Chemistry & Microbiology please register in the correct lecture & lab sections that have been reserved for Pharmacy Students.

Note: Classes commence on Thursday, September 6, 2007. Attend all lectures/laboratories scheduled for that day.

The courses in the first year of the program are as follows:

Dept. Name	Dept. Code	Course No.	Credit Hours
Chemistry	CHEM	2210	3 (Lab: 8:30 – 11:30) (Lecture: M-T-F 11:30-12:30)
Chemistry	CHEM	2360	3 (Lab: 8:30-11:30) (Lecture: T-Th 11:30-1:00)
Chemistry	CHEM	2370	3 (Lab: 8:30 – 11:30) (Lecture: T – Th: 11:30 – 1:00)
Pharmacy	PHRM	1000	1

Pharmacy	PHRM	1100		5
Pharmacy	PHRM	1300		4
Pharmacy	PHRM	1430		3
Pharmacy	PHRM	1700		1
Microbiology	MBIO	2100	3 (Lab: Thursdays: 8:30-11:30) (Lecture: M-W-F 12:30-1:30)	
Anatomy	ANAT	1030		3
Physiology	PHGY	1030		6

Total Credit Hours for First Year: 35

Second-Year Students

It is important that you register at your initial access time to guarantee that you get space in the required Science courses. All Pharmacy reserved space in Science will be held only until mid August.

When registering for Microbiology please register in the correct lecture section that has been reserved for Pharmacy Students.

PHRM 2700 – This course falls under the Spring/Summer session guidelines. The General Office will register you for this course in March. Fees for PHRM 2700 will be assessed in March 2008.

Note: Classes commence on Thursday, September 6, 2007. Attend all lectures/laboratories scheduled for that day. Second year rotation will take place May 5 – May 16, 2008 with a debriefing session to be held on Monday, May 19, 2008.

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 (Lecture: M-W-F 1:30-2:30)
Pharmacology	PHAC	2100	6
Pharmacy	PHRM	2700	2

Total credit hours for Second Year: 36

Third Year Students

Register at your initial access time.

Note: Classes commence on Thursday, September 6, 2007. Attend all lectures/laboratories scheduled for that day. Third year rotation will take place April 7 – May 2, 2008 with a debriefing session to be held on Monday, May 5, 2008. 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

Register at your initial access time.

Note: Classes commence on Tuesday, September 4, 2007. Attend all lectures scheduled for that day. Note the following important dates.

Classes End:	Monday, October 30, 2007
Exams:	October 31 – November 2, 2007
SPEP/Elective:	November 5 – December 21, 2007 January 7 – February 22, 2008 February 25 – April 11, 2008

Courses in the fourth year of the program are as follows:

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: 34

Total program credit hours: 142

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: Zuzana Dankova, Val Matthes, Jill Ogston, Greg Sobie

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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

2.1 Entrance to Science from University 1

To enter the Faculty of Science a student must have completed a minimum of 24 credit hours of courses and have achieved a cumulative grade point average of at least 2.00. Students who do not meet this minimum may appeal to be considered for admission on the recommendation of the Dean. Please see a Science Student Advisor for information.

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 and have achieved a minimum cumulative grade point average of at least 2.00 to be eligible for consideration. Students who do not meet this minimum may appeal to be considered for admission on the recommendation of the Dean. Please see a Science Student Advisor for information. 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 Extended 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

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.

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.

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 (University1, 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.

The **Cumulative Grade Point Average (CGPA)** is calculated on all courses on the student's University of Manitoba record. While all attempts of repeated courses will appear on the student's record, only the grade achieved from the last attempt will be used for all calculations of Grade Point Average.

The **Degree Grade Point Average (DGPA)** is calculated on all courses acceptable for credit in a given degree program. As with the CGPA, all attempts of repeated courses will appear on the student's record, but only the grade achieved from the last attempt will be used for all calculations of Grade Point Average.

The **Term Grade Point Average (TGPA)** is calculated on all courses taken in a given term.

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.

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, Concurrent, 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.

Prerequisite or Concurrent requirement: A course that may be successfully completed prior to registration in a second course, or may be taken concurrently.

Corequisite: If a first course is a corequisite for a second course, the first course **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, concurrent 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 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 1.

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 12 credit hours or more who achieve a Term Grade Point Average of 3.80 or higher will be placed on the Dean's Honour List. The Dean's Honour List will be calculated after each term (i.e. Fall, Winter, Summer 1 and Summer 2).

The Dean's Honour List designation will appear on the student's transcript of marks.

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, Plagiarism 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 Degree Grade Point Average (DGPA) 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 36 credit hours of failures.

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(*cannot be used to fulfil the introductory science requirement if taken after the 2006 Summer Session*)
- 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 5.18 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

Minimum Performance Level

To remain in Good Academic Standing the student must maintain a minimum Cumulative Grade Point Average (CGPA) of 2.00 at every point of assessment after entrance to the Faculty of Science. Assessment will take place after Fall, Winter, Summer 1 and Summer 2 Terms. If the CGPA is less than 2.00 at any point of assessment, the student will receive an **Academic Warning** which will appear on the student history. The student will remain on Academic Warning until Good Academic Standing is achieved. Students on Academic Warning will be individually advised regarding their status and of how to improve.

Students cannot accumulate more than 36 credit hours of failed courses in courses acceptable for credit in the Faculty of Science on their academic history, regardless of the origin of the grade (i.e. courses taken while in University 1, courses that are transferred from other programs or other institutions will be included) and regardless of whether the course has been repeated. If the limit of F's is exceeded, the student will be placed on Academic Suspension for Two Years. The student will be allowed to return and start the degree afresh. At this point, while a CGPA will be automatically calculated for the student, the DGPA will be used for academic assessment. Students may appeal for transfer credit of up to 30 credit hours 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 12 credit hours or more who achieve a Term Grade Point Average of 3.80 or higher will be placed on the Dean's Honour List. The Dean's Honour List will be calculated after each term (i.e. Fall, Winter, Summer 1 and Summer 2).

Degree with Distinction

To obtain a Degree with Distinction the student must achieve a final minimum Degree Grade Point Average of 3.80.

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 indepth 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

To qualify for the degree Bachelor of Science (Major), a student must complete the equivalent of 20 full courses (120 credit hours) or more, with minimum grades of "C" on Major Program Specific courses (as specified by the department) and passing grades ("D" or better) on the remaining courses with a minimum DGPA of 2.00 on the 120 credit hours which contribute to the degree.

Program Specific courses are those identified by the department as being core to the given degree. See the Calendar entry for these departments for clarification.

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 5.18 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 at each point of assessment. Students who do not meet this minimum will be required to withdraw from the Major program.

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.

There is no term registration course load requirement for the Major program.

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. Residency requirements apply both to first and second degree students.

Recognition of Academic Merit

Dean's Honour List

Students enrolled in 12 credit hours or more who achieve a Term Grade Point Average of 3.80 or higher will be placed on the Dean's Honour List. The Dean's Honour List will be calculated after each term (i.e. Fall, Winter, Summer 1 and Summer 2).

Degree with Distinction

To obtain a Degree with Distinction the student must achieve a final minimum Degree Grade Point Average of 3.80.

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 three half courses (9 credit hours), per eight-month term is three full courses or equivalent (18 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. 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.

Students enrolled in 12 credit hours or more who achieve a Term Grade Point Average of 3.80 or higher will be placed on the Dean's Honour List. The Dean's Honour List will be calculated after each term (i.e. Fall, Winter, Summer 1 and Summer 2).

See Section 3.1 above.

Degree with Distinction

To obtain a Degree with Distinction the student must achieve a final minimum Degree Grade Point Average of 3.80.

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 beyond 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

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 Degree Grade Point Average of not less than 2.50 on all courses completed at the end of Year 1 (minimum 24 credit hours).

To qualify for the degree Bachelor of Science (Honours), a student must complete the equivalent of 20 full courses (120 credit hours) or more, with minimum grades of "C+" on Honours Program Specific courses (as specified by the department) and grades of "C" or better on the remaining courses with a minimum DGPA of 3.00 on the 120 credit hours which contribute to the degree.

Program Specific courses are those identified by the department as being core to the given degree. See the *Calendar* entry for these departments for clarification.

Continuation in Honours

A minimum Degree Grade Point Average of 3.00 is required. 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+".

Students must complete a minimum of 9 credit hours in each Fall and Winter Term (or equivalent for students in the Co-operative option) to remain

in Good Academic standing in the Honours program. Students failing to do so will be required to withdraw from the Honours program and may be eligible to pursue the B. Sc. Major program or the B. Sc. General degree program.

Students who do not meet the minimum requirement will be required to withdraw from the Honours program.

Students who accumulate more than 15 credit hours of failed courses once in the Honours degree program (regardless of the origin of the grade or if the course has been repeated) will be required to withdraw from the program. Students required to withdraw from the Honours program may be eligible to pursue the B. Sc. Major program or the B. Sc. General degree program.

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. Residency requirements apply both to first and second degree students.

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 9 credit hours during each Fall and Winter term 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

See Section 3.1 above.

Students enrolled in 12 credit hours or more who achieve a Term Grade Point Average of 3.80 or higher will be placed on the Dean's Honour List. The Dean's Honour List will be calculated after each term (i.e. Fall, Winter, Summer 1 and Summer 2).

First Class Honours

To graduate with First Class Honours the student must achieve a final minimum Degree Grade Point Average of 3.80.

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 three half courses (9 credit hours), per eight-month term is three full courses or equivalent (18 credit hours).

To continue in an Honours Cooperative Option a student must attain a Degree Grade Point Average of 3.00 or higher at each point of assessment. A student's performance will be evaluated following each academic term. 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+" (Honours Program Specific courses). A grade of "C" is required on all remaining courses which contribute to the degree.

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

Students enrolled in 12 credit hours or more who achieve a Term Grade Point Average of 3.80 or higher will be placed on the Dean's Honour List. The Dean's Honour List will be calculated after each term (i.e. Fall, Winter, Summer 1 and Summer 2).

First Class Honours

To graduate with First Class Honours the student must achieve a final minimum Degree Grade Point Average of 3.80.

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 is available in AURORA 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: Registration

4.1 University 1 Students Transiting to Science for the 2007-08 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 2006-2007 Regular Session or the 2007 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 2007 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).

4.2 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 1) 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 1 is the application deadline.

4.3 Registration Dates and Reminders

- Before Mid-July

Review your program requirements as outlined in the following sections of the *Undergraduate Calendar*, and see a Science Student Advisor if you have any questions. For information on finding your registration time, see the chapter “Registration Information: Aurora Student”, Section 4.

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. 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.

List your courses and finalize fees after every transaction.

Pay all fees due by the fee payment deadline - September 5, 2007

Classes start September 6, 2007

Course changes permitted until September 19, 2007 - Determine fees due after each transaction and pay any that are outstanding.

Final Voluntary Withdrawal (VW) deadline for Fall Term courses. – November 14, 2007. For refunds, see dates published in the chapter: Fees, Payments, and Refunds.

Last date to register for second term half courses – January 18, 2008

Last date to VW from Fall/Winter and Winter Term courses. – March 19, 2008. For refunds see the dates published in the chapter: Fees, Payments, and Refunds.

4.4 Science Student Advisor Hours and Availability:

4.4.1 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

4.4.2 Advisor availability during registration

4.4.2.1. June 2007

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.

4.4.2.2 July and August 2007

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.

4.4.2.3 Evening appointments:

Monday, July 9, 5:30 - 8 p.m.

Wednesday, July 18, 5:30 - 8 p.m.

Tuesday, July 24, 5:30 - 8 p.m.

Thursday, July 26, 5:30 - 8 p.m.

Tuesday, July 31, 5:30 - 8 p.m.

Call (204) 474 8256 to arrange an appointment.

4.4.3 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 secondary institution to Science. Science advisors will explain registration procedures and degree program requirements.

Tuesday, July 10 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

4.5 Science Program Info Applicable to all Science Students

4.5.1 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.

4.5.2 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.

4.5.3 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.

4.5.4 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 2006-2007 Regular Session. If unsure of correct access time please access AURORA STUDENT.

4.5.5 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, access AURORA STUDENT

4.5.6 Students in Special Academic Situations

4.5.6.1 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.

4.5.6.2 Academic Warning

If your last assessment was "Academic Warning" you **must** see a Science Student Advisor prior to registration so that you can be advised about your status.

4.5.6.3 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.

4.5.6.4 Students on "Hold"

If your records are on "Hold" you are prevented from any registration transaction until you have cleared this status.

4.6 Important Information applicable to all students

4.6.1 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.*

4.6.2 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 in which you have earned a grade of "D" or "F", or courses that cannot be held for credit with another course previously taken, must be done through the Science General Office.

4.6.3 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.

Refer to the other faculties' class schedules in AURORA STUDENT.

4.6.4 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.

4.6.5 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.

4.7 Laboratory

4.7.1 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.

4.7.2 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.

4.7.3 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, 2007 and January 10, 2008. Failure to check out of your laboratory might put your academic records on HOLD.

4.8 Appeals

4.8.1 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.

4.8.2 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.

4.9 Registration Revisions

4.9.1 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.

4.9.2 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.

4.9.3 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.

4.10 Departmental Office Information

Biology	208 Buller Building	474 9732
Botany	505 Buller Building	474 8132
Chemistry	360 Parker Building	474 9321
Computer Science	E2-445 EITC	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.

SECTION 5: 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.

5.1 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

5.1.1 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 at least 3 credit hours in an approved Written English course, ECON 1200, STAT 1000, STAT 2000, MATH 1500 and MATH 1700 (or MATH 1690) and MATH 1300 or any equivalent with a grade of at least "B" in all of the above courses and have satisfied the Faculty of Science requirements for entry to the Honours program. It is strongly recommended by the Warren Centre that students complete a minimum of 24 credit hours per regular session (Fall and Winter Terms).

5.1.2 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)			
ECON 1200 (B), MATH 1690 (B), (or MATH 1500 ¹ and MATH 1700 ¹ (B)), MATH 1300 ¹ (B), and STAT 1000 (B) STAT 2000 (B) and required 'W' course (B)	ACT 2120, ACT 2020, STAT 2400, STAT 3500, ACC 1100 ³ (B) FIN 2200 ³ (B) MATH 2750 (or MATH 2720 and MATH 2730), MATH 2300 ⁵	ACT 3130, ACT 3230, ACT 3530, STAT 3050, STAT 3600, STAT 3470 (B), COMP 1260 ⁶ and MSCI 2150 ⁶	ACT 4140, ACT 4150, ACT 4240 ACT 4000, ACT 4340, STAT 3490 ⁴ (B)
Plus 3 credit hours from the Faculty of Arts if a 3 credit hour 'W' course is taken	Plus 3 credit hours of approved electives	Plus 6 credit hours of approved electives	Plus 12 credit hours of approved electives
Plus 3 credit hours of electives			

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

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 Degree Grade Point Average of 3.00 or better, and a grade of 'C+' in each Actuarial Mathematics course in the program.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of either "B" or "C+" (as indicated) in each of the Honours Program Specific courses (see below), and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree.

Honours Program Specific Courses

Students must achieve a minimum grade of "B" in each of the following:

MATH 1690 (of MATH 1500 and MATH 1700 or equivalents), MATH 1300 (or equivalent), STAT 1000, STAT 2000, STAT 3470, STAT 3490.

Students must achieve a minimum grade of "C+" in each of the following:

ACT 2020, ACT 2120, ACT 3130, ACT 3230, ACT 3530, ACT 4000, ACT 4140, ACT 4150, ACT 4240, ACT 4340

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.

JOINT MATHEMATICS-ACTUARIAL MATHEMATICS HONOURS: See Section 5.12, Mathematics

JOINT STATISTICS-ACTUARIAL MATHEMATICS HONOURS: See Section 5.16, 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 ACC 1100 and FIN 2200 may be taken in Year 2, 3 or 4; however, it is strongly recommended that these two courses be taken in Year 2 or 3. Note that ACC 1100 is a prerequisite for FIN 2200.

⁴ STAT 3490 may be taken in Year 3 or 4.

⁵ MATH 2300 may be taken in Year 2, 3 or 4.

⁶ COMP 1260 and MSCI 2150 may be taken in Year 2, 3 or 4. Note that COMP 1260 is a prerequisite for MSCI 2150.

(Letters in brackets indicate minimum prerequisite grades 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 (3000 or 4000 level) and Statistics (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: Psychology 1200 or Sociology 1200

Year 2: Business Administration GMGT 2000;

Year 3: Accounting and Finance FIN 3410, Statistics STAT 3480

Year 4: Accounting and Finance FIN 3270, Actuarial Mathematics ACT 4050, ACT 4060; Statistics STAT 4140, STAT 4520, STAT 4530, STAT 4630.

5.2 Biochemistry

Program Coordinators:

Peter Loewen, Head, Department of Microbiology;

Norman R. Hunter, Head, Department of Chemistry

Program Office: 418 Buller Building, 360 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

5.2.1 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 Degree Grade Point Average of 3.00, and in addition, must have a 3.00 Grade Point Average on all Chemistry and Microbiology courses during that session. Students must complete 9 credit hours each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the Honours Program Specific courses (see below), and a minimum grade of "C" on all remaining courses that contribute to the 123 credit hours of the degree.

Honours Program Specific Courses

CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, CHEM 2380, CHEM 2470, MBIO 3450, MBIO 3460, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630, CHEM 4700, and MBIO 4540.

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 9 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.

To graduate with the B. Sc. Honours (Cooperative Option) degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the Honours Program Specific courses (see below), and a minimum grade of "C" on all remaining courses that contribute to the 123 credit hours of the degree.

Honours Program Specific Courses

CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, CHEM 2380, CHEM 2470, MBIO 3410, MBIO 3450, MBIO 3460, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630, CHEM 4700, and MBIO 4540.

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.

To qualify for the degree Bachelor of Science (Major), a student must complete the equivalent of 20 full courses (120 credit hours) or more, with minimum grades of "C" on Major Program Specific courses (see below) and passing grades ("D" or better) on the remaining courses with a minimum DGPA of 2.00 on the 120 credit hours which contribute to the degree.

Major Program Specific Courses

CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, CHEM 2380, CHEM 2470, MBIO 3450, MBIO 3460; two of CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630

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.

To qualify for the degree Bachelor of Science (Major Cooperative Option), a student must complete the equivalent of 20 full courses (120 credit hours) or more, with minimum grades of "C" on Major Program Specific courses (see below) and passing grades ("D" or better) on the remaining courses with a minimum DGPA of 2.00 on the 120 credit hours which contribute to the degree.

Major Program Specific Courses

CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), MBIO 2100, MBIO 2110, CHEM 2380, CHEM 2470, MBIO 3410, MBIO 3450, MBIO 3460; two of CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630

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 3490, CHEM 3580, CHEM 4570, CHEM 4580, CHEM 4590, CHEM 4600, CHEM 4640, CHEM 4650, CHEM 4670, 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

5.2.2 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
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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" course⁴

MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990

Plus 30 credit hours from option list above which must include 21 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
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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" course⁴

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
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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" course⁴

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.)

5.3 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

5.3.1 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)

5.3.2 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.

5.3.3 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)
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.

5.4 Biotechnology

Program Coordinators:

Peter Loewen, Head, Department of Microbiology;

Norman R. Hunter, Head, Department of Chemistry

Program Office: 418 Buller Building, 360 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

5.4.1 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 a Degree Grade Point Average of 3.00, 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 9 credit hours each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the Honours Program Specific courses (see below), and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree.

Honours Program Specific Courses

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, CHEM 3590, CHEM 4590, CHEM 4620 or CHEM 4630, MBIO 4470, MBIO 4510, MBIO 4570, MBIO 4600, MBIO 4610

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 4670, 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.

5.4.2 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.

5.5 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

5.5.1 Academic Staff

Professor Emerita

Shay, J.M., B.Sc.(Hons.) (London), M.Sc., Ph.D. (Manitoba).

Professor Emeritus

Reid, J., B.Sc.(Hons.), M.Sc. (McMaster), Ph.D. (Toronto)

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); **Piercey-Normore, M. D.,** B.Sc. (Gen.), B.Sc. (Hons.), M.Sc., Ph.D. (Memorial); **Renault, S.,** B.Sc., M.Sc., Ph.D. (Poitiers); **Sumner, M.J.,** B.Sc.(Hons.), M.Sc. (Alberta), Ph.D. (Manitoba).

Assistant Professors

Bird, D.A., B.Sc., Ph.D. (Calgary); **Markham, J.H.,** B.Sc.(Hons.) (Guelph), B.Ed. (Dalhousie), Ph.D. (UBC); **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).

5.5.2 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 agricul-

ture, 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, Physics or Statistics 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 Degree Grade Point Average of 3.00, 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 Degree Grade Point Average of 3.00 or better a grade of "C+" or better in all Botany courses and a grade of "C" or better on all remaining courses that contribute to the degree.

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, Physics or Statistics 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 5.8 *Ecology Program* for full details.

5.5.3 Botany, Department Code: 001

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	BOTN 2010, BOTN 2020, BOTN 2110, BOTN 2370 (ZOL 2370 or AGECE 2370) ² , BOTN 2460, ZOOL 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
In University 1 or Year 2 the following must be completed: STAT 1000 and 3 credit hours of Mathematics, Physics or Statistics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , PHYS 1020, PHYS 1050, STAT 2000 6 credit hours from the Faculty of Arts, which should include the required "W" course.			BOTN 3000 (ZOOL 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
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		
Plus 3 credit hours of Mathematics or Physics from MATH 1200, MATH 1300 ¹ , MATH 1500 ¹ , 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.			
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 2110, BOTN 2370 (ZOL 2370 AGECE 2370) ² , BOTN 2460, ZOOL 2280	BOTN 3010, BOTN 3070	BOTN 3190

continued on next page

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)

In University 1 or Year 2:

STAT 1000 and

3 credit hours of Mathematics, Physics or Statistics from MATH 1200, MATH 1300¹, MATH 1500¹, PHYS 1020, PHYS 1050, STAT 2000

6 credit hours from the Faculty of Arts, which should include the required "W" course.

BOTN 3000 (ZOOL 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

JOINT BOTANY-ZOOLOGY HONOURS AND FOUR YEAR MAJOR ECOLOGY PROGRAMS See Section 5.8 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 (ZOOL 2370 or AGECE 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.

5.6 Department of Chemistry

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5.6.1 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); **Jamieson**, J.C., B.Sc. (Heriot Watt), Ph.D. (Aberdeen); **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); **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); **Hultin**, P.G., A.B. (Dartmouth), M.Sc., Ph.D. (Toronto); **Hunter**, N.R., B.Sc., M.Sc. (Carleton), Ph.D. (New Brunswick); **O'Neil**, J.D.J., B.Sc., Ph.D. (Toronto); **Perreault**, H., B.Sc., M.Sc. (Montreal), Ph.D. (Dalhousie), *Canada Research Chair in Bioanalytical Mass Spectrometry*.

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*; **Kroeker**, S., B.Sc. (Winnipeg), M.Sc. (Manitoba), Ph.D. (Dalhousie); **Stetefeld**, J. Dipl.-Chem. (Leipzig), Ph.D. (Max-Planck-Institut) *Canada Research Chair in Structural Biology*; **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-University); **Schreckenbach**, H.G., Dipl.-Phys. (Technische Universität

Dresden), Ph.D. (Calgary); **Schweizer**, F., Dipl.-Chem. (Freiburg), Ph.D. (Alberta); **Sorensen**, J.L., B.Sc., M.Sc. (Saskatchewan), Ph.D. (Alberta); **van Wijngaarden**, J.A., B.Sc. (Hons.), (Western), Ph.D. (Alberta).

Instructors

Gauvin, F., B.Sc. (Sherbrooke), M.Sc. (Laval), Ph.D (McGill) (Instructor II); **Koczanski**, K., B.Sc. (Winnipeg), M.Sc. (Manitoba) (Instructor II); **Scoot**, A., B.Sc.(Hons.) (Newcastle, UK), M.Sc., Ph.D. (Saskatchewan) (Senior Instructor); **Smirnova**, E., Ph.D. (Moscow State) (Senior Instructor); **Xidos**, J., B.Sc., Ph.D. (Memorial) (Instructor II).

5.6.2 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 a Degree Grade Point Average of 3.00 and in addition, must have a 3.00 average on all Chemistry courses during that term, and a grade of "C+" or better in each Chemistry course. Students must complete 9 credit hours in each Fall and Winter Term. To graduate with the Honours degree, a student must also have a minimum grade of "C" in all remaining courses that contribute to the degree.

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 a Degree Grade Point Average of 3.00 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 9 credit hours. To graduate with the Honours degree (Cooperative Option), a student must also have a minimum grade of "C" in all remaining courses that contribute to the degree.

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 the Major program, a student must have a Cumulative Grade Point Average of 2.00 at each point of assessment. To graduate with the Major degree, students must present a grade of "C" or better on the 54 credit hours of Chemistry required in the degree and a Degree Grade Point Average of 2.00.

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 the Major program, a student must have a Cumulative Grade Point Average of 2.00 at each point of assessment. To graduate with the Major degree, students must present a grade of "C" or better on the 54 credit hours of Chemistry required in the degree and a Degree Grade Point Average of 2.00. 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 5.2 *Biochemistry Program* for full details. They also offer a Joint Honours program in Biotechnology. See Section 5.4 *Biotechnology Program* for full details.

5.6.32 Chemistry, Department Code: 002

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

HONOURS 120 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 1500¹(C), MATH 1700(C)¹CHEM 2210, CHEM 2220, CHEM
2280, CHEM 2290, CHEM 2380,
CHEM 2470, CHEM 2860 (CHEM
2360)

CHEM 3380, CHEM 3590

CHEM 4600 and CHEM 4710

Plus 3 credit hours from Mathemat-
ics, Statistics or Computer Science
courses³Sufficient credit hours from the 2000, 3000 and 4000 level Chemistry⁴
courses not yet taken to total a minimum of 60 credit hoursPlus a maximum of 9 credit hours of non-Chemistry courses which are
part of a focus area⁴

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

30 Hours

HONOURS COOPERATIVE OPTION 120 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 1500¹(C), MATH
1700(C)^{1,2}

Plus 6 credit hours of electives

CHEM 2210, CHEM 2220, CHEM
2280, CHEM 2290, CHEM 2380,
CHEM 2470, CHEM 2860 (CHEM
2360)Plus 3 credit hours from Mathemat-
ics, Statistics or Computer Science
courses³

CHEM 3380, CHEM 3590

CHEM 4600 and CHEM 4710

Sufficient credit hours from the 2000, 3000 and 4000 level Chemistry⁴
courses not yet taken to total a minimum of 60 credit hoursPlus a maximum of 9 credit hours of non-Chemistry courses which are
part of a focus area⁴

CHEM 3980, CHEM 3990, CHEM 4980 and/or CHEM 4990

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

30 Hours

MAJOR⁴ 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
1500¹, MATH 1700¹CHEM 2210, CHEM 2220, CHEM
2280, CHEM 2290, CHEM 2380,
CHEM 2470, CHEM 2860 (CHEM
2360)

CHEM 3380, CHEM 3590

CHEM 4600

Plus 3 credit hours from Mathemat-
ics, Statistics or Computer Science
courses³Sufficient credit hours from the 2000, 3000 and 4000 level Chemistry⁴
courses not yet taken to total a minimum of 54 credit hoursPlus a maximum of 9 credit hours of non-Chemistry courses which are
part of a focus area⁴

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 OPTION⁴ 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	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2380, CHEM 2470, CHEM 2860 (CHEM 2360) Plus 3 credit hours from Mathematics, Statistics or Computer Science courses ³	CHEM 3380, CHEM 3590 Sufficient credit hours from the 2000, 3000 and 4000 level Chemistry ⁴ courses not yet taken to total a minimum of 54 credit hours Plus a maximum of 9 credit hours of non-Chemistry courses which are part of a focus area ⁴	CHEM 4600
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.		CHEM 3980, CHEM 3990, CHEM 4980 and/or CHEM 4990	

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 5.2 Biochemistry Program

JOINT MICROBIOLOGY-CHEMISTRY HONOURS IN BIOTECHNOLOGY: See Section 5.4 Biotechnology Program

5.6.4² Chemistry – Physics Joint Program, Department Code: 002PSubject to approval by the Council on Post-Secondary Education

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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JOINT HONOURS 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

CHEM 1300(B), CHEM 1310(B), PHYS 1050(B) (or PHYS 1020(B+)) and PHYS 1070(B), MATH 1500 ¹ (B), MATH 1700(B) ¹ Plus 6 credit hours of electives Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2380 or CHEM 2470, PHYS 2390, PHYS 2380, PHYS 2490, PHYS 2600, PHYS 2650	12 credit hours from whichever of CHEM 2380 or 2470 not taken and any of CHEM 2860 (CHEM 2360 (MBIO 2360)), CHEM 2370 (MBIO 2370) or 3000 or 4000 level Chemistry courses PHYS 2260, PHYS 2610, PHYS 3380, PHYS 3630, PHYS 3670, PHYS 3680	CHEM 4600 CHEM 4710 or PHYS 4670 PHYS 4390 Plus 6 credit hours from 3000 or 4000 level Physics courses Plus 3 credit hours from 3000 or 4000 level Chemistry courses Plus 9 credit hours of electives
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 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 The courses required in this program will satisfy the university mathematics requirement.

³ MATH 1010, MATH 1020, MATH 1190, MATH 1191, COMP 1260 and COMP 1270 may not be used to satisfy this requirement.

⁴ Students are required to complete 27 credit hours in addition to the Chemistry Core course. The 27 hours must include a minimum of 18 credit hours of Chemistry at the 2000, 3000 and 4000 level and a maximum of 9 credit hours of non-Chemistry courses. This selection of courses may be used to create a focus area e.g. Bioanalytical Chemistry, Materials Science, Environmental Chemistry, Biopharmaceutical Chemistry.

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.)

5.7 Department of Computer Science

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5.7.1 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); **Li**, P.C., B.Sc.(Hons.), 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. (Delaware);

Assistant Professors

Irani, P. B.Sc, Ph.D. (New Brunswick); **Domaratzki**, M., B.Math(Hons), M.Math(Waterloo), PhD (Queens); **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); **Liu**, Y., B. Eng. (Beijing U of Posts & Telecommunications), M. Math., Ph.D. (Waterloo).

Instructors

Andres, T. B.Sc (Hon), MSc. (Manitoba) (Instructor II), **Boyer**, G., B.Sc.(Hons.), M.Sc. (Manitoba) (Instructor II); **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 II).

5.7.2 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 a 3.00 Degree Grade Point Average at each point of assessment. Students must complete 9 credit hours each Fall and Winter Term.

To graduate with the Honours degree, a student must present a minimum grade of "C" in each course which contributes to the degree and a DGPA of 3.00.

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 Calgary, 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. REMINDER: Students must complete at least 9 credit hours per each Fall and Winter Term (or equivalent for cooperative students) to remain in the Honours program.

To graduate with the Honours degree, a student must present a minimum grade of "C" in each course which contributes to the degree and a DGPA of 3.00.

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.

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 Cumulative Grade Point Average of 2.00 at each point of assessment. 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.

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 at each point of assessment. To graduate with the Major degree, a student must present a minimum grade of "C" in each of STAT 1000, 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. 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.

5.7.3 Computer Science, Department Code: 074

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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
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
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
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.		COMP 2980, COMP 3980, COMP 4980 must be completed prior to the last academic term	
30 Hours	30 Hours	30 Hours	30 Hours
FOUR YEAR MAJOR ^{4,5,7,8} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
COMP 1010 and COMP 1020(C+) MATH 1300 ¹ and MATH 1500 ¹ , with a (C) average	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3350, COMP 3370, COMP 3430 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+) MATH 1300 ¹ and MATH 1500 ¹ , with a (C) average	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3350, COMP 3370, COMP 3430 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.)

5.7.4 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.

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.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS² 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 2352, 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	
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 2352, 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.)			

5.7.5 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 course that contributes to the degree

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.

5.7.6 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.

5.8 Ecology Program

Program Director: Darren Gillis

Program Office: Z305 Duff Roblin

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Website: umanitoba.ca/science/ecology

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5.8.1 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 program director 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 a Degree Grade Point Average of 3.00, and in addition, must have a 3.00 average on all Botany and Zoology courses during that term 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 9 credit hours each Fall and Winter Term.

In order to graduate with an Honours degree, a student must obtain a Degree Grade Point Average of 3.00 or better, and must have a grade of “C+” or better in all Botany and Zoology courses and a grade of “C” or better on all remaining courses that contribute to the degree.

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 (ZOO 2370 or AGE 2370), ZOO 2320, ZOO 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/ZOO 3980
Second work term	BOTN 3990/ZOO 3990
Third work term	BOTN 4980/ZOO 4980
Fourth work term	BOTN 4990/ZOO 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.

5.8.2 Ecology Program, Department Code: 001E

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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 (ZOO 2370 or AGE 2370) ² , BOTN 2460, ZOO 2280, ZOO 2320, ZOO 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 ZOO 3540 ³ , BOTN 3070, ZOO 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/ZOO 3000, BOTN 3420 (ZOO 3450), BOTN 3540, and ZOO 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

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 (ZOO 2370 or AGE 2370) ² , BOTN 2460, ZOO 2280, ZOO 2320, ZOO 2600	BOTN 3010 or ZOO 3540 ³ , BOTN 3070 Plus BOTN 3420 (ZOO 3450), BOTN 3540 and ZOO 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 (ZOO 2370 or AGE 2370) ² , BOTN 2460, ZOO 2280, ZOO 2320, ZOO 2600	BOTN 3010 or ZOO 3540 ³ , BOTN 3070, BOTN 3980/ZOO 3980, BOTN 3990/ZOO 3990	BOTN 4980/ZOO 4980, BOTN 4990/ ZOO 4990 <i>continued on next page</i>
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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 and STAT 2000

6 credit hours from the Faculty of Arts which could include the required "W" course.

Plus BOTN 3420 (ZOO 3450), BOTN 3540 and ZOO 3680 which may be taken in Year 3 or 4

Either: CHEM 2770 and CHEM 2780 (MBO 2770 and MBO 2780); or CHEM 2210 plus CHEM 2360 and CHEM 2370 (MBO 2360 and MBO 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 ZOO 2370 or AGE 2370), BOTN 3540 and ZOO 3680

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, MBO 2100, MBO 2110, MBO 2230, MBO 2280, MBO 3440, MBO 3480, MBO 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.

5.9 Environmental Science Program, Department of Environment and Geography

Acting Head: Rick Baydack

General Office: 211 Isbister

Telephone: 204 474 9081

5.9.1 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.

5.10 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

5.10.1 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 Honours 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, students must have a Degree Grade Point Average of 3.00. Students must complete 9 credit hours each Fall and Winter Term. To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the Honours Program Specific courses (see below), and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree.

Honours Program Specific Courses

BOTN 3460, PLNT 3140, MBIO 3410, ANTH 2890, BGEN 3020 and MBIO 4530 or BGEN 4010 if taken.

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 (see above). Students are required to complete the first and second year requirements of the program and MBIO 3410 before they begin their first employment term. Each academic term in the third and subsequent years must comprise 9 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. 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 4-month employment term.

5.10.2 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 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 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 3000, BOTN 4180

Chemistry: CHEM 2280, CHEM 2290, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630

Zoology: ZOOL 2150, ZOOL 2530, ZOOL 2540, ZOOL 3000, 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.

5.11 Department of Geological Sciences

Head: Nancy Chow

General Office: 240 Wallace Building

Telephone: 204 474 9371

Website: umanitoba.ca/science/geoscience

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 al-

ready completing a three year General program in which they have chosen Geology as a subject area should consult a Science student advisor.

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.

5.12 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

5.12.1 Academic Staff

Distinguished Professors Emeriti

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.

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.), M.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); **Chipkatti, J.**, B.Tech (IIT Bombay), M.Sc. Ph.D. (Purdue); **Gunderson, D.** B.Sc., M.Sc. (Calgary), Ph.D. (Emory); **Lukács, G.**, B.Sc., M.Sc. (Technion - Israel Inst. of Technology), Ph.D. (York); **Portet, S.** B.Sc., M.Sc., Ph.D. (Paris); **Schippers, E. D.**, B.Sc., M.Sc., Ph.D. (Toronto).

Instructors

Iraghi Moghaddam, G., B.Sc., M.Sc. (Mashad, Iran), Ph.D (Manitoba) (Instructor II); **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)

5.12.2 Program Information

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 9 credit hours each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the Honours Program Specific courses (see below), and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree.

Honours Program Specific Courses

MATH 3230, MATH 3300, MATH 3350, MATH 3400, MATH 3700, MATH 3710, MATH 3760 and MATH 3800.

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.

To graduate with the B. Sc. Major degree, a student must achieve a minimum DGPA of 2.00 and a minimum grade of "C" in each of the Major Program Specific courses (see below).

Major Program Specific Courses

MATH 1300, MATH 1500, MATH 1700, MATH 1690, MATH 2200, MATH 2352, MATH 2600, MATH 2750, MATH 2800, MATH 3300, MATH 3350, MATH 3400, MATH 3700, MATH 3710, MATH 3740, MATH 3760, and MATH 3800.

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.

To graduate with the B. Sc. Major degree, a student must achieve a minimum DGPA of 2.00 and a minimum grade of "C" in each of the Major Program Specific courses (see below).

Major Program Specific Courses

MATH 1200, MATH 1300, MATH 1500, MATH 1700, MATH 1690, MATH 2300, MATH 2400, MATH 2600, MATH 2720, MATH 2730, MATH 2800, MATH 3500, MATH 3600, MATH 3700, MATH 3740, MATH 3800, MATH 3810, and MATH 3820.

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.

5.12.3 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 1300¹ (B), MATH 1690 (B), (or MATH 1500¹ and MATH 1700¹ (B)), STAT 1000², COMP 1010²

Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course

MATH 2200, MATH 2352, MATH 2600, MATH 2750, MATH 2800

48 credit hours³ of 3000 and 4000 level Mathematics⁵ courses, which must include MATH 3230, MATH 3400, MATH 3760, MATH 3800 and one of two of the concentrations listed below:

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 1300¹(B), MATH 1690 (B) (or MATH 1500¹ and MATH 1700¹ (B)), STAT 1000², COMP 1010²

Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course

MATH 2200, MATH 2352, 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 4750³

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

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 1300¹, MATH 1500¹ and MATH 1700¹ (or MATH 1690), STAT 1000², COMP 1010²

Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course

MATH 2200, MATH 2352, 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

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 1300¹, MATH 1500¹ and MATH 1700¹ (or MATH 1690), COMP 1010, COMP 1020

Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course

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

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.)

5.12.4 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. (This program is currently under review).

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 2352, 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.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of either "B" or "C+" (as indicated) in each of the Honours Program Specific courses, and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree. See the Calendar entry for each of the Actuarial Mathematics program and the Department of Mathematics for the Honours Program Specific courses.

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.

5.12.5 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 2352, 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 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.

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.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of “C+” in each of the Honours Program Specific courses, and a minimum grade of “C” on all remaining courses that contribute to the 132 credit hours of the degree. See the Calendar entry for each of the Department of Mathematics and the Department of Physics and Astronomy for the Honours Program Specific courses.

5.12.6 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 2352, 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 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.

5.13 Department of Microbiology

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5.13.1 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); **Kumar, K.**, B.Sc., M.Sc. (Manitoba).

5.13.2 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 a minimum Degree Grade Point Average of 3.00 and in addition, must have a 3.00 Grade Point Average on all Microbiology courses during that term. Students must complete 9 credit hours each Fall and Winter Term. To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each Microbiology course and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree.

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 (see above), 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 (see above). 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 a Degree Grade Point Average of 3.00, and in addition, must have a 3.00 Grade Point Average on all Microbiology courses during that term. Each academic term in the third and subsequent years must comprise 9 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 CHEM 4670

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, AGEC 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 5.4 for full details.

5.13.3 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.		Plus 15 credit hours of Microbiology courses ⁴ and 12 credit hours chosen from Microbiology courses ⁴ or from the option list (see above)	
30 Hours	30 Hours	30 Hours	30 Hours
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
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.		MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990 Plus 21 credit hours of Microbiology courses ⁴ and 12 credit hours chosen from Microbiology courses ⁴ or from the option list (see above)	
30 Hours	30 Hours	30 Hours	30 Hours
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)	
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.			

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, ZOO 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)
--	---	--

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.)

5.14 Department of Physics and Astronomy

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Telephone: 204 474 9817

Websites: www.physics.umanitoba.ca

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E-mail: physics@umanitoba.ca

5.14.1 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); **Loly**, P.D., B.Sc., Ph.D. (London), D.I.C. (Imperial College); **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); **Cadogan**, J.M., B.Sc.(Hons.), Monash, Ph.D. U.N.S.W.; **Chakraborty**, T., Ph.D. (Dibrugarh, India), Docent (Oulu, Finland), Ph.D. (h.c.)(Oulu, Finland), Canada Research Chair; **Ens**, E.W., B.Sc. (Winnipeg), Ph.D. (Manitoba); **Osborn**, T.A., B.Sc. (Cornell), Ph.D. (Stan-

ford); **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.); **Gwinner**, G., Vordiplom (Heidelberg), M.A., Ph.D. (S.U.N.Y.); **Hu**, C-M., B.Sc. (Fudan), Ph.D. (Würtzburg); **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); **Gericke**, M., B.S. (Arkansas, Little Rock), M.S., Ph.D. (Indiana, Bloomington); **van Lierop**, J., B.Sc.(Hons) (Concordia), M.Sc. (Queen's), Ph.D. (McGill).

5.14.2 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 DGPA of 3.00 and a 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.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and minimum grade of “C” in each course that contributes to the 120 credit hours of the degree.

There are a number of awards — the Coish, the C.P. Loewen, the Neamtan, the Roulston, and the Sen Scholarships — 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.

5.14.3 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:	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
	Option A (Astronomy): PHYS 2070	PHYS 3180	PHYS 4230, PHYS 4240
	Option B (Physics): 6 credit hours to be chosen from MATH 2730 ⁸ , MATH 2800 or courses in Computer Science, Chemistry or Geophysics	MATH 3130	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

JOINT CHEMISTRY – PHYSICS HONOURS See Section 5.6.3 Chemistry (Subject to approval by the Council on Post-Secondary Education)

FOUR YEAR MAJOR ^{7,9} 120 CREDIT HOURS (comprising courses listed in chart below, and electives)

PHYS 1050 (C+) (or PHYS 1020² (B)) and PHYS 1070 (C+), MATH 1500^{3,5} and MATH 1700^{3,5}PHYS 2260, PHYS 2390, PHYS 2490, PHYS 2380, PHYS 2600, MATH 1200, MATH 1300³PHYS 2610, PHYS 2650, PHYS 3670, PHYS 3680, PHYS 3380, MATH 2720⁸

PHYS 3430, PHYS 3650, MATH 3130, MATH 3700

Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course

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

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.

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 2730.⁹ IMPORTANT: 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.)

5.15 Psychology Program

Head: H. Keselman**Program Office:** P404 Duff Roblin Building**Telephone:** 204 474 6378**Website:** umanitoba.ca/psychology/**Undergraduate Advisor email:** psychugadvisor@umanitoba.caAssociate Head (Undergraduate) email: psychughead@umanitoba.ca

5.15.1 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 1211 and PSYC 1221) 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 9 credit hours in each Fall and Winter Term and must meet all of the continuation criteria of the Faculty of Science. In addition, students must maintain a minimum Degree Grade Point Average of 3.25 based on all

courses in the program. 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 from the Associate Head (Undergraduate) or the Undergraduate Advisor.

To graduate, a student must offer 120 credit hours of courses with grades of "C" or better in each course and with a minimum Degree Grade Point Average of 3.25 on the 120 credit hours that contribute to 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 1211 and PSYC 1221) 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 at each point of assessment, 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 Degree Grade Point Average of 2.00. In addition,

the student must complete the program of study as listed in the program chart below.

NOTE: Psychology cannot be used as an upper level Science department in the B.Sc. General degree.

5.15.2 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 1211 (B+) and PSYC 1221 (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 3340 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 1211 (C+) and PSYC 1221(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
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A "W" course must be taken in University 1 or Year 2

MINOR

PSYC 1200 or (PSYC 1211 and PSYC 1221)	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 3350, PSYC 3430

Psychology Courses

All Psychology courses are available to Science students, for a complete course listing see the Faculty of Arts section.

Psychology courses taught at the College universitaire de Saint-Boniface can be used to satisfy degree requirements

5.16 Department of Statistics

Acting Head: Brian Macpherson

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Website: www.umanitoba.ca/statistics/

E-mail: Stats_Dept@umanitoba.ca

5.16.1 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).

5.16.2 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 and STAT 2400 in second year and enter Honours in Year 3.

To enter the Honours program students must have a “B” or better in STAT 2000 and STAT 2400 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 a Degree Grade Point Average of 3.00 or better at each point of assessment. 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 9 credit hours each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of “C+” in each of the Honours Program Specific courses (see below), and a minimum grade of “C” on all remaining courses that contribute to the 120 credit hours of the degree.

Honours Program Specific courses

All courses specified in the program charts below (excluding the required optional courses and electives).

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 and STAT 2400 in Year 2 and enter the four year Major in Year 3.

To enter the four year Major program in Statistics, students must have a “C+” or better in STAT 2000 and STAT 2400 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 at each point of assessment.

To graduate from the four year Major program a student must have a minimum 2.00 Degree Grade Point Average and a minimum grade of “C” in each of the Major Program Specific courses (see below).

Major Program Specific courses

All courses specified in the program charts below (excluding the required optional courses and electives).

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.

5.16.3 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	STAT 2400 (B) MATH 2300, MATH 2720 and MATH 2730 (or MATH 2750)	STAT 3050, STAT 3470 and STAT 3480, STAT 3500, STAT 3600, MATH 3740	STAT 4140, STAT 4520, STAT 4530
Plus sufficient credit hours of electives to total 30 credit hours	Plus sufficient credit hours of electives to total 30 credit hours ³		
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 15 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 ³	
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	STAT 2400, MATH 2720, MATH 2730	STAT 3120, STAT 3130, STAT 3500, STAT 3600	STAT 4520, STAT 4530
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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 15 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 below⁴**THREE YEAR GENERAL**A minimum of 12 credit hours from STAT 2400, STAT 3010, STAT 3050, STAT 3120, STAT 3130, STAT 3170, STAT 3180, STAT 3380, STAT 3490, STAT 3500⁵, STAT 3600⁵, STAT 4600, STAT 4630, STAT 4690**MINOR**

STAT 1000

STAT 2000

Plus 12 credit hours from STAT 2400, STAT 3010, STAT 3050, STAT 3120, STAT 3130, STAT 3170, STAT 3180, STAT 3380, STAT 3490, STAT 3500⁵, STAT 3600⁵, 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.**5.16.4 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 at least 3 credit hours in an approved Written English course, ECON 1200, STAT 1000, STAT 2000, MATH 1300 and either MATH 1690, or MATH 1500 and MATH 1700 or any equivalent with a minimum grade of "B" in all of the above courses.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of either "B" or "C+" (as indicated) in each of the Honours Program Specific courses, and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree. See the Calendar entry for each of the Actuarial Mathematics program and the Department of Statistics for the Honours Program Specific courses.

Recommended Electives:

ACT 4050, ACT 4060, Accounting and Finance FIN 3410; Computer Science COMP 1010; STAT 4630

UNIVERSITY 1	YEAR 2	YEAR 3 ²	YEAR 4 ⁶
JOINT HONOURS³ 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
ECON 1200 (B) MATH 1690(B) (or MATH 1500 ¹ and MATH 1700 ¹ (B)), MATH 1300 ¹ (B), STAT 1000 (B), STAT 2000 (B) and required 'W' course (B)	ACT 2120, ACT 2020, STAT 2400, STAT 3500, ACC 1100 ⁴ (B) FIN 2200 ⁴ (B) MATH 2750 (or MATH 2720 and MATH 2730), MATH 2300 ⁵	STAT 3050, STAT 3470 (B) and STAT 3480, STAT 3600, ACT 3130, ACT 3230, ACT 3530, COMP 1260 ⁷ and MSCI 2150 ⁷	STAT 3490 (B), STAT 4140, STAT 4520, STAT 4530, ACT 4140, ACT 4150, ACT 4240, ACT 4000, ACT 4340
Plus 3 credit hours from the Faculty of Arts if a 3 credit hour 'W' is taken	Plus 3 credit hours of approved electives	Plus 3 credit hours of approved electives	Plus 3 credit hours of approved electives
Plus 3 credit hours of 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 It is strongly recommended that students take a minimum of 21 credit hours in YEAR 3

³ The courses required in this program satisfy the university mathematics requirement.

⁴ ACC 1100 and FIN 2200 may be taken in Year 2, 3 or 4; however, it is strongly recommended that these two courses be taken in Year 2 or 3. Note that ACC 1100 is a prerequisite for FIN 2200.

⁵ MATH 2352 may be taken in place of MATH 2300 and may be taken in Year 2, 3 or 4

⁶ It is strongly recommended that students take a minimum of 27 credit hours in YEAR 4

⁷ COMP 1260 and MSCI 2150 may be taken in Year 2, 3 or 4. Note that COMP 1260 is a prerequisite for MSCI 2150.

(Letters in brackets indicate minimum prerequisite standing for further study.)

5.16.5 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).

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the Honours Program Specific courses, and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree. See the Calendar entry for each of the Department of Statistics and the Department of Mathematics for the Honours Program Specific courses.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS⁶ 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)), Plus 9 credit hours	STAT 2000 ⁴ , STAT 2400, MATH 2200, MATH 2352, MATH 2600, MATH 2750, MATH 2800 Plus 3 approved credit hours	STAT 3050, STAT 3470, STAT 3480, STAT 3500, STAT 3600 Plus 3 approved credit hours	STAT 4140 ³ , STAT 4520, STAT 4530 ³ Plus 6 approved credit hours
The following courses must be taken in University 1 or Year 2 COMP 1010 ² , 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.)

5.16.5 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 and STAT 2400 in second year and enter Honours in Year 3. 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), STAT 2000 and STAT 2400, 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.

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 Plus 9 credit hours of electives which should include the required "W" course	STAT 2400, ECON 2700, ECON 2800, MATH 2200, MATH 2352, MATH 2750, STAT 2000 Plus 3 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 Plus 12 credit hours of approved Economics electives ³
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.)

5.17 Department of Zoology

Head: Erwin Huebner

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Telephone: 204 474 9245

Website: umanitoba.ca/science/zoology/

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5.17.1 Academic Staff

Emeritus Distinguished Professor

Eales, J.G., B.A.(Hons.) (Oxford), M.Sc., Ph.D. (UBC), F.R.S.C.;

Senior Scholars

MacArthur, R.A., B.Sc.(Hons.), M.Sc. (Alberta), Ph.D. (Manitoba); **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); **Riewe, R.R.,** B.S., M.S. (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

Campbell, K.L., B.Sc. (Hons), Ph.D. (Manitoba); **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); **Davoren, G.K.,** B. Sc., M.Sc. (Victoria), Ph.D. (Memorial); **Docker, M.F.,** B.Sc., Ph.D. (Guelph); **Whyard, B.Sc.(Hons),** Ph.D. (Queen's).

Senior Instructors

Naraysingh, T.G., B.Sc.(Hons.), M.Sc. (Manitoba); **McLeese, J.M.,** B.Sc., M.Sc. (Guelph), Ph.D. (Ottawa).

Instructor II

Scott, K, G-E, B.Sc., Ph.D. (Calgary)

5.17.2 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, Phar-

macy, 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 a Degree Grade Point Average of 3.00, and in addition, must have a 3.00 Grade Point Average on all Zoology courses during that term and a grade of "C+" or better in each Zoology course. Students must complete 9 credit hours each Fall and Winter Term.

To graduate with an Honours degree after Year 4, a student must obtain a Degree Grade Point Average of 3.00 and must have a grade of "C+" or better in all Zoology courses and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree.

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 (see above). 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 (see above). 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 a Degree Grade Point Average of 3.00, and in addition, must have a 3.00 Grade Point Average on all Zoology courses during that term, 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 cred-

it 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 the Major program a student must have a minimum Cumulative Grade Point Average of 2.00 and a "C" or better in each Zoology course. To graduate with the Major degree after Year 4, a student must obtain a Degree Grade Point Average of 2.00 or better and must have a grade of "C" or better in all Zoology courses.

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 (see above). 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 (see above), with the addition of ZOOL 3750 and the Work Term courses. To continue in the Major Cooperative program, a student must have a Cumulative 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 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.

5.17.3 Zoology, Department Code: 022

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS SINGLE ⁵ 120 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
			<i>continued on next page</i>

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.	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

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.

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
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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.	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.
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30 Hours	30 Hours	30 Hours	30 Hours
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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
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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 2000 6 credit hours from the Faculty of Arts, which should include the required "W" course.	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 un specified Zoology credits from a related area.
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ZOOL 2150, ZOOL 2280, ZOOL 2370 (BOTN 2370 or AGEC 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 3530 ⁴ , ZOOL 3540 ⁴ , ZOOL 3750
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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.

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 (MBO 2360) and CHEM 2370 (MBO 2370) are elected, CHEM 2360 (MBO 2360) and CHEM 2370 (MBO 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.

5.18 Courses Offered in Other Faculties and Schools Acceptable for Credit in the Faculty of Science

All courses acceptable for credit in any degree program at the University of Manitoba are acceptable for credit in Science (excludes Pass/Fail courses) subject to overall degree requirements. All courses will be included on admission to the Faculty and will be applied toward the elective requirement in all degree programs offered in Science. For course descriptions,

including any prerequisites and/or restrictions, see the chapter entitled Course Descriptions in this Calendar (Subject to Senate approval).

All four and five credit hour courses will be counted as three credit hours in the Faculty of Science.

5.18.1 Faculty of Management/Asper School of Business

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) (119)

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.

5.18.2 Faculty of Human Ecology

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 MINOR (062F)

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

6 credit hours at the 1000 level

3 credit hours at the 2000 level, 3 credit hours at the 3000 or 4000 level, and 6 credit hours at the 2000, 3000 or 4000 level

5.18.3 Faculty of Music

Students claiming advance standing, for any reason, will be asked to undergo placement tests to substantiate their claims.

MUSIC MINOR (033) Minor 18 Credit Hours

Minor Option 1

UNIVERSITY 1

YEAR 2

YEAR 3

YEAR 4

MUSC 1280 and MUSC 1290

(At most, 12 credit hours numbered at the 1000 level may be used toward the minor)

12 credit hours of Music courses from List A (Students who elect ensemble courses from List A are required to complete all three courses)

Minor Option 2

MUSC 1110 and MUSC 1120

(At most, 12 credit hours numbered at the 1000 level may be used toward the minor)

12 credit hours of Music courses from List A (Students who elect ensemble courses from List A are required to complete all three courses)

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)

5.18.4 School of Art

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

General Office

521 Tier Building

Telephone: (204) 474-7050

Fax: 474-7594

E-mail: Social_Work@UManitoba.CA

Website: www.umanitoba.ca/faculties/social_work

Dean: Robert Mullaly

Associate Dean (Undergraduate): Harvy Frankel

Associate Dean (Graduate): Diane Hiebert-Murphy

BSW Program Coordinator: Alex Wright

Coordinator of Student Services and Admissions/ Advising Office: Anita Nowak

Student Advisor: Marcie Baker

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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); **Kaminski, L.E.**, B.A., M.S.W. (Manitoba); **Penner, A.G.**, B.A., B.S.W. (Manitoba); **Ry-**

ant, 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); **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); **Baffoe, M.**, B.A. (Ghana), B.S.W. (McGill), M.S.W. (McGill); **Bonnycastle, 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); **Levine, K.**, B.S.W. (Manitoba), M.S.W. (Carleton), Ph.D. (Manitoba); **McKnight, K.E.**, B.A., B.S.W., M.S.W. (McMaster); **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); **Halonen, D.**, B.A., B.S.W., M.S.W. (Lakehead); **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); **Morrisette, V.**, B.S.W. (Manitoba); **Paziuk, L.J.**, B.Ed. (Brandon), M.Ad.Ed. (St. Francis Xavier); **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 3.00 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 op-

portunities 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 Inner City Bachelor of Social Work (B.S.W.) ACCESS 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.

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 Northern Social Work Program

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 Northern Social Work 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 Northern Social Work 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 \$90 application fee. Once admitted as a Special Student, students will:

- Be limited to registration in nine credit hours of required 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 Cumulative Grade Point Average of 2.5. These students will also be limited to registration in nine credit hours of required 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:

Required Social Work Courses:

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

Elective Social Work Courses:

SWRK 2050	Community & Organizational Theory
SWRK 2070	Small Group Dynamics
SWRK 2100	Perspectives on the Individual & Life Transitions
SWRK 3110	Perspectives on Deviancy

NOTE: Special and non-Social Work students are required to abide by the same pre/corequisite 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, 2007 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 – Corequisite Policy

The faculty has established a set of pre-/corequisite requirements to assist students in planning their program of study.

All students must abide by the pre- and corequisite requirements for all courses.

Any exceptions to the pre- and corequisite policy **MUST** be approved by the Committee on Academic Standings prior to course registration. Should a student violate the pre- and corequisite policy, credit(s) for the course(s) will be deleted from the student's academic record. For detailed information, please refer to the BSW 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 both the Degree Grade Point Average and Subject 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 the policy governing scholastic progress as written in the BSW Student Handbook 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

To qualify for the Dean's Honour List a student must achieve:

a Term GPA of 3.5 on the basis of 12 credit hours in each of the Fall and Winter terms, or

a Term GPA of 3.5 on the basis of 12 credit hours in each of the Summer 1 and Summer 2 terms.

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 corequisite 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 corequisite 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 3.00, are eligible for the two year plan (concentrated program). If a student has completed the 51 credit hours of general university study, but does not have the required 3.00 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 2007-2008.

5.3 Interfaculty Option in Aging

The Interfaculty Option in Aging is offered by the following faculties: 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) REC 2650*, The Social Aspects of Aging; b) KIN 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 corequisite, 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 February 1. Forms requesting confirmation of student plans to take field instruction in the following year will be distributed in the winter term. Students must request a field placement by completing a field section 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.

NOTE: Field/Focus of Social Work Practice requirement for Field Instruction 2 is currently under revision. Please contact the Faculty of Social Work for detailed information.

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 February 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: Registration Information

Initial Access Times

Students are referred to the chapter, The Registration System: Aurora Student, Section 4.

6.1 Information for All Students

All B.S.W. Fort Garry and Distance Education 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.

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, including prerequisite 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 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:

Required to Withdraw: If the Committee on Academic Standings assessed you as “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.

Students are allowed one voluntary withdrawal from the Field Instruction 1 course SWRK 3150 and one voluntary withdrawal from the Field Instruction 2 course SWRK 4120.

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.

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.

6.2 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 minimum Subject 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 Degree 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 Subject and Degree 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.

6.3 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 4, 2007 and Wednesday September 5, 2007. As attendance at Field orientation is mandatory, Field students are not required to attend classes on the 4th and 5th. 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) 474-8300.

BSW Student orientation will be held on the afternoon of Tuesday September 4, 2007. 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).

6.4 Field / Focus

Second and Third Year Students Registering for Field Instruction and Field/Focus Courses (SWRK 4200)

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 A01
 add SWRK 3150 A01
 add SWRK 4200 A04
Do you wish to repeat course? Respond "yes"
 add SWRK 4120 A01

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 Child and Family Services: This course examines policy and practice with Canada's Aboriginal People in the area of Child & Family Services.

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 provide 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.

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.

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 February 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 Degree Grade Point Average of 2.75 at point of opting in.

Achieved a minimum Subject 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.

6.5 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.

6.6 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

6.7 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, 2007: Health and Physical Aspects of Aging (3 credit hours)

Plus

REC 2650 Offered in Winter term, 2008: 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.

6.9 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
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Or

SWRK 2120	Britain: Poor Laws to the Welfare State	3
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Or

SWRK 2130	Comparative Social Welfare Systems	3
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SWRK 3130	Contemporary Canadian Social Welfare	3
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Field/Practice Courses 1

SWRK 3150	Field Instruction 1	12
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SWRK 4200	Field / Focus of Social Work Practice	6
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Field/Practice Courses 2

SWRK 4120	Field Instruction 2	12
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SWRK 4200	Field / Focus of Social Work Practice	6
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Policy/Practice Courses

SWRK 4210	Feminist Perspectives on Social Work Practice	6
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SWRK 4220	Aboriginal People and Social Work Practice	6
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Total credit hours of required courses		72
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NOTES:

1. SWRK 1310 and SWRK 2080 are open to University 1 students,
2. 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
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SWRK 2070	Small Group Dynamics	3
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SWRK 4080	Current Issues in Social Welfare	3
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SWRK 4130	Advanced Interpersonal Communication Skills	3
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SWRK 4050	Selected Topics in Social Work	3
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SWRK 4070	Social Problem and Social Work Practice Seminar	3
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* Students must obtain and complete a Letter of Permission 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.

6.10 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.

6.11 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, 2007.
- Have all courses classified as “SS” and this means that courses will not generate a grade point average.

6.8 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 required Social Work courses plus SWRK 1310 and SWRK 2080.
- Be prohibited from adding courses in the Faculty of Social Work until August, 2007.

Courses available to Special Students and students enrolled in other faculties/schools at the University of Manitoba are:

Required Social Work Courses:

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

Elective Social Work Courses:

SWRK 2050 Community & Organizational Theory
 SWRK 2070 Small Group Dynamics
 SWRK 2100 Perspectives on the Individual & Life Transitions
 SWRK 3110 Perspectives on Deviancy

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.

6.12 Social Work 2007/2008 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 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 from 1:30 p.m. to 4:30 p.m. is referred to as M 1:30 – 4:20.

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 Social Work 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.

Course Descriptions

This chapter contains a listing of all courses offered by the University of Manitoba.

Courses have been sorted alphabetically by Faculty/School and then alphabetically by Subject Code.

Not all courses are offered every year. To find out if the course in which you are interested is offered in Fall/Winter 2007-2008, access the course through [Aurora Schedule](#).

Course Attributes

Some areas of study require courses from many different disciplines. Canadian Studies and Women's Studies are among these. In Aurora, you may search by Course Attribute for all the courses recommended by these disciplines, or you may consult the following sections of this *Calendar*:

Canadian Studies courses: in the chapter, Faculty of Arts, Section 8.3.2, Canadian Studies

Women's Studies courses: in the chapter, Faculty of Arts, Section 8.33.3 Women's Studies

A list of courses recommended for University 1 students has been prepared, and on Aurora, a Course Attribute of "University 1" has been attached to each. In this publication, you may find the list as follows:

University 1: in the chapter, University 1, Appendix: University 1 Course List

According to the General Academic Regulations, all students must 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. In this publication, you will find lists of courses that satisfy these requirements, as follows:

Mathematics and Written English Requirements: in the chapter, General Academic Regulations and Requirements, Appendix A: List of Approved Written English and Mathematics Courses.

FACULTY OF AGRICULTURAL AND FOOD SCIENCES-----

ABIZ 1000 Introduction to Agribusiness Management Cr.Hrs.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 use spreadsheet skills with respect to processing information and preparing forecasts. Not to be held with the former 061.100 or 061.250.

ABIZ 1010 Economics of World Issues and Policies Cr.Hrs.3 (Formerly 061.101) Determinants of global food consumption, production and the factors underpinning food security and malnutrition. The importance of international trade in balancing countries' supply and demand for food, examination of trade barriers and institutions facilitating trade. Not to be held with the former 061.210.

ABIZ 2120 World Agribusiness Study Tour Cr.Hrs.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. *Prerequisite*: Approval of instructor.

ABIZ 2210 Transportation Principles Cr.Hrs.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 SCM 2210 by the Department of Supply Chain Management.

ABIZ 2390 Introduction to Environmental Economics Cr.Hrs.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. Also offered as ECON 2390 by the Department of Economics. Students may not hold credit for both ABIZ 2390 and ECON 2390 (or 018.239) *Prerequisite*: ECON 1200 (or 018.120).

ABIZ 2510 Introduction to Agricultural and Food Marketing Cr.Hrs.3 (Formerly 061.251) Economic principles and institutions involved in the Canadian agricultural and food marketing system. Farm and Agribusiness applications. Pre or corequisite: ECON 1200 (or 018.120).

ABIZ 2520 Introduction to Management Sciences Cr.Hrs.3 (Formerly 061.252) An introduction to management science techniques and models. Topics include linear programming, distribution problems, decision theory and queuing models. Students may not hold credit for ABIZ 2520 and SCM 2150 (or 164.215 or 027.215) or 061.414. *Prerequisites*: MATH 1680 (or 136.168), or MATH 1300 (or 136.130 or 136.131) and MATH 1500 (or 136.150 or 136.152). Pre-Corequisite STAT 1000 (or 005.100) or equivalent.

ABIZ 3080 Introduction to Econometrics Cr.Hrs.3 (Formerly 061.308) The application of statistical tools, especially regression analysis for estimating economic relationships and testing economic hypotheses through the use of spreadsheets and data sets. Students may not hold credit for both ABIZ 3080 and the former 018.344. *Prerequisite*: STAT 2000 (or 005.200) or equivalent, or a grade of "C" in ECON 3170 (or 018.317). Also offered as ECON 3180 by the Department of Economics.

ABIZ 3120 Commodity Futures Markets Cr.Hrs.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 (or 018.120) and STAT 2000 (or 005.200)

ABIZ 3500 Agricultural and Food Policy Cr.Hrs.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 (or 018.245) and ECON 2470 (or 018.247).

ABIZ 3520 Food Distribution and International Merchandising Cr.Hrs.3 (Formerly 061.352) An introduction to logistics management concepts and their application to domestic and international merchandising. *Prerequisites*: ABIZ 1000 (or 061.100) or 061.250, and ABIZ 2510 (or 061.251) or MKT 2210 (or 118.221).

ABIZ 3530 Farm Management Cr.Hrs.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 061.100) or 061.250.

ABIZ 3540 Financial Risk Management Cr.Hrs.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 (or 005.100) and ACC 1100 (or 009.110) and ABIZ 1000 (or 061.100) or 061.250 or ABIZ 2510 (or 061.251).

ABIZ 3550 Environmental Policy Cr.Hrs.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. *Prerequisite*: ABIZ 2390 (or 061.239) or ECON 2390 (or 018.239).

ABIZ 3560 Agribusiness Portfolio Management Cr.Hrs.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 (or 009.110) and ECON 1200 (or 018.120), or permission from instructor. Recommended G.P.A. of 2.80 or higher.

ABIZ 4120 Intermediate Econometrics Cr.Hrs.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. *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 061.308) or ECON 3180 (or 018.318) is highly recommended. Also offered as ECON 4120 by the Department of Economics.

ABIZ 4240 Agricultural Economics Special Project Cr.Hrs.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. Permission of the Department Head required.

ABIZ 4250 Commodity Market Analysis Cr.Hrs.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 018.245 or 018.270) and ABIZ 3080 (or 061.308) or ECON 3180 (or 018.318). Not to be held with the former 061.404.

ABIZ 4500 Agribusiness Strategies Seminar Cr.Hrs.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 be given by CEOs followed by a debriefing session. Students must have completed 90 credit hours towards a degree in Agribusiness, or permission of the Department.

- AGEC 2370 Principles of Ecology Cr.Hrs.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 BOTN 2370 or ZOOL 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 BOTN 2291 (or 022.229), or BOTN 2370 or BOTN 2371 (or 001.237), or ZOOL 2370 or ZOOL 2371 (or 022.237). *Prerequisite:* A grade of "C" in BIOL 1020 or BIOL 1021 and BIOL 1030 or BIOL 1031 or the former 071.125. *Pre-corequisite:* STAT 1000 or STAT 1001.
- AGEC 2500 Population Genetics Cr.Hrs.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 065.237) or BOTN 2370 (or 001.237) or ZOOL 2370 (or 022.237).
- AGEC 3510 Agroecology Cr.Hrs.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:* AGECE 2370 (or 065.237) or BOTN 2370 (or 001.237) or ZOOL 2370 (or 022.237).
- AGEC 4510 Applications in Agroecology Cr.Hrs.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. Students must complete the undergraduate thesis for which preliminary work was done in AGECE 3510. *Prerequisite:* AGECE 3510 (or 065.351).
- AGEC 4540 Agroecology Research Project Cr.Hrs.3** (Formerly 065.454) Completion of independent research project for which preliminary work was done in AGECE 3510 (or 065.351). 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 (or 065.351)
- AGRI 1500 Natural Resources and Primary Agricultural Production Cr.Hrs.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 agrifood system will be used to show interrelationships among disciplines, processes, etc.
- AGRI 1510 Production, Distribution and Utilization of Agricultural Products Cr.Hrs.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 agrifood 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 Cr.Hrs.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 Cr.Hrs.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 (or 001.218), BOTN 2190 (or 001.219), ENVR 2180 (or 128.218), ENVR 2190 (or 128.219), ZOOL 2180 (or 022.218), ZOOL 2190 (or 022.219), and the former 001.337. *Prerequisite:* BIOL 1020 (C) and BIOL 1030 (C) or the former 071.125 (C) and CHEM 1310 (or 002.131 or 002.128) or CHEM 1320 (or 002.132).
- AGRI 2190 Toxicology Principles Cr.Hrs.2** (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 (or 001.218), BOTN 2190 (or 001.219), ENVR 2180 (or 128.218), ENVR 2190 (or 128.219), ZOOL 2180 (or 022.218), ZOOL 2190 (or 022.219), AGRI 2180 (or 065.218) and the former 001.337. *Prerequisite:* BIOL 1020 (C) and BIOL 1030 (C) or the former 071.125 (C) and CHEM 1310 (or 002.131 or 002.128) or CHEM 1320 (or 002.132).
- AGRI 2200 Principles of Plant and Animal Physiology for Engineers Cr.Hrs.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:* BIOE 2590 (or 034.259) or the former 071.201.
- AGRI 3030 Modern Topics in Agriculture 1 Cr.Hrs.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 Cr.Hrs.3** (Formerly 065.304) Similar to AGRI 3030 (or 065.303).
- AGRI 4550 Agriculture Cooperative Education Work Term 1 Cr.Hrs.1** (Formerly 065.455) Special four-month work assignment in business, industry, government or research for cooperative education students. Requires submission of a written report covering the work completed during the four-month professional assignment.
- AGRI 4560 Agriculture Cooperative Education Work Term 2 Cr.Hrs.1** (Formerly 065.456) Special four-month work assignment in business, industry, government or research for cooperative education students. Requires submission of a written report covering the work completed during the four-month professional assignment.
- AGRI 4570 Agriculture Cooperative Education Work Term 3 Cr.Hrs.1** (Formerly 065.457) Special four-month work assignment in business, industry, government or research for cooperative education students. Requires submission of a written report covering the work completed during the four-month professional assignment.
- ANSC 2500 Animal Production Cr.Hrs.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 (or 065.150) and AGRI 1510 (or 065.151).
- ANSC 2510 Anatomy and Physiology 1: Control Systems Cr.Hrs.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 (or 002.277) or MBIO 2770 (or 060.277) or CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236).
- ANSC 2520 Anatomy and Physiology 2: Nutrient Utilization Cr.Hrs.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 (or 035.251). *Corequisite:* CHEM 2780 (or 002.278) or MBIO 2780 (or 060.278), or CHEM 2370 (or 002.237) or MBIO 2370 (or 060.237).
- ANSC 2530 Nutritional Toxicology Cr.Hrs.2** (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 (or 065.219)
- ANSC 3500 Principles of Animal Genetics Cr.Hrs.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 (or 039.252).
- ANSC 3510 Feeds and Feeding Cr.Hrs.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 (or 035.252).
- ANSC 3520 Animal Reproduction Cr.Hrs.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 (or 035.251).
- ANSC 3530 The Animal and Its Environment Cr.Hrs.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 (or 035.252).
- ANSC 4090 Livestock Problems Cr.Hrs.3** (Formerly 035.409) 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 Cr.Hrs.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. (For fourth-year students in Animal Systems Major only.) *Prerequisite:* Consent of Department Head.
- ANSC 4280 Applied Animal Genetics Cr.Hrs.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 (or 035.350).
- ANSC 4410 Grassland Agriculture: Plant, Animal and Environment Cr.Hrs.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 Cr.Hrs.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. Offered in 2005-2006 and alternate years thereafter. *Prerequisite:* ANSC 2520 (or 035.252).
- ANSC 4510 Domesticated Animal Behaviour Cr.Hrs.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. *Prerequisite:* ANSC 2520 (or 035.252) or consent of the instructor. Offered in 2006-07 and alternate years thereafter.
- ANSC 4520 Ruminant Production Systems-Meat Cr.Hrs.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 (or 035.250).
- ANSC 4530 Ruminant Production Systems-Milk Cr.Hrs.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 (or 035.250).
- ANSC 4540 Monogastric Production Systems Cr.Hrs.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 (or 035.250).

ANSC 4550 Avian Production Systems Cr.Hrs.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 (or 035.250).

ANSC 4560 Issues in Animal Agriculture Cr.Hrs.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.

ANSC 4570 Advanced Applied Animal Nutrition Cr.Hrs.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. Offered in 2005-2006 and alternate years thereafter. *Prerequisite:* ANSC 3510 (or 035.351)

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.

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 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 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 under 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. *Prerequisites:* BIOE 3580 (034.358) or 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.

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). Not offered in 2005-2006.

BIOE 4412 Design of Light-Frame Building Systems Cr.Hrs.4 Light-frame buildings as a structural and environmental system; structural loads in building systems; energy (heat), moisture and air contaminants in building systems; built-environment for building occupants. Hands-on labs of constructing small-scale structures for students to gain an understanding of building construction techniques. *Prerequisites:* BIOE 2110 (or 034.211) and BIOE 3590 (034.359).

BIOE 4414 Imaging and Spectroscopy for Biosystems Cr.Hrs.4 The purpose of this course is to familiarize senior Biosystems Engineering students with the fundamentals of imaging and spectroscopy for biosystems. Techniques of image acquisition, storage, processing, and pattern recognition will be taught. Various spectroscopy techniques and their applicability to biological materials will be discussed. Analysis of data using statistical, artificial neural networks and chemometric methods will be covered. Offered in alternate years. *Prerequisite:* BIOE 3270 (034.327)

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). Not offered in 2005-2006.

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 2005-2006.

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 CIVL 3610 (023.361) or MECH 2260 (or 025.226). Not offered in 2005-2006.

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. Not offered in 2005-2006.

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.

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.

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.

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.

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 3770 (or 023.377) or BIOE 3590 (034.359) 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, de-

sign 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). Offered in 2005-2006 and alternate years after.

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. Offered in 2005-2006 and alternate years after.

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). Offered in 2005-2006 and alternate years after.

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 modeling 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). Not offered in 2005-2006.

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). Not offered in 2005-2006.

ENTM 1000 World of Bugs Cr.Hrs.3 A survey of insect biology and life styles with emphasis on insect diversity and human-insect interactions.

ENTM 2050 Introductory Entomology Cr.Hrs.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. Students may not hold credit in ENTM 2050 (or 038.205) and the former 038.315 or 022.349.

ENTM 3160 Veterinary and Wildlife Entomology Cr.Hrs.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 interaction, evolutionary relationships, impact on host vertebrates and pest management. Offered in 2006-2007 and alternate years thereafter.

ENTM 3162 Manitoba's Insect Fauna Cr.Hrs.3 A collection of insects is required. Emphasis is placed on collecting techniques, specimen preparation, diversity of species collected, organization and curatorial skills, and accuracy of identification. Students should contact instructors in April preceding registration in this course. *Prerequisite:* ENTM 2050.

ENTM 3170 Crop Protection Entomology Cr.Hrs.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 ecosystem. Students may not hold credit in ENTM 3170 and 038.413 or 038.431.

ENTM 4250 Pesticide Toxicology Cr.Hrs.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 2005-2006.

ENTM 4280 Aquatic Entomology Cr.Hrs.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 (or 038.205); AGECE 2370 (or 065.237) or ZOOL 2370 (or 022.237) or BOTN 2370 (or 001.237); or consent of instructor. Offered in 2006-2007 and alternate years thereafter.

ENTM 4320 Pollination Biology Cr.Hrs.3 (Formerly 038.432) The biology, ecology of social, semisocial and solitary insect pollinators and their ecological interactions with entomophilous plants. Offered 2005-2006 and alternate years thereafter.

ENTM 4500 Insect Taxonomy and Morphology Cr.Hrs.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 ENTM 4500 (or 038.450) and the former 038.412. *Prerequisite:* ENTM 2050 (or 038.205) or consent of instructor.

ENTM 4520 Physiological Ecology of Insects Cr.Hrs.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 038.205) or con-

sent of instructor. Offered 2005-2006 and alternate years thereafter.

FOOD 1000 Food Safety Today and Tomorrow Cr.Hrs.3 (Formerly 078.100) A contemporary examination of the safety of the food supply - where, how and why problems may rise 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 Cr.Hrs.3 (Formerly 078.250) The chemical components of food. Chemical problems and chemical changes which exist uniquely in foods. *Prerequisite:* CHEM 2770 (or 002.277) or MBIO 2770 (or 060.277) or CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236). Not to be held with the former 078.422.

FOOD 3010 Food Process 1 Cr.Hrs.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 (or 078.321).

FOOD 3160 Frozen Dairy Products Cr.Hrs.3 (Formerly 078.316) 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 Cr.Hrs.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 yogurt are studied. Offered in 2005-2006 and alternate years thereafter.

FOOD 3200 Baking Science and Technology Cr.Hrs.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, and 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 (or 002.277) or MBIO 2770 (or 060.277).

FOOD 3210 Food Engineering Fundamentals Cr.Hrs.3 (Formerly 078.321) Applications of engineering fundamentals to unit operations on the food industry. *Prerequisite:* BIOE 3530 (or 034.353).

FOOD 3500 Processing of Animal Food Products Cr.Hrs.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 (or 002.277) or MBIO 2770 (or 060.277) or CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236). Offered in 2006-2007 and alternate years thereafter.

FOOD 4010 Food Process 2 Cr.Hrs.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/nonthermal processing, radiation, extrusion, minimal processing and other advance processing methods will be studied. *Prerequisite:* FOOD 3010 (or 078.301).

FOOD 4120 Food Science Seminar Cr.Hrs.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 Cr.Hrs.3 (Formerly 078.415) Relationships of microorganisms to processing and spoilage of food.

FOOD 4160 Food Analysis 1 Cr.Hrs.3 (Formerly 078.416) This course exposes students to the principles, methods, and techniques of qualitative and quantitative physical, chemical and biological analyses of foods. Major emphasis is placed on understanding the basic principles of classical and instrumental methods of analysis. Criteria for the choice of various analytical methods, methods for treating data and sampling techniques will be studied. *Prerequisite:* FOOD 2500 (or 078.250).

FOOD 4160 Food Analysis 1 Cr.Hrs.3 (Formerly 078.416) This course exposes students to the principles, methods, and techniques of qualitative and quantitative physical, chemical and biological analyses of foods. Major emphasis is placed on understanding the basic principles of classical and instrumental methods of analysis. Criteria for the choice of various analytical methods, methods for treating data and sampling techniques will be studied. *Prerequisite:* FOOD 2500 (or 078.250).

FOOD 4200 Quality Control in Foods Cr.Hrs.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 (or 078.301).

FOOD 4230 Food Research Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 (or 078.416).

FOOD 4280 Food Microbiology 2 Cr.Hrs.3 (Formerly 078.428) In depth study of the microbiological problems encountered in different segments of the food industry, in-

cluding the cereal, confectionery, fruit, vegetables, meat, poultry, fish, dairy and beverage industries. *Prerequisite:* FOOD 4150 (or 078.415).

FOOD 4300 Food Toxicants Cr.Hrs.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 (or 002.277) or MBIO 2770 (or 060.277) or CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236).

FOOD 4310 Introduction to HACCP Cr.Hrs.3 (Formerly 078.431) This course will cover the 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 food products. *Prerequisite* or corequisite: FOOD 4150 (or 078.415) or consent of instructor.

FOOD 4500 Food Safety and Regulations Cr.Hrs.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. Offered in 2005-2006 and alternate years thereafter. *Prerequisites:* FOOD 4150 (or 078.415) or FOOD 4300 (or 078.430).

FOOD 4510 Food Product Development Cr.Hrs.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:* MKT 2210 (or 118.221), STAT 2000 (or 005.200) or equivalent, FOOD 3010 (or 078.301). Cannot be held with HNSC 4280 (or 030.428).

FOOD 4520 The Packaging of Food Cr.Hrs.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 078.301) or consent of instructor.

FOOD 4540 Functional Foods and Nutraceuticals Cr.Hrs.3 (Formerly 078.454) The 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 MIBO 2770 (or 060.277) or MBIO 2360 (or 060.236) or CHEM 2360 (or 002.236).

PLNT 2500 Crop Production Cr.Hrs.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 the major cereal, oilseed, forage and special crops. *Prerequisite:* AGRI 1500 (or 065.150).

PLNT 2510 Fundamentals of Horticulture Cr.Hrs.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 065.150); or consent of instructor.

PLNT 2520 Genetics Cr.Hrs.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 (or 001.246). *Prerequisite:* a minimum grade of "C" in BIOL 1020 and BIOL 1030 or the former 071.125.

PLNT 2530 Plant Biotechnology Cr.Hrs.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 the former 039.450. *Prerequisites:* CHEM 2770 (or 002.277) and PLNT 2520 (or 039.252) or BOTN 2460 (or 001.246).

PLNT 3140 Introductory Cytogenetics Cr.Hrs.3 (Formerly 039.314) An introduction to the structure and function of eukaryotic genomes, from the gene to the chromosome. Topics include the cell cycle, meiosis, chromatin, chromosome and genome organization, karyotyping, changes in chromosome number and structure, physical mapping and chromosome evolution. Labs cover use of the microscope, meiosis, chromosome staining and banding, and bioinformatic analysis of chromosomes. *Prerequisites:* PLNT 2520 (or 039.252) or BOTN 2460 (or 001.246).

PLNT 3370 Environmental Horticulture Cr.Hrs.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 2006-2007.

PLNT 3500 Plant Physiology Cr.Hrs.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 001.301) or the former 1.317. *Prerequisites:* BIOL 1020 and BIOL 1030 or the former 071.125; CHEM 2770 (or 002.277) or MBIO 2770 (or 060.277) or CHEM 2360 (or 002.236) or MBIO 2360 (or 060.236); BOTN 2010 (or 001.201) or the former 001.230 or consent of instructor.

PLNT 3510 Cropping Systems Cr.Hrs.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 wildlife re-

sources. 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 (or 039.250).

PLNT 3520 Principles of Plant Improvement Cr.Hrs.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 039.252) or BOTN 2460 (or 001.246).

PLNT 3530 Horticultural Food Crops Cr.Hrs.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 039.251) or consent of instructor. Offered in 2007-2008 and alternate years thereafter.

PLNT 3540 Weed Science Cr.Hrs.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, effects of rotational and management practices on weed species composition, herbicide selectivity and mechanism of action, and emerging control technologies. *Prerequisites:* BIOL 1020 and BIOL 1030 or the former 071.125; AGRI 1500 (or 065.150); or consent of instructor.

PLNT 3560 Organic Crop Production on the Prairies Cr.Hrs.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. *Prerequisites:* PLNT 2500 (or 039.250) and SOIL 3600 (or 040.360) or the former 040.351 or consent of instructor.

PLNT 3570 Fundamentals of Plant Pathology Cr.Hrs.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 (or 001.221)

PLNT 4270 Plant Disease Control Cr.Hrs.3 (Formerly 039.427) Diseases attacking field crops and horticultural plants: recognition of symptoms, methods of prevention, alleviation, and control. *Prerequisite:* PLNT 2500 (or 039.250) or consent of instructor.

PLNT 4300 Grain Technology Cr.Hrs.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. Not offered.

PLNT 4330 Intermediate Plant Genetics Cr.Hrs.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 039.252) or BOTN 2460 (or 001.246).

PLNT 4380 Plant Science Thesis Cr.Hrs.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. Enrollment limited. Open only to students in their 4th year. Not to be held with SOIL 4080 (or 040.408). *Prerequisite:* Consent of department head.

PLNT 4410 Grassland Agriculture: Plant, Animal and Environment Cr.Hrs.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 offered in Animal Science as ANSC 4410.

PLNT 4530 Woody Plants in the Prairie Landscape Cr.Hrs.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. Offered in 2005-2006 and alternate years thereafter.

PLNT 4540 Plant Genomics Cr.Hrs.3 (Formerly 039.454) An introduction to plant genomics including mapping and sequencing genomes, gene expression and transcriptome, comparative functional and intergrative 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. *Prerequisites:* PLNT 2520 (or 039.252) or BOTN 2460 (or 001.246) and PLNT 2530 (or 039.253) or consent of instructor.

PLNT 4550 Developmental Plant Biology Cr.Hrs.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 (or 039.350)

PLNT 4560 Secondary Plant Metabolism Cr.Hrs.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 the former 039.451. *Prerequisite:* PLNT 3500 (or 039.350) or consent of instructor.

PLNT 4570 Research Methods in Plant Pathology Cr.Hrs.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 tech-

niques 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 039.357) or consent of instructor.

PLNT 4580 Molecular Plant-Microbe Interactions Cr.Hrs.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 (or 039.357).

PLNT 4590 Physiology of Crop Plants Cr.Hrs.3 Concepts dealing with the physiological response of crop plants to the environment from the time of seed germination through to reproduction. Students may not hold credit for PLNT 4590 and the former 039.452. *Prerequisites:* CHEM 2770 (or 002.277) (MBIO 2770 (or 060.277)) or CHEM 2360 (or 002.236) (MBIO 2360 (or 060.236)); PLNT 3500 (or 039.350) or BOTN 2010 (or 001.201) and BOTN 2020 (or 001.202) or the former 001.230 (PLNT 3500 (or 039.350) recommended).

PLNT 4600 Issues in Agricultural Biotechnology Cr.Hrs.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 multidimensional issues associated with the application of biotechnology will be the goal. Students must have completed 84 credit hours towards a degree, or permission of instructor. *Prerequisite:* PLNT 2530 (or 039.253).

SOIL 3060 Introduction to Agrometeorology Cr.Hrs.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 3520 Pesticides: Environment, Economics and Ethics Cr.Hrs.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 040.411, 038.454 or 040.454.

SOIL 3600 Soils and Landscapes in Our Environment Cr.Hrs.3 (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 040.350 or 040.351.

SOIL 4060 Physical Properties of Soils Cr.Hrs.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 040.360) or 040.350 or 040.351 or consent of instructor.

SOIL 4080 Soils Thesis Cr.Hrs.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 (or 039.438). *Prerequisite:* Consent of department head.

SOIL 4130 Soil Chemistry and Mineralogy Cr.Hrs.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 040.360) or 040.350 or 040.351 or consent of instructor.

SOIL 4400 Cr.Hrs.3 Explore the application of soil biology to diversity in agroecosystems, response of soil organisms to management, mediation of important environmental issues, and promotion of human health. Appreciate the vast array of soil organisms and their functions in soil ecosystems, understand cycling of nutrients by soil organisms, and discover quantitative methodology in determining soil biochemical processes. The laboratory provides hands-on experience in observing, quantifying and isolating soil organisms and the biochemical processes they conduct. *Prerequisite:* SOIL 3600 (040.360).

SOIL 4500 Remediation of Contaminated Land Cr.Hrs.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 040.360) or 040.350 or 040.351 or consent of the instructor.

SOIL 4510 Soil and Water Management Cr.Hrs.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 040.360) or 040.350 or 040.351.

SOIL 4520 Soil Fertility Cr.Hrs.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 040.360) or 040.350 or 040.351.

SOIL 4530 Land Use and Environment Cr.Hrs.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. *Prerequisite:* SOIL 3600 (or 040.360) or 040.350 or 040.351.

SCHOOL OF AGRICULTURE

ABIZ 0440 Agricultural Economics & Marketing 1 Cr.Hrs.4 (Formerly 061.044) Introduction to key economic concepts and business principles and their application to Canadian agribusiness.

ABIZ 0450 Agricultural Economics & Marketing 2 Cr.Hrs.4 (Formerly 061.045) The application of economic analysis in the study of marketing: concepts, policy, practices and institutions. *Prerequisite:* ABIZ 0440 (or 061.044).

ABIZ 0460 Financial Management 1 Cr.Hrs.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 Cr.Hrs.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 (or 061.046).

ABIZ 0680 Agribusiness Management Cr.Hrs.4 (Formerly 061.068) The application of economic, accounting and management principles to organizing, operating and managing an agribusiness.

ABIZ 0690 Agricultural Finance and Credit Cr.Hrs.4 (Formerly 061.069) Application of financial management concepts in evaluating investment options and risk in farm and agribusiness decision-making. *Prerequisite:* ABIZ 0460 (or 061.046).

ABIZ 0700 Merchandising and Sales Cr.Hrs.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.

ABIZ 0710 Agricultural Policy Cr.Hrs.3 (Formerly 061.071) Review of agriculture, international trade and food safety policies affecting the production and distribution of agricultural commodities and food products.

ABIZ 0720 Farm Business Management Cr.Hrs.4 (Formerly 061.072) Application of decision making principles in terms of farm production, finance, and marketing. *Prerequisites:* ABIZ 0470 (or 061.047).

ABIZ 0730 Financial Risk Management Cr.Hrs.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. *Prerequisites:* ABIZ 0470 (or 061.047) or 061.047; or Pre- or Corequisite: ABIZ 0450 (061.045).

ABIZ 0740 Special Topics in Business Management Cr.Hrs.3 (Formerly 061.074) Selected topics of current interest in Business Management. *Prerequisite:* written consent of Director of the School of Agriculture.

ANSC 0420 Animal Biology and Nutrition Cr.Hrs.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 Cr.Hrs.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 035.042) or equivalent.

ANSC 0670 Beef Cattle Production and Management Cr.Hrs.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 035.042) or equivalent.

ANSC 0680 Dairy Cattle Production and Management Cr.Hrs.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 035.042) or equivalent.

ANSC 0690 Swine Production and Management Cr.Hrs.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 035.042) or equivalent.

ANSC 0700 Poultry Production and Management Cr.Hrs.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 035.042) or equivalent.

ANSC 0720 Special Topics in Livestock Management Cr.Hrs.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 Cr.Hrs.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 035.042) or equivalent.

BIOE 0400 Farm Power Cr.Hrs.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 Cr.Hrs.4 (Formerly 034.060) Operating principles of basic farm implements with emphasis on seed cleaning, seeding, tillage, haying, and har-

vest machines including their selection, adjustment, efficiency, and cost of operation with respect to test data.

BIOE 0680 Shop Methods Cr.Hrs.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.

BIOE 0690 Water Management Cr.Hrs.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.

BIOE 0700 Agricultural Buildings and Environments Cr.Hrs.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.

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.

DAGR 0410 Communication and Learning Skills Cr.Hrs.4 (Formerly 065.041) A course designed to improve learning skills and abilities in written and oral communication.

DAGR 0420 Introductory Soils and Crops Cr.Hrs.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 Cr.Hrs.3 (Formerly 065.061) A course designed to improve leadership potential and understanding of the rural community.

DAGR 0630 Special Project Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.3 (Formerly 065.068) 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 credit for DAGR 0680 (or 065.068) and the former 065.064.

DAGR 0690 Management Planning Project 2 Cr.Hrs.5 (Formerly 065.069) 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 credit for DAGR 0690 (or 065.069) and the former 065.065. *Prerequisite:* DAGR 0680 (or 065.068).

DAGR 0700 Environmental Farm Plans and On-Farm Food Safety Cr.Hrs.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 0710 Agricultural Enterprise Cr.Hrs.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 065.069) or the former 065.065.

DAGR 0720 Agricultural Industry Cr.Hrs.3 (Formerly 041.072) This course provides students with the opportunity to increase their awareness of agriculture and the agribusiness sector. The following will be emphasized: agriculture in other parts of the world, humane livestock practices, marketing of agricultural products, production of agricultural products for niche markets, and trade show. Students may not hold credit for DAGR 0720 and DAGR 0690 (or 065.069) or the former 065.065.

DAGR 0730 Case Studies in Institutional Lending 1 Cr.Hrs.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 (or 061.047). Pre- or Corequisite: ABIZ 0450 (or 061.045).

DAGR 0740 Case Studies in Institutional Lending 2 Cr.Hrs.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 (or 041.073).

DAGR 0750 Money and Banking Cr.Hrs.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 Cr.Hrs.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 systems, major laws affecting agriculture, and resolution of issues in Canadian agriculture. Offered in 2005-2006 and alternate years thereafter.

DAGR 0770 Tax Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.2 (Formerly 041.082) A course designed to enhance written business communications skills. *Prerequisite:* DAGR 0410 (or 065.041).

DAGR 0830 Agriculture Cooperative Education Work Term Cr.Hrs.2 Special five-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.

ENTM 0610 Beekeeping Cr.Hrs.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 Cr.Hrs.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.

PLNT 0410 Cereal and Oilseed Production Practices Cr.Hrs.4 (Formerly 039.041) Production practices for wheat (spring and winter), barley, oats, rye, triticale, canola and flax will be discussed, including tillage, seeding, fertility, pest control, harvesting, rotation and utilization. *Prerequisite:* DAGR 0420 (or 065.042).

PLNT 0660 Plant Propagation Cr.Hrs.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 Cr.Hrs.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 program; contact the Director of the School of Agriculture.

PLNT 0680 Landscape Design Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 Cr.Hrs.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 (or 065.042).

PLNT 0760 Special Crops Cr.Hrs.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 (or 065.042).

PLNT 0770 Weed Management Cr.Hrs.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 iden-

tification, introduction to herbicides and factors influencing their use and selectivity. *Prerequisite:* DAGR 0420 (or 065.042).

PLNT 0780 Plant Disease Management Cr.Hrs.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 (or 065.042).

PLNT 0790 Landscape Horticulture Cr.Hrs.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 Cr.Hrs.4 (Formerly 039.080) Principles of the production and unique characteristics of horticultural crops including potato, vegetable, fruit, herb, spice, and nutraceutical. The potential for diversifying into and adding value to these alternate crops is examined.

PLNT 0810 Special Topics in Crop Management Cr.Hrs.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 Cr.Hrs.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. *Prerequisites:* DAGR 0420 (or 065.042), PLNT 0410 (or 039.041), SOIL 0420 (or 040.042), and ENTM 0620 (or 038.062) or consent of the instructor.

SOIL 0420 Soil Productivity and Land Use Cr.Hrs.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 (or 065.042).

SOIL 0620 Soil Conservation and Management Cr.Hrs.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:* SOIL 0420 (or 040.042).

SOIL 0630 Soil Fertility Cr.Hrs.4 (Formerly 040.063) Soil nutrients and their behavior; evaluation of soil fertility including soil testing for precision agriculture; crop response to fertilizers; manufacture, properties, reactions and applications of fertilizer. *Prerequisite:* SOIL 0420 (or 040.042).

FACULTY OF ARCHITECTURE

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:* EVDS 3690 (or 079.369).

EVAR 3680 Cr.Hrs.6 (Formerly 079.368) Arch., C.P.: 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 Cr.Hrs.6 (Formerly 079.369) 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:* EVDS 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 2680 (or 079.268), EVDS 2690 (or 079.269) or consent of instructor.

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 2680 (or 079.268), 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. *Pre-*

requisite: EVDS 2690 (or 079.269, or 079.268) or consent of instructor.

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 1602 Visual Literacy Cr.Hrs.3 This course examines the contemporary visual environment, its critical historical influences, and more recent cultural impacts. Optics, the structure of images, and the importance of materiality will be examined through various modes of cultural production including emerging media and information networks. 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 (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). May not be held for credit with the former 079.266.

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. Contin-

ues 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.

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 2660 (or 079.266) or 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. *Pre-requisite* 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.

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.

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.

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 and EVIE 3620.

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) Arch., C.P.: 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:* EVIE 2640 (or 079.264).

EVIE 3690 Cr.Hrs.6 (formerly 079.369) Studio projects which explore and elaborate systems of meaning in interior place making in the public realm; developing strategies and processes in the design of transitional interior environments. *Pre-requisite* EVIE 3680 (or 079.368).

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) Arch., C.P.: 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). *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) Arch., C.P.: Studies in the principles, vocabularies and methods of approach to landscape architecture and environmental design. Studio work with specific projects to exercise the analytical, conceptual and developmental stages of design. *Prerequisite:* EVDS 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/manipulation in constructed landscape architectural works are examined through lectures, set readings, seminars and essay assignments. *Prerequisite* for ED students: 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.

SCHOOL OF ART

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. This course is graded pass/fail. *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 FA 1300 (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. This course is graded pass/fail.

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.

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.

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).

- 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, 054.250 or 054.379. *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 3202 Contemporary Art History Cr.Hrs.3** This course will consider the art history of the past few decades with an emphasis on recent and contemporary developments. *Prerequisite:* FAAH 2080 (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 2nd year 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), FAH 1040 (054.104), FAH 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 054.387; 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. (Formerly 054.358)
- 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.

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.

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.

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 Intersession. May not be used for credit in any School of Art program. *Pre-requisites:* None. No restrictions. Course offered in Intersession 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). 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 2450 Introduction to Digital Photography Cr.Hrs.6 Introduction to Digital Photography is a studio course introducing the basic technical foundation and critical understanding of contemporary photo-based image production. *Prerequisites:* STDO 1200 (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 with 054.227.

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) This course is an introduction to the computer as a creative tool and to explore industry standard software for use in the creative graphic 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. *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 Ad-

vanced 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 the former 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.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.5 (Formerly 054.390) Continuation of Advanced Printmaking A/B. Students may not hold credit for both STDO 3640 (or 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.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.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 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 STDO 3640 (or 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 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 indi-

vidual 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).

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 (Ceramics) 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 STDO 4540 (or 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 STDO 4540 (or 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.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.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.

FACULTY OF ARTS

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 (076.121) and any of: ANTH 1211 (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 (076.121) ne peut se faire créditer aucun des cours ANTH 1210 (076.121) ou l'ancien 076.120. Donné au Collège universitaire de Saint-Boniface.

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 (076.122) and any of: ANTH 1221 (076.122) or ANTH 1520 (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 (076.122) ne peut se faire créditer aucun des cours ANTH 1220 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.120. Donné au Collège universitaire de Saint-Boniface.

ANTH 1520 Critical Cultural Anthropology (A) Cr.Hrs.3 (Formerly 076.152) An introduction to social cultural anthropology that critically examines production and ex-

change 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 (076.152) and any of: ANTH 1220 (076.122) or ANTH 1221 (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 (076.201) et le ANTH 2370 (076.237). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou 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 (076.204) and ANTH 2041 (076.204). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 les crédits du ANTH 2041 (076.204) ne peut se faire créditer aucun des cours ANTH 2040 (076.204) ou l'ancien 076.345. *Préalable:* [une note minimale de C dans un de: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 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 (076.210) and the former 076.290. *Prerequisite:* [a grade of "C" or better in one of: ANTH 1210 (076.121) or ANTH 1211 (076.121) or 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.120] or written consent of 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 2300 Anthropology of Childhood (B) Cr.Hrs.3 Anthropological approaches to the study of children and childhood. Childhood is examined as a social and historical construction, and children are analyzed as active contributors to their social worlds. Cross-cultural ethnographic material relating to children and youth is critically read and discussed. *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.120] or written consent of instructor.

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 (076.235) and any of: ANTH 2351 (076.235) or the former 076.337. *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or ANTH 2360 (076.236) or ANTH 2361 (076.236) or 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 (076.235) ne peut se faire créditer aucun des cours ANTH 2350 (076.235) ou l'ancien 076.337. *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou ANTH 2360 (076.236) ou ANTH 2361 (076.236) ou l'ancien 076.120] ou l'autorisation du professeur. Donné au Collège universitaire de Saint-Boniface.

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 (076.236) and ANTH 2361 (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 (076.236) et le ANTH 2360 (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 (076.237) and ANTH 2011 (076.201). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or 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 (076.238) and ANTH 2381 (076.238). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.238) et le ANTH 2380 (076.238). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 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 (076.239) and ANTH 2391 (076.239). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.239) et le ANTH 2390 (076.239). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 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 (076.243) and ANTH 2500 (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 (076.246) and the former 076.244. *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.255) and ANTH 2551 (076.255). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.255) et le ANTH 2550 (076.255). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.121) or ANTH 1211 (076.121) or 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 (076.121) or ANTH 1211 (076.121) or 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 (076.121) or ANTH 1211 (076.121) or 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 (076.121) or ANTH 1211 (076.121) or 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 (076.121) or ANTH 1211 (076.121) or 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or 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 (076.121) or ANTH 1211 (076.121) or 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 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou 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 (076.121) or ANTH 1211 (076.121) or 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 (076.121) or ANTH 1211 (076.121) or 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 (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 (076.121) or ANTH 1211 (076.121) or 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 (076.121) or ANTH 1211 (076.121) or 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 (076.321) and ANTH 3211 (076.321). *Prerequisite:* a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (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 (076.321) et le ANTH 3210 (076.321). *Préalable:* une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (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 (076.332) and ANTH 3321 (076.332). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.332) et le ANTH 3320 (076.332). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 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 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.338) and ANTH 3381 (076.338). *Prerequisite:* [a grade of "C" or better in ANTH 2390 (076.239) or ANTH 2391 (076.239)] or written consent of instructor.

ANTH 3381 Problèmes sociaux contemporains et l'anthropologie (B) Cr.Hrs.3 (L'ancien 076.338) Nous étudierons 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 (076.338) et le ANTH 3380 (076.338). *Préalable:* [une note minimale de C dans le ANTH 2390 (076.239) ou ANTH 2391 (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 (076.239) or ANTH 2391 (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 (076.346) and ANTH 3461 (076.346). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.346) et le ANTH 3460 (076.346). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 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 (076.347) and ANTH 3471 (076.347). *Prerequisite:* [a grade of "C" or better in ANTH 2390 (076.239) or ANTH 2391 (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 (076.347) et le ANTH 3470 (076.347). *Préalable:* [une note minimale de C dans le ANTH 2390 (076.239) ou ANTH 2391 (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 (076.350) and ANTH 3501 (076.350). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.350) et le ANTH 3500 (076.350). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 076.120] ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

ANTH 3531 Peoples of 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 (076.355) and ANTH 3551 (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 (076.355) et le ANTH 3550 (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 (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; agrribusiness, nutrition and health; genocide and ethnocide; and the international drug trade. *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or 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 (076.121) or ANTH 1211 (076.121) or 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 (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 (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 (076.375) and ANTH 3751 (076.375). *Prerequisite:* [a grade of "C" or better in ANTH 2390 (076.239) or ANTH 2391 (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 (076.375) et le ANTH 3750 (076.375). *Préalable:* [une note minimale de C dans le ANTH 2390 (076.239) ou le ANTH 2391 (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 (076.381) and ANTH 3811 (076.381). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or the former 076.109 or the former 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 (076.381) et le ANTH 3810 (076.381). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou l'ancien 076.109 ou l'ancien 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 (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 (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 (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 (076.397) and ANTH 3971 (076.397). *Prerequisite:* [a grade of "C" or better in one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or 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 (076.397) et le ANTH 3970 (076.397). *Préalable:* [une note minimale de C dans un des cours suivants: ANTH 1220 (076.122) ou ANTH 1221 (076.122) ou ANTH 1520 (076.152) ou 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 (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 (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 (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) *Pre-*

requisite: 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 (076.347) or ANTH 3471 (076.347) or the former 076.320] 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.

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 (099.111) and ARTS 1111 (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 (099.111) et le ARTS 1110 (099.111). Donné au Collège universitaire de Saint-Boniface.

ARTS 1120 Reading and Writing Across the Disciplines Cr.Hrs.6 (Formerly 099.112) English ARTS 1120 (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.

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.

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 (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 (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

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 subcontinent and Southeast Asia from ancient times to around 1500. Also offered as History HIST 1420. May not hold credit with HIST 1420 (011.142).

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 (011.143).

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 (150.236), ASIA 2760 (150.276), ASIA 3760 (150.376), or who have obtained Grade 12 Chinese in Canada or abroad. *Prerequisite:* written consent of instructor.

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 (150.277) or ASIA 3770 (150.377). Students who have obtained Grade 12 Japanese in Canada or abroad must obtain written consent of instructor.

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 (150.278).

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 (150.279) or ASIA 3790 (150.379).

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.

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 (150.176) or ASIA 2760 (150.276) or ASIA 3760 (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 (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 (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.

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 (150.376). *Prerequisite:* a grade of "C" or better in ASIA 1760 (150.176) or written consent of instructor.

ASIA 2770 Intermediate Japanese Cr.Hrs.6 (Formerly 150.277) For students who have taken Japanese ASIA 1770 (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 (150.377). *Prerequisite:* [a grade of "C" or better in ASIA 1770 (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 (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 (150.379). *Prerequisite:* [a grade of "C" or better in ASIA 1790 (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 (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 (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 (150.236) or ASIA 3760 (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 (150.236) or ASIA 3660 (150.366). *Prerequisite:* [a grade of "C" or better in ASIA 2760 (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 (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 (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 (150.279)] or written consent of instructor.

CATH 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 (160.119)] or written consent of program coordinator.

CATH 2010 Literature and Catholic Culture 1 Cr.Hrs.3 The course will focus on the portrayals of Catholic Culture in literature of the 20th Century prior to Vatican II Council. Students will also study the formal features of poetry, drama, and prose focusing on the Catholic Tradition. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)] or written consent of instructor.

CATH 2020 Literature and Catholic Culture 2 Cr.Hrs.3 The course will focus on the portrayals of Catholic Culture in literature of the 20th and 21st Century following Vatican II Council. Students will also study the formal features of poetry, drama, and prose involving the Catholic Tradition. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)] or written consent of instructor.

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 (160.119) is recommended.

CDN 1130 Introduction to Canadian Studies Cr.Hrs.6 (Formerly 151.113) 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.

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 Ab- original past, French/British colonization, Land/regions and Ethnic diversity.

CDN 4410 Seminar in Canadian Studies Cr.Hrs.6 (Formerly 151.441) A seminar course whose content may vary from year to year. *Prerequisite:* written consent of instructor.

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.

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 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 (003.127) or CLAS 1280 (003.128) or CLAS 2140 or CLAS 2150 or CLAS 2670 (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 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 (003.127) or CLAS 1280 (003.128) or CLAS 2160 or CLAS 2170 or CLAS 2680 (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 Neolithic 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.

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 (018.120) and any of: ECON 1201 (018.120) or ECON 1210 (018.121) or ECON 1211 (018.121) or ECON 1220 (018.122) or ECON 1221 (018.122).

ECON 1201 Introduction aux sciences économiques Cr.Hrs.6 (L'ancien 018.120) Étude des principes d'économie et quelques-uns de leurs applications. L'étudiant(e) qui détient les crédits du ECON 1201 (018.120) ne peut se faire créditer aucun des cours ECON 1200 (018.120) ou ECON 1210 (018.121) ou ECON 1211 (018.121) ou ECON 1220 (018.122) ou ECON 1221 (018.122). Donné au Collège universitaire de Saint-Boniface.

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 (018.121) and any of: ECON 1211 (018.121) or ECON 1200 (018.120) or ECON 1201 (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 (018.121) ou ECON 1200 (018.120) ou ECON 1201 (018.120). Donné au Collège universitaire de Saint-Boniface.

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 (018.122) and any of: ECON 1221 (018.122) or ECON 1200 (018.120) or ECON 1201 (018.120).

ECON 1221 Introduction aux politiques et aux problèmes économiques mondiaux Cr.Hrs.3 (L'ancien 018.122) Une étude de principes majeurs qui marquent l'écon-

omie mondiale et l'environnement. L'étudiant(e) qui détient les crédits du ECON 1221 (018.122) ne peut se faire créditer aucun des cours ECON 1220 (018.122) ou ECON 1200 (018.120) ou ECON 1201 (018.120). Donné au Collège universitaire de Saint-Boniface.

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 (018.227) and ECON 2271 (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 (018.227) et le ECON 2270 (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 (018.231) and ECON 2311 (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 (018.231) et le ECON 2310 (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 ECON 2350 (018.235) and any of: NATV 3120 or the former NATV 4310 (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, licensing, criteria and pollution charges will be illustrated by current issues. Students may not hold credit for both ECON 2390 (018.239) and ABIZ 2390 (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 (018.242) and LABR 2420 (153.242). *Prerequisite:* [a grade of "C" or better in six credit hours of 1000 level Economics] or [a grade of "C" or better in both LABR 1270 (153.127) and LABR 1290 (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 (018.245) and any of: ECON 2451 (018.245) or ECON 2700 (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 (018.245) ne peut se faire créditer aucun des cours ECON 2450 (018.245) ou ECON 2700 (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 (018.246) and any of: ECON 2461 (018.246) or ECON 3700 (018.370). *Prerequisite:* a grade of "C" or better in one of: ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (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 (018.246) ne peut se faire créditer aucun des cours ECON 2460 (018.246) ou ECON 3700 (018.370). *Préalable:* une note minimale de C dans un des cours suivants: ECON 2450 (018.245) ou ECON 2451 (018.245) ou ECON 2700 (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 (018.247) and any of: ECON 2471 (018.247) or ECON 2800 (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 (018.247) ne peut se faire créditer aucun des cours ECON 2470 (018.247) ou ECON 2800 (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 (018.248) and any of: ECON 2481 (018.248) or ECON 3800 (018.380). *Prerequisite:* a grade of "C" or better in one of: ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2800 (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 (018.248) ne peut se faire créditer aucun des cours ECON 2480 (018.248) ou ECON 3800 (018.380). *Préalable:* une note minimale de C dans un des cours suivants: ECON 2470 (018.247) ou ECON 2471 (018.247) ou ECON 2800 (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 (153.245) Labour and Technology (3). Students may not hold credit for both ECON 2500 (018.250) and LABR 2450 (153.245). *Prerequisite:* [a grade of "C" or better in six credit hours of 1000 level Economics] or [a grade of "C" or better in both LABR 1270 (153.127) and LABR 1290 (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 (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 (018.256) and ECON 2610 (018.261) when titled Corporations in the Global Economy or ECON 2620 (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 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 (018.258) and either of ECON 2610 (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 (018.263) and ECON 2620 (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 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 (018.270) and any of: ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2460 (018.246) or ECON 2461 (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 (018.280) and any of: ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2480 (018.248) or ECON 2481 (018.248). *Prerequisite:* written consent of department head.

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 (061.308). *Prerequisite:* [a grade of "C" or better in ECON 3170 (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 (018.330) and ECON 3301 (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 (018.330) et le ECON 3300 (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 ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270)] and [a grade of "C" or better in ECON 2460 (018.246) or ECON 2461 (018.246) or ECON 3700 (018.370) or ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2800 (018.280) or ECON 2480 (018.248) or ECON 2481 (018.248) or ECON 3800 (018.380)]. GMGT 3160 (027.316) or ECON 2420 (018.242) or LABR 2420 (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 ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (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 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270) or ECON 2460 (018.246) or ECON 2461 (018.246) or ECON 3700 (018.370) or ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2800 (018.280) or ECON 2480 (018.248) or ECON 2481 (018.248) or ECON 3800 (018.380).

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 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 (018.351) and LABR 3510 (153.351). *Prerequisite:* [a grade of "C" or better in six credit hours of 1000 level Economics] or [a grade of "C"

or better in both LABR 1270 (153.127) and LABR 1290 (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 (018.364) and any of: ECON 3641 (018.364) or FIN 3460 (009.346). *Prerequisite:* a grade of "C" or better in one of: ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2460 (018.246) or ECON 2461 (018.246) or ECON 2700 (018.270) or ECON 3700 (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 (018.364) ne peut se faire créditer aucun des cours ECON 3640 (018.364) ou FIN 3460 (009.346). *Préalable:* une note minimale de C dans un des cours suivants: ECON 2450 (018.245) ou ECON 2451 (018.245) ou ECON 2460 (018.246) ou ECON 2461 (018.246) ou ECON 2700 (018.270) ou ECON 3700 (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 (018.365) and ECON 3651 (018.365). *Prerequisite:* a grade of "C" or better in one of: ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2480 (018.248) or ECON 2481 (018.248) or ECON 2800 (018.280) or ECON 3800 (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 (018.365) et le ECON 3650 (018.365). *Préalables:* une note minimale de C dans un des suivants: ECON 2470 (018.247) ou ECON 2471 (018.247) ou ECON 2480 (018.248) ou ECON 2481 (018.248) ou ECON 2800 (018.280) ou ECON 3800 (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 (018.366) and ECON 3661 (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 (018.366) et le ECON 3660 (018.366). *Préalable:* [une note minimale de C dans six heures-crédits au niveau 1000 en sciences économiques] ou autorisation écrite 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 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270). ECON 2460 (018.246) or ECON 2461 (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 (018.247) or ECON 2471 (018.247) or ECON 2800 (018.280). ECON 2480 (018.248) or ECON 2481 (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 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 (018.370) and any of: ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2460 (018.246) or ECON 2461 (018.246). *Prerequisite:* written consent of department head.

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 [a grade of "C" or better in LABR 1270 (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 (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 (018.374) and the former 018.342. *Prerequisite:* a grade of "C" or better in one of: ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270).

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 (018.380) and any of: ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2480 (018.248) or ECON 2481 (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 be held with ABIZ 4120 (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 (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 (018.280) and ECON 3800 (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 (018.280) and ECON 3800 (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 (018.227) or ECON 2271 (018.227) or ECON 3300 (018.330) or ECON 3301 (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.

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 (018.482) and ECON 4830 (018.483). *Prerequisite:* [formal declaration of an Advanced Major in Economics or Honours Economics program] and [a grade of "C" or better in each of ECON 3170 (018.317) and ECON 3180 (018.318)] and [a grade of "C" or better in ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270)] and [a grade of "C" or better in ECON 2460 (018.246) or ECON 2461 (018.246) or ECON 3700 (018.370)] and [a grade of "C" or better in ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2800 (018.280)] and [a grade of "C" or better in ECON 2480 (018.248) or ECON 2481 (018.248) or ECON 3800 (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 (018.483) and ECON 4820 (018.482). *Prerequisite:* [formal declaration of an Advanced Major in Economics or Honours Economics program] and [a grade of "C" or better in each of ECON 3170 (018.317) and ECON 3180 (018.318)] and [a grade of "C" or better in ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270)] and [a grade of "C" or better in ECON 2460 (018.246) or ECON 2461 (018.246) or ECON 3700 (018.370)] and [a grade of "C" or better in ECON 2470 (018.247) or ECON 2471 (018.247) or ECON 2800 (018.280)] and [a grade of "C" or better in ECON 2480 (018.248) or ECON 2481 (018.248) or ECON 3800 (018.380)].

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.

ENGL 0940 Writing About Literature Cr.Hrs.3 (Formerly 004.094) Designed to supplement and to complement ENGL 0930 (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 (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 (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 (004.107) et l'ancien 004.105. *Préalable:* [une note minimale de C dans le ENGL 1061 (004.106) ou l'ancien 004.104] ou la recommandation du Service de perfectionnement linguistique. Donné au Collège universitaire de Saint-Boniface.

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 (004.120) and any of: ENGL 1201 (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.

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 (004.120) and any of: ENGL 1200 (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.

ENGL 1300 Literature since 1900 Cr.Hrs.6 (Formerly 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 1300 (004.130) and any of: ENGL 1301 (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.

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 (004.130) and any of: ENGL 1300 (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.

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.

ENGL 1340 Introduction to Literary Analysis Cr.Hrs.3 (Formerly 004.134) This course is intended to prepare students who have completed ENGL 1310 (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 (004.131) or the former 004.132.

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 (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).

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 (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 (004.207) and any of: ENGL 2071 (004.207) or the former 004.210. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.207) and any of: ENGL 2070 (004.207) or the former 004.210. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)]. 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 credit for both ENGL 2080 (004.208) and the former 004.206. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.209) and any of: ENGL 2091 (004.209) or the former 004.215. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.209) and any of: ENGL 2090 (004.209) or the former 004.215. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)]. 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 (004.212) and the former 004.226. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.213) and the former 004.228. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.214) and the former 004.229. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.216) and any of: ENGL 2161 (004.126) or the former 004.285. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.216) and any of: ENGL 2160 (004.126) or the former 004.285. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)]. 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 (004.217) and the former 004.286. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.218) and the former 004.287. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

ENGL 2190 Special Topics Cr.Hrs.3 (Formerly 004.219) *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.227) and the former 004.288 or the former 004.289. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.255) and ENGL 2800 (004.280). *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 credit for both ENGL 2640 (004.264) and the former 004.253 or the former 004.254. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (004.276) or any of: ENGL 3500 (004.350) or ENGL 3790 (004.379). Not open to students who have previously obtained credit for any of ENGL 3500 (004.350) or ENGL 3790 (004.379). *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

ENGL 2900 Genre Cr.Hrs.3 (Formerly 004.290) Selections in literature of a particular genre. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

ENGL 2940 Short Fiction I Cr.Hrs.3 (Formerly 004.294) Representative writers. *Prerequisite:* [a grade of "C" or better in ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)]. 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 ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (004.130) or the former 004.126] or [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 (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 (004.301) and any of: ENGL 3011 (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 (004.301) and any of: ENGL 3010 (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 (004.302) and any of: ENGL 3021 (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 (004.302) and any of: ENGL 3020 (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.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3080 Studies in Medieval Literature Cr.Hrs.3 (Formerly 004.308) Students may not hold credit for both ENGL 3080 (004.308) and the former 004.306. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3090 Studies in Seventeenth-Century Literature Cr.Hrs.3 (Formerly 004.309) Students may not hold credit for both ENGL 3090 (004.309) and the former 004.315. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3120 Studies in Restoration and Eighteenth-Century Literature Cr.Hrs.3 (Formerly 004.312) Students may not hold credit for both ENGL 3120 (004.312) and the former 004.326. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the department of English Handbook for detailed course descriptions.

ENGL 3130 Studies in the Romantics Cr.Hrs.3 (Formerly 004.313) Students may not hold credit for both ENGL 3130 (004.313) and the former 004.328. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the department of English Handbook for detailed course descriptions.

ENGL 3140 Studies in the Victorians Cr.Hrs.3 (Formerly 004.314) Students may not hold credit for ENGL 3140 (004.314) and any of: ENGL 3141 (004.314) or the former 004.329. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3141 Studies in the Victorians Cr.Hrs.3 (L'ancien 004.314) Students may not hold credit for ENGL 3141 (004.314) and any of: ENGL 3140 (004.314) or the former 004.329. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions. 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 (004.317) and the former 004.387. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the department of English Handbook for detailed course descriptions.

ENGL 3180 Studies in Renaissance Literature Cr.Hrs.3 (Formerly 004.318) Students may not hold credit for both ENGL 3180 (004.318) and the former 004.311. *Prerequisite:* a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the department of English Handbook for detailed course descriptions.

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 (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 (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 June 1. Students may offer only one of ENGL 3500 (004.350) and ENGL 3790 (004.379) for credit in a Major. NOTE: Students may offer only one of ENGL 3500 (004.350) and ENGL 3790 (004.379) for credit in a Major. If both courses are taken, however, they will be included in the total number of hours that a student has in a Major.

ENGL 3520 Studies in Forms of Discourse Cr.Hrs.3 (Formerly 004.352) Students may not hold credit for both ENGL 3520 (004.352) and the former 004.353. *Prerequisite:*

quisite: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3530 Special Topics in Creative Writing 1 Cr.Hrs.3 This advanced studies course will include practical and theoretical components and will focus on a particular area of writing craft or poetics without an emphasis on end-of-term publication or production. Possible topics include prose fiction, poetry, memoir, dramaturgy and screenwriting. *Prerequisites*: [a grade of "C" or better in ENGL 2760 (or 004.276)] and written consent of instructor, based on a sample of the student's work. Samples of writing (with name, address and telephone number) are to be submitted at the department general office no later than June 1. Enrolment for this course will be limited. NOTE: The content of this course will vary from year to year.

ENGL 3540 Special Topics in Creative Writing 2 Cr.Hrs.6 This advanced studies course will include practical and theoretical components and will focus on a particular area of writing craft or poetics without an emphasis on end-of-term publication or production. Possible topics include prose fiction, poetry, memoir, dramaturgy and screenwriting. *Prerequisites*: [a grade of "C" or better in ENGL 2760 (or 004.276)] and written consent of instructor, based on a sample of the student's work. Samples of writing (with name, address and telephone number) are to be submitted at the department general office no later than June 1. Enrolment for this course will be limited. NOTE: The content of this course will vary from year to year.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the department of English Handbook for detailed course descriptions.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the department of English Handbook for detailed course descriptions.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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 (004.367) and ENGL 3671 (004.367). NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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 (004.367) and ENGL 3670 (004.367). NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions. 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 (004.350) as a *prerequisite* to this course; however, standing in either does not automatically guarantee admission to ENGL 3790 (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 June 1. Students may offer only one of ENGL 3790 (004.379) and ENGL 3500 (004.350) for credit for a Major. NOTE: Students may offer only one of ENGL 3790 (004.379) and ENGL 3500 (004.350) 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. NOTE: The content of this course will vary from year to year. Students are asked to consult the department of English Handbook for detailed course descriptions.

ENGL 3890 Studies in Writing and Gender Cr.Hrs.3 (Formerly 004.389) Students may not hold credit for both ENGL 3890 (004.389) and the former 004.360. *Prerequisite*: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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 (004.395) and the former 004.295. *Prerequisite*: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3960 Drama 2 Cr.Hrs.3 (Formerly 004.396) Advanced study of selected topics. Students may not hold credit for ENGL 3960 (004.396) and any of: ENGL 3961 (004.396) or the former 004.297. *Prerequisite*: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3961 Drama 2 Cr.Hrs.3 (L'ancien 004.396) Advanced study of selected topics. Students may not hold credit for ENGL 3961 (004.396) and any of: ENGL 3960 (004.396) or the former 004.297. *Prerequisite*: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions. 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 (004.397) and the former 004.299. *Prerequisite*: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3980 Studies in Modernism Cr.Hrs.3 (Formerly 004.398) Students may not hold credit for both ENGL 3980 (004.398) and the former 004.391. *Prerequisite*: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

ENGL 3990 Studies in Post-Modernism Cr.Hrs.3 (Formerly 004.399) Students may not hold credit for both ENGL 3990 (004.399) and the former 004.392. *Prerequisite*: a grade of "C" or better in six hours of English at the 2000 level. NOTE: The content of this course will vary from year to year. Students are asked to consult the Department of English Handbook for detailed course descriptions.

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.

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.

FILM 1310 Film History Cr.Hrs.3 In this course students will examine films from more than one period in film history, exploring the relationships among and between films in terms of genre, style, theme, structure, and other aesthetic elements. Students will study films selected from various periods of world cinema, taking into consideration how and in what ways films bear the traces of their time and place, or are affiliated with relevant movements in art, history, or society, or have been shaped by technical and artistic developments in the art of film. Students may not hold credit for FILM 1310 and the former FILM 1300 (152.130). *Prerequisite*: [a grade of "C" or better in FILM 1290 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (152.130))] and written consent of instructor.

FILM 3270 Special Topics in Film 3 Cr.Hrs.6 An intensive examination of selected topics in film including creative filmmaking projects. Contents of the course will vary according to the needs and interests of students and faculty. *Prerequisite:* [a grade of "C" or better in each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (152.130))] and 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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 (152.343) and Screenwriting as previously offered under the title of Special Topics. *Prerequisite:* [a grade of "C" or better in each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 (152.344) and Filmmaking previously offered under the title of Special Topics. *Prerequisite:* [a grade of "C" or better in each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (152.130))] or written consent of instructor.

FILM 3460 Acting for the Camera Cr.Hrs.3 This course is a practical exploration of the acting techniques appropriate for work in film and television. Each student will be required to perform a significant number of scene bits and a few full scenes on video camera. Students will develop skills connected with directing actors in film; intensive preparatory scene analysis, storyboarding, and camera operation during performance. Students may not hold credit for both FILM 3460 and Acting for the Camera as previously offered under the title of Special Topics. *Prerequisite:* [a grade of "C" or better in each of FILM 1290 (152.129) and FILM 1310 (or the former FILM 1300 (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 (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 (152.344)] and written consent of instructor.

NOTE: The following courses with the subject code "FRAN" are offered at College de universitaire Saint-Boniface

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, accompagnées 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. Préalable: autorisation du écrite professeur. Donné au Collège de Saint-Boniface.

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 [une note minimale de C dans un cours choisi parmi les suivants: FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un cours choisi parmi les suivants: FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un cours choisi parmi les suivants: FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un cours choisi parmi les suivants: FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un cours choisi parmi les suivants: FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [un cours choisi parmi les suivants: FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un des FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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'après une étude de textes ayant comme thème: l'individu et le pays. Préalables: [une note minimale de C dans le FRAN 1091 (144.109)] et [une note minimale de C dans un des FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un des FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un des FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un des FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un des FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (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 (144.109)] et [une note minimale de C dans un des FRAN 1021 (144.102) ou FRAN 1071 (144.107) ou FRAN 1111 (144.111)]. Note: le FRAN 1111 (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'éllision. Préalable: une note minimale de C dans le FRAN 1111 (144.111). Donné au Collège universitaire de Saint-Boniface.

FRAN 2931 Initiation à la linguistique Cr.Hrs.3 (L'ancien 144.293) Déglagement 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 (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 (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 (144.291). Rédaction de textes argumentatifs, incitatifs, expressifs, narratifs, descriptifs. Préalable: une note minimale de C dans le FRAN 2911 (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 Lescarbot 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 (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 (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 (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 (144.291) ou FRAN 2931 (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 (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 (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 (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 cri-

tiques 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 (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 et, 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 (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 auteures. *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, Perec, 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 (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 (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 (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 le FRAN 2911 (144.291) et FRAN 2931 (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 (144.291) ou FRAN 2931 (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 (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 le FRAN 2911 (144.291) et FRAN 3911 (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'oeuvres poétiques originales. Préalables: une note minimale de C dans le FRAN 2911 (144.291) et un cours (3 crédits) de poésie de niveau 2000 ou 3000. Donné au Collège universitaire de Saint-Boniface.

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 (044.119) or FREN 1200 (044.120) or FREN 1250 (044.125). Not for credit in French Major or Minor.

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 (044.119) and FREN 1200 (044.120). *Prerequisite:* Senior Matriculation French or written consent of department head.

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 (044.120) and FREN 1190 (044.119). *Prerequisite:* Senior Matriculation French or a grade of "C" or better in FREN 1150 (044.115).

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; 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 or 40G, or the former French 300 or 301] or [a grade of "B" or better in FREN 1150 (044.115) or "C" or better in FREN 1200 (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 (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 (044.119)] or [exactly a "C" or "C+" in FREN 1200 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (044.119)] or [a grade of "C+" or better in FREN 1200 (044.120)] or [a grade of "C" or better in FREN 2620 (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 (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, Jaccottet, etc. *Prerequisite:* [a grade of "B" or better in any 2000-level French course] or written consent of department head. FREN 2610 (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 (044.261) may not be used as a *prerequisite*.

FREN 3160 Roman et nouvelle français du dix-neuvième siècle (B) Cr.Hrs.3 (Formerly 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 (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 con-

versation. *Prerequisite:* [a grade of "B" or better in FREN 2610 (044.261)] or written consent of department head.

FREN 3500 Littérature du 17^e 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 (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 (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 (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 (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 20^e 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 (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 (044.287) and a grade of "B" or better in any other 2000-level French course] or written consent of department head. FREN 2610 (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 (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 (044.291) and a grade of "B" or better in any other 2000-level French course] or written consent of department head. FREN 2610 (044.261) may not be used as a *prerequisite*.

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 4650 Études sur l'Ancien Régime (B) Cr.Hrs.3 L'étude des oeuvres d'un auteur, d'une période ou d'un thème d'avant la Révolution française, du XVI^e au XVIII^e siècles. Le choix des oeuvres, de la période ou du thème dépendra des besoins et des intérêts des étudiants et de l'instructeur. *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.

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.

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.

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 (003.102) and GRK 1030 (003.103). *Prerequisite:* a grade of "C" or better in GRK 1010 (003.101).

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 (003.103) and any of: GRK 1010 (003.101) or GRK 1020 (003.102).

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.

GRK 1070 Introductory Modern Greek 2 Cr.Hrs.3 (Formerly 003.107) The continuation of GRK 1060 (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 (003.106)] or written consent of department head.

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 (003.103)] or [a grade of "C" or better in both GRK 1010 (003.101) and GRK 1020 (003.102)].

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 (003.133) and the former 003.126. *Prerequisite:* [a grade of "C" or better in both GRK 1010 (003.101) and GRK 1020 (003.102)] or [a grade of "C" or better in GRK 1310 (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 (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 (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 (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 (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 (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 (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 (003.131) or GRK 1330 (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. *Pre-*

requisite: a grade of "C" or better in GRK 2730 (003.273) or GRK 2750 (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 (003.273) or GRK 2750 (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 (003.273) or GRK 2750 (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 (003.273) or GRK 2750 (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 (003.273) or GRK 2750 (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 (003.273) or GRK 2750 (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 (003.273) or GRK 2750 (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.

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 (008.210) or GRMN 2101 (008.210). Students may not hold credit for both GRMN 1120 (008.112) and GRMN 1121 (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 (008.210) or GRMN 2101 (008.210).

GRMN 1121 Introduction à l'Allemand Cr.Hrs.6 (L'ancien 008.112) Trois heures de cours plus une heure de travaux dirigés et une heure de conversation par semaine. Destinée à ceux qui n'ont aucune connaissance de l'allemand ou qui n'en ont qu'une connaissance minimale. Initiation à la grammaire fondamentale avec l'accent sur le développement d'aptitudes à la lecture et à la conversation. La réussite à ce cours permet de s'inscrire aux GRMN 2100 (008.210) ou GRMN 2101 (008.210). On ne peut se faire créditer les GRMN 1121 (008.112) et GRMN 1120 (008.112). Si l'on a déjà obtenu crédit pour le cours d'allemand de secondaire 4 ou l'équivalent ou pour le GRMN 2100 (008.210) ou GRMN 2101 (008.210), on ne peut s'inscrire à ce cours. Donné au Collège universitaire de Saint-Boniface.

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 practice (German to English only). May not be used for Major, Minor, or Honours credit in German.

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 (008.210) and GRMN 2101 (008.210). *Prerequisite:* [German 40S] or [a grade of "C" or better in GRMN 1120 (008.112) or GRMN 1121 (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. On ne peut se faire créditer le GRMN 2101 (008.210) et le GRMN 2100 (008.210). *Préalable:* [allemand de Secondaire 4] ou [une note minimale de C dans le GRMN 1120 (008.112) ou GRMN 1121 (008.112)] ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

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.

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 Language of instruction: German. 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. Students may not hold credit for both GRMN 2140 and the former 008.245. *Prerequisite:* [a grade of "C" or better in GRMN 2100 (008.210) or GRMN 2101 (008.210) or GRMN 3200 (008.320) or GRMN 3201 (008.320)] 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 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.

GRMN 2480 Special Topics in German 1 Cr.Hrs.3 (Formerly 008.248) 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 GRMN 2100 (008.210) or GRMN 2101 (008.210) or GRMN 3200 (008.320) or GRMN 3201 (008.320)] 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 GRMN 2100 (008.210) or GRMN 2101 (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 (008.320) and GRMN 3201 (008.320). *Prerequisite:* a grade of "C" or better in GRMN 2100 (008.210) or GRMN 2101 (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. On ne peut se faire créditer le GRMN 3201 (008.320) et le GRMN 3200 (008.320). *Préalable:* une note minimale de C dans GRMN 2100 (008.210) ou GRMN 2101 (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. Révision de la grammaire allemande avec l'accent sur la composition et la conversation appliquées au domaine commercial. On ne peut se faire créditer le GRMN 3211 (008.321) et le GRMN 3210 (008.321). *Préalable:* [une note minimale de C dans GRMN 2100 (008.210) ou GRMN 2101 (008.210) ou le GRMN 2110 (008.211)] ou l'autorisation 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 (008.320) or GRMN 3201 (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 (008.321). *Prerequisite:* [a grade of "C" or better in GRMN 2100 (008.210) or GRMN 2101 (008.210) or GRMN 3200 (008.320) or GRMN 3201 (008.320)] 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 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 3500 Special Topics in German 1 Cr.Hrs.3 Language of instruction: German. Topics dealing with German literature and culture. Course content will vary from year to year depending on interests and needs of students and staff. *Prerequisite:* [a grade of "C" or better in GRMN 2140] or written consent of department head.

GRMN 3510 Special Topics in German 2 Cr.Hrs.3 Language of instruction: English. Topics dealing with German literature and culture. Course content will vary from year to year depending on interests and needs of students and staff. *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 changer en fonction des besoins et des intérêts des étudiants et des professeurs. *Préalable:* [une note minimale de C dans GRMN 2101 (008.210) ou GRMN 2100 (008.210)] ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

GRMN 4200 Literary and Cultural Theory Cr.Hrs.3 Language of instruction: English. A survey of the major theoretical approaches to German literatures and cultures. Discusses the aesthetics of Enlightenment and Idealism, Nietzsche, Freud, Prague Structuralism, hermeneutics, semiotics, the Frankfurt School, collective memory, gender studies, and multi-culturalism; application of theories to German literary texts and other cultural examples. *Prerequisite:* written consent of department head.

GRMN 4210 Survey of Second Language Acquisition and Methods of Language Teaching in German Cr.Hrs.3 For advanced undergraduate students with a high proficiency in German who are interested in the learning and teaching of German as a foreign / second language; the course provides a general introduction to theories and approaches in second language acquisition (SLA) and to methods of the teaching of German as a foreign language. This course is not acceptable for credit in a Bachelor of Education program. *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 4570 Honours Thesis in German Studies Cr.Hrs.3 The Thesis presents the results of an independent research project supervised by a faculty member. *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.

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 (011.120) and any of: HIST 1201 (011.120) or HIST 1350 (011.135) or HIST 1360 (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 (011.120) ne peut se faire créditer aucun des cours HIST 1200 (011.120) ou HIST 1350 (011.135) ou HIST 1360 (011.136). Donné au Collège universitaire de Saint-Boniface.

HIST 1260 New Directions in History: Inquiries into the Cultural Basis of the Mod-

ern 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.

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.

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.

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.

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 (011.135) and any of: HIST 1200 (011.120) or HIST 1201 (011.120).

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 (011.136) and any of: HIST 1200 (011.120) or HIST 1201 (011.120).

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 (011.137) and HIST 1500 (011.150).

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 (011.138) and HIST 1500 (011.150).

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 (011.139) and any of: HIST 1440 (011.144) or HIST 1441 (011.144).

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 (011.140) and any of: HIST 1440 (011.144) or HIST 1441 (011.144).

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 (011.141) and any of: HIST 1420 (011.142) or HIST 1430 (011.143) or ASIA 1420 (150.142) or ASIA 1430 (150.143) or the former 150.141.

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 (011.141) or ASIA 1420 (150.142).

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 (150.143). May not be held with HIST 1410 (011.141) or ASIA 1430 (150.143).

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 (011.144) and any of: HIST 1441 (011.144) or HIST 1390 (011.139) or HIST 1400 (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 (011.144) ne peut se faire créditer aucun des cours HIST 1440 (011.144) ou HIST 1390 (011.139) ou HIST 1400 (011.140). Donné au Collège universitaire de Saint-Boniface.

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 (011.150) and any of: HIST 1370 (011.137) or HIST 1380 (011.138).

HIST 2041 Histoire des États-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 (011.204) et le HIST 2230 (011.223). Donné au Collège universitaire de

Saint-Boniface.

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.

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.

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.

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.

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.

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.

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 (011.221) and HIST 2211 (011.221).

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 (011.223) and any of: HIST 2760 (011.276) or HIST 2761 (011.276).

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 (011.224) and JUD 2940 (055.294).

HIST 2250 Social History of the Jews: Antiquity to Present (G) Cr.Hrs.6 A social, economic, and political history of the Jewish experience from the beginnings of the Jewish diaspora to the present, covering Jewish communities in medieval and modern Europe, the Middle East, and North America.

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 (011.228) and the former 011.254.

HIST 2350 Europe 1789-1870 (E) Cr.Hrs.3 The History of Europe during the French Revolution and the conservative reaction to it, focusing on political ideologies and national and international politics. Students may not hold credit for both HIST 2350 and HIST 2370 (011.237).

HIST 2360 Europe 1870 to the Present (E) Cr.Hrs.3 The history of Europe since 1870, focusing on industrialisation, imperialism, political ideologies, and national and international politics. Students may not hold credit for both HIST 2360 and HIST 2370 (011.237).

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. Students may not hold credit for HIST 2370 (011.237) and any of: HIST 2350 or HIST 2360.

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 (011.238) and HIST 2381 (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 (011.238) et le HIST 2380 (011.238). Donné au Collège universitaire de Saint-Boniface.

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.

HIST 2420 The Medieval World (D) 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 (011.242) and any more than one of the former 011.206 or the former 011.207 or the former 011.209.

HIST 2481 Histoire de la 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.

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 HIST 2490

(011.249) and any of: HIST 2660 (011.266) or HIST 2661 or HIST 2840 (011.284) or HIST 2841.

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.

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.

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.

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.

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.

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.

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 HIST 2660 (011.266) and any of: HIST 2661 or HIST 2490 (011.249) or the former HIST 3471 (011.347).

HIST 2661 Histoire de l'Union soviétique (E) Cr.Hrs.3 Une attention particulière sera donnée à la Révolution russe de 1917, à la nature et au fonctionnement du système politique soviétique, aux expériences sociales et économiques du régime soviétique ainsi qu'au rôle des Soviétiques dans la politique internationale. L'étudiant(e) qui détient les crédits du HIST 2661 ne peut se faire créditer aucun des cours HIST 2660 (011.266) HIST 2490 (011.249) ou l'ancien HIST 3471 (011.347). Donné au Collège universitaire de Saint-Boniface.

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. Students may not hold credit for both HIST 2670 (011.267) and HIST 2671.

HIST 2671 Histoire du capitalisme (M) Cr.Hrs.3 Étude de l'émergence et de l'évolution de capitalisme ainsi que de ses conséquences sociales du 15^e siècle jusqu'à nos jours. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2671 et le HIST 2670 (011.267). Donné au Collège universitaire de Saint-Boniface.

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 non-revolutionary 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.

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.

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.

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.

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 (011.276) and any of: HIST 2761 (011.276) or HIST 2230 (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 les crédits du HIST 2761 (011.276) ne peut se faire créditer aucun des cours HIST 2760 (011.276) ou HIST 2230 (011.223). Donné au Collège universitaire de Saint-Boniface.

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 (011.282) and HIST 2821 (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 (011.282) et le HIST 2820 (011.282). Donné au Collège universitaire de Saint-Boniface.

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 HIST 2840 (011.284) and any of: HIST 2841 or HIST 2490 (011.249) or the former HIST 3471 (011.347).

HIST 2841 Histoire de la Russie jusqu'en 1917 (E) Cr.Hrs.3 Un survol historique du développement de la Russie jusqu'à la fin de la période impériale. L'étudiant(e) qui détient les crédits du HIST 2841 ne peut se faire créditer aucun des cours HIST 2840 (011.284) ou HIST 2490 (011.249) ou l'ancien HIST 3471 (011.347). Donné au Collège universitaire de Saint-Boniface.

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.

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.

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.

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 (011.295) and HIST 2951 (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 (011.295) et le HIST 2950 (011.295). Donné au Collège universitaire de Saint-Boniface.

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 reactions to the new imperialism; and the impact of industrialization upon Canada. Students may not hold credit for both HIST 2960 (011.296) and HIST 2961 (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 (011.296) et le HIST 2960 (011.296). Donné au Collège universitaire de Saint-Boniface.

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 (011.297) and HIST 2971 (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 (011.297) et le HIST 2970 (011.297). Donné au Collège universitaire de Saint-Boniface.

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. Students may not hold credit for both HIST 2990 (011.299) and HIST 2991.

HIST 2991 Histoire de l'Église catholique depuis 1540 (G) Cr.Hrs.3 Histoire de l'Église catholique depuis 1540 jusqu'à nos jours. On portera attention particulièrement à la réponse que l'Église a donnée à la modernisation du monde ainsi qu'à l'évolution théologique et aux réformes institutionnelles. L'étudiant(e) ne peut se faire créditer à la fois le HIST 2991 et le HIST 2990 (011.299). Donné au Collège universitaire de Saint-Boniface.

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 3011 La Guerre au 20^e siècle (G) Cr.Hrs.3 Ce cours aborde le phénomène de la guerre au 20^e siècle dans tous ses aspects: militaires, économiques, sociaux, culturels, humains. Il sera question des deux guerres mondiales et de la Guerre froide mais aussi des guerres régionales ou locales. Nous traiterons aussi des différentes formes que la guerre a prises au siècle dernier: décolonisation, guérilla, terrorisme. *Préalable:* [avoir obtenu une note minimale de C dans six crédits en histoire] ou l'autorisation écrite de la professeure ou du professeur. Donné au Collège universitaire de Saint-Boniface.

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 3060 German and German Jewish History, 1780-1933 (E) Cr.Hrs.3 A course on the history of Germany from the Enlightenment to the Weimar Republic with a focus on the experience of German Jewry.

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 3101 Histoire de l'Éducation en Occident depuis 1500, une introduction (M) Cr.Hrs.3 Introduction à l'histoire de l'éducation en Occident. Présentation des grands jalons au cours des cinq cents dernières années. Parmi les thèmes abordés, il y aura la création et de l'évolution des différents niveaux d'écoles, la programmation, le financement, la place de l'Église et celle de l'État dans l'éducation, les méthodes d'enseignement, les différences entre les sexes, la progression de l'alphabétisation et de la scolarisation. *Préalable:* [avoir obtenu une note minimale de C dans six crédits en histoire] ou l'autorisation écrite de la professeure ou du professeur. Donné au Collège universitaire de Saint-Boniface.

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 3111 Sujets spéciaux 1 (G) Cr.Hrs.3 L'occasion d'étudier un thème choisi en histoire. Le contenu varie mais doit comprendre un travail en histoire sociale ou culturelle ou sur un sujet spécifique. Consulter le département d'histoire et le Guide d'inscription. *Préalable:* [avoir obtenu une note minimale de C dans six crédits en histoire] ou l'autorisation écrite de la professeure ou du professeur. Donné au Collège universitaire de Saint-Boniface.

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 3121 Sujets spéciaux 2 (G) Cr.Hrs.3 L'occasion d'étudier un thème choisi en histoire. Le contenu varie mais doit comprendre un travail en histoire sociale ou culturelle ou sur un sujet spécifique. Consulter le département d'histoire et le Guide d'inscription. *Préalable:* [avoir obtenu une note minimale de C dans six crédits en histoire] ou l'autorisation écrite de la professeure ou du professeur. Donné au Collège universitaire de Saint-Boniface.

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 3140 Medieval Italy (D) Cr.Hrs.6 A study of topics in the history of the Italian peninsula between the 6th and 15th centuries, with emphasis on urban life, gender, and religious culture. *Prerequisite:* [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3141 Histoire de la démocratie (G) Cr.Hrs.3 Ce cours aborde un sujet au cœur de l'actualité: la démocratie et, plus spécialement la démocratisation des États dans le monde depuis le 19^e siècle. Nous abordons les aspects théoriques de la démocratie et l'évolution de la mise en pratique de la théorie démocratique. *Préalable:* [avoir obtenu une note minimale de C dans six crédits en histoire] ou l'autorisation écrite de la professeure ou du professeur. Donné au Collège universitaire de Saint-Boniface.

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 (011.316) and HIST 3580 (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 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 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 (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 Eu-

ropean states. Students may not hold credit for HIST 3680 (011.368) and any of: HIST 3682 or HIST 3684. *Prerequisite:* [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3682 Europe 1870-1918 (E) Cr.Hrs.3 Europe at the zenith of its power. The course examines the dominant forces and personalities of the period from Bismarck to the end of the First World War. It emphasizes the domestic and international concerns of the major European powers, the industrial revolution, and the partition of Africa, as well as the causes and events of the First World War. Students may not hold credit for both HIST 3682 and HIST 3680 (011.368). *Prerequisite:* [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3684 Europe 1918-1945 (E) Cr.Hrs.3 Europe in decline. The course examines the peace settlement of 1919, and the balance of power generally. It also considers fascism, the Russian Revolution, the rise of Nazism, the Spanish Civil War in addition to the origins and events of the Second World War. Students may not hold credit for both HIST 3684 and HIST 3680 (011.368). *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 (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 (011.144) ou HIST 1441 (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 (011.376) and HIST 3761 (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 États-Unis I (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 (011.376) et le HIST 3760 (011.376). *Préalable:* [une note minimale de C dans six crédits en histoire] ou l'assentiment du département. Donné au Collège universitaire de Saint-Boniface.

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 (011.377) and HIST 3771 (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 États-Unis II (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 (011.377) et le HIST 3770 (011.377). *Préalable:* [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 (011.378) and HIST 3781 (011.378). *Prerequisite:* [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3781 Études choisies en histoire du Canada I (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 (011.378) et le HIST 3780 (011.378). *Préalable:* [une note minimale de C dans six crédits en histoire] ou l'assentiment du département. Donné au Collège universitaire de Saint-Bon-

iface.

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 (011.379) and HIST 3791 (011.379). *Prerequisite:* [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3791 Études choisies en histoire du Canada II (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 (011.379) et le HIST 3790 (011.379). *Préalable:* [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 (011.381) and HIST 3811 (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 (011.381) et le HIST 3810 (011.381). *Préalable:* [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.

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 4150 The Social History of the Latin American State (1492-2005) (A) Cr.Hrs.6 Readings on the history of Latin America since colonial times, focused on the dynamic relationship between different social groups and the state. Based on an interdisciplinary theoretical framework, this historical overview will cover different geographical areas, issues, and social factors. *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.

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.

ICEL 1240 Modern Icelandic 1 Cr.Hrs.6 (Formerly 012.124) Texts: Asta Svavarsdóttir and Margret Jónsdóttir, *Íslenska fyrir Utendinga* (Reykjavík 1991) and Ari Pall Kristinsson, *The Pronunciation of Modern Icelandic* (Reykjavík 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:* a grade of "C" or better in ICEL 1240 (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 2300 Icelandic-Canadian Literature Cr.Hrs.6 (Formerly 012.230) Text: Einar H. Kvaran and Gudm. Finnbogason, *Vestan um haf* (Reykjavík, 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: Sigríð Valfélis and James E. Cathey. *Old Icelandic: An Introductory Course* (Oxford, 1981). *Prerequisite:* written consent of department head.

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 (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 (012.332) is recommended but not required.

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 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.

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.

NOTE: The following courses with the subject code "INTL" are offered at Collège universitaire de Saint-Boniface

INTL 1011 Introduction aux études internationales Cr.Hrs.3 Introduction à l'étude du monde contemporain sous un angle interdisciplinaire. Le cours analyse les fondements historique, politique et les principaux outils méthodologiques et théoriques qui président à l'étude de la société internationale contemporaine. Donné au Collège universitaire de Saint-Boniface.

INTL 3011 Sujets particuliers en études internationales Cr.Hrs.3 Le contenu du cours variera. Contacter le secteur pour une description de cours. *Préalable:* consentement écrit du chef de département. Donné au Collège universitaire de Saint-Boniface.

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 (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:* [a grade of "C" or better in ITLN 1080 (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 (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 (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 (044.209) and ITLN 2100 (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 (044.208)] or [a grade of "C" or better in each of ITLN 2090 (044.209) and ITLN 2100 (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 (044.208)] or [a grade of "C" or better in each of ITLN 2090 (044.209) and ITLN 2100 (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 (044.208)] or [a grade of "C" or better in each of ITLN 2090 (044.209) and ITLN 2100 (044.210)] or written consent of department head.

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 (055.233) and RLG 2820 (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 (055.294) and HIST 2240 (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.

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.

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 (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 (153.242) and ECON 2420 (018.242). *Prerequisite:* [a grade of "C" or better in both LABR 1270 (153.127) and LABR 1290 (153.129) (the former 153.128)] or [a grade of "C" or better in 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 (153.127) and LABR 1290 (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 (018.250) Labour and Technology (3). Students may not hold credit for both LABR 2450 (153.245) and ECON 2500 (018.250). *Prerequisite:* [a grade of "C" or better in both LABR 1270 (153.127) and LABR 1290 (153.129) (the former 153.128)] or [a grade of "C" or better in 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 (153.127) and LABR 1290 (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 (153.127) and LABR 1290 (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 (153.127) and LABR 1290 (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 (153.127) and LABR 1290 (153.129) (the former 153.128)] or written consent of the Labour Studies coordinator.

LABR 3090 Globalization and Labour Cr.Hrs.3 An examination of the impact of global capitalism on the lives of workers (both paid and unpaid) in the Global South and North in the early 21st century. Using concepts of class, gender and "race," the course addresses key challenges facing working people, the crisis of workers' movements, and new movements emerging in response to this crisis. *Prerequisite:* written consent of instructor.

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 retirement. 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 (153.127) and LABR 1290 (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 (153.127) and LABR 1290 (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 (153.127) and LABR 1290 (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 (153.320) and the former 153.308. *Prerequisite:* [a grade of "C" or better in LABR 3510 (153.351) or ECON 3510 (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 LABR 1270 (153.127) and LABR 1290 (153.129) (the former 153.128)] or [a grade of "C" or better in LABR 2420 (153.242) or ECON 2420 (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 (153.351) and ECON 3510 (018.351). *Prerequisite:* [a grade of "C" or better in LABR 1270 (153.127) and LABR 1290 (153.129) (the former 153.128)] or [a grade of "C" or better in 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 (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.

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 (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 (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.

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.

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 (003.108).

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 both LATN 1080 (003.108) and LATN 1090 (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 (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 (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 (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 (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 (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 (003.272) or LATN 2740 (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 (003.272) or LATN 2740 (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 (003.272) or LATN 2740 (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 (003.272) or LATN 2740 (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 (003.272) or LATN 2740 (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 (003.272) or LATN 2740 (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 (003.272) or LATN 2740 (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 (003.272) or LATN 2740 (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.

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.

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.

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.

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.

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.

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 (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 sys-

tems are language-specific, abstract structures. *Prerequisite:* [a grade of "C" or better in LING 1200 (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 (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 (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 (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 (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 (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 (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 (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 (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 both LING 1200 (126.120) and LING 1380 (126.138)] or written consent of instructor.

LING 2850 Linguistic Anatomy and Physiology 2 Cr.Hrs.3 (Formerly 126.285) A survey 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 both LING 1200 (126.120) and LING 1380 (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 both LING 1200 (126.120) and LING 1380 (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 both LING 1200 (126.120) and LING 1380 (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 (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 (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 (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 (126.220) and LING 2420 (126.242) and LING 2440 (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 (126.120) and LING 2200 (126.220) and LING 2460 (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 (126.220) and LING 2420 (126.242) and LING 2440 (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 (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.

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.

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 (032.120) and any of: NATV 1220 (032.122) or NATV 1240 (032.124).

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 (032.122) and NATV 1200 (032.120).

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 (032.124) and NATV 1200 (032.120).

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 Introductory Cree 2.

NATV 1260 Introductory Cree 2 Cr.Hrs.3 (Formerly 032.126) Continuation of NATV 1250 (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 (032.125).

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 Introductory Ojibway 2.

NATV 1280 Introductory Ojibway 2 Cr.Hrs.3 (Formerly 032.128) Continuation of NATV 1270 (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 (032.127).

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 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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (032.124)] or 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 both NATV 1250 (032.125) and NATV 1260 (032.126)] or [a grade of "C" or better in both NATV 1270 (032.127) and NATV 1280 (032.128)] or written consent of department head.

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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 Saisi Dene, north of the Churchill River. This course may include a field trip component. *Prerequisite:* [a grade of "C" or better in NATV 1200 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.208) and NATV 2000 (032.200) with the topic "Inuit Society and Culture." *Prerequisite:* [a grade of "C" or better in NATV 1200 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.210) and NATV 3000 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (032.124)] 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 both NATV 1250 (032.125) and NATV 1260 (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 (032.127) and NATV 1280 (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 (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 (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 (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 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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (032.124)] or written consent of instructor or department head.

NATV 2430 Indigenous Women's Stories Cr.Hrs.3 This course will investigate through the medium of literature - life writing, fiction, creative non-fiction, poetry - and film experiences of Indigenous women in North America, particularly in Canada, as articulated in their own voices. *Prerequisite:* [a grade of "C" or better in NATV 1200 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.310) and NATV 3000 (032.300) when titled "Exploring Aboriginal Healing." *Prerequisite:* [a grade of "C" or better in NATV 2100 (032.210)] or written consent of the department head.

NATV 3110 Indigenous Environmental Discourse Cr.Hrs.3 This course is designed to further an in-depth understanding of Indigenous perspectives on the environment (rural and urban) through the critical analysis of poetry, essays, fiction, film and art by Indigenous writers, scholars and (media) artists. *Prerequisite:* [a grade of "C" or better in NATV 2410 (032.241)] or written consent of instructor or department head.

NATV 3120 Exploring Aboriginal Economic Perspectives Cr.Hrs.3 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 NATV 3120 and any of: ECON 2350 (018.235) or IDM 3000 (098.300) or the former NATV 4310 (032.431). *Prerequisite:* [a grade of "C" or better in NATV 1200 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (032.124)] or written consent of instructor or department head.

NATV 3130 International Indigenous Literatures Cr.Hrs.3 This course will compare selected texts by Indigenous authors from Canada, U.S.A., New Zealand and Australia. Following the history of the respective literature in each country, it will examine the role of Indigenous writing – poetry, fiction, plays – in de/colonization processes in settler societies. *Prerequisite:* [a grade of "C" or better in NATV 2410 (032.241)] or written consent of instructor or department head.

NATV 3140 Aboriginal Resistance Writing Cr.Hrs.3 This course will trace and explore the history and practice of Canadian Aboriginal resistance writing. Attention will be given to political and creative writing in contrapuntal response to the Canadian colonial situation. Classes will be based largely on seminar discussions and readings. *Prerequisite:* [a grade of "C" or better in NATV 2410 (032.241)] or written consent of instructor or 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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 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.

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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 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 (032.335) and the former NATV 3320 (032.332). *Prerequisite:* [a grade of "C" or better in NATV 1200 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (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 (032.339) and NATV 3000 (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 (032.120) or "C+" or better in both NATV 1220 (032.122) and NATV 1240 (032.124)] and [a grade of "C+" or better in 6 credit hours in Native Studies] or written consent of instructor.

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 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 (032.432) and IDM 4090 (098.409). *Prerequisite:* [a grade of "C" or better in NATV 1200 (032.120)] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (032.124)] or written consent of instructor.

NATV 4330 Indigenous Aesthetics Cr.Hrs.3 This course will be centered on Indigenous philosophies and aesthetic theories regarding literature, film, theatre and visual arts produced by Indigenous writers, artists and filmmakers in Canada with special emphasis on conceptualizations of an oral "communitist," activist and resistance aesthetics. *Prerequisite:* [a grade of "C" or better in 15 credit hours of Native Studies courses which must include NATV 2410 (032.241)] or written consent of instructor or department head.

NATV 4340 Text, Representation and Discourse Cr.Hrs.3 This course examines the discourse of representation surrounding Aboriginal Peoples and Canada's historical and cultural productions. Although the focus is on Canadian material and experience, the course draws on international post-colonial approach in the critical study of archival and historical records, literary works and contemporary Aboriginal expressions. Method of study includes historiography, film and literary criticism and post-colonial theory. *Prerequisite:* [a grade of "C" or better in NATV 2410 (032.241)] or written consent of instructor or department head.

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.

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 (015.120) and any of: PHIL 1261 (015.126) or PHIL 1510 (015.151) or PHIL 1511 (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.

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 (015.129) and any of: PHIL 1320 (015.132) or PHIL 1321 (015.132).

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 (015.243) or PHIL 3750 (015.375). Students may not hold credit for PHIL 1320 (015.132) and any of: PHIL 1321 (015.132) or PHIL 1290 (015.129) or PHIL 1330 (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 (015.243) et PHIL 3750 (015.375) ne sont pas autorisés à suivre ce cours. L'étudiant(e) qui détient les crédits du PHIL 1321 (015.132) ne peut se faire créditer aucun des cours PHIL 1320 (015.132) ou PHIL 1290 (015.129) ou PHIL 1330 (015.133). Donné au Collège universitaire de Saint-Boniface.

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 (015.133) and any of: PHIL 1320 (015.132) or PHIL 1321

(015.132) or PHIL 2430 (015.243) or PHIL 3750 (015.375).

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 (015.151) and any of: PHIL 1511 (015.151) or PHIL 1200 (015.120) or PHIL 1261 (015.126). PHIL 1510 (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 (015.151) ne peut se faire créditer aucun des cours PHIL 1510 (015.151) ou PHIL 1200 (015.120) ou PHIL 1260 (015.126). Les cours PHIL 1510 (015.151) fait partie à la fois du groupe 1 et du groupe 2. Donné au Collège universitaire de Saint-Boniface.

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 [successful completion of 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 [successful completion of 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 [successful completion of 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 [successful completion of 30 hours of university credit].

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. *Course not regularly offered.

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 (015.229) and any of: PHIL 2531 (015.253) or PHIL 2740 (015.274) or PHIL 2750 (015.275). *Prerequisite:* successful completion of 30 hours of university credit.

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 (015.230) and PHIL 2301 (015.230). *Prerequisite:* successful completion of 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 (015.230) et le PHIL 2300 (015.230). *Préalable:* après avoir complété et réussi 30 unités de cours 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 (015.232) and PHIL 2321 (015.232). *Course not regularly offered.

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 (015.232) et le PHIL 2320 (015.232). Donné au Collège universitaire de Saint-Boniface.

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 (015.243) and any of: PHIL 1330 (015.133) or PHIL 3750 (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 (015.245) and PHIL 2580 (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 (015.253) ne peut se faire créditer aucun des cours PHIL 2290 (015.229) ou PHIL 2740 (015.274) ou PHIL 2750 (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. *Course not regularly offered.

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 (015.258) and PHIL 2450 (015.245). *Prerequisite:* a grade of "C" or better in six credit hours of Philosophy at the 1000 level.

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:* successful completion of 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 (015.263) and PHIL 2631 (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 (015.263) et le PHIL 2630 (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 (015.264) and PHIL 2641 (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 (015.264) et le PHIL 2640 (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 (015.265) and PHIL 2651 (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 (015.265) et le PHIL 2650 (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 (015.266) and PHIL 2661 (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 (015.266) et le PHIL 2660 (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 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 (015.270) and any of: PHIL 2701 (015.270) or PHIL 2730 (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'ex-

istence 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 le crédits du PHIL 2701 (015.270) ne peut se faire créditer aucun des cours PHIL 2700 (015.270) ou PHIL 2730 (015.273). Donn  au Coll ge universitaire de Saint-Boniface.

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 (015.271) and any of: PHIL 2820 (015.282) or PHIL 2821 (015.282). *Course not regularly offered.

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 (015.272) and any of: PHIL 2820 (015.282) or PHIL 2821 (015.282). *Course not regularly offered.

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 (015.273) and any of: PHIL 2700 (015.270) or PHIL 2701 (015.270). *Course not regularly offered.

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 (015.274) and any of: PHIL 2290 (015.229) or PHIL 2531 (015.253). *Prerequisite:* successful completion of 30 hours of university credit. *Course not regularly offered.

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 (015.275) and any of: PHIL 2290 (015.229) or PHIL 2531 (015.253). *Prerequisite:* successful completion of 30 hours of university credit. *Course not regularly offered.

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. *Course not regularly offered.

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 (015.278) and any of: PHIL 2320 (015.232) or PHIL 2321 (015.232). *Course not regularly offered.

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 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 (015.280) and PHIL 3710 (015.371). *Prerequisite:* successful completion of 30 hours of university credit. *Course not regularly offered.

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 (015.281) and any of: PHIL 3550 (015.355) or PHIL 3551 (015.355). *Prerequisite:* successful completion of 30 hours of university credit. *Course not regularly offered.

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 (015.282) and any of: PHIL 2821 (015.282) or PHIL 2710 (015.271).

PHIL 2821 L'existentialisme Cr.Hrs.6 (L'ancien 015.282)  tude des th mes existentialistes qui apparaissent   travers les oeuvres d' crivains et de philosophes tels que: Beckett, Camus, de Beauvoir, Hesse, Heidegger, Kafka, Jaspers, Kierkegaard, Marcel,

Nietzsche, Sartre, Buber et Lange. L' tudiant(e) qui d tient les cr dits du PHIL 2821 (015.282) ne peut se faire cr diter aucun des cours PHIL 2820 (015.282) ou PHIL 2710 (015.271). Donn  au Coll ge universitaire de Saint-Boniface.

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:* successful completion of 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:* successful completion of 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 (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 (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 (015.287) and the former 015.247.

PHIL 3220 Feminist Philosophy Cr.Hrs.3 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 (015.338) and PHIL 3740 (015.374). *Prerequisite:* successful completion of 30 hours of university credit.

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 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 (015.355) and any of: PHIL 3551 (015.355) or PHIL 2810 (015.281). *Prerequisite:* successful completion of 30 hours of university credit. *Course not regularly offered.

PHIL 3551 Philosophie de l' ducation Cr.Hrs.6 (L'ancien 015.355) Expos s, examen et  valuation des diverses th ories sur ce qui constitue l' ducation id ale. Des institutions et des pratiques les plus aptes   r aliser cet id al et des compromis   faire selon la nature humaine. L' tudiant(e) qui d tient le cr dits du PHIL 3551 (015.355) ne peut se faire cr diter aucun des cours PHIL 3550 (015.355) ou PHIL 2810 (015.281). *Pr alable:* apr s avoir compl t  et r ussi 30 unit s de cours universitaires. Donn  au Coll ge universitaire de Saint-Boniface.

PHIL 3561 M taphysique Cr.Hrs.6 (L'ancien 015.356) Les pr socratiques et le probl me de l' tre mobile. Analyse du temps, de l'espace, du lieu et de la quantit . De la th orie hyl morphique et du mouvement re u dans les  tres. Transcendantalisme et analogie de l' tre et structure des  tres particuliers. Dieu et le concours divin. *Pr alable:* une note minimale de C dans six heures de cr dits en philosophie au niveau 1000. Donn  au Coll ge universitaire de Saint-Boniface.

PHIL 3571 Philosophie de l'homme Cr.Hrs.6 (L'ancien 015.357) Dans le monde, l'Homme est d termin . Par la raison, il en  merge et cherche le sens de son existence. Est-ce l  toute son originalit ? Libert  et valeurs. *Pr alable:* [une note minimale de C dans six heures-cr dits en philosophie] ou autorisation  crite du professeur. Donn  au Coll ge 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 (015.263) or PHIL 2631 (015.263) or PHIL 2640 (015.264) or PHIL 2641 (015.264)] or written consent of department head.

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. *Course not regularly

offered.

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 (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 (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 (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 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. *Course not regularly offered.

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. *Course not regularly offered.

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 (015.371) and PHIL 2800 (015.280). *Prerequisite:* successful completion of 30 hours of university credit. *Course not regularly offered.

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 (015.372) and PHIL 3690 (015.369). *Prerequisite:* [a grade of "C" or better in six credit hours of 1000-level Philosophy] or written consent of department head.

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 (015.374) and PHIL 3380 (015.338). *Prerequisite:* successful completion of 30 hours of university credit. *Course not regularly offered.

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 (015.375) and any of: PHIL 1330 (015.133) or PHIL 2430 (015.243). *Prerequisite:* successful completion of 60 hours of university credit.

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 (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 (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. *Course not regularly offered.

PHIL 4470 Contemporary Issues 2* Cr.Hrs.3 (Formerly 015.447) A course of the same description as PHIL 4460 (015.446), but with subject matter drawn from a different area of contemporary philosophy. *Prerequisite:* written consent of department head. *Course not regularly offered.

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. *Course not regularly offered.

PHIL 4530 Historical Topics 2* Cr.Hrs.3 (Formerly 015.453) Selected topics in the history of philosophy. *Prerequisite:* written consent of department head. *Course not regularly offered.

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. *Course not regularly offered.

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. *Course not regularly offered.

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. *Course not regularly offered.

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. *Course not regularly offered.

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.

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 (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 (052.289)] or written consent of department head.

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 (019.150) and POLS 1501 (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 (019.150) et le POLS 1500 (019.150). Donné au Collège universitaire de Saint-Boniface.

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.

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 (019.204) and any of: POLS 2041 (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 les crédits du POLS 2041 (019.204) ne peut se faire créditer aucun des cours POLS 2040 (019.204) ou l'ancien 019.153. Donné au Collège universitaire de Saint-Boniface.

POLS 2044 Introduction to Conflict Resolution Studies Cr.Hrs.6 Inter-University Services course.

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 (019.207) and any of: POLS 2071 (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 les crédits du POLS 2071 (019.207) ne peut se faire créditer aucun des cours POLS 2070 (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.

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 (019.251) and POLS 2511 (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 (019.251) et le POLS 2510 (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 (019.257) and POLS 2571 (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 (019.257) et le POLS 2570 (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 (019.207) or POLS 2071 (019.207) or 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. *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. *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. *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. *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 (019.316) and the former 019.266. *Prerequisite:* [a grade of "C" or better in one of: POLS 2510 (019.251) or POLS 2511 (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 Charter 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 (019.317) and the former 019.266. *Prerequisite:* [a grade of "C" or better in one of: POLS 2070 (019.207) or POLS 2071 (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 (019.320) and the former 019.273. *Prerequisite:* [a grade of "C" or better in one of: POLS 2040 (019.204) or POLS 2041 (019.204) or 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 (019.322) and the former 019.383. *Prerequisite:* [a grade of "C" or better in one of: POLS 2040 (019.204) or POLS 2041 (019.204) or 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 POLS 3250 (019.325) and any of: POLS 3251 (019.325) or the former 019.383. *Prerequisite:* [a grade of "C" or better in one of: POLS 2040 (019.204) or POLS 2041 (019.204) or 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 (019.325) ou l'ancien 019.383. *Préalable:* [une note minimale de C dans un des cours suivants: POLS 2040 (019.204) ou POLS 2041 (019.204) ou 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 (019.352) and any of: POLS 3561 (019.356) or the former 019.368. *Prerequisite:* [a grade of "C" or better in one of: POLS 2040 (019.204) or POLS 2041 (019.204) or 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 (019.356) ne peut se faire créditer aucun des cours POLS 3520 (019.352) ou l'ancien 019.368. *Préalable:* [une note minimale de C dans un des cours suivants: POLS 1500 (019.150) ou POLS 1501 (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 (019.251) or POLS 2511 (019.251) or 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 or-

ganism, mechanism, contractualism, games, exchange, and the theatre. *Prerequisite:* a grade of "B" or better in one of: POLS 2510 (019.251) or POLS 2511 (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 (019.204) or POLS 2041 (019.204) or 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 (019.367) and the former 019.286. *Prerequisite:* [a grade of "C" or better in one of: POLS 2070 (019.207) or POLS 2071 (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 (019.384) and POLS 3841. *Prerequisite:* [a grade of "C" or better in one of: POLS 2040 (019.204) or POLS 2041 (019.204) or 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 (019.384). *Préalable:* [une note minimale de C dans un des cours suivants: POLS 2040 (019.204) ou POLS 2041 (019.204) ou 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 (019.204) or POLS 2041 (019.204) or 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 (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 (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 (019.393) and POLS 3931 (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 (019.393) et le POLS 3930 (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 (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 (019.207) or POLS 2071 (019.207) or the former 019.156] or 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 (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 (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 (019.453) and POLS 4830 (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 (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 (019.494) and the former 019.493. *Prerequisite:* written consent of instructor or department head.

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 (017.120) and any of: PSYC 1201 (017.120) or PSYC 1211 (017.121) or PSYC 1221 (017.122). *Prerequisite* for all other courses in Psychology.

PSYC 1201 Introduction to la psychologie Cr.Hrs.6 (L'ancien 017.120) Étude des principes et des concepts de base de la psychologie, tels l'apprentissage, la percep-

tion, le développement, le comportement normal et anormal. L'étudiant(e) qui détient les crédits du PSYC 1201 (017.120) ne peut se faire créditer aucun des cours PSYC 1200 (017.120) ou PSYC 1211 (017.121) ou PSYC 1221 (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 (017.121) ne peut se faire créditer aucun des cours PSYC 1200 (017.120) ou PSYC 1201 (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 (017.122) ne peut se faire créditer aucun des cours PSYC 1200 (017.120) ou PSYC 1201 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.225) and PSYC 2251 (017.225). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.225) et le PSYC 2250 (17.225). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (017.122)] ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

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 (017.226) and PSYC 2261 (017.226). *Prerequisite:* a grade of "C" or better in PSYC 2250 (017.225) or PSYC 2251 (017.225).

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 (017.226) et le PSYC 2260 (17.226). *Préalable:* une note minimale de C dans le PSYC 2250 (017.225) ou le PSYC 2251 (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 (017.229) and PSYC 2291 (017.229). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.229) et le PSYC 2290 (17.229). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (017.122)] ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

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 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 (017.231) and PSYC 2311 (017.231). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.231) et le PSYC 2310 (17.231). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.236) and any of: PSYC 3530 (017.353) or PSYC 3531 (017.353) or PSYC 3540 (017.354) when titled Brain and Behaviour or PSYC 3541 (017.354). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.241) and PSYC 2411 (017.241). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.241) et le PSYC 2410 (017.241). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 (017.241) or PSYC 2411 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.244) and PSYC 2441 (017.244). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 hu-

main, 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 (017.244) et le PSYC 2440 (17.244). *Préalable*: [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 (017.245) and PSYC 2451 (017.245). *Prerequisite*: a grade of "C" or better in PSYC 2440 (017.244) or PSYC 2441 (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 (017.244) ou PSYC 2441 (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 (017.245) et le PSYC 2450 (17.245). *Préalable*: une note minimale de C dans le PSYC 2440 (017.244) ou PSYC 2441 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.248) and PSYC 2481 (017.248). *Prerequisite*: [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.248) et le PSYC 2480 (17.248). *Préalable*: [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (017.122)] ou l'autorisation écrite du professeur. Donné au Collège universitaire de Saint-Boniface.

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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.344). *Prerequisite*: [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (017.122)] and written consent of instructor.

PSYC 3340 Design and Analysis for Psychological Experiments Cr.Hrs.3 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. Students may not hold credit for both PSYC 3340 and the former PSYC 4570 (017.457). *Prerequisite*: [a grade of "C" or better in PSYC 2300 (017.230)] or [a grade of "C" or better in both PSYC 2250 (017.225) and PSYC 2260 (017.226)] or [a grade of "C" or better in both PSYC 2251 (017.225) and PSYC 2261 (017.226)], and written consent of department head.

PSYC 3350 Behavioural Neuroscience Cr.Hrs.3 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 PSYC 3350 and any of: PSYC 3351 or the former PSYC 3330 (017.333) or the former PSYC 3331 (017.333). *Prerequisite*: [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (017.122)] or written consent of department head.

PSYC 3351 Neurosciences du comportement Cr.Hrs.3 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) qui détient les crédits du PSYC 3351 ne peut se faire créditer aucun des cours PSYC 3350 ou l'ancien PSYC 3331 (17.333) ou l'ancien PSYC 3330 (017.333). *Préalable*: [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 3350 or PSYC 3351 or the former PSYC 3330 (017.333) or the former PSYC 3331 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (017.122)] or 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 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 PSYC 1200 (017.120) or PSYC 1201 or in both PSYC 1211 (017.121) and PSYC 1221 (017.122)] and [a grade of "C" or better in one of the following: PSYC 2360 (017.236), or PSYC 3350, or PSYC 3351, or both BIOL 1020 and BIOL 1030, or both BIOL 1021 and BIOL 1031, or ZOOL 2530 (022.253), or the former PSYC 3330 (017.333), or the former PSYC 3331 (017.333), or the former 071.125.

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 PSYC 1200 (017.120) or PSYC 1201 or in both PSYC 1211 (017.121) and PSYC 1221 (017.122)] and [a grade of "C" or better in one of the following: PSYC 2360 (017.236), or PSYC 3350, or PSYC 3351, or both BIOL 1020 and BIOL 1030, or both BIOL 1021 and BIOL 1031, or ZOOL 2530 (022.253), or the former PSYC 3330 (017.333), or the former PSYC 3331 (017.333), 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 (017.344) et le PSYC 3160. *Préalable*: [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 (017.345) and PSYC 3451 (017.345). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.345) et le PSYC 3450 (17.345). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 (017.346) and PSYC 3461 (017.346). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.346) et le PSYC 3460 (17.346). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.230), or both PSYC 2250 (017.225) and PSYC 2260 (017.226), or both PSYC 2251 (017.225) and PSYC 2261 (017.226). A student may not hold credit for more than two of PSYC 3520 (017.352) or PSYC 3560 (017.356) or PSYC 3590 (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 (017.353) and PSYC 3531 (017.353). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.353) et le PSYC 3530 (17.353). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 (017.354) and PSYC 3541 (017.354). *Prerequisite:* [a grade of "C" or better in PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (017.122)] or written consent of department head.

(017.121) and PSYC 1221 (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 (017.354) et le PSYC 3540 (17.354). *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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 (017.352), PSYC 3560 (017.356), PSYC 3590 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.230), or both PSYC 2250 (017.225) and PSYC 2260 (017.226), or both PSYC 2251 (017.225) and PSYC 2261 (017.226). A student may not hold credit for more than two of: PSYC 3520 (017.352), PSYC 3560 (017.356), PSYC 3590 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (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 (017.363) and PSYC 3631 (017.363). *Prerequisite:* [a grade of "C" or better in PSYC 2300 (017.230)] or [a grade of "C" or better in both PSYC 2250 (017.225) and PSYC 2260 (017.226)] or [a grade of "C" or better in both PSYC 2251 (017.225) and PSYC 2261 (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 (017.363) et le PSYC 3630 (017.363). *Préalable:* [une note minimale de C dans le PSYC 2300 (017.230)] ou [une note minimale de C dans tous les deux PSYC 2250 (017.225) et PSYC 2260 (017.226)] ou [une note minimale de C dans tous les deux PSYC 2251 (017.225) et PSYC 2261 (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, aphasia, apraxie, négligence, etc.) asymétrie cérébrale, applications cliniques. *Préalable:* [une note minimale de C dans le PSYC 1200 (017.120) ou le PSYC 1201 (017.120)] ou [une note minimale de C dans tous les deux PSYC 1211 (017.121) et PSYC 1221 (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:*

site: [a grade of "C" or better in one of: PSYC 3450 (017.345) or PSYC 3451 (017.345) or PSYC 3460 (017.346) or PSYC 3461 (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 PSYC 1200 (017.120) or PSYC 1201 (017.120)] or [a grade of "C" or better in both PSYC 1211 (017.121) and PSYC 1221 (017.122)] or 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 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 (017.363) or PSYC 3631 (017.363) or PSYC 3340 or the former PSYC 4500 (017.450) or the former PSYC 4570 (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 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, person 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 (017.462) and PSYC 4540 (017.454) offered as Community Mental Health. *Prerequisite:* written consent of de-

partment 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 3350 or PSYC 3351 or the former PSYC 3330 (017.333) or the former PSYC 3331 (017.333)] and written consent of department head.

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 (020.112) and SEM 1120 (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. Donné au Collège universitaire de Saint-Boniface.

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 (020.132) and RLGN 1321 (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 (020.132) et le RLGN 1320 (020.132). Donné au Collège universitaire de Saint-Boniface.

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.

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 (020.112) or SEM 1120 (055.112)] or written consent of instructor or department head.

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 (020.139)] or written consent of instructor or department head.

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 (020.141) and the former 020.247.

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 (020.142) and any of: RLGN 1421 (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 les crédits du RLGN 1421 (020.142) ne peut se faire créditer aucun des cours RLGN 1420 (020.142) ou l'ancien 020.245. Donné au Collège universitaire de Saint-Boniface.

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 (020.143) and the former 020.131.

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 RLGN 1440 (020.144) and the former 020.138.

RLGN 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.

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 RLGN 2030 (020.203) and RLGN 2211 (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 produc-

tion. 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 (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 (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.

RLGN 2110 Religion and Healing (C) Cr.Hrs.3 A study of concepts of illness, health and healing, of therapeutic rituals, and of healing figures, in selected world religions.

RLGN 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 (020.216) and the former 020.240.

RLGN 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 (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 (020.241) and RLG 2411 (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 (020.241) et le RLG 2410 (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 (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 (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.

RLGN 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 (020.259) and RLG 2591 (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 (020.259) et le RLG 2590 (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 its 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 (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 (020.313) and RLG 3251 (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 (020.314) and RLG 3251 (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 (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 (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 (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 (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 3200 Paul and the Letters (A) Cr.Hrs.3 A study of Paul of Tarsus and his writings, this course will address topics pertaining to the historical Paul, the Pauline and deuter-Pauline letters, the social history of Pauline communities, and approaches to the study of Paul and his communities. Students may not hold credit for both RLG 3200 and the former RLG 3770 (020.377). *Prerequisite:* written consent of instructor or department head.

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, constatant 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 (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 (020.353) and RLG 3531 (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 (020.353) et le RLG 3530 (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 (020.354) and RLG 3541 (020.354). *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 (020.354) et le RLG 3540 (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:* [a grade of "C" or better in RLG 1350 (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 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 (020.216) and RLG 2170 (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 (020.216) and RLG 2170 (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 (020.216) and RLG 2170 (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 (020.216) and RLG 2170 (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 tex-

tual 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.

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 RLGN 4160 (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 RLGN 4230 (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 RLGN 4260 (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 RLGN 4270 (020.427) and the former 020.452. *Prerequisite:* written consent of the department head.

RLGN 4280 Advanced Studies in Christian Origins (A) Cr.Hrs.3 With content varying year to year, this course will engage topics pertaining to the first 300 years of Christianity. Theoretical and methodological issues will be considered, as will literary and archaeological data for the study of nascent Christianity. *Prerequisite:* written consent of instructor or department head.

RLGN 4290 Advanced Studies in Mysticism (C) Cr.Hrs.3 With religious traditions of focus varying year to year, this course considers current scholarly approaches to the understanding of mysticism and sainthood. It includes study of mystic texts and treatises; the mystic body; mystic communities; ascetic ritual and practice. *Prerequisite:* 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.

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 (052.130) and RUSN 1330 (052.133).

RUSN 1330 Introductory Russian 2 Cr.Hrs.3 (Formerly 052.133) The second term of RUSN 1300 (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 (052.130). Students may not hold credit for both RUSN 1330 (052.133) and RUSN 1300 (052.130). *Prerequisite:* successful completion of a placement test administered by the department.

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 En-

glish translation and in the original.

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.

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 (052.130)] and written consent of department head.

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.

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, Pelevin, Petrushevskaya, Tolstaya, Voznesensky, Vysotsky and others. Films directed by Bykov, Mikhalkov, 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.

RUSN 2770 Master Pieces of Russian Literature in Translation Cr.Hrs.3 An introduction to representative works by major Russian writers, with emphasis on key paradigms in literary and socio-political thinking in Russia. Early 19th century to the present. The course is designed for students who have little or no prior knowledge of Russian literature. Lectures and readings in English.

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 RUSN 2810 (052.281) and any of: RUSN 2820 (052.282) or the former 052.262. *Prerequisite:* [a grade "C" or better in RUSN 1300 (052.130) or RUSN 1330 (052.133)] or [Russian 41G] or written consent of department head.

RUSN 2820 Intermediate Russian 2 Cr.Hrs.3 (Formerly 052.282) The second term of RUSN 2810 (052.281) Intermediate Russian. Intended for students who already have basic comprehension, communication and writing skills equivalent to those that would be achieved in the first term of RUSN 2810 (052.281). Students may not hold credit for RUSN 2820 (052.282) and any of: RUSN 2810 (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, Tjutchev, 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 (052.393) or RUSN 3940 (052.394) or the former 052.380] or written consent of department head.

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 RUSN 3930 (052.393) and any of: RUSN 3940 (052.394) or the former 052.380. *Prerequisite:* [a grade "C" or better in RUSN 2810 (052.281) or RUSN 2820 (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 (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 (052.393). Students may not hold credit for RUSN 3940 (052.394) and any of: RUSN 3930 (052.393) or the former 052.380. *Prerequisite:* successful completion of a placement test administered by the department.

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, Tsveetaeva, 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.

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 (055.112) and RLG 1120 (020.112).

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.

SEM 1260 Hebrew 2 Cr.Hrs.6 (Formerly 055.126) For students who have taken SEM 1250 (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 (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.

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 2260 Russia, Ukraine and Poland - Cultures in Dialogue 1 Cr.Hrs.3 Key issues in the cultural heritages of the three largest Slavic nations. Particular attention is paid to the way each culture has represented itself and the other two in literature and the arts. Students will examine the way cultural myths have been formed, challenged and modified. Early times to the late 19th century. Lectures and readings in English.

SLAV 2270 Russia, Ukraine and Poland - Cultures in Dialogue 2 Cr.Hrs.3 Key issues in the cultural heritages of the three largest Slavic nations. Particular attention is paid to the way each culture has represented itself and the other two in literature and the arts. Students will examine the way cultural myths have been formed, challenged and modified. Late 19th century to the present. Lectures and readings in English.

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.

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 (077.120) and any of: SOC 1201 (077.120) or SOC 1211 (077.121) or SOC 1221 (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 do-

maines 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 (077.121) ne peut se faire créditer aucun des cours SOC 1200 (077.120) ou SOC 1211 (077.121) ou SOC 1221 (077.122). Donné au Collège universitaire de Saint-Boniface.

SOC 1211 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 (077.121) ne peut se faire créditer aucun des cours SOC 1200 (077.120) ou SOC 1201 (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 (077.122) ne peut se faire créditer aucun des cours SOC 1200 (077.120) ou SOC 1201 (077.120). *Préalable*: une note minimale de C dans le SOC 1211 (077.121). Donné au Collège universitaire de Saint-Boniface.

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 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 (077.222) and SOC 2221 (077.222). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.222) et le SOC 2220 (77.222). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.227) and SOC 2271 (077.227). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.227) et le SOC 2270 (77.227). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (077.122)]. Donné au Collège universitaire de Saint-Boniface.

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 (077.229) and SOC 2291 (077.229). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 (077.229) et le SOC 2290 (77.229). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.231) and SOC 2311 (077.231). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.231) et le SOC 2310 (77.231). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.232) and SOC 2321 (077.232). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.232) et le SOC 2320 (77.232). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.233) and SOC 2331 (077.233). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 processus 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 (077.233) et le SOC 2330 (77.233). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 practice. *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. SOC 2330 (077.233) or SOC 2331 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. SOC 2330 (077.233) or SOC 2331 (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 (077.237) and SOC 2371 (077.237). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.237) et le SOC 2370 (77.237). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.239) and SOC 2391 (077.239). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.239) et le SOC 2390 (77.239). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.246) and SOC 2461 (077.246). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.246) et le SOC 2460 (77.246). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.247) and SOC 2471 (077.247). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.247) et le SOC 2470 (77.247). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.251) and SOC 2511 (077.251). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.251) et le SOC 2510 (77.251). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.251) or SOC 2511 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.333) and SOC 3331 (077.333). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.333) et le SOC 3330 (77.333). *Préalable*: [une note minimale de C

dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.337) and SOC 3371 (077.337). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.337) et le SOC 3370 (77.337). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.339) and SOC 3391 (077.339). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.339) et le SOC 3390 (77.339). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.233) or SOC 2331 (077.233)] or written consent of department head. SOC 2340 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.347) and SOC 3471 (077.347). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.347) et le SOC 3470 (77.347). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.351) and SOC 3511 (077.351). *Prerequisite*: [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 en 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 (077.351) et le SOC 3510 (77.351). *Préalable*: [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note

minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (077.122)].

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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. SOC 2490 (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 (077.359) and SOC 3591 (077.359). *Prerequisite:* [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. SOC 2330 (077.233) or SOC 2331 (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 le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (077.122)]. Le SOC 2330 (077.233) ou SOC 2331 (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 (077.246) or SOC 2461 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. SOC 2490 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.251) or SOC 2511 (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 (077.251) or SOC 2511 (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 (077.251) or SOC 2511 (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 (077.373) and SOC 3731 (077.373). *Prerequisite:* [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.373) et le SOC 3730 (077.373). *Préalable:* [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 (077.251) or SOC 2511 (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 special advance permission is required to register. To be considered for admission, students must complete and application form available in the Department of Sociology Gen-

eral Office by the last day of April preceding the term in which the student intends to take the course. *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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. SOC 2490 (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 (077.251) or SOC 2511 (077.251)] or written consent of department head. SOC 2610 (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 (077.251) or SOC 2511 (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 (077.251) or SOC 2511 (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 (077.381) and SOC 3811 (077.381). *Prerequisite:* [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.381) et le SOC 3810 (077.381). *Préalable:* [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.251) or SOC 2511 (077.251)] or written consent of department head.

SOC 3838 Ecology and Society Cr.Hrs.3 Examines changing patterns of social organizations of civilizations, the resultant social constructions of the human/nature interface, the human social contribution to the global ecological crisis, and possible strategies to create sustainable societies. Consideration of topics such as population, consumption, capitalism, and agricultural practices. *Prerequisite:* [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (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 (077.251) or SOC 2511 (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 focused upon. Students may not hold credit for both SOC 3870 (077.387) and SOC 3871 (077.387). *Prerequisite:* [a grade of "C" or better in SOC 1200 (077.120) or SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

SOC 3871 Inégalités sociales Cr.Hrs.3 (L'ancien 077.387) Ce cours discute des iné-

galités 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 (077.387) et le SOC 3870 (77.387). *Préalable:* [une note minimale de C dans le SOC 1200 (077.120) ou le SOC 1201 (077.120)] ou [une note minimale de C dans tous les deux SOC 1211 (077.121) et SOC 1221 (077.122)]. Donné au Collège universitaire de Saint-Boniface.

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 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 (077.249) and SOC 3540 (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 (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.

SOC 4570 Quantitative Social Analysis Cr.Hrs.3 The application of quantitative data analysis in the social sciences, including the following procedures: multiple regression, dummy variable regression, simple analysis of variance and covariance, and an introduction to path analysis. Students may not hold credit for both SOC 4570 and the former SOC 4480 (077.448). *Prerequisite:* written consent of department head.

SOC 4580 Social Research Methods Cr.Hrs.3 An introduction to the philosophy of science and logic of scientific method, as well as a survey of research methods and issues. Students are expected to gain a working knowledge of the research process. Students may not hold credit for both SOC 4580 and the former SOC 4470 (077.447). *Prerequisite:* written consent of department head.

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 (044.126) or SPAN 1280 or SPAN 1290 or TRAD 1181 (122.118) or TRAD 1261 (122.126).

SPAN 1260 Intermediate Spanish Language Review Cr.Hrs.3 (Formerly 044.126) Intensive language review for students who have completed SPAN 1180 (044.118) (TRAD 1181 or 122.118) or who have been granted *prerequisite* standing in SPAN 1180 (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 (044.126) and any of: SPAN 1280 or SPAN 1290 or TRAD 1261 (122.126). *Prerequisite:* [a grade of "C" or better in SPAN 1180 (044.118) (TRAD 1181 or 122.118)] or [Senior 4 Spanish] or written consent of department head.

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 SPAN 1270 (044.127) and any of: SPAN 1280 or SPAN 1290 or TRAD 1271 (122.127). *Prerequisite:* [a grade of "C" or better in SPAN 1260 (044.126) (TRAD 1261 or 122.126)] or written consent of department head.

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 (044.118) or TRAD 1181 (122.118) or SPAN 1260 (044.126) or TRAD 1261 (122.126) or SPAN 1270 (044.127) or TRAD 1271 (122.127) or SPAN 1290. *Prerequisite:* written consent of department head.

SPAN 1290 Accelerated Intermediate Spanish Cr.Hrs.6 This is a one term accelerated course which combines the content of SPAN 1260 (or 044.126) and SPAN 1270 (or 044.127). It is a review of grammar and pronunciation structured around extensive

writing practice and conversation of contemporary issues relating to the Spanish speaking world. There will be six hours of classroom instruction with a two hour laboratory per week. This course is not open to students with native oral fluency. Students may not hold credit for SPAN 1290 and any of: SPAN 1260 (044.126) or SPAN 1270 (044.127) or TRAD 1261 (122.126) or TRAD 1271 (122.127). *Prerequisite:* [a grade of "C" or better in SPAN 1180 (044.118) (TRAD 1181 or 122.118)] or [Senior 4 Spanish] or written consent of instructor or 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 (044.126) (TRAD 1261 or 122.126) or SPAN 1270 (044.127) (TRAD 1271 or 122.127) or SPAN 1280 or SPAN 1290] 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 (044.126) (TRAD 1261 or 122.126) or SPAN 1270 (044.127) (TRAD 1271 or 122.127) or SPAN 1280 or SPAN 1290] 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 (044.126) or SPAN 1270 (044.127) or SPAN 1280 or SPAN 1290 or TRAD 1261 (122.126) or TRAD 1271 (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 (044.126) or SPAN 1270 (044.127) or SPAN 1280 or SPAN 1290 or TRAD 1261 (122.126) or TRAD 1271 (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 (044.126) or SPAN 1270 (044.127) or SPAN 1280 or SPAN 1290 or TRAD 1261 (122.126) or TRAD 1271 (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 (044.126) or SPAN 1280 or SPAN 1290 or TRAD 1261 (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 both SPAN 1260 (044.126) and SPAN 1270 (044.127)] or [a grade of "C" or better in both TRAD 1261 (122.126) and TRAD 1271 (122.127)] or [a grade of "C" or better in SPAN 1290] 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, Bunuel 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 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 3300 Cinema and Literature Cr.Hrs.3 A survey of the culture (Spain and Latin America) through its literature and cinema. The course will be taught in Spanish. All the readings, movies, activities and examinations will be in Spanish. *Prerequisite:* [a grade of "C" or better in any 2000-level Spanish course] or written consent of department head.

SPAN 3310 Advanced Spanish Vocabulary and Composition Cr.Hrs.3 A survey of grammar and vocabulary, the course also emphasizes and enhances students' writing abilities. The course will be taught in Spanish. All the class exercises, readings, activities and examinations will be in Spanish. *Prerequisite:* [a grade of "C" or better in any 2000-level Spanish course] or written consent of department head.

SPAN 3320 Testimony and Human Rights in Latin America Cr.Hrs.3 A survey of the culture of human rights in Latin America through its testimonial literature. The course will be taught in Spanish. All readings, activities and examinations will be in Spanish. *Prerequisite:* [a grade of "C" or better in any 2000-level Spanish course] or written consent of department head.

SPAN 3330 Spanish Phonetics and Pronunciation Cr.Hrs.3 This course includes a thorough study of advanced Spanish phonetics and pronunciation. Students may not hold credit for both SPAN 3330 and the former SPAN 3280 (044.328). *Prerequisite:* [a grade of "C" or better in any 2000-level Spanish course] or written consent of department head.

SPAN 3340 Spanish Syntax and Grammar Cr.Hrs.3 This course includes a thorough study of advanced Spanish syntax and grammar. Students may not hold credit for both SPAN 3340 and the former SPAN 3280 (044.328). *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 Guervara, 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.

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 (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 (154.122)] and written consent of instructor.

THTR 2170 Specialized Practical Training 1 Cr.Hrs.3 (Formerly 154.217) Two spe-

cial 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 (154.217) or THTR 2180 (154.218) or THTR 2490 (154.249). *Prerequisite:* [a grade of "C" or better in THTR 1220 (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 (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 (154.217) or THTR 2180 (154.218) or THTR 2490 (154.249). *Prerequisite:* [a grade of "C" or better in THTR 1220 (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 (154.122) or ENGL 1200 (004.120) or ENGL 1201 (004.120) or ENGL 1300 (004.130) or ENGL 1301 (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 (154.122)] or written consent of instructor.

THTR 2490 Specialized Practical Training 3 Cr.Hrs.3 (Formerly 154.249) An alternative method of taking THTR 2170 (154.217) or THTR 2180 (154.218). Two special workshops, other than those credited for THTR 2170 (154.217) or THTR 2180 (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 (154.217) or THTR 2180 (154.218) or THTR 2490 (154.249). *Prerequisite:* [a grade of "C" or better in THTR 1220 (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 (154.247) or ENGL 2960 (004.296) or ENGL 2961 (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 (154.215)] or [a grade of "C" or better in six credit hours from: THTR 2170 (154.217) or THTR 2180 (154.218) or THTR 2490 (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 (154.215) or THTR 2160 (154.216) or THTR 2170 (154.217) or THTR 2180 (154.218) or THTR 2490 (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 (154.215) or THTR 2160 (154.216) or THTR 2170 (154.217) or THTR 2180 (154.218) or THTR 2490 (154.249); and written consent of the Theatre program chair.

NOTE: The following courses with the subject code "TRAD" are offered at College universitaire de Saint-Boniface

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 (122.126) (ou en SPAN 1260 ou 044.126) ou SPAN 1180 (044.118) ou SPAN 1280 ou SPAN 1290. Les étudiants et les étudiantes dont l'espagnol est la langue maternelle et ceux qui possèdent déjà les crédits du cours d'espagnol de sec-

ondaire 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 (SPAN 1180) ou en Espagnol 40S. Pratique et perfectionnement des connaissances en classe et au laboratoire. On ne peut se faire créditer à la fois le TRAD 1261 et les SPAN 1260 (044.126) ou SPAN 1280 ou SPAN 1290. *Préalable:* [au moins "C" dans le TRAD 1181 (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 à la fois le TRAD 1271 et les SPAN 1270 (044.127) ou SPAN 1280 ou SPAN 1290. *Préalable:* [au moins "C" dans le TRAD 1261 (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 (144.109) et FRAN 1111 (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 (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 un des cours suivants: TRAD 1261 (122.126) ou SPAN 1260 (044.126) ou SPAN 1290] 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'oeuvres cinématographiques issues de ces cultures. L'accent sera mis sur la discussion et l'expression orale. *Préalable:* [au moins C dans le TRAD 1271 (122.127) ou SPAN 1270 (044.127) ou SPAN 1290] 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 (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 (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 (122.210) et TRAD 3101 (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 (122.210) et TRAD 3101 (122.310)] ou l'autorisation écrite du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

TRAD 3141 Rédaction professionnelle comparée 1 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 (122.210) et TRAD 3100 (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 (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 (122.215). Donné au Collège universitaire de Saint-Boniface.

TRAD 3271 General Translation (French-English) Cr.Hrs.3 (L'ancien 122.327) Apprendre 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: le ENGL 2000 (004.200) ou le ENGL 2001 (004.200) ou le TRAD 2101 (122.210) ou le TRAD 2151 (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 (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 (122.126) ou SPAN 1260 (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 du français à l'espagnol à partir de textes pragmatiques à caractère professionnel. *Préalable:* une note minimale de C dans le TRAD 2361 (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 (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 (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 (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 (122.326) ou le TRAD 3271 (122.327)] et [une note minimale de C dans le TRAD 3131 (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 (122.425) ou le TRAD 4091 (122.409) ou le TRAD 4281 (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 le TRAD 2151 (122.215)] et [une note minimale de C+ dans le TRAD 3261 (122.326) ou le TRAD 3271 (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 (122.313) et TRAD 4061 (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 (122.311), se donne en même temps et selon des modalités semblables. 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 (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 (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 (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 (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 (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 (122.326) et le TRAD 3271 (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 (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 (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 (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 (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 (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 (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 (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 (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 utiliser divers outils informatiques indispensables à cette activité. *Préalable*: [une note minimale de C dans le TRAD 2111 (122.211)] ou l'autorisation du professeur ou de la professeure. Donné au Collège universitaire de Saint-Boniface.

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.

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 (052.131) (or its equivalent)] and written consent of department head.

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 (052.131)] or written consent of department head.

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 (052.131) and UKRN 1320 (052.132).

UKRN 1320 Introductory Ukrainian 2 Cr.Hrs.3 (Formerly 052.132) This course is the second term of UKRN 1310 (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 (052.131). Students may not hold credit for both UKRN 1320 (052.132) and UKRN 1310 (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 (052.226) and the former 052.223.

Prerequisite: [a grade of "C" or better in UKRN 1310 (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 (052.272) or UKRN 2730 (052.273) or 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 nomenclature 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 (052.272) or UKRN 2730 (052.273) or the former 052.264] or written consent of department 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 (052.272) or UKRN 2730 (052.273) or 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.

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.

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 (052.272) and any of: UKRN 2730 (052.273) or the former 052.264. *Prerequisite:* [a grade of "C" or better in UKRN 1310 (052.131) or UKRN 1320 (052.132)] or [Ukrainian 40S] or written consent of department head.

UKRN 2730 Intermediate Ukrainian 2 Cr.Hrs.3 (Formerly 052.273) This course is the second term of UKRN 2720 (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 (052.272). Students may not hold credit for both UKRN 2730 (052.273) and any of: UKRN 2720 (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 (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 (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 (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 (052.395) and the former 052.383. *Prerequisite:* [a grade of "C" or better in UKRN 2720 (052.272) or UKRN 2730 (052.273) or the former 052.264] or written consent of department head.

UKRN 3960 Advanced Ukrainian 2 Cr.Hrs.3 (Formerly 052.396) A continuation of UKRN 3950 (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 (052.396) and the former 052.383. *Prerequisite:* [a grade of "C" or better in UKRN 3950 (052.395)] or written consent of department head.

UKRN 3970 Women and Ukrainian Literature Cr.Hrs.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, Kobyljanska, 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.

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.

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.

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 (156.257) and WOMN 2540 (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 (156.360) and WOMN 3500 (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 Grrrls 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 Grrrl music, and performance art. Students may not hold credit for both WOMN 3610 (156.361) and WOMN 3500 (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.

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 (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:* [a grade of "C" or better in at least 24 credit hours in Women's Studies courses] and written consent of the Women's Studies coordinator.

YDSH 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.

YDSH 2320 Yiddish Literature and Language Cr.Hrs.6 (Formerly 055.232) Not regularly offered.

SCHOOL OF DENTAL HYGIENE -----

HYGN 1232 Oral and Dental Anatomy Cr.Hrs.3 This course consists of a self-study CD and laboratory work dealing with the normal development, morphology, structure, and functions of the dentition and related structures. Self-Study (30) Lab (45) Seminar (15). Corequisites: HYGN 1234 and HYGN 1236.

HYGN 1234 Preclinical Dental Hygiene Cr.Hrs.2 This introductory course teaches the necessary dental hygiene skills in laboratory and preclinical settings. Students are introduced to foundational assessment and implementation skills necessary to begin client care at the novice level. Corequisites: HYGN 1232 and HYGN 1236.

HYGN 1236 Dental Hygiene Theory and Practice 1 Cr.Hrs.4 This introductory course provides the necessary foundational knowledge requisite for preclinical experience and early client care. It includes the theory and principles underlying the practice of dental hygiene based on the four phases of the Dental Hygiene Process of Care and the concept of Professionalism. Corequisites: HYGN 1232 and HYGN 1234.

HYGN 1238 Dental Hygiene Clinical Practice I Cr.Hrs.3 The course focus is on the cognitive, psychomotor and affective knowledge and skills requisite to the dental hygiene process of care. It includes the principles underlying the practice of dental hygiene and facilitates the development of a self-directed and self-aware professional. Clinic: 180 hrs. *Prerequisites:* HYGN 1234 and HYGN 1236. Corequisite: HYGN 1242.

HYGN 1242 Dental Hygiene Theory and Practice II Cr.Hrs.4 A continuation of foundational knowledge requisite for clinical care on less complicated clients that includes the theory and principles underlying the practice of dental hygiene based on the Dental Hygiene Process of Care. Lecture: 60 hrs. *Prerequisites:* HYGN 1234 and HYGN 1236. Corequisite: HYGN 1238.

HYGN 1262 Dental Radiology Cr.Hrs.3 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. Lecture (20) and Clinical Practice (28). Corequisites: HYGN 1234 and HYGN 1238.

HYGN 1270 Biology of the Head and Neck Cr.Hrs.3 (Formerly 070.127) Anatomy, physiology, histology and embryology of the head and neck. First term - 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. Second term - Lecture (30) and Laboratory (15) 45 hours.

HYGN 1292 Dental Hygiene Preclinical Restorative Techniques Cr.Hrs.2 A study of the principles and techniques of restorative dentistry. Introduction information on restorative dentistry specialties. Lecture (15) Laboratory (45) 60 hrs. Corequisite: HYGN 1320.

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. First term - 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 1352 Community Health I Cr.Hrs.3 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 through classroom teaching, interviews and debates. Lecture (45) Field (6), total 51 hrs.

HYGN 1360 Periodontology I 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. First term, lecture 30 hours.

HYGN 2100 Dental Hygiene Portfolio Cr.Hrs.2 This two credit hour course houses the evaluation component of the programmatic portfolio of student competencies that all students commence at enrolment and complete prior to graduation.

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. Second term - 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. Both terms - Lecture 45 hours.

HYGN 2312 Dental Hygiene Clinical Practice II Cr.Hrs.4 This competency-based clinical course amalgamates theoretical knowledge and clinical skills in both general clinical and community based clinical settings. Students provide care to clients with

moderate oral health needs. This course is evaluated on a pass/fail basis. *Prerequisites:* HYG 1238 and HYG 1242. *Corequisite:* HYG 2314.

HYGN 2314 Dental Hygiene Theory and Practice III Cr.Hrs.4 Learning, motivation, and behaviour modification theories are applied to oral health promotion. Dental hygiene care plans are developed using a human needs model and process of care. Ethics, jurisprudence and practice standards are discussed. *Prerequisites:* HYG 1238 and HYG 1242. *Corequisite:* HYG 2312.

HYGN 2316 Dental Hygiene Clinical Practice III Cr.Hrs.4 This course advances the student's clinical dental hygiene skills to a level of minimal competency. Students provide dental hygiene care to clients with high oral health needs to facilitate their attainment of optimal oral health. This course is evaluated on a pass/fail basis. *Prerequisites:* HYG 2312 and HYG 2314. *Corequisite:* HYG 2318.

HYGN 2318 Dental Hygiene Theory and Practice IV Cr.Hrs.5 The oral health needs of persons with disabilities and the development of dental hygiene care plans to address those needs are discussed as well as issues of access to dental hygiene care, employment, quality assurance, and professional growth and development. *Prerequisites:* HYG 2312 and HYG 2314. *Corequisite:* HYG 2316.

HYGN 2340 Periodontology II Cr.Hrs.2 (Formerly 070.234) Continuation of the study of etiology, diagnosis and treatment of periodontal disease. First term - 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. First term - Lecture 30 hours.

HYGN 2362 Community Health II Cr.Hrs.3 Student abilities to deliver community oral health education/promotion programs, with attention given to barriers and strategies used to meet the unique needs of target populations less likely to have optimal oral health are further developed. Lecture (45) Field Work (45). *Prerequisite:* HYG 1352.

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. Second term - 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

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 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 psy-

chology 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. Course evaluated on a pass/fail basis.

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 planning; 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.

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. This course is graded pass/fail. Lectures: 30 hours; Clinics: 90 hours. Course evaluated on a pass/fail basis.

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. Clinic: 84 hours; Seminars: 10 hours. This course is evaluated on a pass/fail basis.

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 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 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.

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. Course evaluated on a pass/fail basis.

RSTD 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.

RSTD 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.

RSTD 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.

RSTD 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. Course evaluated on a pass/fail basis.

RSTD 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.

RSTD 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.

RSTD 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.

RSTD 2140 Fixed Partial Denture Prosthodontics - 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.

RSTD 2220 Removable Partial Denture Prosthodontics Cr.Hrs.6 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.

RSTD 2230 Complete Denture Prosthodontics Cr.Hrs.6 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.

RSTD 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.

RSTD 3040 Fixed Partial Denture Prosthodontics - 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.

RSTD 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.

RSTD 3090 Complete and Removable Partial Denture Prosthodontics 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 concurrently through the clinical treatment of patients. Lectures: 47 hours; Clinic: 96 hours.

RSTD 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.

RSTD 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.

RSTD 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.

FACULTY OF EDUCATION

NOTE: The following courses with subject code "EDSB" are offered at College universitaire de Saint-Boniface

EDSB 5011 L'ÉDUCATION BILINGUE ET L'ACQUISITION D'UNE LANGUE SECONDE Cr.Hrs.3 (Ancien 120.501) Étude du développement linguistique de l'enfant tout en considérant un grand nombre de facteurs socioaffectifs et cognitifs qui influencent le développement linguistique, facteurs permettant de réfléchir à toute la question de l'immersion et d'appliquer ces connaissances à la situation qui existe au Manitoba.

EDSB 5021 L'ENSEIGNEMENT DU LANGAGE : ASPECTS PSYCHOLINGUISTIQUES Cr.Hrs.3 (Ancien 120.502) Étude des divers facteurs psycholinguistiques et sociolinguistiques qui influencent l'acquisition du langage chez l'enfant et qui permettent de mieux comprendre le rapport entre la cognition, le langage et la lecture/écriture, les fonctions du langage dans la salle de classe, l'acquisition précoce d'une deuxième langue, et l'enseignement de la langue maternelle en situation minoritaire.

EDSB 5031 HISTOIRE DE L'ÉDUCATION FRANÇAISE AU MANITOBA Cr.Hrs.3 (Ancien 120.503) Les fondements de l'éducation française au Manitoba. Examen, dans une perspective historique, des événements majeurs, de nature sociologique et politique, qui ont marqué le développement de l'éducation française au Manitoba. On ne peut se faire créditer le EDSB 5031 (ancien 120.503) et l'ancien 116.503.

EDSB 5041 THÉORIES D'APPRENTISSAGE EN SITUATION D'IMMERSION Cr.Hrs.3 (Ancien 120.504) Étude des connaissances théoriques concernant les processus, les mécanismes et les facteurs reliés à l'apprentissage d'une langue seconde. Développement d'une compréhension plus englobante de l'expérience pratique en immersion. *Préalable* : le EDSB 5011 (ancien 120.501) ou le EDSB 5021 (ancien

120.502).

EDSB 5051 Cr.Hrs.3 (Ancien 120.505) Familiarisation avec les principes de l'intégration des matières et les stratégies d'intégration de la lecture et de l'écriture dans l'enseignement des mathématiques, des sciences naturelles et des sciences humaines. Contenu du cours adapté au contexte de l'immersion.

EDSB 5061 THÉORIES D'APPRENTISSAGE EN MILIEU MINORITAIRE Cr.Hrs.3 (Ancien 120.506) Familiarisation avec les recherches en éducation compensatoire et bilingue et dégageant des implications en regard de l'apprentissage en milieu minoritaire.

EDSB 5071 DIFFICULTÉS DANS L'ENSEIGNEMENT DU LANGAGE ÉCRIT Cr.Hrs.3 (Ancien 120.507) Familiarisation avec les principes et les méthodes de prévention des difficultés d'apprentissage du langage écrit en tenant compte du contexte franco-manitobain.

EDSB 5081 STAGE ET SÉMINAIRES DE RECHERCHE-ACTION Cr.Hrs.6 (Ancien 120.508) Utilisation du processus et des méthodes de recherche-action en vue de la résolution de problèmes éducatifs pratiques. Cours qui exige un minimum de 150 heures consacrées au stage de recherche. Pour s'inscrire à ce cours, il faut être en fonction dans le milieu éducatif.

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 1534 Unallocated Credit Cr.Hrs.3 Cmapus Manitoba course.

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 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 1801 Psychologie de l'Apprentissage 1: Théorie et Pratique Cr.Hrs.3 (Ancien 129.180) Étude des concepts théoriques reliés à la nature de l'apprentissage et du développement en milieu scolaire, ou autre, et des pratiques qui en découlent. On ne peut se faire créditer le EDUA 1801 (ancien 129.180) et l'ancien 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 2011 Psychologie du Développement Cr.Hrs.3 (Ancien 043.201) Étude des principes de base du développement humain et de leur importance dans l'établissement de procédés efficaces de communication en classe. Étude d'un développement normal et des problèmes communs en éducation.

EDUA 2031 Psychologie de l'enfance exceptionnelle Cr.Hrs.3 (ANCIEN 043.203) Initiation à l'étude des besoins des enfants nécessitant une approche spéciale qui leur permet de se développer au maximum de leur potentiel. Examen particulier du rôle

de l'enseignante ou de l'enseignant en vue d'identifier et de combler ces besoins.

EDUA 2041 Psychologie de l'enfant Cr.Hrs.3 (Ancien 043.204) Étude de l'interaction entre l'enfant et son entourage. Analyse particulière de l'influence des parents, des adultes, des frères et des sœurs et de l'école sur l'évolution psychologique, affective, sociale et morale de l'enfant.

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 2801 Psychologie de l'apprentissage II: Éducation Inclusive Cr.Hrs.3 (Ancien 129.280) Étude des approches et des pratiques visant à répondre aux besoins diversifiés de tous les élèves, incluant les méthodes et les ressources disponibles pour inclure tous les élèves dans les classes et les écoles régulières.

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).

EDUA 2901 Le rôle de l'école dans la société Cr.Hrs.3 Étude du système scolaire canadien et manitobain, dans le contexte d'une société diversifiée. Ce cours vise, dans un premier temps, à faire prendre conscience des enjeux historique, philosophique, sociologique et transculturel liés à l'enseignement. Dans un deuxième temps, il amènera les étudiants et étudiantes à comprendre le rôle de l'enseignant et de l'enseignante au sein de l'organisation du point de vue professionnel, légal et administratif.

EDUA 3011 Mesure et Évaluation Cr.Hrs.3 (Ancien 043.301) Théorie et application pratique dans la préparation, l'utilisation et l'interprétation de tests composés par les instituteurs et les institutrices; utilisation et interprétation de divers types de tests standards; techniques de statistiques connexes.

EDUA 3021 Principes de Programmation Scolaire Cr.Hrs.3 (Ancien 116.302) Analyse des principes fondamentaux qui gouvernent l'élaboration des programmes scolaires et étude de l'application de ces principes à certains programmes actuels.

EDUA 3051 Troubles Particuliers De l'apprentissage Cr.Hrs.3 (Ancien 043.305) Initiation à l'étude de certains troubles perçus dans le développement des élèves. Étude du rôle de l'enseignante ou de l'enseignant dans le dépistage de ces troubles et application de programmes particuliers de rééducation.

EDUA 3061 Informatique En Éducation I Cr.Hrs.3 (Ancien 043.306) Applications pédagogiques des ordinateurs. Exploitation des logiciels, des progiciels et des didactiques applicables à l'enseignement.

EDUA 3071 Développement Du Langage Chez Le Jeune Enfant Cr.Hrs.3 (Ancien 043.307) Étude des expériences sensorimotrices et des étapes de la communication prélinguistique et linguistique allant de l'expression vocale au développement syntaxique. Appréciation de l'importance de l'environnement linguistique et de la cognition dans le développement, l'acquisition et l'apprentissage de la langue première. Analyse particulière du développement d'une langue seconde aux niveaux préscolaire et primaire en immersion. Il est préférable mais non obligatoire de suivre le EDUA 2011 (ancien 043.201) au préalable.

EDUA 3201 Diversité culturelle dans les écoles Cr.Hrs.3 Les écoles accueillent un grand nombre d'élèves provenant de groupes sociaux marginalisés selon, entre autres, leur race, leur ethnie, leur langue maternelle, leur religion, leur orientation sexuelle ou leur statut socioéconomique. Ce cours abordera donc la question de la diversité culturelle, prise dans un sens large, dans le contexte de l'enseignement. Il permettra aux étudiantes et aux étudiants d'acquies les connaissances et de développer les attitudes et les stratégies nécessaires pour favoriser l'équité et la qualité des apprentissages des élèves, peu importe leurs antécédents, leurs particularités ou leurs circonstances.

EDUA 3991 Éducation française en milieu minoritaire Cr.Hrs.3 (Ancien 116.399) Étude des aspects historique, démographique, culturel, linguistique, identitaire et pédagogique qui encadrent le phénomène de l'éducation française en milieu minoritaire canadien.

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 5011 Introduction a L'administration Scolaire Cr.Hrs.3 (Ancien 129.501) Étude des concepts, des tâches et des processus de l'administration tels qu'ils s'appliquent à l'éducation. On ne peut se faire créditer le EDUA 5011 (ancien 129.501) et l'ancien 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 5021 Principes D'élaboration De Curriculum Cr.Hrs.3 (Ancien 129.502) Étude des différentes approches d'élaboration de curriculum, des facteurs qui en influencent le processus d'élaboration et des aspects de l'implantation. Participation de l'enseignant ou de l'enseignante à l'élaboration du curriculum. On ne peut se faire créditer le EDUA 5021 (ancien 129.502) et l'ancien 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 5031 Gestion Des Établissements Scolaires Cr.Hrs.3 (Ancien 129.503) Étude des modes fondamentaux d'organisation et du rôle de l'administration au sein d'un

établissement scolaire. Attention particulière accordée à la prise de décision, à la communication, à la planification et à l'évaluation. On ne peut se faire créditer le EDUA 5031 (ancien 129.503) et l'ancien 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 5041 Administration Du Personnel Scolaire Cr.Hrs.3 (Ancien 129.504) Étude des rapports de l'administratrice ou de l'administrateur avec le personnel, en mettant l'accent sur la politique de gestion, le perfectionnement et la motivation du personnel. On ne peut se faire créditer le EDUA 5041 (ancien 129.504) et l'ancien 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 5061 Principes De La Supervision En Enseignement Cr.Hrs.3 (Ancien 129.506) Étude des modèles théoriques d'enseignement et de supervision et de leur application dans la pratique. On ne peut se faire créditer le EDUA 5061 (ancien 129.506) et l'ancien 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 5071 Comportement Organisationnel En Éducation Cr.Hrs.3 (Ancien 129.507) Étude des théories et des recherches en sciences du comportement et en sciences sociales qui ont trait au comportement des individus et des groupes dans une structure organisationnelle. Analyse de la portée de ces théories et recherches par rapport à l'administration des établissements scolaires. On ne peut se faire créditer le EDUA 5071 (ancien 129.507) et l'ancien 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 5081 Courants Actuels En Administration Scolaire 1 Cr.Hrs.3 (Ancien 129.508) Étude des fondements théoriques et de l'application pratique des développements récents et des nouveaux courants en administration scolaire.

EDUA 5090 Recent Developments in Educational Administration 2 Cr.Hrs.3 (Formerly 129.509) A continuation of certain topics of EDUA 5080 to extend and develop studies previously undertaken in these areas.

EDUA 5091 Courants Actuels En Administration Scolaire 2 Cr.Hrs.3 (Ancien 129.509) Prolongement de l'étude de certains sujets abordés dans le EDUA 5081 (ancien 129.508) en vue d'approfondir les études entreprises dans ces domaines.

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.

EDUA 5101 Problématiques Actuelles En Administration Scolaire Cr.Hrs.3 (Ancien 129.510) Étude de sujets d'importance en administration scolaire. On ne peut se faire créditer le EDUA 5101 (ancien 129.510) et l'ancien 116.510.

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.

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.

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.

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.

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. *Prerequisite* or concurrent: EDUA 5500 (129.550)(C). Course evaluated on a pass/fail basis.

EDUA 5481 Techniques De Counselling Cr.Hrs.3 (Ancien 129.548) Acquisition de techniques de counselling telles que l'attention et l'écoute, le reflet du contenu et des émotions, la rétroaction et la révélation de soi, la focalisation et le résumé. On ne peut se faire créditer le EDUA 5481 (ancien 129.548) et l'ancien 129.556 ou l'ancien 043.516. *Préalable* ou concomitant : EDUA 5501 (ancien 129.550) ou l'ancien 043.509 EDUA 5481 TECHNIQUES DE COUNSELLING Cr.Hrs.3

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. *Prerequisite* or concurrent: [EDUA 5500 (129.550)(C)] and [EDUA 5480 (129.548)(P)]. Course evaluated on a pass/fail basis.

EDUA 5491 Stage En Counselling Cr.Hrs.3 (Ancien 129.549) Situation réelle de counselling où les étudiantes et les étudiants auront l'occasion, sous la supervision de professionnels compétents et avec l'appui de leur professeur ou de leur professeur, de mettre en pratique les techniques de counselling qu'ils ont apprises. On ne peut se faire créditer le EDUA 5491 (ancien 129.549) et l'ancien 129.556 ou l'ancien 043.516. *Préalable* ou concomitant : le EDUA 5501 (ancien 129.550) ou l'ancien 043.509 et le EDUA 5481 (ancien 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 5501 Théories De Counselling SCOLAIRE Cr.Hrs.3 (Ancien 129.550) Étude de la philosophie et des théories du counselling. Sujets importants en orientation et en counselling scolaires. On ne peut se faire créditer le EDUA 5501 (ancien 129.550) et l'ancien 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. *Prerequisite* or concurrent: EDUA 5500 (129.550)(C).

EDUA 5511 Cr.Hrs.3 EDUA 5511 Cr.Hrs.3

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. *Prerequisite* or concurrent: EDUA 5500 (129.550)(C).

EDUA 5531 Counselling Au Secondaire Cr.Hrs.3 EDUA l'animation de groupe et de l'acquisition des compétences connexes, particulièrement en ce qui a trait à la fonction de la conseillère ou du conseiller en milieu scolaire. On ne peut se faire créditer le EDUA 5541 (ancien 129.554) et l'ancien 043.512. *Préalable* ou concomitant : le EDUA 5501 (ancien 129.550) ou l'ancien 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. *Prerequisite* or concurrent: EDUA 5500 (129.550)(C).

EDUA 5541 Counselling De Groupes Cr.Hrs.3 (Ancien 129.554) Étude des groupes, de

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 5551 Psychologie Des Relations Humaines Cr.Hrs.3 (Ancien 129.555) Étude des relations interpersonnelles. Approche de type laboratoire visant à augmenter la sensibilité personnelle des étudiantes et des étudiants aux autres personnes. Cours qui s'adresse particulièrement au personnel enseignant, administratif et professionnel en milieu scolaire. On ne peut se faire créditer le EDUA 5551 (ancien 129.555) et l'ancien 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 5571 Éducation Familiale Cr.Hrs.3 (Ancien 129.557) Étude de la sexualité humaine et des relations familiales, axée sur les résultats de la recherche, les ressources et les méthodes pédagogiques, le développement, ainsi que la collaboration avec les

membres de la famille et la collectivité. On ne peut se faire créditer le EDUA 5571 (ancien 129.557) et l'ancien 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.

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 5601 Introduction À L'éducation Inclusive Cr.Hrs.6 (Ancien 129.560) Survol des préoccupations dans le domaine de l'éducation inclusive. Étude des barrières à l'inclusion en ce qui concerne les lois, la pédagogie, les attitudes et les organisations, de même que les modalités d'inclusion exemplaires. On ne peut se faire créditer le EDUA 5601 (ancien 129.560) et l'ancien 043.518.

EDUA 5610 Field Experience in Inclusive Special Education Cr.Hrs. (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. *Prerequisite* or concurrent: [EDUA 5600 (129.560)(C) or equivalent] and [EDUA 5630 (129.563)(C) or equivalent] and [EDUA 5660 (129.566)(C) or equivalent]. Course evaluated on a pass/fail basis.

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. *Prerequisite* or concurrent: EDUA 5600 (129.560)(C) or equivalent.

EDUA 5631 Évaluation Et Programmation En Éducation Inclusive Cr.Hrs.3 (Ancien 129.563) Étude des modalités d'évaluation basées sur le curriculum et sur le fonctionnement de la classe en vue de guider l'instruction des élèves éprouvant des difficultés d'apprentissage et de comportement en contexte d'inclusion. On ne peut se faire créditer le EDUA 5631 (ancien 129.563) et l'ancien 043.536. *Préalable* ou concomitant : le EDUA 5601 (ancien 129.560) ou l'ancien 043.518 ou l'équivalent.

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. (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. *Prerequisite* or concurrent: EDUA 5600 (129.560)(C).

EDUA 5661 Gestion Des Programmes D'orthopédagogie Et De Soutien Cr.Hrs.3 (Ancien 129.563) Étude des modalités d'évaluation basées sur le curriculum et sur le fonctionnement de la classe en vue de guider l'instruction des élèves éprouvant des difficultés d'apprentissage et de comportement en contexte d'inclusion. On ne peut se faire créditer le EDUA 5631 (ancien 129.563) et l'ancien 043.536. *Préalable* ou concomitant : le EDUA 5601 (ancien 129.560) ou l'ancien 043.518 ou l'équivalent.

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. *Prerequisite* or concurrent: [EDUA 5600 (129.560)(C) or equivalent] and [EDUA 5630 (129.563)(C) or equivalent].

EDUA 5671 Stratégies Pour L'organisation De Classes Et D'écoles Cr.Hrs. (Ancien 129.567) Étude de l'organisation et de la mise en 'uvre à l'échelle de l'école de mécanismes de soutien visant à favoriser l'accès à ces écoles, l'apprentissage, la socialisation, le comportement, les rapports avec la famille, la participation de professionnels de la santé et les services communautaires. Analyse des stratégies d'organisation visant à améliorer la consultation, la coopération, la collaboration et le perfectionnement professionnel. On ne peut se faire créditer le EDUA 5671 (ancien 129.567) et l'ancien 043.540. *Préalable* ou concomitant : le EDUA 5601 (ancien 129.560) ou l'ancien 043.518 ou l'équivalent et le EDUA 5631 (ancien 129.563) ou l'ancien 043.536 ou l'équivalent.

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. *Prerequisite* or concurrent: EDUA 5600 (129.560)(C) or equivalent.

EDUA 5681 Promotion D'un Comportement Responsable Cr.Hrs. (Ancien 129.568) Étude des besoins des enfants ayant des problèmes de comportement en milieu scolaire. Analyse de la conceptualisation des troubles du comportement, des procédures d'identification et d'évaluation de ces troubles, ainsi que des stratégies d'intervention. Le cours a pour objectif d'habiliter les enseignantes et enseignants à concevoir des stratégies d'intervention appropriées en milieu scolaire. On ne peut se faire créditer le EDUA 5681 (ancien 129.568) et l'ancien 043.542. *Préalable* ou concomitant : le EDUA 5601 (ancien 129.560) ou l'ancien 043.518 ou l'équivalent.

EDUA 5690 Focus on Exceptionality: Gifted and Talented Cr.Hrs. (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 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 5701 Psychologie Sociale De L'éducation Cr.Hrs.3 (Ancien 129.570) Examen des facteurs sociaux qui influencent le rendement et l'adaptation de l'élève à l'école. Importance accordée au fonctionnement des petits groupes et aux interactions en classe, ainsi qu'à l'analyse de la structure sociale de l'école et du rôle social de l'enseignant et de l'enseignante. On ne peut se faire créditer le EDUA 5701 (ancien 129.570) et l'ancien 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 5711 Lectures Dirigées En Psychologie De L'éducation 1 Cr.Hrs.3 (Ancien 129.571) Lectures dirigées et étude de sujets traitant de divers aspects de l'éducation du point de vue de la psychologie.

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 5721 Lectures Dirigées En Psychologie De L'éducation 2 Cr.Hrs.3 (Ancien 129.572) Lectures dirigées et étude de sujets traitant de divers aspects de l'éducation du point de vue de la psychologie.

EDUA 5730 Recent Developments in Educational Psychology 1 Cr.Hrs. (Formerly 129.573) An opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in this area.

EDUA 5731 Courants Actuels En Psychologie De L'éducation 1 Cr.Hrs. (Ancien 129.573) Examen des courants théoriques et des applications pratiques récents ou en émergence dans ce domaine.

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 5741 Courants Actuels En Psychologie De L'éducation 2 Cr.Hrs.3 (Ancien 129.574) Étude des fondements théoriques et des applications pratiques de développements récents et de nouveaux courants dans ce domaine.

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 (129.180)(C)] and [PSYC 1200 (017.120)(C)], or equivalent.

EDUA 5751 Psychologie De L'enseignement En Contexte Scolaire Cr.Hrs.3 (Ancien 129.575) Étude des théories fondamentales d'apprentissage telles qu'elles sont appliquées à l'enseignement en salle de classe et utilisées dans l'élaboration des programmes. Analyse du traitement de l'information cognitive et des aspects comportemental, développemental et psychosocial. On ne peut se faire créditer le EDUA 5751 (ancien 129.575) et l'ancien 43.543. *Préalable* : le EDUA 1801 (ancien 129.180), le PSYC 1201 (ancien 017.120), l'ancien 043.202 ou l'équivalent.

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 (129.180)(C)] or [PSYC 1200 (017.120)(C)], or equivalent.

EDUA 5761 Psychologie De L'enseignement En Contexte Scolaire Cr.Hrs.3 (Ancien 129.576) Conçu principalement, mais non exclusivement, à l'intention des enseignantes, des enseignants et du personnel scolaire. Étude critique des fondements théoriques et des modèles d'enseignement principaux. Intégration et application d'approches et de stratégies d'enseignement existantes ou nouvelles. On ne peut se faire créditer le EDUA 5761 (ancien 129.576) et l'ancien 043.544. *Préalable* : le EDUA 1801 (ancien 129.180) ou le PSYC 1201 (ancien 017.120), l'ancien 043.202 ou l'équivalent.

EDUA 5770 Focus on Exceptionality: An Ecological Approach to FAS/E Cr.Hrs. (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.

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 5801 Introduction À La Recherche En Éducation Cr.Hrs. (Ancien 129.580) Étude de l'investigation scientifique dans le domaine de l'éducation. Examen des méthodes de recherche et d'analyse statistique dans le contexte éducatif. Cours particulièrement recommandé aux étudiantes et aux étudiants qui s'intéressent à l'évaluation et à la mise en application des résultats de la recherche. On ne peut se faire créditer le EDUA 5801 (ancien 129.580) et l'ancien 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 5811 Théories De Construction De Tests Cr.Hrs.3 (Ancien 129.581) Étude des problèmes reliés à l'analyse d'items, à la validité, à la fidélité et à l'utilisation des tests dans le processus d'évaluation en milieu scolaire. Considération des tests normatifs et critériés. On ne peut se faire créditer le EDUA 5811 (ancien 129.581) et l'ancien 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:* consent of instructor or 043.306 (C).

EDUA 5851 Application De L'informatique En Éducation 2 Cr.Hrs.3 (Ancien 129.585) Cours avancé sur l'utilisation de logiciels d'apprentissage dans les classes ordinaires et dans l'enseignement aux élèves ayant des difficultés d'apprentissage. On ne peut se faire créditer le EDUA 5851 (ancien 129.585) et l'ancien 043.526. *Préalable :* le EDUB 5761 (ancien 132.576) ou l'ancien EDUB 5281 (ancien 081.528) ou l'autorisation du titulaire du cours, ou l'ancien 043.306.

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 5901 Éducation Et Processus Du Développement 1 Cr.Hrs.3 (Ancien 129.590) Survol du processus du développement de la conception à la puberté. Importance accordée aux fondements biologiques, au développement cognitif et aux aspects sociaux du comportement dans leurs rapports au processus éducatif. On ne peut se faire créditer le EDUA 5901 (ancien 129.590) et l'ancien 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 5911 Éducation Et Processus De Développement 2 Cr.Hrs.3 (Ancien 129.591) Étude de la croissance et du développement à l'âge postérieur à la puberté. Attention particulière accordée à leurs effets sur l'apprentissage au niveau secondaire. On ne peut se faire créditer le EDUA 5911 (ancien 129.591) et l'ancien 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 5921 Le Jeu Chez L'enfant Cr.Hrs.3 (Ancien 129.592) Examen du rôle du jeu dans l'apprentissage chez l'enfant, en incluant la perspective historique. Discussion du jeu en tant que partie intégrante du développement de l'enfant. Distinction entre les activités ludiques et non ludiques, considération des attributs conceptuels, perceptuels, linguistiques et physiques du jeu. On ne peut se faire créditer le EDUA 5921 (ancien 129.592) et l'ancien 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 5931 Observation Du Comportement De L'enfant Cr.Hrs.3 (Ancien 129.593) Étude des techniques d'observation qualitatives qui peuvent être utilisées en milieu scolaire pour mieux comprendre le comportement de l'enfant, ses modes de penser et ses motivations. On ne peut se faire créditer le EDUA 5931 (ancien 129.593) et l'ancien 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.

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 1011 Stages Et Séminaires I Cr.Hrs.3 (Ancien 081.101) Initiation pratique et théorique à l'enseignement au moyen de stages d'observation suivis de discussions en petits groupes.

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 1061 Langue Et Littérature Cr.Hrs.3 (Ancien 063.106) Initiation au monde de la littérature : comment comprendre et se produire dans différentes situations à l'aide de stratégies propres à son style et au contexte.

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 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).

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); EDUB 1800 (or 132.180); 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 1281 Cr.Hrs.3 (l'ancien 132.128F) 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. Pre- or co-requisite: EDUA 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 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 1411 L'enseignement Des Sciences De La Nature Au Secondaire Cr.Hrs.3 (Ancien 081.141) Principes généraux sous-tendant l'enseignement des sciences, le développement conceptuel, les théories d'apprentissage, la culture scientifique, le

caractère de la science, les interactions entre les sciences, la technologie, la société et l'environnement. Accent mis sur les modèles pédagogiques qui tiennent compte du développement conceptuel chez les apprenants et apprenantes afin de soutenir l'enseignement de divers thèmes scientifiques. Cours obligatoire pour ceux et celles qui veulent enseigner les programmes de sciences de la nature au niveau secondaire.

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 1501 Éducation Au Secondaire Cr.Hrs.3 (Ancien 132.150) Étude des prémisses qui sous-tendent les objectifs de l'éducation au secondaire, le rôle de l'enseignant ou de l'enseignante au secondaire et les programmes d'études dans les écoles.

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-S4, 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 expérimentelle. *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. This course is graded pass/fail. 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. This course is graded pass/fail. *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. This course is graded pass/fail. *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. This course is graded pass/fail. 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. This course is graded pass/fail. 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. This course is graded pass/fail. *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 2011 Stages et séminaires II Cr.Hrs.3 (Ancien 063.201) Poursuite plus poussée de la pratique de l'enseignement dans les écoles, soutenue par des discussions en petits groupes portant sur le matériel de simulation et sur les pratiques observées dans les écoles.

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 2021 Communication Cr.Hrs.3 (Ancien 063.202) Activités dont le but est de développer l'adresse en communication sous toutes ses formes. Étude de la dynamique de dons de communication oraux et écrits qui s'appliquent plus à l'enseignant et à l'enseignante dans son interaction avec les individus et les groupes. Étude de la communication tant verbale que non verbale.

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 2041 Littérature pour adolescents Cr.Hrs.3 (L'ancien 063.204) Aperçu de la littérature appropriée aux élèves de la 7^e à la 12^e année. Critères d'évaluation littéraire et problèmes dont l'étude sera placée dans un contexte historique, social et psychologique.

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 2081 Perfectionnement de l'expression orale I Cr.Hrs.3 (Ancien 063.208) Comparaison de son expression orale en français à la norme internationale (au plan de la structure de la phrase, de la phonétique et du vocabulaire). Suite à ce diagnostic, perfectionnement de la langue parlée.

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 Littérature pour enfants Cr.Hrs.3 (Ancien 063.212) Aperçu général de la littérature enfantine créatrice disponible dans les divers moyens de communication; établissement de critères pour l'évaluation de livres et de matériaux connexes; problèmes du lecteur en difficulté et du non-lecteur. Établissement des normes en vue de porter un jugement d'appréciation sur la littérature enfantine en mettant l'accent sur l'analyse critique et l'interprétation de la littérature replacée dans son contexte historique, sociologique et psychologique.

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 2171 Atelier en art (dessin) à l'élémentaire Cr.Hrs.3 (Ancien 063.217) Cours pratique. Étude des techniques et du matériel appropriés permettant d'acquérir des notions de l'enseignement créatif à l'élémentaire et au primaire.

EDUB 2181 La bibliothèque, source de référence Cr.Hrs.3 (Ancien 063.218) Utilisation des livres et des bibliothèques comme sources de références et de recherche au niveau universitaire.

EDUB 2191 Perfectionnement de l'expression orale II Cr.Hrs.3 (Ancien 063.219) Comparaison de son expression orale en français à la norme internationale (au plan de la structure de la phrase, de la phonétique et du vocabulaire). Suite à ce diagnostic, perfectionnement de la langue parlée.

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 2201 Enseignement de l'anglais au primaire d'immersion Cr.Hrs.3 (Ancien 063.220) Étude de la philosophie de l'apprentissage de l'anglais au primaire d'immersion, afin de pouvoir identifier les transferts et interférences dans l'apprentissage des deux lectures (anglaise et française) et de tenir compte de ceux-ci dans l'enseignement. Concomitant : EDUB 3211 (ancien 063.321).

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 2211 Perfectionnement du français oral et écrit Cr.Hrs.3 Ce cours permettra aux étudiantes et aux étudiants d'améliorer leurs compétences langagières en français, tant à l'oral qu'à l'écrit, dans le but d'enseigner en français à tous les niveaux. Ce cours est accompagné de séances de travaux dirigés d'une durée d'une heure par semaine. Ces séances obligatoires permettront de mettre en pratique les notions théoriques présentées dans le cadre du cours.

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. *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. *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 2003-04 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 EDUB 1220 (or 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 2501 Sujets Particuliers En Éducation Au Secondaire Cr.Hrs.3 (Ancien 132.250) Étude de thèmes et de questions reliés à l'enseignement au secondaire et au développement de l'identité professionnelle de l'enseignante ou de l'enseignant débutant. Coordination des activités qui varieront d'année en année avec des expériences en milieu scolaire.

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 2511 L'intégration De La Langue Dans Toutes Les Matières Cr.Hrs.3 (Ancien 132.251) Initiation à la langue comme outil d'enseignement et d'apprentissage et aux moyens offerts aux enseignants et aux enseignantes pour intégrer la langue dans toutes les matières et enrichir la compréhension du contenu.

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. This course is graded pass/fail. *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. This course is graded pass/fail. *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. This course is graded pass/fail. Senior Years: *prerequisite:* successful completion of year one; *corequisite:* EDUB 2500 (or 132.250) and six credit hours year two curriculum and instruc-

tion 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 one to four 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 132.250) (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).

EDUB 3011 Pratique du microenseignement Cr.Hrs.3 (Ancien 063.301) Étude du comportement de l'enseignante ou de l'enseignant. Utilisation de vidéos fournissant le décor pour la pratique contrôlée de quelques-uns des éléments de l'enseignement, en particulier de l'analyse et de l'application des techniques suivantes : l'exposition, l'interrogation, la discussion et la démonstration.

On ne peut se faire créditer le EDUB 3011 (ancien 063.301) et le EDUB 3161 (ancien 063.316).

EDUB 3013 Pratique Du Microenseignement Cr.Hrs.3 (Ancien 081.301) Étude du comportement de l'enseignante ou de l'enseignant. Utilisation de vidéos fournissant le décor pour la pratique contrôlée de quelques-uns des éléments de l'enseignement, en particulier l'analyse et l'application des techniques suivantes : l'exposition, l'interrogation, la discussion et la démonstration.

EDUB 3021 Sujets particuliers en sciences humaines Cr.Hrs.3 (Ancien 063.302) Étude de sujets choisis dans le domaine de l'enseignement des sciences humaines.

EDUB 3031 La lecture au secondaire Cr.Hrs.3 (Ancien 063.303) Étude des habiletés de base en lecture et des relations de celles-ci avec les divers contenus disciplinaires du niveau secondaire. Examen de divers outils susceptibles de contribuer au développement des habiletés en lecture ainsi que diverses techniques d'évaluation.

EDUB 3033 Sujets Particuliers En Sciences Naturelles Cr.Hrs.3 (Ancien 081.303) Identification et solution des problèmes reliés à l'enseignement de sujets particuliers qui se trouvent à l'extérieur des champs de spécialisation des futurs enseignants et enseignantes.

EDUB 3101 Méthodologie de la lecture à l'élémentaire Cr.Hrs.3 (Ancien 063.310) Étude de l'apprentissage et de l'enseignement de la lecture à l'élémentaire dans les écoles franco-manitobaines et les écoles d'immersion. Compréhension en lecture, analyse des structures textuelles, lecture à voix haute et analyse du mot. Survol des habiletés préalables à la lecture et de quelques techniques d'évaluation de la lecture.

EDUB 3121 Méthodologie De La Lecture À L'élémentaire Ii Cr.Hrs.3 (Ancien 063.312) Étude approfondie des stratégies d'enseignement de la lecture, entre autres, l'expérience langagière, les grands livres, les tableaux collectifs et l'exploitation des connaissances antérieures avant, pendant et après la lecture. Enseignement et apprentissage de la lecture par le biais de toutes les matières, lecture-recherche et prise de notes. Étude des liens entre la lecture et l'écriture. *Préalable :* EDUB 3101 (ancien 063.310).

EDUB 3131 Bibliothèque Scolaire Cr.Hrs.3 (Ancien 063.313) Cours pour les enseignantes et enseignants de classes régulières portant sur l'utilisation efficace de la bibliothèque dans les écoles élémentaires et secondaires.

EDUB 3161 Stages Et Séminaires Iii Cr.Hrs.3 (Ancien 063.316) Choix d'expérience initiale ou d'enrichissement dans un des domaines suivants : niveau scolaire élémentaire ou présecondaire, une situation en éducation spécialisée ou expérience dans un service communautaire relié de façon ponctuelle à l'éducation totale. Aspects théoriques et pratiques traités en ateliers d'initiation et en discussions de groupes.

On ne peut se faire créditer le EDUB 3161 (ancien 063.316) et le EDUB 3011 (ancien 063.301).

EDUB 3171 Stages Et Séminaires Iii Cr.Hrs.3 (Ancien 063.317) Cours qui fournira de multiples occasions de rédiger différents genres de textes en français. Composition, transcription et révision de textes. Familiarisation avec le processus de l'écrit qui peut être adapté et appliqué aux niveaux primaire, élémentaire et secondaire.

EDUB 3211 Enseignement Du Français Au Primaire D'immersion Cr.Hrs.3 (Ancien 063.321) Enseignement du français langue seconde au primaire. Étude des principes de la communication orale et écrite dans la salle de classe, de la nouvelle pédagogie dans l'enseignement de la lecture et de l'écrit et de l'intégration des savoirs et des matières. Concomitant : EDUB 2201 (ancien 063.220).

EDUB 3241 Principes D'apprentissage Du Français Langue Seconde A L'élémentaire Cr.Hrs.3 (Ancien 063.324) Étude des théories de l'acquisition d'une deuxième langue ainsi que des stratégies d'enseignement et d'apprentissage à l'élémentaire par le biais de l'approche communicative.

EDUB 3251 Sujets Particuliers - Curriculum Et Pédagogie Cr.Hrs.3 (Ancien 063.325) Étude de sujets choisis en enseignement et apprentissage en immersion.

EDUB 3261 L'acquisition Et L'apprentissage Du Français En Contexte D'immersion Cr.Hrs.3 (Ancien 063.326) Cours théorique. Familiarisation avec les théories explicatives de l'acquisition et l'apprentissage d'une langue seconde et les approches pédagogiques qui en découlent. On ne peut se faire créditer le EDUB 3261 (ancien 063.326) et l'ancien 063.319.

EDUB 3271 Dév langagière en imm française a l'élémentaire Cr.Hrs.3 (L'ancien 063.327) Étude des aspects pratiques de l'enseignement en situation d'immersion à l'élémentaire. Sensibilisation aux méthodes et aux techniques susceptibles de développer les compétences en français langue seconde. On ne peut se faire créditer l'ancien 063.327 ou l'ancien 063.320. *Préalable:* EDUB 3261 (063.326) ou l'ancien 063.319.

EDUB 3281 Développement Langagière En Immersion Française Cr.Hrs.3 (Ancien 063.328) Étude des aspects pratiques de l'enseignement en situation d'immersion au secondaire. Sensibilisation aux méthodes et aux techniques susceptibles de développer les compétences en français langue seconde. *Préalable :* EDUB 3261 (ancien 063.326) ou l'ancien 063.319.

EDUB 3291 Principes et pratiques de l'évaluation des apprentissages Cr.Hrs.3 Ce cours permettra aux étudiantes et aux étudiants de comprendre les approches et les principes permettant d'évaluer la progression des apprentissages et le degré d'acquisition des compétences des élèves.

EDUB 4011 Stages Cr.Hrs.9 (Ancien 063.401) Période d'application, en milieu scolaire, des connaissances acquises, sous la surveillance du personnel de la Faculté et de l'école qui reçoit le ou la stagiaire.

EDUB 4013 Stages Cr.Hrs.3 (Ancien 081.401) Période d'application, en milieu scolaire, des connaissances acquises, sous la surveillance du personnel de la Faculté et de l'école qui reçoit le ou la stagiaire.

EDUB 4021 Didactique ' Élémentaire Cr.Hrs.6 (Ancien 063.402) Étude des programmes actuels offerts dans les écoles élémentaires et des méthodes pratiques dans l'utilisation du matériel didactique disponible tant pour l'enseignement des matières au programme que pour l'enrichissement culturel de l'enfant.

EDUB 4023 Didactique ' Élémentaire Cr.Hrs.6 (Ancien 081.402) Étude des programmes actuels au niveau élémentaire et des méthodes pratiques d'enseignement.

EDUB 4051 Méthodologie Générale Cr.Hrs.3 (Ancien 063.405) Étude des fondements et de l'application de la méthodologie.

EDUB 4053 Techniques De Production Cr.Hrs.3 (Ancien 081.405) Production de matériel audiovisuel utilisable dans l'enseignement (diapositives, transparents, techniques d'art graphique). *Préalable* recommandé : le EDUB 2021 (ancien 081.202).

EDUB 4061 Didactique En Anglais (Secondaire) Cr.Hrs.3 (Ancien 063.406) Étude des programmes et des méthodes d'enseignement en anglais au niveau secondaire.

EDUB 4071 L'enseignement Du Français De Base Au Secondaire Cr.Hrs.3 (Ancien 063.407) Étude de l'enseignement et de l'apprentissage du français langue seconde aux niveaux présecondaire et secondaire. Familiarisation avec l'approche communicative en tenant compte du programme d'études et des ressources disponibles au Manitoba.

EDUB 4081 Didactique En Géographie (Secondaire) Cr.Hrs.3 (Ancien 063.408) Étude des programmes et des méthodes d'enseignement en géographie au niveau secondaire.

EDUB 4091 Didactique En Langues Vivantes (Secondaire) Cr.Hrs.3 (Ancien 063.409) Étude des programmes et des méthodes d'enseignement en langues vivantes au niveau secondaire.

EDUB 4101 Didactique En Histoire (Secondaire) Cr.Hrs.3 (Ancien 063.410) Étude des programmes et des méthodes d'enseignement en histoire au niveau secondaire.

EDUB 4103 Didactique En Biologie (Secondaire) Cr.Hrs.3 (Ancien 081.410) Étude des programmes et des méthodes d'enseignement en biologie au niveau secondaire.

EDUB 4111 Didactique En Musique (Secondaire) I Cr.Hrs.3 (Ancien 063.411) Étude des programmes et des méthodes d'enseignement en musique au niveau secondaire.

EDUB 4113 Didactique En Chimie (Secondaire) Cr.Hrs.3 (Ancien 081.411) Étude des programmes et des méthodes d'enseignement en chimie au niveau secondaire.

EDUB 4121 Didactique En Musique (Secondaire) II Cr.Hrs.3 (Ancien 063.412) Étude des programmes et des méthodes d'enseignement en musique au niveau secondaire.

EDUB 4123 Didactique En Informatique (Secondaire) Cr.Hrs.3 (Ancien 081.412) Étude des programmes et des méthodes d'enseignement en informatique au niveau secondaire.

EDUB 4131 Didactique En Théâtre (Secondaire) Cr.Hrs.3 (Ancien 063.413) Étude des programmes et des méthodes d'enseignement en théâtre au niveau secondaire.

EDUB 4133 Didactique En Sciences Générales (Secondaire) Cr.Hrs.3 (Ancien 081.413) Étude des programmes et des méthodes d'enseignement en sciences générales au niveau secondaire.

EDUB 4141 Didactique En Art (Secondaire) Cr.Hrs.3 (Ancien 063.414) Étude des programmes et des méthodes d'enseignement en art au niveau secondaire.

EDUB 4143 Didactique En Sciences De L'écologie Humaine I Cr.Hrs.3 (Ancien 081.414) Étude des programmes et des méthodes d'enseignement en sciences de l'écologie humaine au niveau secondaire.

EDUB 4151 Didactique En Sciences De L'écologie Humaine II Cr.Hrs.3 (Ancien 081.415) Étude des programmes et des méthodes d'enseignement en sciences de l'écologie humaine au niveau secondaire.

EDUB 4153 Didactique En Sciences De L'écologie Humaine III Cr.Hrs.3 (Ancien 081.415) Étude des programmes et des méthodes d'enseignement en sciences de l'écologie humaine au niveau secondaire.

EDUB 4161 Didactique En Éducation Physique (Secondaire) Cr.Hrs.3 (Ancien 081.416) Étude des programmes et des méthodes d'enseignement en éducation physique au niveau secondaire.

EDUB 4171 Didactique En Physique (Secondaire) Cr.Hrs.3 (Ancien 081.417) Étude des programmes et des méthodes d'enseignement en physique au niveau secondaire.

EDUB 4181 Didactique En Mathématiques (Secondaire) Cr.Hrs.3 (Ancien 081.418) Étude des programmes et des méthodes d'enseignement en mathématiques au niveau secondaire.

EDUB 4201 Didactique du/en français au secondaire Cr.Hrs.3 Ce cours est axé autour des questions didactiques soulevées par les programmes d'études de français langue première et ceux de français langue seconde – immersion établis, pour les niveaux 7e années à Secondaire 4, par la Division du Bureau de l'éducation française d'Éducation, Citoyenneté et Jeunesse Manitoba.

EDUB 4XX1 Didactique En Français (Secondaire) Cr.Hrs.3 (Ancien 063.4XX) Étude des programmes et des méthodes d'enseignement en français au niveau secondaire.

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. (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. (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 5100 Developing Competency Skills in Enterprise Education 1 Cr.Hrs. (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 (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 (132.510).

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 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 5221 Courants Actuels En Curriculum, En Enseignement Et En Apprentissage 1 Cr.Hrs.3 (Ancien 132.522) Étude de la théorie qui sous-tend les courants actuels et les problématiques émergentes dans le domaine et de leurs applications pratiques.

EDUB 5230 Recent Developments in Curriculum, Teaching and Learning 2 Cr.Hrs.3 (Formerly 132.523) A continuation of certain topics of EDUB 5220 (132.522) to extend and develop the study previously undertaken in these areas.

EDUB 5231 Courants Actuels En Curriculum, En Enseignement Et En Apprentissage 2 Cr.Hrs. (Ancien 132.523) Approfondissement de thèmes choisis qui ont fait l'objet d'études dans le EDUB 5221 (ancien 132.522).

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. (Formerly 132.525) Advanced methods in choral instruction and conducting through a study of choral literature related to school music programs. Not to be held with the former 063.565.

EDUB 5261 Introduction Aux Fondements De La Lecture Cr.Hrs.3 (Ancien 132.526) Étude de la nature de la lecture par rapport à diverses composantes du développement humaine telles que le langage, la vue, l'ouïe, la cognition et la motivation. On ne peut se faire créditer le EDUB 5261 (l'ancien 132.526) et l'ancien 063.566.

- EDUB 5271 Enseignement De La Lecture Cr.Hrs.3** (Ancien 132.527) Étude des fondements du programme d'enseignement de la lecture; objectifs du programme, conditions d'apprentissage, démarches et matériel pédagogiques et évaluation des apprentissages. On ne peut se faire créditer le EDUB 5271 (l'ancien 132.527) et l'ancien 063.567.
- EDUB 5281 Théorie Et Pratique De L'enseignement De La Lecture 1 Cr.Hrs.3** (Ancien 132.528) Étude approfondie des éléments didactiques de la lecture au premier et au deuxième cycle de l'élémentaire, l'analyse des méprises, l'analyse critique des habiletés de base et les recherches à l'appui. On ne peut se faire créditer le EDUB 5281 (l'ancien 132.528) et l'ancien 063.568.
- EDUB 5291 Théorie Et Pratique De L'enseignement De La Lecture 2 Cr.Hrs.3** (Ancien 132.529) Étude d'approches non traditionnelles à l'enseignement de la lecture au premier et au deuxième cycle de l'élémentaire, de l'évaluation et de l'enseignement diagnostique, et de la conception de programmes de lecture solides. On ne peut se faire créditer le EDUB 5291 (l'ancien 132.529) et l'ancien 063.529.
- EDUB 5321 Séminaire Sur Les Arts Langagiers 1 Cr.Hrs.3** (Ancien 132.532) Séminaire de recherche et de lecture, qui comprend une analyse approfondie des fondements théoriques de l'étude et de l'enseignement des arts langagiers à l'élémentaire et de la recherche qui sous-tend ces fondements. Réflexion sur la portée pratique de ces théories dans l'enseignement en ce qui a trait à la communication orale, à l'écoute et à la création dramatique. On ne peut se faire créditer le EDUB 5321 (l'ancien 132.532) et l'ancien 063.572.
- 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 5331 Sujets Pratiques Dans Les Arts Langagiers 2 Cr.Hrs.3** Étude des pratiques d'enseignement de l'écriture et de ses rapports avec la communication orale et la lecture. Examen attentif des démarches pédagogiques, des techniques d'évaluation, du matériel existant et des méthodologies de l'enseignement de l'épellation, de l'écriture et de la composition écrite. On ne peut se faire créditer le EDUB 5331 (l'ancien 132.533) et l'ancien 063.575.
- 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 5341 Fondements De La Littérature Cr.Hrs.3** (Ancien 132.532 / 132.534) Étude de la nature de la littérature par rapport aux dimensions du développement humain et de l'enseignement telles que le langage, la vision, l'audition, la cognition, la motivation et l'objectif de l'enseignement. On ne peut se faire créditer le 132.534) et le EDUB 5261 (ancien 132.526) et l'ancien 063.566.
- EDUB 5350 Current Issues in Language and Literacy Cr.Hrs.3** 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 5361 Littérature Enfantine Cr.Hrs. 3** (Ancien 132.536) Étude de la nature et de la psychologie de la littérature enfantine à l'élémentaire. Aperçu du matériel existant, établissement de critères d'évaluation de ce matériel et résultats des recherches portant sur l'élaboration, le niveau d'intérêt et l'utilisation du matériel. On ne peut se faire créditer le EDUB 5361 (ancien 132.536) et l'ancien 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 5371 Littérature Pour Adolescents Et Adolescentes Cr.Hrs.3** (Ancien 132.537) Étude de la nature et de la psychologie de la littérature destinée aux élèves de la 7e à la 12e année. Aperçu du matériel existant, établissement de critères d'évaluation de ce matériel et résultats des recherches portant sur l'élaboration, le niveau d'intérêt et l'utilisation du matériel. On ne peut se faire créditer le EDUB 5371 (ancien 132.537) et l'ancien 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 5431 Développements Récents En Curriculum: Humanités Cr.Hrs.3** Examen des courants théoriques et des applications pratiques récents ou en émergence dans ce domaine.
- EDUB 5470 Recent Developments in Curriculum: Mathematics and Natural Sciences 1 Cr.Hrs.3** 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 5471 Cr.Hrs.3** (Ancien 132.547) Examen des courants théoriques et des applications pratiques récents ou en émergence dans ce domaine.
- 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 to extend and develop the previous study undertaken in these areas.
- 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. *Prerequisites* or concurrent: one or more of [EDUB 5580 (132.558)(C)] or [063.322 (C)] or [132.549 (C)] or [132.550 (C)] or [063.586 (C)] 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 5531 Théorie Et Pratique De L'enseignement Du Français Cr.Hrs.6** (L'ancien 132.533) Étude de la théorie actuelle et des nouvelles pratiques de l'enseignement du français langue seconde. Examen attentif de l'analyse des procédures pédagogiques et de la tâche d'enseignement. Initiation à la recherche dans le domaine de l'enseignement d'une langue seconde. On ne peut se faire créditer le EDUB 5531 (l'ancien 132.533) et l'ancien 063.512.
- EDUB 5533 Théorie et pratique de l'enseignement du français langue seconde Cr.Hrs.3** Ce cours fournit une mise à jour des théories et des pratiques de l'enseignement et de l'apprentissage en français langue seconde (immersion et français de base).
- EDUB 5535 L'utilisation des médias en enseignement du français de base Cr.Hrs.3** Ce cours est axé autour de deux volets relatifs à l'utilisation des médias dans la salle de classe de français de base. Dans un premier temps, les étudiants développeront une appréciation critique des médias, et ce, à partir d'une étude approfondie du sujet. Dans un deuxième temps, ils apprendront à utiliser les médias pour appuyer des thèmes explorés en situation de salle de classe et à développer des stratégies pédagogiques qui en découlent.
- EDUB 5537 Théorie et pratique des arts visuels et l'enseignement du français de base Cr.Hrs.3** An examination of current methods and approaches relevant to the teaching of visual arts in the Basic French classroom with particular emphasis on the application of theory through practical activities and projects. Students will learn appropriate vocabulary as well as teaching strategies which will lead to authentic learning experiences in the Basic French classroom.
- EDUB 5539 L'enseignement du français de base et les TIC Cr.Hrs.3** Liens entre l'apprentissage, la pédagogie et les TIC. Mise à l'essai et évaluation des logiciels éducatifs. Utilisation pédagogique des logiciels comme Word, Excel, et Power Point. Développement des compétences techniques activités pédagogiques. Consultation et évaluation de sites Web. Création d'un plan de site Web pour une unité d'apprentissage. Cours en ligne.
- 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 (132.164).
- EDUB 5541 Enseignement Du Français Cr.Hrs.6** (L'ancien 132.554) Revue critique du programme d'études : buts et objectifs, divers aspects de la discipline du français, théorie et pratique de l'enseignement, recherche et évaluation des techniques méthodologiques pour un meilleur enseignement du français. On ne peut se faire créditer le EDUB 5541 (l'ancien 132.544) et l'ancien 063.515.
- EDUB 5543 L'art dramatique et l'enseignement du français de base Cr.Hrs.3** Ce cours examine la littérature récente sur l'utilisation de l'art dramatique en éducation, et vise, en particulier, la théorie et la pratique de l'art dramatique dans la classe de français de base.
- EDUB 5545 French Immersion for Teachers Intermediate C/D Cr.Hrs.3** Ce cours de perfectionnement linguistique vise les enseignantes et enseignants du français langue seconde, et qui veulent se perfectionner en français par le biais de l'approche communicative.
- EDUB 5547 French Immersion for Teachers Advanced/Perfectionnement Cr.Hrs.3** Ce cours de perfectionnement linguistique vise les enseignantes et enseignants du français langue seconde, ou des personnes qui se destinent à l'enseignement du français langue seconde, et qui veulent se perfectionner en français par le biais de l'approche communicative.
- 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.

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 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 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.

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.

EDUB 5760 Recent Developments in Mathematics Education Cr.Hrs.3 (Formerly 132.576) Reading and research in mathematics education (selected topics).

EDUB 5761 Courants Actuels En Enseignement Des Mathématiques Cr.Hrs.3 (Ancien 132.576) Lectures et recherches sur l'enseignement des mathématiques (sujets particuliers).

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.

EDUB 5771 Diagnostic Et Intervention En Enseignement Des Mathématiques À L'élémentaire Cr.Hrs.3 (Ancien 132.577) Méthodes diagnostiques et ressources orthopédagogiques en enseignement des mathématiques à l'élémentaire. On ne peut se faire créditer le EDUB 5771 (ancien 132.577) et l'ancien 081.558.

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.

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.

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.

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. (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.

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.

FACULTY OF ENGINEERING

CIVL 2760 Introduction to Environmental Engineering Cr.Hrs.5 (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 (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:* ENG 1350 (or 130.135). *Corequisite:* CIVL 2800 (or 023.280).

CIVL 2780 Civil Engineering Systems Cr.Hrs.4 (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 (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 (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 2830 Graphics for Civil Engineers Cr.Hrs.2 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 the former 130.140. *Co-requisite:* CIVL 2840 Civil Engineering Geomatics.

CIVL 2840 Civil Engineering Geomatics Cr.Hrs.3 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 or 023.282. *Co-requisite:* CIVL 2830 Graphics for Civil Engineers.

CIVL 3560 Engineering Cooperative Education Assignment 1 Cr.Hrs.1 (Formerly 023.356) Special work assignment in business, industry, or government for cooperative education students. Requires submission of a written report covering the work completed during the four-month professional assignment.

CIVL 3570 Engineering Cooperative 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 (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 (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 (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 (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 (Formerly 023.373) Geotechnical Materials and Analysis (3-1.5T:0-0) 4 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 (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 (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 (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 (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 (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), CIVL 2770 (or 023.277), CIVL 2780 (or 023.278), STAT 2220 (or 005.222).

CIVL 4030 Structural Design 3 Cr.Hrs.4 (Formerly 023.403) Prestressed concrete structures; fibre-reinforced concrete structures; bridge loading, analysis and design in steel and concrete; special topics in structural engineering. *Corequisite:* CIVL 4390 (or 023.439).

CIVL 4040 Structural Dynamics Cr.Hrs.4 (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. *Prerequisite:* CIVL 2780 (or 023.278), STAT 2220 (or 005.222).

CIVL 4100 Engineering Management and the Environment Cr.Hrs.4 (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. *Corequisite:* CIVL 3700 (or 023.370).

CIVL 4180 Environmental Systems Cr.Hrs.4 (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 (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 Cooperative Education Assignment 5 Cr.Hrs.1 (Formerly 023.421) See CIVL 3560 (or 023.356) for course description.

CIVL 4220 Geotechnical Design Cr.Hrs.4 (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 (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 (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 (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 (For-

merly 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). *Corequisite:* CIVL 3740 (or 023.374).

CIVL 4390 Structural Design 2 Cr.Hrs.4 (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 (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 (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 (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) or ENGL 1320 (or 004.132).

CIVL 4470 Watershed Processes Cr.Hrs.4 (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 (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 Cooperative Education Assignment 3 Cr.Hrs.1 (Formerly 023.490) See CIVL 3560 (or 023.356) for course description.

CIVL 4910 Engineering Cooperative Education Assignment 4 Cr.Hrs.1 (Formerly 023.491) See CIVL 3560 (or 023.356) for course description.

ECE 2130 Electric Fields Cr.Hrs.4 (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 (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 (Formerly 024.222) Boolean algebra and logic primitives, net-work simplification techniques, physical realizations, number systems and codes; analysis and design of asynchronous and synchronous sequential circuits; applications to computation, measurements, and control.

ECE 2262 Electric Circuits Cr.Hrs.4 The application of circuit concepts; network theorems and formal methods, steady state analysis, frequency and transient response, application of the Laplace transform in the analysis of linear time-invariant networks. *Prerequisite:* [ENG 1450 (or 130.118) and [MATH 2100 (or 136.210)] and [MATH 2110 (or 136.211)].

ECE 3530 Network Theory Cr.Hrs.4 (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 (Formerly 024.359) Electrostatics; 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 (Formerly 024.360) Basic solid state theory; properties of semi-conductors; principles of metal-semiconductor junctions, p-n junc-

tions 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 (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 (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 (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 (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.

ECE 3700 Telecommunication Network Engineering Cr.Hrs.4 (Formerly 024.370) This course will introduce modem 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 (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 (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 (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 (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 (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 (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 (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 (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 (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 (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 (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 (Formerly 024.419) Microelectronic fabrication principles. Bipolar and FET structures: discrete devices and integrated LSI log-

ic 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 (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 (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 (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 (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 (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 (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 (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 (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 (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 (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 (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 non-linear equations. *Prerequisite:* MATH 3110 (or 136.311).

ECE 4420 Digital Control Cr.Hrs.4 (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 (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 (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 (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 (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 (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 Supervised 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 (Formerly 024.474) Implemen-

tation 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 (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 (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 (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 (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).

ENG 1130 Introduction to Engineering Cr.Hrs.1 (Formerly 130.113) The Engineering Profession from the Perspective of Students and Practising Professionals. Academic, Legal and Ethical Considerations. *Prerequisite:* Acceptance to Engineering or permission of the Instructor.

ENG 1400 Engineering Design Cr.Hrs.4 (Formerly 130.140) Part A: The Creative Process; The Design Process; Working in a Team. Part B: Drawing, Sketching and Computer-Aided Drawing (CAD); Descriptive Geometry; Design Studio; Graphics Tutorials. *Prerequisites:* A minimum grade of 60% in pre-calculus Mathematics 40S, or the former Mathematics 40S, Physics 40S, and Chemistry 40S, or permission of the Instructor.

ENG 1420 Engineering Processes for Non-Engineering Students Cr.Hrs.3 (Formerly 130.142) Develops a basic understanding of the engineering profession with emphasis on basic technical principles, Systems Engineering, and Project Management. Special emphasis will be placed upon the interface between management and engineering and the role management plays in the conduct of technical projects and manufacturing. NOTE: This course is not available for credit to students registered in the Faculty of Engineering.

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 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 Chemistry 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).

MECH 2050 Mechanical Engineering Coop Education Assignment 1 Cr.Hrs.1 (Formerly 025.205) Special work assignment in business, industry, or government for cooperative 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 (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 1440 (or 130.135) and COMP 1010 (or 074.101).

MECH 2120 Mechanics of Machines Cr.Hrs.4 (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 1440 (or 130.135) and COMP 1010 (or 074.101).

MECH 2200 Thermodynamics 2M Cr.Hrs.4 (Formerly 025.220) Cycles, compressors, transient flow processes, irreversibility and availability, thermodynamic relations, departure charts, gas mixtures, psychrometry, combustion. *Prerequisites:* ENG 1120 (or 130.112), MATH 1510 (or 136.151) and MATH 1710 (or 136.171).

MECH 2220 Stress Analysis and Design 2M Cr.Hrs.4 (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 1440 (or 130.135) and MATH 1710 (or 136.171).

MECH 2260 Introduction to Fluid Mechanics Cr.Hrs.3 (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 (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 (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 (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 Coop Education Assignment 2 Cr.Hrs.1 (Formerly 025.305) Special work assignment in business, industry, or government for cooperative 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 (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 3132 (formerly MATH 3100) (or 136.310).

MECH 3420 Vibrations and Acoustics Cr.Hrs.4 (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 3132 (formerly MATH 3100) (or 136.310).

MECH 3430 Measurements and Control Cr.Hrs.4 (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 (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 3132 (formerly MATH 3100) (or 136.310) and ENG 1120 (or 130.112).

MECH 3480 Dynamics Cr.Hrs.3 (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 (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 3132 (formerly MATH 3100) (or 136.310).

MECH 3500 Stress Analysis and Design 3M Cr.Hrs.3 (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 2132 (formerly 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 (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 3132 (formerly MATH 3100) (or 136.310).

MECH 3540 Modern Engineering Materials Cr.Hrs.4 (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 (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 robotics. 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 (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 (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 (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 (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 (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 Cooperative Education Assignment 1 Cr.Hrs.1 (Formerly 025.391) Special work assignment in business, industry, or government for cooperative 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 Cooperative Education Assignment 2 Cr.Hrs.1 (Formerly 025.392) Special work assignment in business, industry, or government for cooperative 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 Coop Education Assignment 3 Cr.Hrs.1 (Formerly 025.405) Special work assignment in business, industry, or government for cooperative 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 Coop Education Assignment 4 Cr.Hrs.1 (Formerly 025.406) Special work assignment in business, industry, or government for cooperative 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 com-

ponents 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 compressors, 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 (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 (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 3132 (formerly 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 (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 (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 (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 (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 (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 (Formerly 025.482) General conservation equations; specific forms of the conservation equations and en-

ergy 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 3132 (formerly 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 (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 Cooperative 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 (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 Manufacturing 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 Manufacturing 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 (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 (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).

FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES, THE CLAYTON H. RIDDELL

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 (071.134)

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:* ENVR 1000 (128.100) (C).

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:* (CHEM 1310 or CHEM 1311 (002.131) (C)) and, (BIOL 1030 or BIOL 1031 or (071.125) (C)), and (PHYS 1020 or PHYS 1021 (016.102), or MATH 1500 or MATH 1501 (136.150), or MATH 1200 or MATH 1201 (136.120), or MATH 1300 or MATH 1301 (136.130), or MATH 1310 (136.131), or MATH 1510 (136.151), or MATH 1520 (136.152), or MATH 1530 (136.153) (C)).

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 (128.219), BOTN 2180 (001.218), BOTN 2190 (001.219), ZOOL 2180 (022.218), ZOOL 2190 (022.219), AGRI 2180 (065.218), AGRI 2190 (065.219). *Prerequisites:* (BIOL 1030 or BIOL 1031 or (071.125) (C)), and (CHEM 1310 or CHEM 1311 (002.131) (C), or CHEM 1320 (002.132) (C)).

ENVR 2190 Toxicological Principles Cr.Hrs.2 (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 (128.218), BOTN 2180 (001.218), BOTN 2190 (001.219), ZOOL 2180 (022.218), AGRI 2180 (065.218), AGRI 2190 (065.219). *Prerequisites:* (BIOL 1030 or BIOL 1031 or (071.125) (C)), and (CHEM 1310 or CHEM 1311 (002.131) (C), or CHEM 1320 (002.132) (C)).

ENVR 2350 Technical Communication Skills In Environmental Science 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 (128.205). *Prerequisite:* Permission of 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 (002.255). *Prerequisite:* CHEM 1310 or CHEM 1311 (002.131) (C).

ENVR 2650 Introduction to Environmental and Natural Resources Policy and Law 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. Not to be held with the former ENVR 3650. *Prerequisite:* A minimum grade of C in ENVR 1000 (128.200) or written permission of the department head.

ENVR 2900 Professional Development in the Environmental Sectors 1 Cr.Hrs. (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 expectation, and professionalism. The course is a mandatory requirement to Cooperative Education Option admission. *Prerequisite:* 30 credit hours of university credit.

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. *Prerequisites:* Permission of department head, and 60 credit hours of university credit.

ENVR 3010 Field Topics in Environmental Science 1 Cr.Hrs. (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 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 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 (128.310). *Prerequisites:* BOTN 2280 (001.228) (C), or (ZOOL 2290 (022.229) (C), or BOTN 2370 or BOTN 2371 (001.237) (C), or ZOOL 2370 or ZOOL 2371 (022.237) (C), or AGECE 2370 (065.237) (C) or permission of 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:* A minimum grade of C in ENVR 2650 or written permission of the department head.

ENVR 3250 Environmental Assessment Cr.Hrs.3 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. *Prerequisites:* (ABIZ 3550 (061.355) (C), or ENVR 3150 (128.315) (C), and (BOTN 2370 or BOTN 2371 (001.237) (C), or ZOOL 2370 or ZOOL 2371 (022.237) (C), or AGECE 2370 (065.237) (C)), or permission of department head.

- ENVR 3300 Methods in Ecotoxicology Cr.Hrs.3** This is a laboratory-based course exploring the development, conduction and application of bioassays, biomarkers, bioindicators and biomonitors in ecotoxicology. Through a laboratory setting, students learn how to perform standard bioassays for a variety of species (plants and invertebrates) as well as systems (aquatic and terrestrial) at different levels of biological organization, from the individual to the ecosystem. *Prerequisite:* a minimum grade of C in each of ENVR 2180 (or BOTN 2180, ZOO 2180 or AGRI 2180) and a second year course in the Faculty of Science or the Faculty of Agricultural and Food Sciences that has a laboratory component, or written permission of the department head.
- ENVR 3340 Circumpolar Cultures and Lifestyles Cr.Hrs.3** This course provides an introduction to the culture, lifestyles, belief systems, material culture, art, environmental issues, and politics of Aboriginal Peoples in northern Canada, Greenland, Alaska, Siberia and Scandinavia. *Prerequisite:* written 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 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 (128.421). *Prerequisite:* 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 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 environments and the interpretation of data obtained from such analyses. Not to be held with CHEM 3590 or (002.347) or (002.355). *Prerequisite:* ENVR 2550 (128.255) (C), or CHEM 2550 (002.255) (C), or CHEM 2470 (002.247) (C), or permission of department head.
- ENVR 3900 Professional Development in the Environmental Sectors 2 Cr.Hrs.2** (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 and mock interviews. The normal sequence for participation is after completion of ENVR 3980 (128.398). *Prerequisites:* ENVR 2900 (128.290) (C), and 60 credit hours of university credit.
- ENVR 3910 Coop Work Term Report 1 Cr.Hrs.2** (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:* ENVR 2900 (128.290) (C). *Prerequisite or Concurrent Requirement:* ENVR 3980 (128.398).
- ENVR 3920 Coop Work Term Report 2 Cr.Hrs.2** (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:* ENVR 3980 (128.398) (P). *Prerequisites or Concurrent Requirements:* ENVR 3900 (128.390), and ENVR 3990 (128.399).
- ENVR 3980 Coop Work Term 1 Cr.Hrs.0** (Formerly 128.398) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. This course is graded pass/fail. *Prerequisite:* ENVR 2900 (128.290) (C). *Corequisite:* ENVR 3910.
- ENVR 3990 Coop Work Term 2 Cr.Hrs.0** (Formerly 128.399) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. This course is graded pass/fail. *Prerequisite:* ENVR 3980 (128.398) (P). *Prerequisite or Concurrent Requirement:* ENVR 3900 (128.390). *Corequisite:* 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. *Prerequisites:* Permission of department head, and 60 credit hours of university credit.
- ENVR 4010 Field Topics in Environmental Science 2 Cr.Hrs.2** (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 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 department head.
- ENVR 4110 Critical Thinking and the Environment Cr.Hrs.3** (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:* ENVR 2000 (or 128.200)(C) and 72 credit hours of course work, or written permission 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:* ENVR 2180 (128.218) (C), or BOTN 2180 (001.218) (C), or ZOO 2180 (022.218) (C), or AGRI 2180 (065.218) (C).
- 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 (128.422). *Prerequisite:* ENVR 3400 (128.340) (C).
- 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 Studies Program. *Prerequisite:* Permission of 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 2008-2009 and in alternate years thereafter. Not to be held with CHEM 4550 (002.455). *Prerequisite:* ENVR 3550 (128.355) (C), or (002.355) (C), or CHEM 3590 (C), or (002.347) (C), or permission of 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 2650 or permission of the department head.
- ENVR 4910 Coop Work Term Report 3 Cr.Hrs.2** (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 (128.399) (P).
- ENVR 4980 Work Term 3 Cr.Hrs.0** 0 (Formerly 128.498) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. This course is graded pass/fail. *Prerequisite:* ENVR 3990 (128.399) (P). *Corequisite:* ENVR 4910.
- GEOG 1200 Introductory Geography Cr.Hrs.6** (Formerly 053.120) This course studies aspects of the human and physical worlds and their interrelationships. Not to be held with GEOG 1201(053.120), or GEOG 1290or GEOG 1291(053.129), or GEOG 1280or GEOG 1281(053.128).
- 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), ou GEOG 1290ou GEOG 1291(053.129), ou GEOG 1280ou GEOG 1281(053.128).Donné au Collège universitaire de Saint-Boniface.
- GEOG 1280 Introduction to Human Geography Cr.Hrs.3** (Formerly 053.128) This course studies aspects of the human world: population, settlement and resources. Not to be held with GEOG 1200 or GEOG 1201(053.120), or GEOG 1281.
- 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 GEOG 1200ou GEOG 1201(053.120). Donné au Collège universitaire de Saint-Boniface.
- 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. Not to be held with GEOG 1291(053.129), or GEOG 1200or GEOG 1201(053.120).
- 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 créditer avec GEOG 1290(053.129), ou GEOG 1200ou GEOG 1201(053.120). Donné au Collège universitaire de Saint-Boniface.
- 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 GEOG 2221(053.222). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 1000 level, or permission of department head.
- 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:* GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or permission of department head.

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 1000 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 2250 Introduction to Geographic Information Systems (TS) Cr.Hrs. (Lab Required) (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 GEOG 2221(053.222). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 1000 level, or permission 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. *Prerequisites:* (GEOG 1290 or GEOG 1291(053.129) (C), or GEOG 1200 or GEOG 1201 (053.120) (C)) , and (MATH 1500 or MATH 1501 (136.150) (C), or MATH 1510 (136.151) (C), or MATH 1520 (136.152) (C), or MATH 1530 (136.153) (C)).

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 (053.362). *Prerequisites:* (GEOG 1290 or GEOG 1291 (C), or GEOG 1200 or GEOG 1201(053.120) (C)), and (PHYS 1020 or PHYS 1021 (016.102) (C), or PHYS 1050 or PHYS 1051 (016.105) (C), or MATH 1500 or MATH 1501 (136.150) (C), or MATH 1510 (136.151) (C), or MATH 1520 (136.152) (C), or MATH 1530 (136.153) (C)), or permission of department head.

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 1000 level, or permission 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:* GEOG 1200 or GEOG 1201 (053.120) (C) or GEOG 1280 or GEOG 1281 (or 053.128) (C), or permission 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. Not to be held with GEOG 2651(053.265), or GEOG 2661 (053.266). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or permission of department head.

GEOG 2440 Geography of Natural Hazards (PS) Cr.Hrs.6 (Formerly 053.244) Physical 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 1000 level, or permission 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 1000 level, or permission 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 1000 level, or permission 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 1000 level, or permission of department head.

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 1000 ou l'autorisation écrite du professeur.

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 1000 level, or permission 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 1000 level, or permission 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. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or permission of department head.

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. Donné au Collège universitaire de Saint-Boniface. *Préalable:* une note minimale de C dans un minimum de 3 heures-crédits de géographie de niveau 1000, ou l'autorisation écrite du professeur.

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. *Prerequisite:* GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or permission of department head.

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. (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 1000, ou l'autorisation écrite du professeur.

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. Not to be held with GEOG 2580(053.258), GEOG 2570 (053.257), GEOG 3431(053.343). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or permission 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 (053.256). Not to be held with GEOG 2560(053.256), GEOG 2561 or GEOG 3431 (053.343). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or permission 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 (053.256). Not to be held with GEOG 2560, GEOG 2561(053.256). *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or permission 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 1000 level, or permission 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. *Prerequisite:* GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or permission 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. *Prerequisite:* GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or permission of department head.

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 (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 1000, ou l'autorisation

écrite du professeur.

GEOG 2661 Géographie politique II Cr.Hrs. (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 (053.243). Donné au Collège universitaire de Saint-Boniface. *Préalable*: une note minimale de C dans le GEOG 2651 (053.265), ou l'autorisation écrite du professeur.

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. Not to be held with (053.454). *Prerequisites*: (GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1290 or GEOG 1291 (053.129) (C)), and (PHYS 1020 or PHYS 1021 (016.102) (C), or PHYS 1030 or PHYS 1031 (016.103) (C), or MATH 1300 or MATH 1301 (136.130) (C), or MATH 1500 or MATH 1501 (136.150) (C)), or permission of department head.

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*: GEOG 2300 (053.230) (C), or permission of department head.

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. *Prerequisites*: (GEOG 2310 (053.231) (C)), and (GEOG 2300 (053.230) (C)), or permission of department head.

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 (053.129), ou l'autorisation écrite du professeur.

GEOG 3421 L'eau, enjeu géostratégique Cr.Hrs.3 (L'ancien 053.342) L'eau, 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 (053.128), et les deux GEOG 2651 (053.265) et GEOG 2661 (053.266) (ou le GEOG 2430 (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 GEOG 2560 (053.256) ou le GEOG 2570 (053.257) et le GEOG 3700 (053.370). Donné au Collège universitaire de Saint-Boniface. *Préalable*: une note minimale de C dans un minimum de 6 heures-crédits de géographie de niveau 1000 ou l'autorisation écrite du professeur.

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*: GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or permission of department head.

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*: GEOG 2560 (053.256) (C), or GEOG 2570 (053.257) (C), or GEOG 3431 (053.343) (C), or permission of department head.

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 (053.256), GEOG 2570 (053.257) ou GEOG 3431 (053.343), ou l'autorisation écrite du professeur.

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 1000 level, or permission of department head.

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 1000, ou l'autorisation écrite du professeur

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*: GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or GEOG 2210 or GEOG 2211 (053.221) (C), or permission 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 1000 level, or permission 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*: GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or GEOG 2210 or GEOG 2211 (053.221) (C), or permission 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*: GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or GEOG 2210 or GEOG 2211 (053.221) (C), or permission of department head.

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. Not to be held with GEOL 3490 (007.349). *Prerequisite*: GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1290 or GEOG 1291 (053.129) (C), or GEOG 2550 or GEOG 2551 (053.255) (C), or permission 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. Not to be held with GEOG 3591. *Prerequisite*: a grade of "C" or better in six credit hours from Geography courses numbered at the 1000 level, or permission 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 (053.359). Donné au Collège universitaire de Saint-Boniface. *Préalable*: une note minimale de C dans un minimum de 6 heures-crédits de géographie niveau 1000, 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 1000 level, or permission of department head.

GEOG 3610 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*: GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1290 or GEOG 1291 (053.129) (C), or GEOG 2540 or GEOG 2541 (053.254) (C), or permission of department head.

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. *Prerequisite*: GEOG 2530 (053.253) (C), or STAT 1000 or STAT 1001 (005.100) (C), or permission 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. *Prerequisite*: a grade of "C" or better in six credit hours from Geography courses numbered at the 1000 level, or permission of department head.

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 (053.370). Donné au Collège universitaire de Saint-Boniface. *Préalable*: une note minimale de C dans 6 heures-crédits de géographie de niveau 1000, ou l'autorisation écrite du professeur.

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*: (GEOG 2480 or GEOG 2481 (053.248) (C)), or (SOC 2480 (077.248) (C)), or permission 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*: GEOG 1200 or GEOG 1201 (053.120) (C), or GEOG 1280 or GEOG 1281 (053.128) (C), or GEOG 2480 or GEOG 2481 (053.248) (C), or permission of department head.

GEOG 3730 Geographic Information Systems (TS) Cr.Hrs.3 (Lab Required) (Formerly 053.373) Weekly two-hour lab. An introduction to geographic information systems (GIS) input, processing, output and applications. *Prerequisite*: GEOG 2250 (053.225) (C), or permission 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*: permission 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 1000 level, or permission 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:* permission 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:* permission 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. *Prerequisite:* a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 1000 level, or permission of department head.

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 1000.

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 (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 (053.382).

GEOG 4200 Advanced Methods in Remote Sensing Cr.Hrs.3 (Lab Required) (Formerly 053.420) 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. Not to be held with (053.454). *Prerequisite:* GEOG 3200 (053.320) (C), or permission 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. Not to be held with (NATV 4260) (032.426). *Prerequisite:* permission of department head.

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:* permission of department head.

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 (053.331) (C), or permission of department head.

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 (053.332) (C), or permission of department head.

GEOG 4320 Modeling the Physical Climate Cr.Hrs. (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 2008-2009 and in alternate years thereafter. *Prerequisites:* (GEOG 3310 (053.331) (C)), and (GEOG 3320 (053.332) (C)), or permission of department head.

GEOG 4350 Parks and Protected Areas Planning and Management: Field Studies Cr.Hrs.6 The course is taught in two segments, an on-campus component and field study component taking place in Banff National Park. The on-campus component examines the historical development of the concept of parks and protected areas, the role of interpretation, management and research in the parks and emerging issues in the management of parks and protected areas. In addition, during the on-campus component planning for the field will take place. The field segment will focus on a wide variety of management issues with particular attention to Banff National Park. Emerging issues and trends will be examined and past management responses evaluated. There will be opportunities for students to investigate specific management issues of interest to them and to participate in current research being conducted in the park. This course is also offered in the Faculty of Physical Education and Recreation Studies as REC 4350. *Prerequisite:* Written permission of the department head.

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:* permission of department head.

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:* permission 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. *Prerequisite:* permission 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:* permission 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:* GEOG 3320 (053.332) (C), or permission 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. *Prerequisite:* permission 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:* permission of department head.

GEOG 4590 Spatial Analysis Cr.Hrs.3 (Formerly 053.459) The theory and techniques of spatial statistical data exploration, inference and hypothesis testing as they pertain to geography analysis are explored. The role of spatial analytical techniques in field investigations, GIS and remote sensing applications are discussed. *Prerequisites:* 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:* permission 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:* permission 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:* permission 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:* permission 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:* permission 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 permission of department head.

GEOG 4690 Natural Hazards and Disasters Cr.Hrs.3 (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. *Prerequisites:* (GEOG 2440 (053.244)(C)), and (GEOG 2550 (053.255) (C)), and (GEOG 3580 (053.358) (C)), or permission 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:* permission 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. *Prerequisite:* permission of department head.

GEOL 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 (007.144) or GEOL 2250 (007.225) or (007.123) or (007.124). Recommended for students intending to proceed in further courses in the Geological Sciences.

GEOL 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 (007.123). *Prerequisite:*

GEOL 1340 (007.134) (C) or GEOL 1440 (007.144) (C) or GEOL 2250 (007.225) (C) or (007.124) (C).

GEOL 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. *Prerequisite:* GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or GEOL 2250 (007.225) (C), or (007.123) (C), or (007.124) (C).

GEOL 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 (007.124). *Prerequisite:* GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or GEOL 2250 (007.225) (C), or (007.123) (C).

GEOL 1440 Introduction of 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 (007.134), or GEOL 2250 (007.225) or (007.123) or (007.124).

GEOL 2060 Introductory Geophysics Cr.Hrs.3 (Lab Required) (Formerly 007.206) An introduction to geophysical exploration, Earth physics, satellite geophysics and remote sensing. Emphasis will be on quantitative modeling and will include geophysical measurements and handling of data. *Prerequisites:* (GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or (007.123) (C), or (007.124) (C)), and (MATH 1300 (136.130) (C), or MATH 1310 (136.131) (C), or MATH 1500 (136.150) (C), or MATH 1510 (136.151) (C), or MATH 1520 (136.152) (C), or MATH 1530 (136.153) (C)), and (PHYS 1020 (016.102) (C), or PHYS 1050 (016.105) (C)); or permission of department head.

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 (007.134), or GEOL 1440 (007.144), or (007.123), or (007.124).

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:* university geology or GEOG 1290 or GEOG 1291 (053.129) (C), or GEOG 1200 or GEOG 1201 (053.120) (C), or permission of department head.

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:* GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or (007.123) (C), or (007.124) (C).

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. *Prerequisites:* (40S Chemistry or CHEM 0900 (002.090) (Pass)), and (GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or (007.123) (C), or (007.124) (C)), or permission of department head. CHEM 1300 (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. *Prerequisites:* (GEOL 2500 (007.250) (C) and GEOL 2800 (C), or (007.260) (C)), or GEOL 2540 (C).

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. *Prerequisites:* (GEOL 2500 (007.250) (C) and GEOL 2800 (C), or (007.260) (C)), or GEOL 2540 (C).

GEOL 2540 Introductory Mineralogy with Essential 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 (007.250). *Prerequisites:* (40S Chemistry, CHEM 0900 (002.090) (Pass) or equivalent), and (GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or (007.123) (C), or (007.124) (C)), or permission of department head. CHEM 1300 (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 for credit in a Major or Honours program in Geological Sciences. *Prerequisite:* GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or (007.123) (C), or (007.124) (C).

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. *Prerequisite:* GEOL 2500 (007.250) (C), or GEOL 2540 (C). *Prerequisite or Concurrent Requirement:* CHEM 1300 (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 (007.260). *Prerequisite:* GEOL 2500 (or 007.250) (C), or GEOL 2540 (C), or permission of department head.

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. *Prerequisites:* (GEOL 2520 (007.252) (C)), and (GEOL 2770 (007.277) (C)).

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. *Prerequisites:* (GEOL 2500 (007.250) (C)), and (GEOL 2440 (007.244) (C)). 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 2008-2009 and alternate years thereafter. *Prerequisites:* (GEOL 2500 (007.250) (C)), and (GEOL 2800 (C), or (007.260) (C), or GEOL 2540 (C)).

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 2008-2009 and in alternate years thereafter. *Prerequisites:* (GEOL 2440 (007.244) (C)), and (GEOL 2520 (007.252) (C)), and (GEOL 2770 (007.277) (C)).

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:* GEOL 1340 (007.134) (C), or GEOL 1440 (007.144) (C), or (007.123) (C), or (007.124) (C), or permission of department head.

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 2008-2009 and in alternate years thereafter. *Prerequisites:* (GEOL 2440 (007.244) (C)), and (GEOL 2520 (007.252) (C)), and (GEOL 2530 (007.253) (C)).

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 (053.358). *Prerequisite:* GEOL 2530 (007.253) (C).

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. *Prerequisites:* (GEOL 2060 (007.206) (C)), and (MATH 1500 (136.150) (C), or MATH 1510 (136.151) (C), or MATH 1520 (136.152) (C), or MATH 1530 (136.153) (C), or MATH 1690 (136.169) (C)).

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:* GEOL 2060 (007.206) (C), or permission of department head.

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. *Prerequisite:* GEOL 2060 (007.206) (C).

GEOL 3900 Sedimentology Cr.Hrs.3 (Lab Required) (Formerly 007.390) The study of depositional environments of sedimentary rocks. Facies analysis and modeling of sedimentary deposits. *Prerequisite:* GEOL 2530 (007.253) (C).

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. Not to be held with (007.449). *Prerequisites:* (GEOL 2440 (007.244) (C)), and (GEOL 2520 (007.252) (C)), and (GEOL 2530 (007.253) (C)).

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:* (GEOL 2060 (007.206) (C)), and (MATH 2100 (136.210) (C), or MATH 1300 (136.130) (C), or MATH 1310 (136.131) (C)).

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 alternate Summer Sessions. Taught with the first half of GEOL 4740 (or 007.474). Not to be held for credit with GEOL 4740 (or 007.474). *Prerequisite:* GEOL 3810 (or 007.381 or 007.380) (C), or consent of department.

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 alternate Summer Sessions. Taught with the first half of GEOL 4740 (or 007.474). Not to be held for credit with GEOL 4740 (or 007.474). *Prerequisite:* GEOL 3810 (or 007.381 or 007.380) (C), or consent of department.

GEOL 4270 Advanced Studies in Earth Sciences Cr.Hrs.3 (Formerly 007.427) Advanced study in a selected subject in Earth sciences. *Prerequisite:* Permission of department head.

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:* (GEOL 2520 (007.252) (C)), and (GEOL 2530 (007.253) (C)), and (GEOL 2770 (007.277) (C)).

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. *Prerequisite* or Concurrent Requirement: GEOL 3900 (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. *Prerequisites:* (GEOL 3110 (007.311) (C)), and (GEOL 3900 (007.390) (C)).

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 2008-2009 and in alternate years thereafter. *Prerequisite:* GEOL 3310 (007.331) (C), or permission of department head.

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 2008-2009 and in alternate years thereafter. *Prerequisites:* (GEOL 2060 (007.206) (C)), and (PHYS 2370 (016.237) (C)).

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 2008-2009 and in alternate years thereafter. *Prerequisites:* (GEOL 2060 (007.206) (C)), and (PHYS 2370 (016.237) (C)).

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:* GEOL 3900 (007.390) (C). *Prerequisite* or Concurrent Requirement: GEOL 3490 (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:* GEOL 3900 (007.390) (C).

GEOL 4630 Geolimnology Cr.Hrs. (Formerly 007.463) The major physical, geochemical, sedimentological, and hydrogeological processes in lakes and their watersheds. A multidisciplinary course. Offered in 2008-2009 and in alternate years thereafter. *Prerequisites:* GEOL 2770 (007.277) (C), or university chemistry and geology, or permission of department head.

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:* (GEOL 3110 (007.311) (C)), and (GEOL 3900 (007.390) (C)).

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:* (GEOL 2440 (007.244) (C)), and (GEOL 2520 (007.252) (C)), and (GEOL 2530 (007.253) (C)).

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 alternate Summer Sessions. Not to be held with GEOL 4260 (or 007.426). *Prerequisite:* GEOL 3810 (or 007.381 or 007.380) (C), or consent of department..

GEOL 4810 Geophysical Data Analysis Cr.Hrs.3 (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 alternate years. *Prerequisite:* PHYS 2490 (or 016.237) (C), or consent of department.

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:* GEOL 2060 (007.206) (C).

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.

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. *Prerequisite:* GEOL 4520 (007.452) (C).

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 (007.449). Offered in Summer 1. *Prerequisite:* GEOL 3910 (007.391) (C).

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 (007.487). Normally this course is available after completion of Year 3 requirements in Geology or Geophysics Major program. *Prerequisite:* permission of department head.

FACULTY OF HUMAN ECOLOGY -----

FMLY 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 (049.126).

FMLY 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 062.114.

FMLY 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.

FMLY 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 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 (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 1020 (062.102) or equivalent.

FMLY 2600 Foundations of Childhood Developmental Health Cr.Hrs.3 (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 effects of developmental progress. *Prerequisite:* Minimum grade of C in FMLY 1010 (062.101). Limited enrolment.

FMLY 2800 Family Violence Cr.Hrs.3 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 (062.101) or FMLY 1020 (062.102) or PSYC 1200 (017.120) or SOC 1200 (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 (062.190 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:* 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 (062.101) or PSYC 1200 (017.120) or SOC 1200 (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 (062.102) or PSYC 1200 (017.120) or SOC 1200 (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 (062.324) and the former 062.321. *Prerequisites:* [FMLY 1010 (062.101) and FMLY 1020 (062.102)] or PSYC 1200 (017.120) or SOC 1200 (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:* FMYL 1020 (062.102) and completion of 54 credit hours. Not to be held with 062.435.

FMYL 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:* FMYL 2070 (062.207) and one of ECON 1200 (018.120) or ECON 1210 (018.121) or ECON 1220 (018.122).

FMYL 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.

FMYL 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:* FMYL 2600 (062.260) and completion of 54 credit hours.

FMYL 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. Not to be held with the former 062.450. *Prerequisite:* FMYL 2600 (062.260). Not to be held with 062.450.

FMYL 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 (028.205).

FMYL 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 (028.205).

FMYL 3800 Conflict Resolution in the Family Cr.Hrs. (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:* FMYL 2800 (062.280) and completion of 54 credit hours.

FMYL 3802 Intimate Partner Violence Cr.Hrs.3 A critical examination of theory and research on violence in intimate relationships. Topics will include violence in dating, common-law, marital, ex-partner and same-sex relationships. *Prerequisite:* FMYL 2800.

FMYL 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:* FMYL 1900 (062.190) or consent of instructor. Not to be held with 062.473.

FMYL 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 062.436 or 062.455 or 062.456 or 062.457.

FMYL 4330 Management of Family Stress Cr.Hrs. (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:* FMYL 1020 (062.102)

FMYL 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:* FMYL 2070 (062.207) and ECON 1200 (018.120) or ECON 1210 (018.121) or ECON 1220 (018.122).

FMYL 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:* FMYL 3450 (062.345).

FMYL 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.

FMYL 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:* FMYL 2070 (062.207) and 84 credit hours.

FMYL 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:* FMYL 2600 (062.260). Not to be held with 062.437.

FMYL 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:* FMYL 3800 (062.380) and completion of 72 credit hours.

FMYL 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:* FMYL 2900 (062.290) or FMYL 3900 (062.390) or consent of instructor.

HEAL 2600 Integration of Health Determinants of Individuals Cr.Hrs.3 Students study, integrate and apply the determinants that affect the health of individuals throughout the life span to selected case or learning scenarios. The case or learning scenarios present a variety of issues in the delivery of health-related services that are intended to benefit individual health. *Prerequisites:* All courses required in the first year in University 1 for the Curriculum for Interdisciplinary Health or consent of instructor.

HEAL 3600 Integration of Health Determinants for Communities Cr.Hrs.3 Students study, integrate and use community level determinants of population health in selected case or learning scenarios. These cases present a variety of issues in the design of health related services that are intended to benefit population health. *Prerequisites:* HEAL 2600 and 54 credit hours in the Curriculum for Interdisciplinary Health or consent of instructor.

HEAL 4600 Integration of Health Determinants for Canada and World Cr.Hrs.3 Students use selected case or learning scenarios to study the determinants of population health that depend on decision making in governmental or international agencies. The case scenarios present a variety of issues in the governance and management of population health. *Prerequisites:* HEAL 3600 and 84 credit hours in the Curriculum for Interdisciplinary Health or consent of instructor.

HEAL 4610 Health Studies Capstone Cr.Hrs.3 Students will explore selected topics from the social sciences to synthesize and evaluate actions that can affect the health of people. The course summarizes the social sciences knowledge that forms the basis for all health related professional work. *Prerequisite:* HEAL 3600 and 84 credit hours in the Curriculum for Interdisciplinary Health or consent of instructor.

HEAL 4620 Health Sciences Capstone Cr.Hrs.3 Students will explore selected topics from the biological sciences to synthesize and evaluate actions that can affect the health of people. The course summarizes the biological science knowledge that forms the basis for all health related professional work. *Prerequisite:* HEAL 3600 and 84 credit hours in the Curriculum for Interdisciplinary Health or consent of instructor.

HMEC 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 (028.203W) and 028.103 and 028.204.

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 (028.203W or 028.103W)] and STAT 1000 (005.100)M.

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 (028.265) or SWRK 2650 (047.265) or REC 2650 (123.265).

HMEC 3100 Communication for Professional Practice Cr.Hrs.3 (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 (028.310) and 028.204. *Prerequisites:* 54 credit hours in the Human Ecology program and HMEC 2030 (028.203W 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 program and consent of instructor.

HNSC 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 030.119.

HNSC 1210 Nutrition for Health and Changing Lifestyles Cr.Hrs.3 HNSC 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 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 030.304. *Prerequisite:* HNSC 1210 (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:* A grade of C or higher in [CHEM 2770 or MBO 2770 (002.277 or 060.277) or

CHEM 2360 or MBIO 2360 (002.236 or 060.236)] and [HNSC 1210 (030.121) and HNSC 1200 (030.120)] or [FOOD 2500 (078.250)]. 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 (030.120) and HNSC 1210 (030.121) and [CHEM 1320 or CHEM 1310 (002.132 or 002.131)].

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 (030.120) and [CHEM 1320 or CHEM 1310 (002.132 or 002.131)]. Not to be held with 030.211 or 030.324.

HNSC 3260 Food Quality Evaluation Cr.Hrs.3 (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 (030.216) or FOOD 3010 (078.301)] and STAT 2000 (005.200).

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 MBIO 2780 (002.278 or 060.278) or CHEM 2370 or MBIO 2370 (002.237 or 060.237)] and [HNSC 2140 (030.214) and ZOOL 1330 (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 MBIO 2780 (002.278 or 060.278) or CHEM 2370 or MBIO 2370 (002.237 or 060.237)] and [HNSC 2140 (030.214) and ZOOL 1330 (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 (017.120) and HNSC 2130 (030.213) and HNSC 2140 (030.214) and HNSC 2160 (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 MBIO 2780 (002.278 or 060.278) or CHEM 2370 or MBIO 2370 (002.237 or 060.237) and HNSC 2150 (030.215)] or [CHEM 2220 (002.222) and FOOD 2500 (078.250)].

HNSC 3342 Management for Food and Nutrition Professionals Cr.Hrs.3 Management strategies and cost control principles as applied to food and nutrition organizations. Topics include leadership, organizational design, teamwork, human resource management, performance improvement, cost management, and the interpretation of financial statements. Not to be held with HNSC 3340 (030.334). *Prerequisites:* HNSC 1200 (030.120) and [MGMT 2030 (027.203) or MGMT 2070 (027.207) or MGMT 2080 (027.208)].

HNSC 3350 Culture and Food Patterns Cr.Hrs.3 (Lab Required) A study of the cultural, sociological and psychological aspects of food patterns and behaviour. Not to be held with 030.329. *Prerequisites:* [PSYC 1200 (017.120) or SOC 1200 (077.120)] and HNSC 1200 (030.120) and HNSC 1210 (030.121).

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. Enrolment 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 HNSC 3342 (030.334) and HNSC 2160 (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 (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)(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 (030.216) or FOOD 3010 (078.301) or ENTM 3240 (038.324)] and STAT 2000 (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 (118.221) and STAT 2000 (005.200) and [one of FOOD 3010 (078.301) or HNSC 3330 (030.333)]. Not to be held with FOOD 4510 (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 (028.205) and HNSC 2130 (030.213) and HNSC 2150 (030.215) and STAT 2000 (005.200).

HNSC 4300 Community Nutrition Intervention Cr.Hrs.3 (Formerly 030.430) Principles of planning and evaluating nutrition related interventions. Examples of community needs assessments, program planning strategies and types of program evaluation will be examined. Not to be held with 030.411. *Prerequisite:* HNSC 3320 (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 3310 (030.331) and HNSC 3320 (030.332). *Prerequisite* or corequisite: HNSC 3300 (030.330). Offered in alternate years, opposite HNSC 4340.

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. *Prerequisite* or corequisite: HNSC 3300 (030.330) and HNSC 3310 (030.331) and HNSC 3320 (030.332). Not to be held with 030.423 or 030.424.

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 3310 (030.331) and HNSC 3320 (030.332). *Prerequisite* or corequisite: HNSC 3300 (030.330). Offered in alternate years opposite HNSC 4310.

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:* HNSC 1210 (030.121) and PHED 3430 (057.343) or ZOOL 1330 (022.133).

HNSC 4362 Nutrition Option Practicum Cr.Hrs.6 Practical applications of nutrition principles in a variety of public service and research applications. *Prerequisites:* completion of 84 credit hours in the Human Nutritional Sciences program with two of the following courses: HNSC 3300, HNSC 3310, HNSC 3320, and HNSC 3330. Application to the department is required. Limited enrolment.

HNSC 4364 Foods Industry 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 Food Industry Option including HNSC 3260, HNSC 3330, FOOD 4150 and one of MGMT 2030, MGMT 2070 or MGMT 2080. Application to department is 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 MBIO 2770 (002.277 or 060.277) or CHEM 2360 or MBIO 2360 (002.236 or 060.236)]. Not to be held with FOOD 4540 (078.454).

TXSC 1600 Textiles for Living Cr.Hrs.3 (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 064.102.

TXSC 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.

TXSC 2250 Cr.Hrs.3 (Formerly 064.225) Communicating textile product design through sketching. *Prerequisites:* TXSC 1600 (or 064.102) and TXSC 2230 (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. (Formerly 064.242) Development and diffusion of textile fibres, fabrics, and finishes from prehistoric times to present. May not hold with 064.332.

TXSC 2500 Preparation for Product Development Cr.Hrs.1 Designed for students with little or no background in textile product assembly or for students who require a refresher course. This course provides an orientation to textile product assembly equipment, construction, techniques, and terminology. Students who do not meet the minimum standard in a placement test must pass this course before they will be permitted to register in TXSC 3650. For Textile Sciences students only. NOTE: The credit associated with this course will not be counted toward the minimum credit hour requirements of the Textile Sciences degree. (Pass/fail grade).

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:* [064.102] or [a minimum grade of C in TXSC 1600 (064.160) and TXSC 1610 (064.161) and 3 credit hours of 100-level chemistry].

TXSC 2610 Textiles for Non Apparel End Uses Cr.Hrs.3 (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:* [064.102] or [a minimum grade

of C in TXSC 1600 (064.160) and TXSC 1610 (064.161) and 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 (064.260) or TXSC 2610 (064.261). Not to be held with MKTG 3230 (118.323).

TXSC 2630 Pattern Development in an Industrial Environment Cr.Hrs.3 (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 (064.260). Not to be held with the former 064.348.

TXSC 3220 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 3470 Cr.Hrs.3 TXSC 3470 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 3500 Textiles for the Healthcare Sector Cr.Hrs.3 (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. Not to be held with TXSC 3470 (064.347) offered from September 2004 to September 2007. *Prerequisite:* TXSC 2610 (064.261) and [HMEC 2050 (028.205) or any 2000-level or 3000-level research method course] and CHEM 2220 (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 (064.262) and [ECON 1200 (018.120) or ECON 1210 (018.121) and ECON 1220 (018.122)] and HMEC 2050 (028.205). Not to be held with the former 064.340.

TXSC 3610 Product Standards and Specifications Cr.Hrs.3 (Formerly 064.361) Challenge students to apply their knowledge and skills gained in TXSC 2600, TXSC 2610 and TXSC 2620 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 (064.362) and HMEC 2050 (028.205). Not to be held with 064.220 or 064.221 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 (064.260) and TXSC 2610 (064.261). Not to be held with the former 064.220 or 064.221 or 064.337.

TXSC 3630 Line Planning and Visual Communication Cr.Hrs.3 (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 (064.263). Not to be held with the former 064.225.

TXSC 3640 Pattern Development in a Computer Aided Design Environment Cr.Hrs.3 (Formerly 064.364) This course is a continuation of TXSC 2630. It covers advanced pattern manipulations using an industrial computer aided design system. *Prerequisite:* TXSC 2630 (064.263). Not to be held with 064.349.

TXSC 3650 Production of Textile Products Cr.Hrs.3 (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 3630 and TXSC 3640 and HMEC 2050 (028.205) and consent of instructor. Not to be held with 064.224 and 064.342. Consent will be based on students' performance on a placement test. Students who do not meet the minimum standard set by the Textile Sciences Department will be required to enroll in and pass TXSC 2500.

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 Cr.Hrs.3 (Formerly 064.426) Application of marketing in the textile industries. *Prerequisites:* 064.340 and MKTG 2210 (118.221).

TXSC 4310 Cr.Hrs.3 (Formerly 064.431) Supervised practical experience in the clothing and textile field in an appropriate off-campus 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 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 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 Textiles program and consent of department head.

Prerequisite: completed 84 credit hours in the Clothing and Textiles program and consent of department head.

TXSC 4500 Advanced Textiles for the Healthcare Sector Cr.Hrs.3 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. Not to be held with TXSC 3470 (064.347) offered from September 2004 to September 2007. *Prerequisites:* 57 credit hours including [TXSC 2600 (064.260) and TXSC 2610 (064.261) and TXSC 3620 (064.362) and TXSC 3500 (064.350) with a minimum grade of C] and CHEM 2220 (002.222) and HMEC 2050 (028.205).

TXSC 4600 The Information Age and the Textiles Supply Chain Cr.Hrs.3 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. Not to be held with 064.347 offered from September 2004 to September 2007/2008.

TXSC 4610 Integrative Project Cr.Hrs.6 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 or TXSC 4340 (064.434).

TXSC 4620 Colour Management Cr.Hrs.3 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 (064.361) and HMEC 2050 (028.205). Not to be held with the former 064.339 or 064.430.

TXSC 4630 Quality Assurance Systems Cr.Hrs.3 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 and TXSC 4620. Not to be held with 064.220 or 064.221 or 064.337.

FACULTY OF KINESIOLOGY AND RECREATION MANAGEMENT -----

KIN 2320 Human Anatomy Cr.Hrs.3 Structure of the skeletal, articular, and muscular systems of the human body. May not be held for credit with PHED 2320 (057.232), REHB 1480 (068.148), REHB 1490 (068.149), or REHB 1500 (068.150). *Prerequisite:* BIOL 1020 and BIOL 1030 (C) or BIOL 1000 and BIOL 1010 (C+), or the former 071.125 (C) (or equivalent).

KIN 2330 Biomechanics Cr.Hrs.3 The mechanical and anatomical analysis of human movement. May not hold for credit with PHED 2330 or PHED 2310 (057.231). *Prerequisite:* PHED 2320 (057.232) or KIN 2320 (or equivalent).

KIN 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 PHED 2610 (057.261) or NURS 2610 (049.261).

KIN 2740 Fitness Theory and Practice Cr.Hrs.3 Integrates theory and practice necessary to design and lead safe and effective group fitness programs, following performance standards established by the National Fitness Leadership Alliance. Introduces students to Manitoba Curriculum Student Learning Outcomes in "Fitness Management," and prepares them for Manitoba Fitness Council Theory and Group Fitness Specialty exams. May not be held for credit with PHED 1640 (057.164) or PHED 2640 (057.264) or PHED 2630 (057.263) or PHED 2730. *Prerequisites:* PHED 2320 (057.232) or KIN 2320.

KIN 2750 Athletic Therapy Skills Cr.Hrs.3 This course will focus upon the theoretical and practical application of massage therapy (basic and advanced) and sport specific taping, splinting and bracing techniques. The intent of this course is to help prepare students for the profession of athletic therapy. May not be held for credit with the former PHED 2020 (057.202) or PHED 3180 (057.318). Open to AT students only.

KIN 2910 Athletic Therapy Practicum Cr.Hrs.6 To provide clinical and on-field internship experiences on campus and in the community for prospective Athletic Therapy candidates. May not be held for credit with PHED 2910 (057.291). Open to AT students only.

KIN 3090 Principles of Fitness Training Cr.Hrs.3 Theoretical concepts of designing programs employing the principles of overload and adaptation for all components of fitness for all age groups. May not hold with PHED 3090 (057.309). *Prerequisite:* PHED 3430 (057.343) or KIN 3470 or PHED 3470.

KIN 3160 Pathology and Sport Medicine Cr.Hrs.3 Analysis of types of injuries and emergency procedures, and practical experience in first aid, taping and wrapping, massage, and various preventive techniques. May not be held for credit with PHED 3160 or PHED 3060 (057.306). *Prerequisite:* PHED 2320 (057.232) or KIN 2320 or

equivalent.

KIN 3170 Canadian Sport History Cr.Hrs.3 This 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. May not be held for credit with PHED 3170 or PHED 3070 (057.307).

KIN 3200 Basic Trauma and Emergency Support Cr.Hrs.3 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. Open only to Athletic Therapy students or with permission of the instructor. May not hold for credit with PHED 3200 (057.320).

KIN 3300 Functional Assessment and Restoration Cr.Hrs.6 Assessment of acute and chronic musculo-skeletal injuries and rehabilitation techniques to ensure full restoration of function. Open only to Athletic Therapy students. May not hold for credit with PHED 3300 (057.330). *Prerequisite:* [KIN 2320 or PHED 2320 (057.232)].

KIN 3320 Advanced Human Anatomy Cr.Hrs.3 This course will concentrate on the structure and function of the human body's various tissues, organs and systems with particular emphasis upon basic histology, function and gross anatomy. This course will help prepare students who are interested in pursuing careers in Athletic Therapy and Kinesiology. *Prerequisites:* [KIN 2320 or PHED 2320 (057.232) (C)]. This course includes a laboratory.

KIN 3340 Philosophy of Physical Activity and Leisure Cr.Hrs.3 Issues in sport, physical education and recreation will be examined from a philosophical perspective. May not be held for credit with REC 3340 or PHED 2340 (057.234). *Prerequisite:* [PERS 2100 (C)].

KIN 3450 Motor Learning Cr.Hrs.3 Principles underlying human motor performance and motor skill learning. May not hold for credit with PHED 3450 (057.345). *Prerequisites:* [ZOO 1330 (022.133) or ZOO 2540 (022.254)].

KIN 3470 Exercise Physiology Cr.Hrs.3 Physiological and functional responses to acute and chronic exercise, focusing on the cardiovascular, respiratory and neuromuscular systems. May not be held for credit with PHED 3470 or PHED 3430 (057.343). *Prerequisite:* [ZOO 2540 (D)].

KIN 3830 Wilderness Leadership Cr.Hrs.3 Theoretical aspects of trip planning and administration; leadership development. May not hold for credit with PHED 3830 (057.383) or REC 3830.

KIN 4060 Drugs and Ergogenic Aids in Sport Cr.Hrs.3 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. May not hold for credit with PHED 4060 (057.406). ZOO 1330 or ZOO 2540 are strongly recommended *prerequisites*.

KIN 4160 Advanced Pathology and Sport Medicine Cr.Hrs.3 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. May not be held for credit with PHED 4050 (057.405). *Prerequisite:* [KIN 3160 or PHED 3060 (057.306) (C)].

KIN 4300 Health and Wellness Practices in Athletic Therapy Cr.Hrs.3 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 PHED 4300 (057.430).

KIN 4330 Advanced Biomechanics Cr.Hrs.3 A biomechanical analysis of the skills and techniques of the major sports, games, and exercises. May not be held for credit with PHED 4360 (057.436). *Prerequisite:* [KIN 2330 or PHED 2330 or PHED 2310 (057.231) (C)].

KIN 4460 Fitness Appraisal and Lifestyle Counselling Cr.Hrs.3 Theoretical knowledge and practical training related to physical activity, fitness and lifestyle appraisal and counselling. May not be held for credit with PHED 4460 (057.446). Note: Prepares students to certify as "Certified Fitness Consultants." 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. *Prerequisite:* [KIN 3470 or PHED 3430 (057.343) (C)]. *Prerequisite or Corequisite:* [PERS 1200 or PHED 1200 (057.120) and KIN 3090 or PHED 3090 (057.309)].

KIN 4470 Advanced Exercise Physiology Cr.Hrs.3 An advanced examination of the physiological factors that affect human performance during physical activity. This will include exposure to related research and the development of techniques for its critical assessment. May not hold for credit with PHED 4410 or 057.441. *Prerequisites:* [KIN 3320 or PHED 3430 (057.343) (C)].

KIN 4500 Physical Activity and Aging Cr.Hrs.3 The study of the aging processes and the effects of exercise and lifestyle factors on the health and fitness of the aging adult. May not be held for credit with PHED 4500 (057.450). *Prerequisite:* [KIN 3090 or PHED 3090 (C) or permission of the instructor].

KIN 4560 Advanced Fitness Appraisal and Lifestyle Counselling Cr.Hrs.3 Advanced theoretical knowledge and experiential learning related to physical activity, fitness and lifestyle assessment, counselling, and exercise prescription for apparently healthy and clinical populations. Prepares students for Canadian Society of Exercise Physiology "Certified Exercise Physiologist" (CSEP-CEP) exams. *Prerequisites:* [KIN 4460 or PHED 4460 (057.446) (C)] and [KIN 3740 or PHED 3740 or PHED 2620 (057.262) (C)] and [KIN 3090 or PHED 3090 (057.309) (C)].

KIN 4620 Supervised Fieldwork Experience Cr.Hrs.12 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. May not hold for credit with PHED 4620 (057.462). (To be deleted in 2009-2010).

PERS 1200 Physical Activity, Health and Wellness Cr.Hrs.3 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. May not be held for credit with PHED 1200 (057.120).

PERS 1300 Introduction to Leisure Travel Cr.Hrs.3 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. May not be held for credit with REC 1200 (123.120).

PERS 1400 Concepts of Recreation and Leisure Cr.Hrs.3 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. May not be held for credit with REC 1400 (123.140).

PERS 1500 Foundations of Physical Education and Kinesiology Cr.Hrs.3 An introduction to physical education and kinesiology 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 PHED 1500 (057.150).

PERS 2100 Introduction to Professional Practice Cr.Hrs.3 An introduction to professional values and behaviours in the broad fields related to kinesiology, physical education, and recreation management including accountability, commitment, ethical decision making, interpersonal communication, respect for diversity, and service. *Prerequisites:* [PERS 1200 or PHED 1200 (057.120) or PERS 1500 or PHED 1500 (057.150)] and [PERS 1400 or REC 1400 (123.140) (C)].

PERS 2200 Program Planning Principles Cr.Hrs.3 While contexts in practice may vary, program planning is an essential competency for all professionals in recreation, kinesiology, and physical education. To ensure the requisite skill set is acquired, the emphasis in this course will be on principles and processes in effective program planning, implementation, and evaluation. May not hold for credit with PHED 3080 (057.308) or REC 2530 (123.253). *Prerequisites:* [PERS 1200 or PHED 1200 (057.120) or PERS 1500 or PHED 1500 (057.150)] and [PERS 1400 or REC 1400 (123.140) (C)].

PERS 4200 Special Topics Cr.Hrs.3 A theoretical and practical examination of selected topics in the fields of recreation, leisure and kinesiology. Topics will vary depending on faculty expertise and student need. *Prerequisites:* [PERS 1400 or REC 1400 (123.140) or PERS 1500 or PHED 1500 (057.150) or PERS 1200 or PHED 1200] and departmental approval.

PERS 4600 Directed Studies Cr.Hrs.3 Completion of an independent study or fieldwork experience, including a major written submission, approved by the department and under the direction of a faculty member.

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. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 1380 Track and Field 1 Cr.Hrs.2 (Formerly 057.138) An introduction to the basics of sprinting, jumping, throwing, and distance events. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 2320 Human Anatomy Cr.Hrs.3 (Formerly 057.232) Structure of the skeletal, articular, and muscular systems of the human body. *Prerequisites:* [ZOO 1320 and ZOO 1330 (C) or BIOL 1020 and BIOL 1030 (C) or (071.125) (C) or equivalent]. May not be held for credit with REHB 1480 (068.148), REHB 1490 (068.149), or REHB 1500 (068.150).

PHED 2330 Biomechanics Cr.Hrs.3 The mechanical and anatomical analysis of human movement. May not hold for credit with KIN 2330, PHED 2310 (057.231). *Prerequisite:* PHED 2320 (057.232) or KIN 2320 (C) or equivalent.

PHED 2420 Soccer 1 Cr.Hrs.1 (Formerly 057.242) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 2430 Basketball 1 Cr.Hrs.1 (Formerly 057.243) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 2440 Football 1 Cr.Hrs.1 (Formerly 057.244) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 2460 Volleyball 1 Cr.Hrs.1 (Formerly 057.246) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 2500 Skating Cr.Hrs.1 (Formerly 057.250) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 2520 Hockey 1 Cr.Hrs.1 (Formerly 057.252) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

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 KIN 2610 (057.261) or NURS 2610 (049.261).

PHED 2620 Resistance Training Cr.Hrs.1 (Formerly 057.262) Designing and teaching effective resistance training programs. *Prerequisite:* [PHED 2320 (057.232) (C) or

equivalent]. Pre- or Co-requisite: [PHED 2310 (057.231) (C). Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 2710 Human Movement Principles Cr.Hrs.3 An introduction to the principles of inclusive physical education through the integration of theory, practice and guided reflection pertaining to the development of fundamental movement skills and strategies applied to educational games, gymnastics, and dance. May not hold for credit with PHED 1420 (057.142).

PHED 2720 Developmental Games and Activities Cr.Hrs.3 Practical and theoretical aspects of designing educational game experiences applicable to early through senior years physical education, to include the design, implementation, and assessment of safe and inclusive physical activities as well as planning, organizational and teaching strategies. Introduces students to Manitoba Curriculum Student Learning Outcomes in "Movement, Safety, Personal and Social Management." May not hold for credit with PHED 2650 (057.265).

PHED 2730 Gymnastics, Dance and Rhythmic Activities Cr.Hrs.3 Practical and theoretical aspects of designing gymnastics, dance and rhythmic activity experiences applicable to early through senior years physical education, to include the design, implementation, and assessment of safe and inclusive physical activities as well as planning, organizational and teaching strategies. Incorporates Manitoba Curriculum Student Learning Outcomes in "Movement" and "Safety". May not hold for credit with PHED 3120 (057.312) or PHED 3410 (057.341) or PHED 3140 (057.314) or PHED 3100 (057.310).

PHED 2740 Fitness Theory and Practice Cr.Hrs.3 Integrates theory and practice necessary to design and lead safe and effective group fitness programs, following performance standards established by the national Fitness Leadership Alliance. Introduces students to Manitoba Curriculum Student Learning Outcomes in "Fitness Management," and prepares them for Manitoba Fitness Council Theory and Group Fitness Specialty exams. May not be held for credit with PHED 1640 (057.164) or PHED 2640 (057.264) or PHED 2630 (057.263) or KIN 2740. *Prerequisites:* [PHED 2320 (057.232) or KIN 2320 (C)].

PHED 3040 Racquet Court Sports Cr.Hrs.1 (Formerly 057.304) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3050 Principles of Coaching Cr.Hrs.3 (Formerly 057.305) Philosophical and psychological components pertinent to coaching of sports. (To be deleted in 2008-2009).

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. May not hold for credit with KIN 3090. *Prerequisite:* [PHED 3470 or PHED 3430 (057.343) (C)].

PHED 3100 Design and Assessment of Physical Activities Cr.Hrs.3 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 1420 (057.142) (C) or PHED 1410 (057.141) (C)]. *Co-requisite:* PHED 2650 (057.265) (for Early and Middle Years students only). May not be held with 057.257. (To be deleted in 2008-2009).

PHED 3150 Outdoor Activities Cr.Hrs.1 (Formerly 057.315) May not be held for credit with 057.439. A fieldwork fee is attached to the course. Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2009-2010).

PHED 3160 Pathology and Sport Medicine Cr.Hrs.3 Analysis of types of injuries and emergency procedures, and practical experience in first aid, taping and wrapping, massage, and various preventive techniques. May not be held for credit with KIN 3160 or PHED 3060 (057.306). *Prerequisite:* [PHED 2320 (057.232) or KIN 2320 (C)].

PHED 3170 Canadian Sport History Cr.Hrs.3 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. May not be held for credit with KIN 3170 or PHED 3070 (057.307).

PHED 3390 Adapted Physical Education Cr.Hrs.3 (Formerly 057.339) Various adaptations of physical education for exceptional individuals. May not be held for credit with REC 3060 (123.306). *Prerequisites:* [completion of 59 credit hours of coursework]. (To be deleted in 2008-2009).

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. (To be deleted in 2008-2009).

PHED 3450 Motor Learning Cr.Hrs.3 (Formerly 057.345) Psychological components of human movement; human motor behaviour and the acquisition of motor skills. May not be held for credit with KIN 3450 or 057.345. *Prerequisites:* [ZOO 1330 (022.133) or ZOO 2540 (022.254)].

PHED 3460 Sociology of Sport Cr.Hrs.3 (Formerly 057.346) Sociological factors related to physical education and sport. (To be deleted in 2008-2009).

PHED 3470 Exercise Physiology Cr.Hrs.3 Physiological and functional responses to acute and chronic exercise, focusing on the cardiovascular, respiratory and neuromuscular systems. May not be held for credit with KIN 3470 or PHED 3430 (057.343). *Prerequisites:* [ZOO 1330 (022.133) or ZOO 2540 (022.254)].

PHED 3510 Track and Field 2 Cr.Hrs.1 (Formerly 057.351) *Prerequisite:* PHED 1380 (057.138). Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3540 Basketball 2 Cr.Hrs.1 (Formerly 057.354) *Prerequisite:* PHED 2430 (057.243). Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3560 Hockey 2 Cr.Hrs.1 (Formerly 057.356) *Prerequisite:* PHED 2520 (057.252). Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in

2008-2009).

PHED 3570 Soccer 2 Cr.Hrs.1 (Formerly 057.357) *Prerequisite:* PHED 2420 (057.242). Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3580 Volleyball 2 Cr.Hrs.1 (Formerly 057.358) *Prerequisite:* PHED 2460 (057.246). Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3610 Tennis Cr.Hrs.1 (Formerly 057.361) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3620 Badminton Cr.Hrs.1 (Formerly 057.362) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3650 Golf Cr.Hrs.1 (Formerly 057.365) A fieldwork fee is attached to the course. Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3670 Cross Country Skiing Cr.Hrs.1 (Formerly 057.367) A fieldwork fee is attached to the course. Evaluated pass-fail. (To be deleted in 2009-2010).

PHED 3820 Team Handball Cr.Hrs.1 (Formerly 057.382) Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2008-2009).

PHED 3830 Wilderness Leadership Cr.Hrs.3 (Formerly 057.383) Theoretical aspects of trip planning and administration; leadership development.

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 co-requisite:* [PHED 3830 (057.383) or REC 3090 (123.309) (C)]. (To be deleted in 2009-2010).

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 co-requisite:* [PHED 3830 (057.383) or REC 3090 (123.309) (C)]. Evaluated pass-fail. (To be deleted in 2009-2010).

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 co-requisite:* [PHED 3830 (057.383) or REC 3090 (123.309) (C) or (123.330) (C)]. Evaluated pass-fail. (To be deleted in 2009-2010).

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. (To be deleted in 2008-2009).

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. (To be deleted in 2009-2010).

PHED 3980 Rock Climbing Cr.Hrs.1 (Formerly 057.398) A fieldwork fee is attached to the course. Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2009-2010).

PHED 3990 Rowing Cr.Hrs.1 (Formerly 057.399) A fieldwork fee is attached to the course. Evaluated pass-fail. Requires a paid facility use pass. (To be deleted in 2009-2010).

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. (To be deleted in 2009-2010).

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. (To be deleted in 2008-2009).

REC 2400 Management and Marketing of Leisure Services Cr.Hrs.3 Basic management, and marketing principles and practices and their applicability to delivery of leisure services. Topics include financial resources, budgeting, people-centred management, and marketing. May not hold for credit with REC 3860 (123.386) or REC 3870 (123.387). *Prerequisites:* PERS 1400 or REC 1400 (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 (123.253) (C)]. (To be deleted in 2008-2009).

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 (051.265) or HMEC 2650 (028.265) or SWRK 2650 (047.265).

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:* [PERS 1400 or REC 1400 (123.140) (C)]. (To be deleted in 2008-2009).

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. (To be deleted in 2009-2010).

REC 3080 Supervised Fieldwork Experience Cr.Hrs.12 (Formerly 123.308) Super-

vised 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 (123.307) (C) and successful completion of 70% of the core curriculum in Recreation Management and Community Development]. Evaluated pass-fail. (To be deleted in 2009-2010).

REC 3090 Sustainable Nature-Based Tourism 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. May not be held with 123.330. *Prerequisite:* [PERS 1300 or REC 1200 (123.120) (C)] and [PERS 1400 or REC 1400 (123.140) (C)].

REC 3340 Philosophy of Physical Activity and Leisure Cr.Hrs.3 Issues in sport, physical education and recreation will be examined from a philosophical perspective. May not be held for credit with KIN 3340 or PHED 2340 (057.234). *Prerequisite:* [PERS 2100 (C)].

REC 3830 Wilderness Leadership Cr.Hrs.3 Theoretical aspects of trip planning and administration; leadership development. May not hold for credit with PHED 3830 (057.383) or KIN 3830.

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:* [PERS 1400 or REC 1400 (123.140) (C)].

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:* [PERS 1400 or REC 1400 (123.140) (C)]. (To be deleted in 2008-2009).

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:* [PERS 1400 or REC 1400 (123.140) (C)] and [REC 3060 (123.306) (C)].

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. May not be held for credit with 123.404. *Prerequisites:* [Must have completed 70 percent of the core courses in Recreation Management and Community Development].

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. May not be held for credit with 123.430. *Prerequisites:* [REC 3090 (123.309) or (123.330) (C)].

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 (123.201) (C)] and [PERS 1300 or REC 1200 (123.120) (C)].

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 (118.221) (D) and REC 3860 (123.386) (C)].

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 (123.306) (C)].

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:* [PERS 1400 or REC 1400 (123.140) (C) or PERS 1500 or PHED 1500 (057.150) (C)].

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:* [PERS 1400 or REC 1400 (123.140) (C)].

REC 4250 Leisure and Aging Cr.Hrs.3 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. May not be held for credit with REC 4130 (123.413). *Prerequisite:* [PERS 3100 or REC 3060 (123.306) (C)].

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 (123.386) (C)].

REC 4350 Parks and Protected Areas Planning and Management: Field Studies Cr.Hrs.6 The course is taught in two segments, an on-campus component and field study component taking place in Banff National Park. The on-campus component examines the historical development of the concept of parks and protected areas, the role of interpretation, management and research in the parks and emerging issues in

the management of parks and protected areas. In addition, during the on-campus component planning for the field will take place. The field segment will focus on a wide variety of management issues with particular attention to Banff National Park. Emerging issues and trends will be examined and past management responses evaluated. There will be opportunities for students to investigate specific management issues of interest to them and to participate in current research being conducted in the park. *Prerequisite:* [Written permission of the instructor required]. Offered with GEOG 4350.

REC 4850 Advanced Planning of Recreation Areas and Facilities Cr.Hrs.3 Advanced planning considerations with opportunity for application of planning process theories. May not be held for credit with REC 4340 (123.434). *Prerequisite:* [REC 3850 (123.385) (C)].

FACULTY OF LAW

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. This course is graded pass/fail.

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 transportation 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 3162 Topics in Conflict Resolution Cr.Hrs.2 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. May not be held with the former LAW 3160 (045.316).

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 Current Legal Problems C Cr.Hrs.2 (Formerly 045.324) Critical and constructive study, at an advanced level, of a significant major subject or set of topics. Grading: Pass/Fail.

LAW 3250 Current Legal Problems D Cr.Hrs.3 (Formerly 045.325) Critical and constructive study, at an advanced level, of a significant major subject or set of topics. 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 3822 Scholarly Publications Cr.Hrs.2 Senior editors of scholarly publications

approved by the Academic Affairs Committee who successfully complete their terms of office and any writing requirements. 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 Current Legal Problems A Cr.Hrs.2 (Formerly 045.397) Critical and constructive study, at an advanced level, of a significant major subject or set of topics.

LAW 3980 Current Legal Problems B Cr.Hrs.3 (Formerly 045.398) Critical and constructive study, at an advanced level, of a significant major subject or set of topics.

FACULTY OF MANAGEMENT,

I.H. Asper School of Business -----

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. Not offered every year. *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 ACC 1111 (or 009.111) and MIS 2000 or MIS 2001 (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).

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 MATH 1701 (or 136.170) (B) or MATH 1710 (or 136.171) (B). *Corequisites:* (MATH 2750 or MATH 2720 or MATH 2730) and (STAT 2000 or 2001).

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 MATH 2730) and (STAT 2000 or STAT 2001); 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:* 136.150, 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:* 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:* 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).

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 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 3102 Technological Entrepreneurship Cr.Hrs.3 An overview of the inter-relationship between technology and entrepreneurship. An appreciation of the role of technical entrepreneurship in the economy, how a technology strategy is developed, implemented and defended as well as the societal implications of technological entrepreneurship. *Prerequisite:* MKT 2210.

ENTR 3104 Selected Topics in Small Business/Entrepreneurship Cr.Hrs.3 A study of selected areas of recent development related to small business/entrepreneurship. Topics may include innovation and creativity, venture financing, opportunity identification and recognition, franchising and entry strategies of new business. *Prerequisite:* MKT 2210 (118.221) (D) and [GMGT 2030 (027.203) (D) or GMGT 2080 (027.208) (D)].

ENTR 3106 Family Business Management Cr.Hrs.3 An examination of the unique challenges inherent in the management of a family business. Topics include founder relinquishment, the need for succession planning and firm regeneration, the core actors and their issues, ownership structure and estate planning. *Prerequisite:* GMGT 2030 (027.203) (D) or GMGT 2080 (027.208) (D).

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).

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 3451 Finance Internationale Cr.Hrs.3 (Ancien 009.345) Introduction à l'étude des aspects internationaux du financement d'une compagnie et des marchés internationaux de capitaux. *Préalable:* FIN 2201 (ancien 009.220) avec une note minimale de 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).

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.

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).

GMGT 2034 Introduction to Business 1 Cr.Hrs.3 Inter University Services course.

GMGT 2036 Introduction to Business 2 Cr.Hrs.3 Inter-University Services course.

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.

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 gram-

maticales, 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 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 3560 (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 Ethique 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 4121 Commerce International Cr.Hrs.3 (Ancien 027.412) Étude des échanges internationaux à travers les politiques économiques internationales, les ententes régionales, les tarifs commerciaux, les institutions internationales et le financement des échanges.

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 4151 Gestion des organisations sans but lucratif Cr.Hrs.3 (Ancien 027.415) Description et analyse de la dynamique des organismes sans but lucratif (OSBL) : leur environnement spécifique, leur fonctionnement interne et leurs modes d'intervention dans la communauté. Approfondissement de la compréhension de la spécificité du secteur tertiaire, ce qui rend apte à y intervenir efficacement soit en tant que gestionnaires, soit en tant que bénévoles. *Préalables :* les GMGT 2081 (ancien 027.208) et GMGT 2071 (ancien 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 plan-

ification 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 juridiques 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 4521 Relations industrielles et gestion des ressources humaines Cr.Hrs.3 (Ancien 027.452) Perspective internationale des relations industrielles (RI) et de la gestion des ressources humaines (GRH) par l'analyse et l'étude comparée des systèmes de relations industrielles et des pratiques de gestion des ressources humaines dans certains pays ainsi que des développements actuels. Théories et questions pertinentes à cette matière. *Préalable* recommandé mais non obligatoire : le HRIR 3451 (ancien 027.345) ou l'ancien 027.341.

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).

IDM 2980 Work Term 1 Cr.Hrs. Work assignment in business, industry, or government for students registered in the Asper School of Business Cooperative option. Requires submissions of a written report covering the work completed during the four-month professional assignment. (Pass/Fail).

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 3980 Work Term 2 Cr.Hrs. Work assignment in business, industry, or government for students registered in the Asper School of Business Cooperative option. Re-

quires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail).

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.

IDM 4980 Work Term 3 Cr.Hrs.0 Work assignment in business, industry, or government for students registered in the Asper School of Business Cooperative option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grading).

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).

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 or 074.100) 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 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: MIS 3500 (or 009.350), MIS 3510 (or 009.351), MIS 3520 (or 009.352), ACC 3530 (or 009.353), MIS 4250 (or 009.425).

MKT 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 3221 Recherche en marketing Cr.Hrs.3 (Ancien 118.322) Étude de la recherche en marketing comme outil fondamental de la prise de décision. Utilisation d'un logiciel dans l'analyse statistique des données. Préalables : le MKT 2211 (ancien 118.221) et le STAT 1001 (ancien 005.100).

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 Communications 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:* MKT 2210 (or 118.221) and either MKT 3220 (or 118.322) or MKT 3230 (or 118.323) *Corequisite:* either MKT 3220 (or 118.322) or MKT 3230 (or 118.323) (whichever not yet taken) Take in final year only.

MKT 4211 Gestion du marketing Cr.Hrs.3 (Ancien 118.421) Étude des marchés et des techniques utilisées par les entreprises pour influencer la demande de leurs produits et services. Impact de cette influence sur les marchés, le milieu des affaires et la société. Ce cours ne sera suivi qu'à la dernière année du programme. *Préalable :* MKT 2211 (ancien 118.221). et deux autres cours de marketing.

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.

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 MATH 1301) or equivalent and MATH 1520 (or 136.152) or MATH 1500 (or 136.150) or equivalent. *Corequisites:* STAT 1000 (or STAT 1001) or equivalent and COMP 1260 (or COMP 1261). 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 in-

cluent 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 sujets 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.

MSCI 5010 Mathematics for Management Cr.Hrs.3 (Formerly 164.501) A remedial course in linear and matrix algebra and calculus; with applications to elementary management problems. Note: this course will not be included in the calculation of the Grade Point Average. Pass/Fail. Not to be held with 027.501.

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 ECON 1201 (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 -----

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.

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.

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/V2 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.

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, pass/fail grade.

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.

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.

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.

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.

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.

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, pass/fail grade.

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.

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, pass/fail grade.

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, pass/fail grade.

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, pass/fail grade.

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, pass/fail grade.

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, pass/fail grade.

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, pass/fail grade.

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, pass/fail grade.

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, pass/fail grade.

FACULTY OF MEDICINE

ANAT 1030 Human Anatomy Cr.Hrs.3 (Formerly 080.103) To present the essentials of the organization and structure of the human body. Surface, functional and applied anatomy will be taken into consideration. For Pharmacy students only.

BGEN 3020 Introduction to Human Genetics Cr.Hrs.6 (Formerly 137.302) Principles necessary to understand and study genetically influenced malformations, diseases and variation in individuals and in populations. Two terms. Lectures, tutorials and assignments. Not to be held with the former 080.301 or 125.301.

BGEN 4010 Project Course in Human Genetics Cr.Hrs.6 (Formerly 137.401) 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 supervisor and course coordinator is March 31.

PHAC 2100 Pharmacology Cr.Hrs.6 (Formerly 089.210) General principles of phar-

macology including consideration of the pharmacodynamics of important drugs and control and modification of drug action.

PHAC 4020 Pharmacology Basics Cr.Hrs.6 General mechanism of action of the important groups of drugs and factors which control and modify their effects. Overview of the use and side effects of drugs. Not to be held with the former 089.210.

PHGY 1030 Fundamentals of Medical Physiology Cr.Hrs.6 (Formerly 090.103) The function and regulation of the systems and major organs of the human body as they relate to clinical disorders. For Pharmacy students only.

FACULTY OF MUSIC

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.

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.

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.

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.

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).

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.

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 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 chromat-

ic 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.

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).

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 par-

ticipation.

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 practise 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.

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:* enrollment 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.

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 NURSING

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.

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 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 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.

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.

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.

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 co-requisite with NURS 2180 (or 049.218).

NURS 2180 Clinical Nursing Practice I 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 phenomenon and the development of assessment, communication, teaching/facilitative and basic psychomotor skills. Pre or corequisite: NURS 1280 (or 049.128); NURS 2120 (or 049.212); NURS 2130 (or 049.213); NURS 2140 (or 049.214); NURS 2170 (or 049.217).

NURS 2190 Clinical Nursing Practice II 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 corequisite: NURS 1280 (or 049.128); NURS 2120 (or 049.212); NURS 2130 (or 049.213); NURS 2150 (or 049.215).

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. *Prerequisite:* core courses in the Inter-faculty Option in Aging or permission from the course leader.

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, and adult clients.

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:* ZOOL 1320 (or 022.132) and ZOOL 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. *Prerequisite:* ZOOL 1320 (or 022.132), ZOOL 1330 (or 022.133), NURS 1260 (or 049.126) and NURS 1280 (or 049.128). Pre or corequisite: NURS 2120 (or 049.212).

NURS 2610 Health and Physical Aspects of Aging Cr.Hrs.3 (Formerly 049.261) 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 NURS 2610 (or 049.261) and PHED 2610 (or 057.261). (A required Option in Aging course)

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 STAT 2200 (or 005.220)) prior to NURS 3210 (or 049.321).

NURS 3220 Community Health Nursing I 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 are discussed. MNHW 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 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 PHGY 3240 (or 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 corequisite: NURS 3240 (or 049.324); NURS 3440 (or 049.344) or 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) and NURS 3440 (or 049.344) or 090.324.

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.

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 III 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 corequisite: 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 IV 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 corequisite: NURS 3270 (or 049.327); NURS 3280 (or 049.328); NURS 3310 (or 049.331).

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. Not to be held for credit with the 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 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. MNHW NURS 3220 (or 049.322).

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.

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 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.

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. MNHW NURS 3190 (or 049.319).

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 be held with the former 090.324.

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. Not to be held with the former 049.216.

NURS 4160 Community Health Nursing II 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. Orien-

tation 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). MNHW NURS 4300 (or 049.430).

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 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 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 V 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. *Co-requisites:* 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 4300 Promoting Health of Communities Cr.Hrs.4 (Formerly 049.430) Theoretical and practical application regarding the promotion of health in First Nations Communities. MNHW 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. MNHW 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). *Co-requisites:* NURS 4440 Prevention of Illness and NURS 4420 Health Promotion in the Community.

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. Not to be held with the former 049.217.

FACULTY OF PHARMACY

PHRM 1000 Introduction to Pharmacy Cr.Hrs. (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 life-long 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. 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 therapeutics 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) This 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 one week rotation in a community pharmacy and a one 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 counseling, 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 patient 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 science 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) Toxicology of prescription and non-prescription medications and drugs of abuse. The emphasis is on the study of emergency treatments of the overdosed patient. Forensic aspects of common poisonings and drug overdoses are also discussed.

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) 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 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 SCIENCE

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 (or 071.102), BIOL 1021, BIOL 1030 (or 071.103), BIOL 1031 (or the former 071.125), BIOL 2010 (or 071.201). *Prerequisite:* MATH 40S.

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 071.102) ou BIOL 1021 ou BIOL 1030 (ou 071.103) ou BIOL 1031 ou l'ancien 071.125, BIOL 2010 (ou 071.201). *Préalable:* MATH 40S. Donné seulement au Collège universitaire de Saint-Boniface.

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 1020 (or 071.102) or BIOL 1021 or BIOL 1030 (or 071.103) or BIOL 1031 or the former 071.125, BIOL 2010 (or 071.201). *Prerequisite:* MATH 40S.

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 1020 (ou 071.102) ou BIOL 1021 ou BIOL 1030 (ou 071.103) ou BIOL 1031 ou l'ancien 071.125, BIOL 2010 (ou 071.201). *Préalable:* MATH 40S. Donné seulement au Collège universitaire de Saint-Boniface.

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 1000 or BIOL 1001 (or 071.100), BIOE 2590 (or 034.259), or the former 071.125, or 071.201. *Prerequisite:* MATH 40S. Recommended *prerequisites:* Biology 40S, and one of Chemistry 40S (or 002.090), or Physics 40S (or 016.090).

BIOL 1021 Biologie I: Thèmes et Principes Cr.Hrs.3 (Labo Requis) (Ancien 071.102) Les principes unificateurs à la base de la biologie dont la biologie cellulaire, la bioénergétique, la division cellulaire, la génétique et l'évolution. Reconnu dans un programme de sciences biologiques avec majeure ou spécialisation. Cours et laboratoire. On ne peut se faire créditer le BIOL 1021, le BIOL 1001 ou BIOL 1000 (ancien 071.100), BIOE 3590 ou les anciens 071.125, 034.259, 071.123 et 071.201. *Préalable:* MATH 40S. Prélabes recommandés: Biologie 40S, et un de Chimie 40S (ou

l'ancien 002.090) ou Physique 40S (ou l'ancien 016.090).

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, or 071.201. *Prerequisite:* BIOL 1020 (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.

BIOL 1031 Biologie II: Diversité Biologique, Fonction et Interaction Cr.Hrs.3 Cours et laboratoire. Introduction à la biodiversité dont le 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. Destiné aux étudiants qui veulent suivre un programme de sciences biologiques avec majeure ou spécialisation. On ne peut se faire créditer le BIOL 1030 et le BIOL 1011 ou BIOL 1010 (Ancien 071.101), BIOE 2590 (Ancien 034.259), ou les anciens 071.125, ou 071.201. *Préalable:* BIOL 1021 ou BIOL 1020.

Note: Le BIOL 1031 est *préalable* aux cours plus avancés de microbiologie, et à la plupart des cours de botanique et de zoologie. Il prépare aussi aux études 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.

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.

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).

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 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) 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. *Prerequisite:* 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). *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). *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 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 071.123) with a minimum grade of "B", or BIOL 1030 (or 071.103) 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 071.103) 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 071.103) 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). *Prerequisite* or concurrent requirement: 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:* BIOL 1030 ou BIOL 1031 ou l'ancien 071.125 (C). Pré-ou concomitant: 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). *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). *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) (C) or PLNT 2520 (or 039.252) (C)] and [any one of the following: BOTN 2110 (or 001.211) (C), BOTN 2210 (or 001.221) (C), BOTN 2290 (or 001.229) (C), ZOOL 2320 (or 022.232) (C), ZOOL 2501 (or 022.250F) (C), ZOOL 2600 (or 022.260) (C)] 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) (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. *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) (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) (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). *Prerequisite* or concurrent requirement: CHEM 2370 or CHEM 2371 (or 002.237) or MBIOL 2370 or MBIOL 2371 (or 060.237) (C) or CHEM 2780 (or 002.278) or MBIOL 2780 (or 060.278) (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. *Prerequisite:* BOTN 3070 (or 001.307) (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. *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. *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) (C) and CHEM 2370 or CHEM 2371 (or 002.237) or MBIOL 2370 or MBIOL 2371 (or 060.237) (C) or CHEM 2780 (or 002.278) or MBIOL 2780 (or 060.278) (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. *Prerequisite:* BOTN 2010 (or 001.201) (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 (001.237 or 022.237 or AGECE 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. *Prerequisite:* BOTN 2210 (or 001.221) (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. *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. *Prerequisites:* BOTN 2020 (or 001.202) (C) and BOTN 2210 (or 001.221) (C), or consent of department head.

BOTN 4460 Molecular Biology for Plants and Fungi Cr.Hrs.3 (Lab Required) Basic molecular biology techniques for the collection, preservation, and analysis of DNA and RNA in a wide variety of organisms with an emphasis on plants and fungi. Extraction, amplification, diagnostic, recombinant DNA theory, bioinformatics, and interpretation of biological data focusing on trouble-shooting and hands-on experience in the laboratory. Not to be held with BOTN 7460 (001.742 or 001.746). Restricted to Honours students or with permission of the instructor.

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 ZOOL2371 (or 022.237) or AGECE 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 3480 (or 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)

CHEM 0900 Preparatory Chemistry Cr.Hrs.0 (Formerly 002.100) 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. Concurrent registration in CHEM 0900 and any of CHEM 1300, CHEM 1301, CHEM 1311 or CHEM 1320 is not permitted. (Pass/Fail grade only). *Prerequisite or Concurrent Requirement:* MATH 40S.

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) (Developmental 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 200 level university Chemistry course.

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 200 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.

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).

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). 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.

CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry Cr.Hrs. (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. *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).

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). Préalables: Mathématiques ap - piquées 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) (avec la note minimale de "B"). Donné seulement au Collège universitaire de Saint-Boniface.

CHEM 1310 University 1 Chemistry: An Introduction to Physical Chemistry Cr.Hrs.3 (Lab Required) (Formerly 002.131) Thermochemistry, chemical thermodynamics, and chemical kinetics. *Prerequisite:* CHEM 1300 or CHEM 1301 (or 002.130) (C).

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) *Préalable:* CHEM 1300 ou CHEM 1301 (ou 002.130) (C). Donné seulement au Collège universitaire de Saint-Boniface

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) *Prerequisite:* CHEM 1300 or CHEM 1301 (or 002.130) (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. *Prerequisite:* CHEM 1310 or CHEM 1311 (or 002.131) (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 ou 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. *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 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) (C).

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. *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) (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. (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). Préalables: CHEM 1310 ou 1311 (ou 002.131) (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 1000 en mathématiques (de préférence Calcul) exceptés (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 Energetic and Dynamics: Macroscopic Descriptions Cr.Hrs.3 (Lab Required) (Formerly 002.229) Chemical energetic, entropy and the second law of thermodynamics, chemical dynamics. Not to be held with CHEM 2291. *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) (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). Préalables: CHEM 1310 ou CHEM 1311 (ou 002.131) (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 1000 en mathématiques (de préférence Calcul) exceptés (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 MBI0 2360. Not to be held with CHEM 2361 or CHEM 2770 (or 002.277), or MBI0 2360 or MBI0 2361 (or 060.236), or MBI0 2770 (or 060.277). *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) 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 CHEM (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 MBI0 2361. On ne peut se faire créditer à la fois les CHEM 2360 or CHEM 2770 (ou 002.277), ou le MBI0 2360 or MBI0 2361 (ou 060.236), ou le MBI0 2770 (ou 060.277). Préalables: une note de "C" dans le CHEM 1310 ou CHEM 1311 (ou 002.131), et le BIOL 1030 ou BIOL 1031 ou l'ancien 071.125. NOTE: On peut utiliser ce cours dans son Baccalauréat 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 MBI0 2370. Not to be held with CHEM 2780 (or 002.278), or MBI0 2370 or MBI0 2371 (or 060.237), or MBI0 2780 (or 060.278). *Prerequisites:* CHEM 2360 or CHEM 2361 (or 002.236) or MBI0 2360 or MBI0 2361 (or 060.236) and CHEM 2210 or CHEM 2211 (or 002.221), 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 MBI0 2371. On ne peut se faire créditer à la fois le CHEM 2370 ou CHEM 2780 (ou 002.278), ou le MBI0 2370 ou MBI0 2371 (ou 060.237), ou le MBI0 2780 (ou 060.278). Préalables: une note de "C" dans le CHEM 2360 ou CHEM 2361 (ou 002.236) ou le MBI0 2360 ou MBI0 2361 (ou

060.236) et le CHEM 2210 ou CHEM 2211 (ou 002.221) NOTE: On peut utiliser ce cours dans son Baccalauréat 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) (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) (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 1310 or CHEM 1311 (or 002.131) (C) and three credit hours of mathematics with the exception of MATH 1000, 1010, 1190, 1191 or 1020.

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 1311 ou CHEM 1310 (002.131) et un cours de 3 crédits en mathématiques de niveau 1000 exceptés MATH 1000, 1010, 1191, 1190 ou 1020. Donné 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 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 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 Microbiology as MBI0 2770. Not to be held with CHEM 2360 or CHEM 2361 (or 002.236), or MBI0 2360 or MBI0 2361 (or 060.236) or CHEM 2860 (or 002.286), or MBI0 2770 (or 060.277). *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) (C) or CHEM 1320 (or 002.132) (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 MBI0 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 MBI0 2780. Not to be held with CHEM 2370 or CHEM 2371 (or 002.237) (MBIO 2370 or MBI0 2371 (or 060.237) or 002.235, or 002.240, or 060.235 or MBI0 2780 (or 060.278 or 060.240). *Prerequisites:* CHEM 2770 (or 002.277) (MBIO 2770 (or 060.277)) (C) or CHEM 2360 or CHEM 2361 (or 002.236) or (MBIO 2360 or MBI0 2361 (or 060.236)) (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 (002.236) or CHEM 2770 (002.277) or the former 002.240, MBI0 2360 or MBI0 2361 (060.236) or MBI0 2770 (060.277) or the former 060.240, or the former 002.235 or 060.235. *Prerequisite:* CHEM 1310 or CHEM 1311 (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 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 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:* 002.222 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 002.220) (C) and CHEM 2290 or

CHEM 2291 (or 002.229 or 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 002.220) (C). *Prerequisite or Concurrent Requirement:* CHEM 2290 or CHEM 2291.

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 MBIO 2370 or MBIO 2371 (or 060.237 or 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 typage cellulaire. *Préalable:* CHEM 2370 ou CHEM 2371 (ou 002.237) ou MBIO 2370 ou MBIO 2371 (ou 060.237), (ou l'ancien 002.235 ou 060.235) (C). Donné 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 activation of biomolecules. Not to be held with the former 002.449. *Prerequisite:* CHEM 2370 or CHEM 2371 (or 002.237) or MBIO 2370 or MBIO 2371 (or 060.237 or 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 et l'ancien 002.449. *Préalable:* CHEM 2370 ou CHEM 2371 (ou 002.237) ou MBIO 2370 ou MBIO 2371 (ou 060.237) (ou l'ancien 002.235 ou 060.235) (C). Donné 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. 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 the former 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 MBIO 2371 (or 060.237) or 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 détermination des séquences; interactions avec les protéines et les médicaments. *Préalable:* CHEM 2370 ou CHEM 2371 (ou 002.237) ou MBIO 2371 ou MBIO 2370 (ou 060.237) (ou l'ancien 002.235 ou 060.235) (C). Donné 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 MBIO 2370

or MBIO 2371 (or 060.237) or 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 MBIO 2371 ou MBIO 2370 (ou 060.237) ou l'ancien 002.235 ou 060.235) (C). Donné 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). Not currently offered.

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 4670 Drug Design and Drug Discovery Cr.Hrs.3 An understanding of the design, synthesis and interactions of drug molecules. Emphasis will be on novel drug-like molecules in the early stages of drug discovery with special focus on brain diseases and infectious diseases. *Prerequisites:* [CHEM 2220 (C)] and [one of CHEM 2360 (C) or CHEM 2860 (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 (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. *Prerequisite or Concurrent Requirement:* 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 required. 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 4711 Projet de recherche en chimie ou biochimie Cr.Hrs.6 Un projet de recherche dans n'importe quel aspect de la chimie ou de la biochimie, choisi en consultation avec l'administrateur de cours ou un superviseur approprié de la faculté. Des rapports écrits et des présentations orales à la fin du projet seront nécessaires. Ce cours est normalement offert aux étudiant(e)s seulement lors de leur dernière année du programme de chimie. *Préalable:* Permission de l'administrateur du cours. Donné seulement au Collège universitaire de Saint-Boniface.

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).

COMP 1010 Introductory Computer Science 1 Cr.Hrs.3 (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. *Prerequisite:* any grade 12 or 40S Mathematics, or equivalent.

COMP 1011 Introduction à l'informatique I Cr.Hrs.3 (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. *Préalable:* N'importe quel cours de mathématiques de 12^e année ou de niveau 40S, ou l'équivalent.

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) or High School Computer Science 40S (75 per cent) or any grade 12 or 40S Mathematics, or equivalent.

COMP 1021 Introduction à l'informatique II Cr.Hrs.3 (Labo Requis) (L'ancien 074.102) Introduction à la programmation orientée objet, aux structures de données informatiques et à l'algorithme. On ne peut se faire créditer plus d'un de cour suivant: le COMP 1020. *Préalable:* COMP 1010 ou COMP 1011 (ou 074.101) (C) ou informatique 40S (avec une note minimale de 75%) et un cours de mathématiques de 12^e année ou de niveau 40S, ou l'équivalent. Donné seulement au Collège universitaire de Saint-Boniface.

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.

COMP 1261 Introduction aux services informatiques modernes I Cr.Hrs.3 (Labo

Requis (L'ancien 074.126) Entre autres, l'accent est mis sur le traitement de texte, les chiffriers, 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.

COMP 1270 Introductory Computer Usage 2 Cr.Hrs.3 3 (Lab Required) (Formerly 074.127) Using advanced tools to design web pages. Students will also learn how to make effective presentations, work in other operating system environments, use file transfer tools, apply simple script programming to web page designs, and understand current issues relating to technology in society. May not be taken within the Computer Science Honours or Major program. Recommended *Prerequisite*: COMP 1260 (074.126) or equivalent knowledge is strongly recommended.

COMP 1271 Introduction aux services informatiques modernes II Cr.Hrs.3 (Labo Requis) (L'ancien 074.127) Utilisation de nouveaux outils pour la création de pages Web, apprendre les techniques de présentations efficaces, se familiariser avec d'autres systèmes d'exploitation, utiliser les outils de transfert de fichiers, programmer des scripts de base lors de la conception de pages Web, comprendre les questions actuelles liées à la technologie dans la société. On inscrit(e) à un programme de majeure ou de spécialisation en Informatique ne peut s'inscrire à ce cours. *Préalable* recommandé: COMP 1260 ou COMP 1261 (ou 074.126) (C) ou la connaissance équivalente. Donné seulement au Collège universitaire de Saint-Boniface.

COMP 2061 Structures discrètes et programmation Cr.Hrs.6 (Labo requis) (L'ancien 074.206) 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 COMP 2140 (074.214). *Préalables*: COMP 1021 ou COMP 1020 (074.102) (ou l'ancien 074.123), un de MATH 1301 ou MATH 1300 (ou 136.130) 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) (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 074.206 or COMP 2061 (C). STAT 1000 or STAT 1001 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 (C), and a "C" average in: one of MATH 1300 or MATH 1301 (or 136.130) or MATH 1310 (or 136.131 or 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).

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 074.206. *Prerequisites*: COMP 1020 or COMP 1021 (or 074.102) (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 *Prerequisite*: COMP 2140 (or 074.214 or 074.206) or COMP 2061(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) (C).

COMP 2190 Introduction to Scientific Computing Cr.Hrs.3 (Formerly 074.219) An applied computational course introducing topics such as approximation by polynomials, solution of non-linear equations, linear systems, simulation and computational geometry. *Prerequisites*: COMP 1020 or COMP 1021 (or 074.102) (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). *Pre- or Corequisite*: One of MATH 1300 or MATH 1301 or MATH 1310.

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) (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) (C). *Préalable ou Concomitant*: Un de MATH 1300 ou MATH 1301 ou MATH 1310. Donné seulement au Collège universitaire de Saint-Boniface.

COMP 2261 Concepts appliqués en informatique Cr.Hrs.3 (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 concurrentement inscrits dans un des cours suivants: COMP 1010 ou COMP 1011 (ou 074.101), COMP 1020 ou COMP 1021 (ou 074.102). *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 074.222 074.240) *Prerequisites*: COMP 2140 (or 074.214) (C) and COMP 2160 (or 074.216) (C) and COMP 2130 (or 074.213) (C). This course includes a laboratory.

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) *Prerequisites*: COMP 2140 (or 074.214) (C) and COMP 2160 (or 074.216) (C) and COMP 2130 (or 074.213) (C). This course includes a laboratory.

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 074.206) or COMP 2061(C).

COMP 3020 Human-Computer Interaction 1 Cr.Hrs. (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 074.206) or COMP 2061 (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. *Prerequisites*: COMP 2140 (or 074.214 or 074.206) or COMP 2061(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 074.447 or 024.422). *Prerequisite*: COMP 3370 (or 074.337) (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 intractability. *Prerequisites*: COMP 2140 (or 074.214 or 074.206) or COMP 2061(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 074.206) or COMP 2061(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 074.206) or COMP 2061(C), and COMP 2280 (or 074.228 or 074.222) (C). COMP 2160 (or 074.216) is recommended.

COMP 3350 Software Engineering 1 Cr.Hrs.3 (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 074.206) (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 074.222) (C).

COMP 3380 Databases Concepts and Usage Cr.Hrs.3 (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 074.206) or COMP 2061(C).

COMP 3430 Operating Systems Cr.Hrs.3 (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 074.206) or COMP 2061(C) and COMP 2280 (C). COMP 2160 (or 074.216) is recommended.

COMP 3440 Programming Language Concepts Cr.Hrs.3 (Formerly 074.344) An in-

roduction 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 074.206) or COMP 2061(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 200 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 074.206) or COMP 2061(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) (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) (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 cryptanalysis, the Data Encryption Standard (ADES) and Public-key cryptosystems. *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) (C) and COMP 4340 (or 074.434) (C).

COMP 4270 Design Theory and Coding Theory Cr.Hrs.3 Latin squares, finite geometries, BIBD's and linear and non-linear codes, dual codes, weight distribution and finite fields are studied. *Pre- or 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 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) (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 (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) (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 074.206) or COMP 2061 (C), STAT 1000 or STAT 1001 (or 005.100) (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) (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 interconnection 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 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).

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 (136.119). Not available to any student already holding a grade of C or better in any 1000 level mathematics course with the exception of MATH 1010, MATH 1020, MATH 1190 or MATH 1191. This course cannot be used as part of an Honours, Major, General or Minor program in the mathematical sciences. No *prerequisite*.

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*.

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 mathe-

matics. 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 available to any student already holding a grade of C or better in any 1000 level mathematics course with the exception of MATH 1010, MATH 1020, MATH 1190, MATH 1191, or FA 1020. No *prerequisite*.

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. [Not available to any student already holding a grade of C or better in any 1000 level mathematics course, with the exception of MATH 1010, MATH 1020, MATH 1190 or MATH 1191; or FA 1020. Donné seulement au Collège universitaire de Saint-Boniface. Aucun de préalable.

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. *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 MATH 1000 (or 136.100) or the Mathematical Skills course taught by the Continuing Education Division.

MATH 1201 Éléments de mathématiques discrètes Cr.Hrs.3 (L'ancien 136.120) Suites et séries, trigonométrie, nombres complexes, algèbre de polynômes, approximation des zéros de fonctions, équations aux différences. On ne peut se faire créditer à la fois le MATH 1200 (ou 136.120) . *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 MATH 1000 (ou 136.100) ou le cours "Mathematical Skills" enseigné par la Division de l'éducation permanente. Donné seulement au Collège universitaire de Saint-Boniface.

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 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 1310 (or 136.131), MATH 1680 (or 136.168). *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 MATH 1000 (or 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.

MATH 1301 Géométrie vectorielle et algèbre linéaire Cr.Hrs.3 (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). *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 MATH 1000 (ou 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.

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 1300 or MATH 1301 (or 136.130), MATH 1680 (or 136.168). *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 MATH 1000 (or 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.

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). *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 MATH 1000 (or 136.100) or the Mathematical Skills course taught by the Continuing Education Division

MATH 1501 Introduction au calcul Cr.Hrs.3 (Lab Required)(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). *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 MATH 1000 (ou 136.100) ou le cours "Mathematical Skills" enseigné par la Division de l'éducation permanente. Donné seulement au Collège universitaire de Saint-Boniface.

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). *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 MATH 1000 (or 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).

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). *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 MATH 1000 (or 136.100) or the Mathematical Skills course taught by the Continuing Education Division.

MATH 1530 Calculus with Computers Cr.Hrs. (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 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 MATH 1000 (or 136.100) or the Mathematical Skills course taught by the Continuing Education Division. *Prerequisite or concurrent Requirement*: COMP 1010 or permission of the instructor.

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 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). *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 MATH 1000 (or 136.100) or the Mathematical Skills course taught by the Continuing Education Division.

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). *Prerequisite*: a minimum grade of 80 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300).

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). *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).

MATH 1701 Calcul II Cr.Hrs.3 (Lab Requis) MATH 1701 Calcul II Cr.Hrs.3 (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) , MAST 1490 (ou 013.149), ou MAST 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) ou MATH 1680 (ou 136.168) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MATH 1710 Applied Calculus 2 Cr.Hrs.3 (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). *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). *Prerequisite or concurrent Requirement*: PHYS 1050 or PHYS 1051.

MATH 1730 Calculus 2 with Computers Cr.Hrs.3 (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). *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 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 006.220), the former 010.344 or 006.270. *Prerequisites:* COMP 1010 or COMP 1011 (or 074.101 or 074.111 or 074.112) (C), and MATH 2100 (or 136.210 or 006.260) (C).

MATH 2130 Engineering Mathematical Analysis Cr.Hrs.3 (Lab Required) Multivariable differential and integral calculus up to and including multiple integrals in cylindrical and spherical coordinates. *Prerequisites:* MATH 1210 and MATH 1710.

MATH 2132 Engineering Mathematical Analysis 2 Cr.Hrs.3 (Lab Required) Infinite series, Taylor and Maclaurin Series; ordinary differential equations including Laplace transforms. *Prerequisites:* MATH 1210 (C) and MATH 1710 (136.171) (C).

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. 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), 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).

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, MATH 2352 (or the former 136.235). *Prerequisites:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (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).

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)). 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 2352, MATH 2350 (ou l'ancien 136.235). *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) (C). Donné seulement au Collège universitaire de Saint-Boniface.

MATH 2352 Advanced Linear Algebra 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 (136.230) (or the former MATH 2350 or 013.235). *Prerequisites:* a grade of "C+" or better in MATH 1300 or MATH 1301 (136.130) or MATH 1310 (136.131), and a grade of "C+" or better in one of MATH 1690 (136.169), MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171) or MATH 1730 (136.173).

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. *Prerequisite:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (C).

MATH 2450 Combinatorial Mathematics Cr.Hrs.6 (Formerly 136.245) An introduction to several areas of current interest in combinatorial mathematics, including techniques of enumeration, graphs, block designs and generalizations, linear recursions. 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 MATH 1000 (or 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 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 2451 (ou MATH 2450) à la fois avec l'ancien 136.245. *Préalable:* une moyenne de "C" ou plus dans un cours d'introduction en sciences mathématiques à l'exception de MATH 1000 (ou 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), 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. *Prerequisite:* An average of "C" or better in six credit hours of Year 1 Mathematics courses with the exception of MATH 1000 (or 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 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 2501 (ou MATH 2501) à la fois avec l'ancien 136.250. *Préalable:* une moyenne de

"C" ou plus dans un cours d'introduction en sciences mathématiques à l'exception de MATH 1000 (ou 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 MATH 1230, 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. *Prerequisites:* MATH 1690 (or 136.169) (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) (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) (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 2551 (ou MATH 2550, ou 136.255) . *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) (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) . 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. *Prerequisites:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (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) (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 élémentaires 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 2601 (ou MATH 2600) et les anciens 136.260. *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 1701 (ou 136.170) (C) ou MATH 1710 (ou 136.171) (C) ou MATH 1730 (ou 136.173) (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 136.270. *Prerequisites:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (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), or MATH 1730 (or 136.173) (C).

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 l'anciens 136.270 . *Préalables:* MATH 1300 ou MATH 1301 (ou 136.130) (C) (ou MATH 1310 (ou 136.131) (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) . 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 136.271. *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). *Prerequisite* or concurrent requirement: MATH 1300 or MATH 1301 or MATH 1310.

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). *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) *Préalable* ou Concomitants: MATH 1300 ou MATH 1301 (ou 136.130) (C) 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). 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) 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).

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. *Prerequisite:* MATH 1300 or MATH 1301 (or 136.130) (C) or MATH 1310 (or 136.131) (C). *Prerequisite* or concurrent requirement: 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 peut se faire créditer à la fois le MATH 2800 (ou 136.280) *Préalable:* MATH 1300 ou MATH 1301 (ou

136.130) (C). *Préalable* ou Concomitants: MATH 2721 ou MATH 2751. Donné seulement au Collège universitaire de Saint-Boniface.

MATH 3110 Mathematical Methods and Complex Analysis Cr.Hrs.3 (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 (one 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 2352 (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).

MATH 3132 Engineering Mathematical Analysis 3 Cr.Hrs.3 Vector integral calculus; series of Ordinary differential equations; Fourier series and Partial differential equations. Not to be held with the former MATH 3100 *Prerequisites*: MATH 2130 (C) and MATH 2132 (C).

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. 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 MATH 3230 (or 136.323) or 013.336. *Prerequisite*: MATH 3200 (or 136.320) (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. *Prerequisite*: MATH 2200 (or 136.220) (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) *Prerequisites*: MATH 2750 (or 136.275) (C) and MATH 2200 (or 136.220) (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) *Prerequisite*: MATH 3230 (or 136.323) (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). *Prerequisites*: MATH 2300 or MATH 2301 (or 136.230) (C) or MATH 2352 (or 136.235) (C) and an additional 6 credit hours of 2000 level mathematics courses, or consent of department.

MATH 3310 Modern Algebra 2 Cr.Hrs. (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) *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) *Prerequisites*: MATH 2352 (or MATH 2350, or 136.235) (C) and MATH 2200 (or 136.220) (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. *Prerequisites*: MATH 2200 (or 136.220) (C) and MATH 2352 (or MATH 2350 or 136.235) (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. *Prerequisites*: MATH 2750 (or 136.275) (C) and MATH 2352 (or MATH 2350 or 136.235) (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. *Prerequisites*: MATH 2750 (or 136.275) (C) and MATH 2200 (or 136.220) (C) or consent of department.

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. *Prerequisites*: MATH 2300 or MATH 2301 (or 136.230) (C), MATH 2352 (or MATH 2350 or 136.235) (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, de-

scriptions 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. *Prerequisites*: MATH 2720 (or 136.272) (C) or MATH 2110 (or 136.211) (C) or MATH 2750 (or 136.275) (C) and MATH 2600 or MATH 2601 (or 136.260) (C) or MATH 2120 (or 136.212) (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. (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) (C), MATH 2730 (or 136.273) (C) and MATH 3800 (or 136.380) (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. *Prerequisites*: MATH 3700 (or 136.370) (C) and MATH 3800 (or 136.380) (C) or consent of department. *Prerequisite* or concurrent requirement: 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. *Prerequisites*: MATH 2600 or MATH 2601 (or 136.260) (C), MATH 2800 or MATH 2801 (or 136.280) (C), MATH 2720 (or 136.272) (C) and MATH 2730 or MATH 2731 (or 136.271) (C) or MATH 2750 (or 136.275) (C), and either COMP 1010 or COMP 1011 (or 074.101) (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 grade taille, pars ou mal conditionnés. On 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) (C), MATH 2800 ou MATH 2801 (ou 136.280) (C), MATH 2720 ou MATH 2721 (ou 136.272) (C) et MATH 2730 ou MATH 2731 (ou 136.271) (C) (ou MATH 2750 (ou 136.275) (C) et le COMP 1010 ou COMP 1011 (ou 074.101) (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), *Prerequisites*: MATH 2720 or MATH 2721 (or 136.272 or the former 136.270) (C) and either MATH 2730 or MATH 2731 (or 136.273) (or the former 136.271) (C) (or MATH 2750 (or 136.275) (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) *Prerequisite* or concurrent requirement: 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) *Prerequisites*: MATH 2300 or MATH 2301 (or 136.230) (C), MATH 2720 or MATH 2721 (or 136.272) (or the former 136.270) (C), MATH 2730 or MATH 2731 (or 136.273) (or the former 136.271) (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) *Prerequisites*: MATH 2750 (or 136.275) (or the former 013.234) (C), MATH 2352 (or MATH 2350 or 136.235) (C) and MATH 2200 (or 136.220) (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. *Prerequisite*: MATH 2800 or MATH 2801 (or 136.280) (C). *Prerequisite* or concurrent requirement: 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. *Prerequisites*: MATH 2720 or MATH 2721 (or 136.270) (or the former 136.272) (C), and MATH 2730 or MATH 2731 (or 136.273) (or the former 136.271) (C) or MATH 2750 (or 136.275) (C) and MATH 3800 (or 136.380) (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. *Prerequisites*: MATH 2600 or MATH 2601 (or 136.260) (C) and MATH 2800 or MATH 2801 (or 136.280) (C). *Prerequisite* or concurrent requirement: STAT 1000 or STAT 1001.

MATH 3900 Problem Solving Seminar Cr.Hrs.3 (Formerly 136.390) Classical problem solving methods and heuristics; Polya'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. *Prerequisite* or concurrent requirement: 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 special-

ized 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. (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. *Prerequisite:* MATH 3240 (or 136.324) (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. *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 concurrent requirement MATH 3240 with consent of department) (C) and MATH 3300 (or 136.330) (or concurrent requirement 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. *Prerequisite:* MATH 3350 (or 136.335) (C) or consent of department.

MATH 4310 Applied Matrix Analysis Cr.Hrs.3 Vector and matrix norms; LU, QR, Schur, and singular value decompositions; projections; least squares; Gerschgorin theorem, perturbation theory; positive definite systems; quadratic forms; pseudoinverse; diagonalization; canonical forms; function of matrices; minimal polynomials; Perron-Frobenius theory; and applications. *Prerequisite:* MATH 2300, MATH 2301 (136.230) or MATH 2352 or MATH 2350 (136.235).

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. *Prerequisite:* MATH 3350 (or 136.335) (C).

MATH 4400 Combinatorics 2 Cr.Hrs.3 (Formerly 136.440) Generating functions, combinatorial geometry, symbolic dynamics, forbidden configurations, topics from combinatorial matrix theory. *Prerequisites:* MATH 2750 (or 136.275) (C), MATH 3400 (or 136.340) (C) and MATH 3350 (or 136.335) (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) (C) and MATH 3350 (or 136.335) (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) (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) (C), MATH 2352 (or 136.235) (C), and either MATH 3300 (or 136.330) (C) and MATH 3310 (or 136.331) (C), or MATH 3350 (or 136.335) (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. *Prerequisite:* MATH 3600 (or 136.360) (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. *Prerequisites:* MATH 3600 (or 136.360) (C) and either MATH 3750 (or 136.375) (C) or MATH 3760 (or 136.376) (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. *Prerequisite:* MATH 3750 (or 136.375) (C).

MATH 4710 Complex Analysis 2 Cr.Hrs.3 (Formerly 136.471) Conformal mappings, space of analytic functions, space of meromorphic functions, harmonic functions. *Prerequisites:* MATH 3240 (or 136.324) (C), MATH 3710 (or 136.371) (C) and MATH 3760 (or 136.376) (C).

MATH 4720 Complex Analysis 3 Cr.Hrs.3 (Formerly 136.472) Subharmonic functions, infinite products, entire functions, analytic continuation. *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. *Prerequisites:* six credit hours of 2000 level calculus and MATH 2800 or MATH 2801 (or 136.280) (C) or consent of department. *Prerequisite:* or concurrent requirement: 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. *Prerequisites:* MATH 2352 (or 136.235) (C), MATH 3230 (or 136.323) (C) and MATH 3760 (or 136.376) (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. *Prerequisite:* MATH 3600 (or 136.360) (C) and MATH 3800 (or 136.380) (C).

MATH 4810 Partial Differential Equations 2 Cr.Hrs. (Formerly 136.481) Partial differential equations and their classification. Special functions and generalized eigenfunction expansions. Solution by separation of variables, and transform methods. *Prerequisite:* MATH 3810 (or 136.381) (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. *Prerequisite:* MATH 3820 (or 136.382) (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) (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) (C).

MATH 4960 Topics in Mathematics 2 Cr.Hrs.6 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.

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). *Prerequisite:* any grade 12 or 40S Mathematics, or equivalent.

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. *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) (C).

MBIO 2101 Microbiologie générale A Cr.Hrs.3 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. Préalables: CHEM 1310 ou CHEM 1311 (ou 002.131) (C) ou CHEM 1320 (ou 002.132) (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. *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. 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) (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) (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 CHEM 2360 or CHEM 2361 (or 002.236), CHEM 2860 (or 002.286) or CHEM 2770 (or 002.277) *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) 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'éner-

gie 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 le CHEM 2360 ou CHEM 2361 (ou 002.236), le CHEM 2860 (ou 002.286) ou le CHEM 2770 (ou 002.277). Préalables: une note de "C" dans le CHEM 1310 ou CHEM 1311 (ou 002.131) et le BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125). Donnée 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 CHEM 2370 or CHEM 2371 (or 002.237) or CHEM 2780 (or 002.278) *Prerequisites:* MBIO 2360 or MBIO 2361 (or 060.236 or 002.236) and CHEM 2210 or CHEM 2211 (or 002.221) (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 le CHEM 2370 ou CHEM 2371 (ou 002.237), ou le CHEM 2780 (ou 002.278) 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) Donnée 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 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 CHEM 2860 (or 002.286). *Prerequisites:* CHEM 1310 or CHEM 1311 (or 002.131) (C) or CHEM 1320 (or 002.132) (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). *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).

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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (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. Préables: MBIO 2100 ou MBIO 2101 (ou 060.210) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2371 ou CHEM 2370 (ou 002.237) (C). Donnée 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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (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) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2370 ou CHEM 2371 (ou 002.237) (C). Donnée 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, carbo-

hydrates, and nucleic acids as structural, catalytic, and genetic elements in evolution of living systems. *Prerequisite:* MBIO 2110 or MBIO 2111 (or 060.211) (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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 CHEM 2370 (or 002.237) (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) (C) or consent of the department, and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (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) (C) ou le consentement du département, et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2371 CHEM 2370 (ou 002.237) (C). Donnée 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) (C) or consent of the department, and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (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) (C) ou le consentement du département, et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2371 CHEM 2370 (ou 002.237) (C). Donnée 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. *Prerequisite:* MBIO 2110 or MBIO 2111 (or 060.211) (C).

MBIO 3480 Microbial Diversity Cr.Hrs.3 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. *Prerequisite:* MBIO 2110 or MBIO 2111 (or 060.211) (C).

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 greffes 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). Donnée seulement au Collège universitaire de Saint-Boniface.

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). *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.

MBIO 4410 Virology Cr.Hrs.3 MBIO (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 4411 Virologie Cr.Hrs.3 Une analyse compréhensive des propriétés fondamentales des virus, de la taxonomie virale ainsi que les façons dans lesquelles les vi-

rus se reproduisent. Les méthodes expérimentales utilisées en virologie et les façons que les virus provoquent des maladies seront examinées aussi. On ne peut pas se faire créditer à la fois MBIO 4410 (ancien 060.441) et MMIC 7010 (ancien 097.701). Préalables: MBIO 3010 (ancien 060.301) et MBIO 3410 (ancien 060.341). Donnée seulement au Collège universitaire de Saint-Boniface.

MBIO 4470 Fermentations Cr.Hrs.3 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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2371 or CHEM 2370 (or 002.237) (C).

MBIO 4510 Industrial Microbiology Cr.Hrs.3 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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (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) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2370 ou CHEM 2371 (ou 002.237) (C) ou le consentement du département. Donnée 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). Donnée 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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (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) (C) et MBIO 2370 ou MBIO 2371 (ou 060.237) ou CHEM 2370 (ou 002.237) (C). Le BOTN 2460 (ou 001.246) est recommandé. Donnée 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) (C) and MBIO 2370 or MBIO 2371 (or 060.237) or CHEM 2370 or CHEM 2371 (or 002.237) (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).

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.

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 016.127). *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 recommended that students attain a minimum of 70 per cent as the average of their marks in Physics 40S and Pre-calculus Mathematics 40S.

PHYS 1021 Physique générale I Cr.Hrs.3 (Lab Required)(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). *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. Donnée seulement au Collège universitaire de Saint-Boniface.

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) (C).

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) (C). Donnée seulement au Collège universitaire de Saint-Boniface.

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). *Prerequisite* or concurrent requirement: One of MATH 1500 or MATH 1501, MATH 1510, MATH 1520, MATH 1530 or MATH 1690.

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. *Préalables* ou concomitants: Un de MATH 1500 ou MATH 1501, MATH 1510, MATH 1520, MATH 1530 ou MATH 1690. Donnée seulement au Collège universitaire de Saint-Boniface.

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) (C). *Prerequisite* or concurrent requirement: MATH 1700 or MATH 1701 or MATH 1690, MATH 1710, MATH 1730.

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 suivant seront traités: les oscillations: les ondes, la superposition, l'interférence, la relativité, l'effet photoélectrique, le modèle 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) (C). *Préalables* ou *concomitants:* MATH 1700 ou MATH 1701 ou MATH 1690 ou MATH 1710. Donnée seulement au Collège universitaire de Saint-Boniface.

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.

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. Donnée seulement au Collège universitaire de Saint-Boniface.

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).

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). *Prerequisite:* PHYS 1410 (or 016.141) (C) or consent of department.

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

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. *Prerequisites:* Pre-calculus Mathematics 40S or equivalent, and PHYS 1810 (or 016.181) (C), or consent of department.

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 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). *Prerequisite* or concurrent requirements: RTT 2040 and RTT 2080.

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. *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 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).

PHYS 2152 Modern Physics for Engineers Cr.Hrs.3 (Lab Required) An overview of topics in modern physics including wave particle duality, atomic structure and quantum mechanics. Elementary classical electromagnetic theory and wave theory are reviewed as an introduction to the modern physics concepts. For Engineering students only. Not to be held with PHYS 1070, PHYS 1071 (016.107), PHYS 2380 (016.238), PHYS 2250, PHYS 2251 (016.225). *Prerequisites:* [PHYS 1050 or PHYS 1051 (016.105) (or the former 016.118) (C)] or [PHYS 1020 or PHYS 1021 (016.102) (B)] and [MATH 1500 or MATH 1501 (136.150) or MATH 1510 (136.151), MATH 1520 (136.152), MATH 1530 (136.153) (or the former 006.125 or 013.139) (C)]. *Pre- or Corequisite:* MATH 1700 or MATH 1701 or MATH 1690, MATH 1710, MATH 1730.

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+) (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). *Prerequisite* or concurrent requirement: 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, capacitance, 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+) (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) (C). *Préalables* ou *concomitants:* MATH 1200 ou MATH 1201 et un de MATH 1690, MATH 1700 ou MATH 1701, MATH 1710 ou MATH 1730. Donnée 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 (C), or PHYS 1020 or PHYS 1021 (or 016.102) (C+) and PHYS 1030 or PHYS 1031 (or 016.103) (C+) (or the former 016.127 (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). *Prerequisite* or concurrent requirement: MATH 1200 or MATH 1201 and one of MATH 1690 or 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 concurrentement 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) (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 016.127 (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) (C). Préalables ou 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) (C) or PHYS 1020 or PHYS 1021 (or 016.102)(C+) and PHYS 1030 or PHYS 1031 (or 016.103)(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). *Prerequisite* or concurrent requirement: 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 lementaire de la diffraction, interférence et polarisation. *Préalables*: Un de: PHYS 1070 ou PHYS 1071 (ou 016.107) (C), ou PHYS 1020 ou PHYS 1021 (ou 016.102) (C+) et PHYS 1030 ou PHYS 1031 (ou 016.103) (C+) (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) (C). Préalables ou 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 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) (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) (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) (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) (C) or PHYS 1030 or PHYS 1031 (or 016.103) (C) or consent of department.
- 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 Schrodinger theory of quantum mechanics. Special emphasis is placed on the derivation of the time independent Schrodinger 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) (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) (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).
- 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). *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) (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). *Prerequisite*: PHYS 2600 (or 016.260) (C).
- PHYS 2650 Classical Mechanics 1 Cr.Hrs.3** 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). *Prerequisite* or concurrent requirement: PHYS 2490 and MATH 2720, MATH 2130 or MATH 2750.
- 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 016.131. 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 016.132. This course is not to be held for credit in a Major or Honours program in Physics and Astronomy.
- 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 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 Schrodinger 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 *prerequisite* or concurrent requirement: 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 in-

cluding 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 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.

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) (C) and PHYS 3180 (or 016.318) (C). *Prerequisite* or concurrent requirement PHYS 4230.

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 (of 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)(C).

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) (C).

PHYS 4560 Applied Nuclear Science Cr.Hrs.3 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) (C).

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) (C).

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) (C).

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 defects, plastic deformation, radiation damage, diffusion and dislocations. *Prerequisite:* PHYS 3570 (or 016.357) (C).

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) (C), MATH 1700 or MATH 1701 (or 136.170) or MATH 1710 (or 136.171) (C) or MATH 1730 (or 136.173) (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).

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.

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 1000 or STAT 2220. *Prerequisite:* Any grade 12 or 40S Mathematics, or equivalent.

STAT 1001 Analyse statistique de base I Cr.Hrs.3 (L'ancien 005.100) Une introduction aux principes fondamentaux de la statistique et aux procédures utilisées 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 échantillonnelles, l'estimation et les tests de signification, l'inférence pour les moyennes. On ne peut se faire créditer à la fois le STAT 1000 ou STAT 2220. *Préalable:* Un cours de mathématiques 40S ou l'équivalent. Donné seulement au Collège universitaire de Saint-Boniface.

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, or 005.211, 005.221, 005.231, 005.241, or 005.250. *Prerequisite:* STAT 1000 (or 005.100) 'C', or STAT 1001 (or the former 005.101 or 005.210) (C).

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, 005.120, 005.201, 005.211, 005.221, 005.231, 005.241, ou 005.250. *Préalable:* STAT 1000 ou STAT 1001(ou 005.100) 'C'. Donné seulement au Collège universitaire de Saint-Boniface.

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, 005.100. *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).

STAT 2400 Introduction to Probability 1 Cr.Hrs.3 Basic probability, discrete distributions including binomial, hypergeometric, geometric and Poisson, joint distributions, continuous distributions, statistical inference and applications involving discrete random variables. *Prerequisites:* [STAT 1000 or STAT 1001 (005.100)] and [MATH 1700, MATH 1701(136.170) or MATH 1690 (136.169) (C)].

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 (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:* 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 (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 (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 (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 (C).

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 (C).

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. *Prerequisite:* STAT 2000 or STAT 2001 (or 005.200). *Pre- or Corequisite:* STAT 3500.

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. *Prerequisite:* STAT 2000 (or 005.200). *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 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 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). *Prerequisite:* STAT 2400. *Pre- or 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). *Pre- or Corequisite:* Whichever of MATH 2720 (or MATH 2721) or MATH 2730 (or MATH 2731) (or the former 136.270 and 136.271) not yet taken.

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 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 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) and STAT 3600 (or 005.360) (C) or consent of department.

STAT 4630 Stochastic Processes Cr.Hrs.3 (Formerly 005.463) An introduction to stochastic processes. *Prerequisite:* STAT 3050 (or 005.305) (C) and 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) (C) or 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. *Pre- or Corequisites:* STAT 4520 and STAT 4530.

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. No *prerequisite*. High school biology strongly recommended.

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 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 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.

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 ZOO 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) (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 ZOO 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) (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) This 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 ZOO 2370 or ZOO 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 ZOO 2501 (or 022.250). *Prerequisite:* BIOL 1030 or BIOL 1031 (or the former 071.125) (C).

ZOOL 2370 Principles of Ecology Cr.Hrs.3 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 ZOO 2371, BOTN 2370, BOTN 2371 (or 001.237) or ZOO 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). *Prerequisite* or concurrent requirement: STAT 1000 or STAT 1001 (or 005.100) (D).

ZOO 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'ac-costèmes. 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 ZOO 2370 (ou 022.237), BOTN 2370 ou BOTN 2371 (ou 001.237) et le AGEC 2370 (ou 065.237) ou ZOO 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). *Préalables* ou concomitants ou corequis: STAT 1000 ou STAT 1001 (ou 005.100) (D). Donné seulement au Collège universitaire de Saint-Boniface.

ZOO 2501 L'évolution et la structure morphologique des cordés Cr.Hrs.6 (Labo Requis) (L'ancien 022.250) Une étude de l'histoire évolutive de la structure et des adaptations des cordés bassées sur les animaux fossilisés et sur les animaux vivants. Ce cours établit les bases pour l'étude des groupes majeurs de cordés. On ne peut se faire créditer à la fois le ZOO 2500 (ou 022.250) et le ZOO 2320 (ou 022.232) et l'ancien 022.227. *Préalable*: BIOL 1030 (ou 071.103) ou BIOL 1031 ou l'ancien 071.125 (C). Donné seulement au Collège universitaire de Saint-Boniface.

ZOO 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 ZOO 3530 (or 022.353) *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 ZOO 1330 (or 022.133)(C).

ZOO 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 ZOO 2530 (ou 022.253) et le ZOO 3530 (ou 022.353). *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 le ZOO 1330 (ou 022.133) (C). Donné seulement au Collège universitaire de Saint-Boniface.

ZOO 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). *Prerequisite*: Completion of ZOO 2530 (or 022.253) (D) or ZOO 3530 (or 022.353) (D) or consent of department.

ZOO 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). *Préalable*: avoir complété le ZOO 2530 (ou 022.253) (D) ou le ZOO 3530 (ou 022.353) (D) ou consentement du professeur. Donné seulement au Collège universitaire de Saint-Boniface.

ZOO 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).

ZOO 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). Donné seulement au Collège universitaire de Saint-Boniface.

ZOO 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) (C) or PLNT 2520 (or 039.252) (C)] and [any one of the following: BOTN 2110 (or 001.211) (C) or BOTN 2210 (or 001.221)(C) or BOTN 2290 (or 001.229) (C) or ZOO 2320 (or 022.232) (C) or ZOO 2501 (or 022.250F) (C) or ZOO 2600 (or 022.260) (C)], or consent of department.

ZOO 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*: ZOO 2320 (or 022.232), ZOO 2501 (or 022.250) or ZOO 2280 (or 022.228).

ZOO 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 ZOO 3060 (ou 022.306) (ou l'ancien 022.347). *Préalable*: BIOL 1030 ou BIOL 1031 (ou l'ancien 071.125) (C). *Préalable* conseillé: ZOO 2320 (ou 022.232) ou ZOO 2501 (ou 022.250) ou ZOO 2280 (ou 022.228). Donné seulement au Collège universitaire de Saint-Boniface.

ZOO 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*: ZOO 2150 (or 022.215) (C)

or consent of department.

ZOO 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*: ZOO 2370 or ZOO 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C) and ZOO 2320 (or 022.232) (C) or consent of department.

ZOO 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. *Prerequisite*: ZOO 2370 or ZOO 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C) or ZOO 2290 (or 022.229) or BOTN 2280 or BOTN 2281 (or 001.228) (C) or consent of department.

ZOO 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*: ZOO 2370 or ZOO 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).

ZOO 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 *Prerequisite* or concurrent requirement: : ZOO 2600 (or 022.260) (C) or consent of department.

ZOO 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*: ZOO 2370 or 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C).

ZOO 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 ZOO 2530 or ZOO 2531 (or 022.253) or ZOO 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 ZOO 1330 (or 022.133) (C).

ZOO 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. *Prerequisite*: ZOO 2320 (or 022.232) (C) and ZOO 2600 (or 022.260) (C), or ZOO 1330 (or 022.133) (or the former 022.123) (C), or ZOO 2530 or ZOO 2531 (or 022.253) (C) or ZOO 3530 (or 022.353) (C) or consent of instructor.

ZOO 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*: ZOO 2370 or ZOO 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 2370 (or 065.237) (C) or consent of department

ZOO 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*: ZOO 2600 (or 022.260) (C).

ZOO 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*: ZOO 2370 or ZOO 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.

ZOO 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).

ZOO 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)

ZOO 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)

ZOO 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

pre-sented. 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 immunocyto-chemistry, electron microscopy, video and image processing microscopy. This is a practical course with a major emphasis on the laboratory portion. *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. *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. 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. 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). *Prerequisite or concurrent requirement:* 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. *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 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) (C) or consent of department.

ZOOL 4270 Genes and Development Cr.Hrs.3 ZOOL 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. *Prerequisite:* ZOOL 3460 (or 022.346) (C).

ZOOL 4800 Special Topics in Field Biology Cr.Hrs.3 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) (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 emphasis 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) (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 MBIO 2370 or MBIO 2371 (or 060.237) (C), or CHEM 2780 (or 002.278) (C) or MBIO 2780 (or 060.278) (C); ZOOL 2370 or ZOOL 2371 (or 022.237) or BOTN 2370 or BOTN 2371 (or 001.237) or AGEC 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 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.)

FACULTY OF SOCIAL WORK-----

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).

SWRK 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 psychosocial 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 reports, 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.

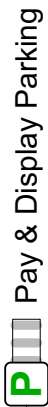
SWRK 4200 Field Focus of Social Work Practice Cr.Hrs.6 (Formerly 047.420) A seminar that teaches social work practice skills in the context of a field or focus of practice. The course emphasizes practice as planned change (client systems) and policy and linkage (service system). Students must select 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).

LEGEND

-  University Buildings/Property
-  Non-University Buildings



Pay & Display Parking



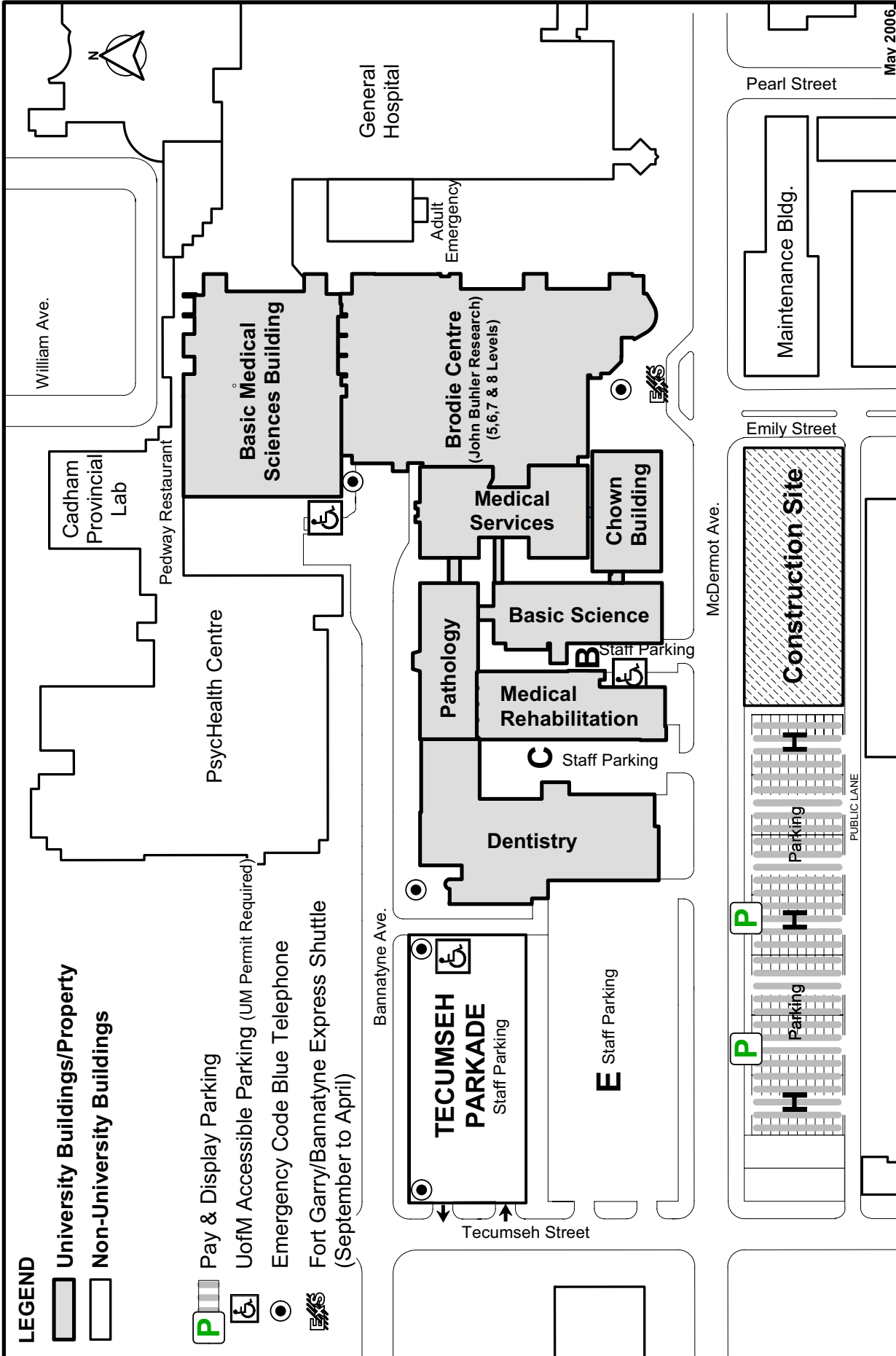
UofM Accessible Parking (UM Permit Required)



Emergency Code Blue Telephone



Fort Garry/Bannatyne Express Shuttle
(September to April)



UNIVERSITY OF MANITOBA

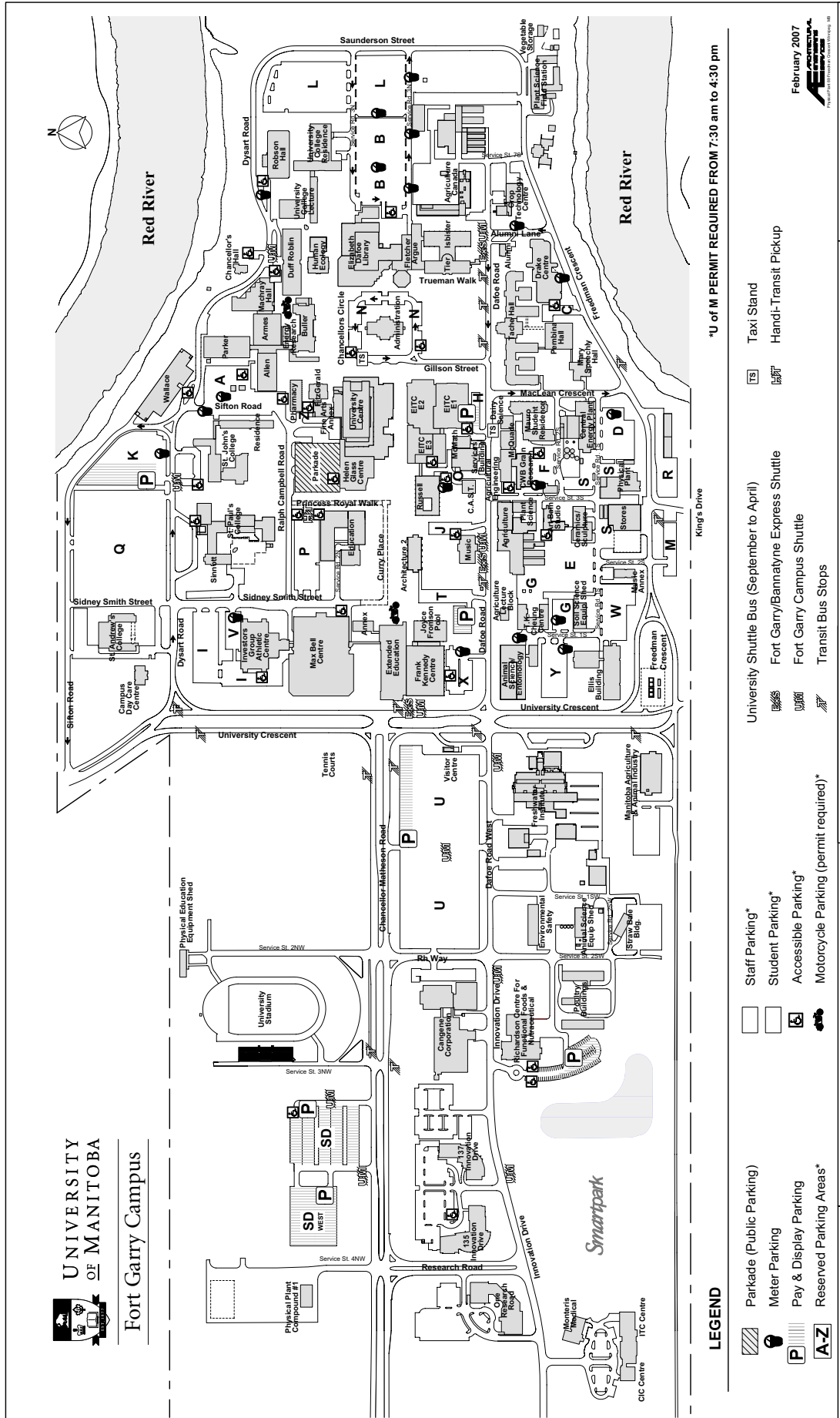
Bannatyne Campus



Physical Plant 89 Freedman Crescent Winnipeg, MB

May 2006

UNIVERSITY OF MANITOBA
Fort Garry Campus



*U of M PERMIT REQUIRED FROM 7:30 am to 4:30 pm

LEGEND

- Parkade (Public Parking)
- Meter Parking
- Pay & Display Parking
- Reserved Parking Areas*
- Staff Parking*
- Student Parking*
- Accessible Parking*
- Motorcycle Parking (permit required)*
- University Shuttle Bus (September to April)
- Fort Garry/Bannatyne Express Shuttle
- Fort Garry Campus Shuttle
- Transit Bus Stops
- Taxi Stand
- Handi-Transit Pickup

February 2007
UNIVERSITY OF MANITOBA
Forts of the University of Manitoba

UNIVERSITY OF MANITOBA
Fort Garry Campus

University of Manitoba
Fort Garry Campus

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