UNDERGRADUATE

DEFENDER TRAILBLAZER REBEL PIONEER EXPLORER ADVENTURER

ACADEMIC CALENDAR 2013-2014

UNIVERSITY OF MANITOBA

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CONTENTS

IMPORTANT NOTICE

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

Not every course listed in the Undergraduate Calendar 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 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 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 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 lockouts, 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 (FIPPA)

Personal information is collected under the authority of The University of Manitoba Act. It is used for the purposes of admission, registration, provision of education to the student including assessment of academic status, and communication with the student. It may be used for administrative research in support of provision of education and general administration of the University. It may be disclosed to 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. Upon graduation, the student's 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 the University's advancement and development efforts. Information on graduation and awards may be made public. Personal information will not be used or disclosed for other purposes, unless permitted by The Freedom of Information and Protection of Privacy Act. Personal information is protected under the Protection of Privacy provisions of The Freedom of Information and Protection of Privacy Act. If you have any questions about the collection of your personal information, contact the Access & Privacy Office (204-474-9462 or 204-474-8339), 230 Elizabeth Dafoe Library, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2.

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 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 in 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 the 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:www.statcan.gc.ca or by writing to the Post-Secondary Section, Centre for Education Statistics, 17th Floor, R.H. Coats Building, Tunney's Pasture, Ottawa, Canada, K1A 0T6.

(Rev. Oct./08)

ABOUT THE UNIVERSITY

Welcome to the University of Manitoba - western Canada's first university. Founded more than 135 years ago, and located in the heart of the country, we are the region's largest and only research intensive university offering over 90 degrees, diplomas, and certificates – more than 60 at the undergraduate level including professional disciplines such as medicine, law, and engineering.

Our energetic university community is comprised of over 29,000 students, 8,500 faculty and staff, and 190,000 alumni. Nearly 11.2 per cent of our current students are international, representing close to 104 countries.

Home to a thriving community of Indigenous researchers, staff and over 1,900 self-declared Aboriginal (First Nations, Metis and Inuit) students, the University of Manitoba is located on Anishinabe and Metis traditional land.

Our university stimulates over $1.8 billion in economic activity in the province, and we are leaders in Manitoba's knowledge economy with groundbreaking research in areas such as nanotechnology, functional foods and nutraceuticals, HIV/AIDS, and climate change.

With a strong legacy of excellence to guide us, the University of Manitoba and its dynamic community of researchers, students, teachers and staff, are addressing the challenges facing Canada and the world in the 21st century.

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.

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Mark Whitmore, B.Sc.(Hons), M.Sc., Ph.D.

ELECTED BY GRADUATES

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Gwen Hatch, B.A., LL.B.

Rennie Zegalski, B.Comm. (Hons.)

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Bilan Arte

Jennifer Black

Emmanuel Rotimi Ojo

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Director of Libraries

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Universitairé de Saint-Boniface

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St. Paul's College

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Prairie Theatre Exchange

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Barber, D., B.P.E., MNRM (Manitoba), Ph.D. (Waterloo); **Berkes**, F., B.Sc., Ph.D. (McGill); **Butler**, M., B.Sc.(Hons.)(Birm.), M.Sc.(Wat.), Ph.D. (King's College, London); **Cheng**, S., B.Sc.(Tamkang), M.A., Ph.D. (Western); **Chochinov**, H. M., O.M., M.D., Ph.D.(Man.), F.R.C.P.C., F.R.S.C., F.C.A.H.S.; **Gole**, A.M., B.Tech. (IIT Bombay), M.Sc., Ph.D.; **Hawthorne**, F.C., O.C., B.Sc. (Spec.) (Imperial College), A.R.S.M. (Royal School of Mines, London), Ph.D. (McMaster), F.R.S.C., F.G.A.C., F.M.S.A.; **Holley**, R.A., B.Sc., M.Sc. (McGill), Ph.D. (Guelph); **Jayas**, D.S., B.Sc. (G.B.Pant), M.Sc. (Manitoba), Ph.D. (Saskatchewan), P.Ag., P.Eng.; **Judd**, E.R., B.A. (Hons.)(Queen's), M.A., Ph.D. (Br.Col.), Diploma (Beijing Language Institute), Diploma (Fudan), F.R.S.C.; **McCance**, D.C., Cert. Ed., M.A., Ph.D. (Manitoba); **Oleszkiewicz**, J.A., M.Sc.(Wroclaw), M.Sc.(Vanderbilt), Ph.D., F.C.S.C.E.; **Page**, J.H., B.Sc.(Hons.)(Dal.), D.Phil.(Oxf.); **Perry**, R.P., B.A. (UBC), M.Sc., Ph.D. (Calgary); **Plummer**, F., B.Sc. (Hons.), M.D. (Manitoba), F.R.C.P.C.; Roos, L., A.B. (Stanford), Ph.D. (MIT); **Shafai**, L., B.Sc. (Tehran), M.Sc., Ph.D. (Toronto), F.R.S.C.; Toles, G., B.A., M.A., Ph.D. (Virginia); **Wolfart**, H.C., [B.A. equiv.] (Albert-Ludwigs-UniversitŠt, Freiburg im Breisgau), M.A. (Yale), M.A. (Cornell), M.Phil., Ph.D. (Yale), F.R.S.C.

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Chancellors Emeriti

Auld, I.G., B.A.(Hons.); M.A.; LL.D.

Mauro, A.V., O.C., Q.C., B.A., LL.B., LL.M., LL.D. (Manitoba), D.Comm. (Lakehead)

Presidents Emeriti

Naimark, A., B.Sc. (Med.), M.D. (Manitoba), M.Sc., (M.), LL.D., F.R.C.P.C., F.R.S.C.

Szathmáry, E.J.E. C.M., O.M., B.A. (Hons.), Ph.D., LL.D. (Toronto), D.Sc. (Western Ontario), D. Litt.S. (St. Michael's College), LL.D. (York), LL.D. (McMaster), F.R.S.C.

Faculties/Schools and Departments

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

Faculties/Schools	Departments
Agricultural and Food Sciences (Faculty 07; School 24)	
	Agribusiness and Ageconomics (061)
	Animal Science (035)
	Biosystems Engineering (034)
	Entomology (038)
	Food Science (078)
	General Agriculture (065)
	Plant Science (039)
	Soil Science (040)
Architecture (09)	
	Architecture (050)
	Architecture Interdisciplinary (166)
	City Planning (073)
	Environmental Design (079)
	Interior Design (051)
	Landscape Architecture (031)
Art (15)	
	Fine Arts (054)
Arts (01)	
	Anthropology (076)
	Arts Interdisciplinary (099)
	Asian Studies (150)
	Canadian Studies (151)
	Catholic Studies (160)
	Central and East European Studies (099S)
	Classics (003)
	Economics (018)
	English, Film, and Theatre (004)
	French, Spanish and Italian (044)
	German and Slavic Studies (008)
	Global Political Economy (157)
	History (011)
	Icelandic (012)
	Judaic Studies (055)
	Labour Studies (153)
	Linguistics (126)
	Native Studies (032)
	Philosophy (015)
	Political Studies (019)
	Psychology (017)
	Religion (020)
	Sociology (077)

Faculties/Schools	Departments
	Ukrainian Canadian Heritage Studies (155)
	Women's and Gender Studies (156)
Dental Hygiene (20)	
	Dental Hygiene (070)
Dentistry (17)	
	Dental Diagnostic and Surgical Sciences (103)
	Dentistry (066)
	Oral Biology (100)
	Preventive Dental Science (101)
	Restorative Dentistry (102)
Education (08)	
	Curriculum, Teaching and Learning (132)
	Educational Administration, Foundations and Psychology (129)
	Education Ph.D. (124)
Engineering (03)	
	Civil Engineering (023)
	Electrical and Computer Engineering (024)
	Engineering - Preliminary Year (130)
	Mechanical and Manufacturing (025)
	Engineering (025)
Environment, Earth, and Resources, Clayton H. Riddell (028)	
	Geological Sciences (007)
	Environment and Geography (128)
	Environment, Earth, and Resources (177)
	Resource Management (056)
Extended Education (26)	
Graduate Studies (016)	
	Disability Studies (162)
	Graduate Studies (069)
	Mauro Centre for Peace Studies (170)
Human Ecology (04)	
	Family Social Sciences (062)
	General Human Ecology (028)
	Health Studies (173)
	Human Nutritional Sciences (030)
	Textile Sciences (064)
Kinesiology and Recreation Management (22)	
	Kinesiology (171)
	Physical Education (057))
	Physical Education & Recreation Studies General (172)
	Recreation Studies (123)

Faculties/Schools	Departments
Law (10)	
	Law (045)
Management, I. H. Asper School of Business (06)	
	Accounting and Finance (009)
	Actuarial Studies, Warren Centre (010)
	Business Administration (027)
	Interdisciplinary Management (098)
	Marketing (118)
	Supply Chain Management (164)
Medical Rehabilitation (19)	
	Medical Rehabilitation (068)
	Occupational Therapy (168)
	Physical Therapy (167)
	Respiratory Therapy (169)
Medicine (05)	
	Anaesthesia (096)
	Biochemistry and Medical Genetics (137)
	Community Health Sciences (093)
	Human Anatomy and Cell Science (080)
	Immunology (072)
	Interdisciplinary Medicine (165)
	Medical Education (888)
	Medical Microbiology (097)
	Medicine (083)
	Pathology (088)
	Pharmacology (089)
	Psychiatry (091)
	Physiology (090)
	Surgery (094)
Music, Marcel A. Desautels (21)	
	Music (033)
Nursing (13)	
	Nursing (049)
Pharmacy (11)	
	Pharmacy (046)
Science (02)	
	Biological Sciences (071)
	Chemistry (002)
	Computer Science (074)
	Mathematics (136)
	Microbiology (060)
	Physics and Astronomy (016)
	Statistics (005)

Faculties/Schools	Departments
Social Work (12)	
	Social Work (047)
University 1 (27)	

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
Arabic	ARA	Arts
Architecture	ARCG	Architecture
Architecture Interdisciplinary	ARCH	Architecture
Arts Interdisciplinary	ARTS	Arts
Asian Studies	ASIA	Arts
Biochemistry and Medical Genetics	BGEN	Medicine
Biological Sciences	BIOL	Science
Biosystems Engineering	BIOE	Agricultural and Food Sciences
Biotechnology	BTEC	Science
Canadian Studies	CDN	Arts
Catholic Studies	CATH	Arts
Chemistry	CHEM	Science
City Planning	CITY	Architecture
Civil Engineering	CIVL	Engineering
Classics	CLAS	Arts
Community Health Sciences	CHSC	Medicine
Computer Science	COMP	Science
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
Environment, Earth, and Resources	EER	Environment, Earth, and Resources
Environmental Architecture	EVAR	Architecture
Environmental Design	EVDS	Architecture
Environmental Interior Environment	EVIE	Architecture
Environmental Landscape and Urbanism	EVLU	Architecture
Family Social Sciences	FMLY	Human Ecology
Film Studies	FILM	Arts
Finance	FIN	Management
Fine Art General Courses	FA	Art
Fine Art Diploma	FNDP	Art
Fine Art: Art History	FAAH	Art
Fine Art Studio Courses	STDO	Art
Food Science	FOOD	Agricultural and Food Sciences
Forensic Sciences	FORS	Science
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

Subject	Code	Faculty/School
Greek	GRK	Arts
Health Studies	HEAL	Human Ecology
Hebrew	HEB	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
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
Nursing	NURS	Nursing
Occupational Therapy	OT	Medical Rehabilitation
Operations Management	OPM	Management
Oral Biology	ORLB	Dentistry
Pathology	PATH	Medicine
Peace Studies	PEAC	Graduate Studies
Pharmacology	PHAC	Medicine
Pharmacy	PHRM	Pharmacy
Philosophy	PHIL	Arts
Physical Education	PHED	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	PDSD	Dentistry
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
Semitic Languages and Literature	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
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

ACADEMIC SCHEDULE

Section 1: Orientation Sessions for Fall/Winter Session

Orientation Session	Date
IDDP Year 1	May-June 2013
New Student Orientation- Fort Garry Campus- Fall 2013	Sept. 3-4, 2013
Agriculture Diploma	Sept. 18, 2013
Agriculture & Food Sciences Year 1	Sept. 4, 2013
School of Art	Sept. 3-4, 2013
Asper School of Business, Year 1 student welcome luncheon	Sept. 3, 2013
Asper School of Business, Year 1 CSA orientation and Barbeque	Sept. 4, 2013
Education, Year 1	Sept. 4, 2013
Education, Year 2 and Year 5 Integrated	Aug. 29, 2013
Faculty of Engineering	Sept. 3-4, 2013
Medicine Inaugural Exercises	Aug. 21, 2013
Music	Sept. 3, 2013
Nursing Orientation for All New Students	Aug. 27, 28, 29, 2013
NOTE: Immunizations/CPR due for all newly admitted Nursing students. Criminal Record Check/Child Abuse Registry/Immunizations/CPR due for all newly admitted Nursing students .	Aug. 1, 2013
Nursing, Year 2 Clinical Orientation	Sept. 4, 2013
Nursing, Year 3	Sept. 11, 2013
Nursing, Year 4 clinical orientation and senior practicum (January start)orientation	Sept. 5, 2013
Occupational Therapy, Year 1	Aug. 22 - 23, 2013
Physical Therapy, Year 1	Aug. 19, 2013
Pharmacy, Year 1	Sept. 4, 2013
Social Work, Year 1	Sept. 4, 2013
Social Work, Year 2 and 3 Field Orientation	Sept. 3 and 4, 2013
New Student Orientation - Fort Garry Campus -Winter 2014	Jan. 7, 2014

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 website www.umanitoba.ca/distance for further information.

Education courses may have unique start and end dates. Students are referred to the Aurora Student Class Schedule.

Fall Term 2013 (including spanned courses)	Start	End
Most faculties and schools	Sept. 5, 2013	Dec. 4, 2013
Agriculture diploma	Sept. 23, 2013	Dec. 6, 2013
Dentistry, Years 1 and 2	Aug. 12, 2013	Nov. 29, 2013
Dentistry, Year 3	Aug. 6, 2013	Nov. 29, 2013
Clinics	T.B.A.	Dec. 6, 2013
Dentistry, Year 4	Aug. 6, 2013	Dec. 6, 2013
Clinics	T.B.A.	Dec. 13, 2013
Dental Hygiene, Year 2	Aug. 12, 2013	Nov. 29, 2013
Dental Hygiene, Year 3	Aug. 19, 2013	Nov. 29, 2013
Clinics	T.B.A.	Dec. 6, 2013
Law	Sept. 3, 2013	Dec. 2, 2013
Medicine, Years 1	Aug. 20, 2013	Dec. 17, 2013
Medicine, Years 2	Aug. 26, 2013	Dec. 17, 2013
Medicine, Years 3	Aug. 26, 2013	Dec. 20, 2013
Medicine, Years 4	Aug. 26, 2013	Dec. 20, 2013
NursingLectures 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. 9, 2013	
Nursing, Year 2 (2180)		
Tuesday/Wednesday clinical	Sept. 10, 2013	
Nursing, Year 2 (2180)		
Thursday/Friday clinical	Sept. 12, 2013	
Nursing, Year 2 (2190)		
Tuesday/Wednesday clinical	Sept. 10, 2013	
Nursing, Year 2 (2190)		
Thursday/Friday clinical	Sept. 12, 2013	
Nursing, Year 3		
Tuesday/Wednesday clinical rotation	Sept. 24, 2013	
Nursing, Year 3		
Thursday/Friday clinical rotation	Sept. 26, 2013	
Nursing, Year 4 4270 clinical rotation	Sept. 10, 2013	
Nursing, Year 4 4430		
Tuesday/Wednesday clinical rotation	Sept. 17, 2013	
Nursing, Year 4 4430		
Thursday/Friday clinical rotation	Sept. 19, 2013	
Nursing, Year 4 4290 senior practicum	Sept. 9, 2013	
Occupational Therapy, Year 1	Aug. 26, 2013	Nov. 15, 2013
Basic Fieldwork	Nov. 18, 2013	Dec. 13, 2013
Occupational Therapy, Year 2	Aug. 26, 2013	Dec. 13, 2013
Pharmacy, Year 4 (classes)	Sept. 3, 2013	Oct. 28, 2013
(SPEP 4 - Block 1)	Nov. 4, 2013	Dec. 13, 2013
(Electives - Block 1)	Nov. 4, 2013	Dec. 20, 2013

Physical Therapy , Year 1	Aug. 19, 2013	Dec. 18, 2013
Physical Therapy , Year 2	Aug. 19, 2013	Dec. 20, 2013
Respiratory Therapy, Years 1 and 2	Aug. 26, 2013	Dec. 13, 2013
Respiratory Therapy, Year 3	Aug. 19, 2013	Dec. 20, 2013
Social Work, Field Instruction Years 2 & 3	Sept. 3, 2013	Dec. 6, 2013
Winter Term 2014 (including spanned courses)	**Start**	**End**
Most faculties and schools	Jan. 6, 2014	April 9, 2014
Agriculture Diploma	Jan. 6, 2014	Mar. 27, 2014
Dental Hygiene, Years 2 and 3 classes	Jan. 6, 2014	April 4, 2014
Year 2 clinic	Jan. 6, 2014	April 4, 2014
Year 3 clinic	Jan. 6, 2014	April 17, 2014
Dentistry, Years 1, 2 and 3		
Classes and clinics	Jan. 6, 2014	May 16, 2014
Dentistry, Year 4 classes	Jan. 6, 2014	Jan. 10, 2014
Year 4 clinics	Jan. 6, 2014	April 25, 2014
Law	Jan. 6, 2014	April 11, 2014
Medicine, Years 1 and 2	Jan. 6, 2014	May 23, 2014
Medicine, Year 3	Jan. 6, 2014	Aug. 22, 2014
Medicine, Year 4	Jan. 6, 2014	May 15, 2014
Occupational Therapy, Year 1	Jan. 6, 2014	May 2, 2014
Occupational Therapy, Year 2		
Intermediate Fieldwork 2	Jan. 6, 2014	Feb. 28, 2014
Year 2 classes	Mar. 10, 2014	June 27, 2014
Pharmacy, Year 3 classes	Jan. 2, 2014	Mar. 24, 2014
Pharmacy, Year 2, SPEP 2	May 5, 2014	May 16, 2014
Pharmacy, Year 3 SPEP 3	April 7, 2014	May 2, 2014
Pharmacy, Year 4,		
(SPEP 4 - Block 2)	Jan. 6, 2014	Feb. 14, 2014
(Electives - Block 2)	Jan. 6, 2014	Feb. 21, 2014
(SPEP 4 - Block 3)	Feb. 24, 2014	Apr. 4, 2014
(Electives - Block 3)	Feb. 24, 2014	April 11, 2014
Physical Therapy , Years 1 and 2	Jan. 6, 2014	Mar. 28, 2014
Respiratory Therapy, Years 1 and 2	Jan. 6, 2014	April 25, 2014
Respiratory Therapy, Year 3	Jan. 6, 2014	June 6, 2014
Social Work Years 2 and 3 field instruction	Jan. 6, 2014	April 18, 2014

Section 3: Registration and Withdrawal Dates

Fall Term 2013 (including spanned courses)	**Start**	**End**
Nursing Clinical Courses registration for Fall Term 2013 and Winter Term 2014 ends		Aug. 1, 2013
Regular registration ends for all programs (except Agriculture Diploma and Law). This is the last Date to register and pay fees without penalty.		
		Sept. 4, 2013
Agriculture Diploma		Sept. 20, 2013
Law:		Sept. 3, 2013
Registration revisions and late registration in all programs (except Agriculture Diploma, Law, and irregularly scheduled courses). A financial penalty is assessed on all late registrations during this period.	Sept. 5, 2013	Sept. 18, 2013
Agriculture Diploma	Sept. 23, 2013	Oct. 2, 2013
Law		Sept. 16,2013
Last date in all programs (except Agriculture Diploma and irregularly scheduled courses) to withdraw from Fall Term 2013 and full courses and not be assessed a "VW"		Sept. 18, 2013
Agriculture Diploma		Oct. 2, 2013
Last date for Voluntary Withdrawal from Fall Term 2013 courses without academic penalty in all faculties and schools (except Agriculture Diploma). (see refund schedule, published on the Registrar's Office website in July 2013, for financial implications) (For a refund schedule, please check the Registrar's Office website after July 1, 2013.)		Nov. 13, 2013
Agriculture Diploma		Nov. 19, 2013
Winter Term 2014	**Start**	**End**
Registration and Revision period in Winter Term 2014 half courses in all programs (except irregularly scheduled courses)	Jan. 6, 2014	Jan. 17, 2014
Last date for registration in Winter Term 2014 half courses, including Challenge for Credit, and/or registration revisions in all programs (except irregularly scheduled courses)		Jan. 17, 2014
Law: Registration Revision only until Jan. 17,2014		Jan. 17, 2014
Winter Term 2014 half courses dropped after this date from any program (except irregularly scheduled courses) are recorded as Voluntary Withdrawals		Jan. 17, 2014
Last date for Voluntary Withdrawal from Winter Term 2014 half courses and full courses without academic penalty in all faculties and schools (except Agriculture Diploma). (see refund schedule, published on the Registrar's Office website in July 2013, for financial implications) (For a refund schedule, please check the Registrar's Office website after July 1, 2013.)		Mar. 19, 2014
Agriculture Diploma		Mar. 10, 2014

Section 4: Fee Deadlines

Fall Term 2013	**Date**
Last date for all students to pay Fall Term 2013 and 1st instalment fees without late fee (except Agriculture Diploma)	Sept. 4, 2013
Agriculture Diploma	Sept. 20, 2013
Winter Term 2014	**Deadline**
Last date for all students to pay Winter Term 2014 and 2nd instalment fees without late fee	Jan. 7, 2014

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 1, 2013	
Civic Holiday	Aug. 5, 2013	
Labour Day	Sept. 2, 2013	
Thanksgiving Day	Oct. 14, 2013	
Remembrance Day (Holiday Observed)	Nov. 11, 2013	
December Holidays	Dec. 21, 2013	Jan. 1, 2014
Louis Riel Day	Feb. 17, 2014	
Mid-Term Break* for all faculties and schools (except Medicine, Dentistry, Education, Occupational Therapy, Physical Therapy & Respiratory Therapy Yr. 3)	Feb. 18, 2014	Feb. 21, 2014
Dentistry break	Feb. 24, 2014	Feb. 28, 2014
Occupational Therapy break	Mar. 3, 2014	Mar. 7, 2014
Medicine Years 1 and 2 break	Mar. 17, 2014	Mar. 21, 2014
Physical Therapy, Year 1 break	Mar. 31, 2014	Apr. 4, 2014
Physical Therapy, Year 2 break	TBA	
Good Friday	Apr. 18, 2014	
Victoria Day	May 19, 2014	

*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 Term 2013 (including spanned courses)	**Start**	**End**
Most faculties and schools	Dec. 6, 2013	Dec. 18, 2013
Agriculture Diploma	Dec. 9, 2013	Dec. 16, 2013
Dentistry, Years 1, 2, and 3	Dec. 2, 2013	Dec. 13, 2013
Dentistry, Year 4	Dec. 9, 2013	Dec. 13, 2013
Dental Hygiene Year 2	Dec. 2, 2013	Dec. 13, 2013
Dental Hygiene Year 3	Dec. 9, 2013	Dec. 13, 2013
Law	Dec. 5, 2013	Dec. 18, 2013
Pharmacy, Year 4	Oct. 31, 2013	Nov. 1, 2013
Winter Term 2014 (including spanned courses)	**Start**	**End**
Most faculties and schools	April 11, 2014	April 25, 2014
Agriculture Diploma	Mar. 31, 2014	April 7, 2014
Dental Hygiene, Years 2 and 3	April 7, 2014	April 11, 2014
Winter Term 2014 (including spanned courses)	**Start**	**End**
Dentistry, Years 1, 2 and 3	April 14, 2014	April 25, 2014
Year 4	Jan. 13, 2014	Jan. 17, 2014
Law	April 14, 2014	April 28, 2014
Pharmacy, Year 3	Mar. 28, 2014	April 4, 2014

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

Autumn Supplemental Examinations

Faculties and schools that extend supplemental examination privileges: last date for applications for autumn supplemental examinations July 2, 2013

Fall Term 2013	**Date**
Agriculture Diploma:	
Last date for applications for supplemental examinations	Jan. 6, 2014
Fall term supplementary examinations date	Jan. 8, 2014
Language reading tests for graduate students	Aug. 31, 2013
Last date to apply for Challenge for Credit for courses	Sept. 18, 2013
International Dental Degree Program on-site assessment	TBA
Winter Term 2014	**Date**
Last date to apply for Challenge for Credit for courses	Jan. 17, 2014
Language reading tests for graduate students	Mar. 29, 2014
Agriculture Diploma **(graduating students)**:	
Last date for applications for supple mental examinations	April 15, 2014
Winter Term supplementary examinations date	April 21, 2014
Agriculture Diploma **(non-graduating students)**:	
Last date for applications for supplemental examinations	May 27, 2014
Winter Term supplementary examinations	June 2, 2014
Last day to register for Challenge for Credit for examinations in June series	April 25, 2014
Medical Council of Canada examinations	April 28 - May 6, 2014

Section 8: Grade Appeal Dates

Appeal period for final grades received for Fall Term 2013 courses:	Jan. 6, 2014	Jan. 24, 2014
Appeal period for final grades received for Winter Term 2014 courses and Spanned courses:	May 20, 2014	June 9, 2014

Section 9: Graduation and Convocation

Last date to apply online to graduate in October	July 30, 2013
Last date to apply online to graduate in February	Sept. 18, 2013
Fall Convocation	Oct. 16 - 17, 2013
Last date to apply online to graduate in May	Jan. 17, 2014
Graduation date for students graduating in February 2014	
(Graduates may attend a Spring Ceremony)	Feb. 5, 2014
School of Agriculture Convocation ceremony	May 2, 2014
Faculty of Medicine Convocation ceremony	May 15, 2014
Spring Convocation	June 3 - June 5, 2014
Universite de Saint-Boniface Convocation ceremony	June 9, 2014

Section 10: Other University Special Events

Head Start 2013	June 8, 2013
2013 School Counsellors Admissions Seminar	Sept. 2013
Enrolment Services/Student Recruitment: Evening of Excellence	Oct. 2013
Memorial events for 14 women murdered at l'Ecole Polytechnique in 1989	Dec. 6, 2013
Information Days for high school students	Feb. 19-20, 2014
Annual traditional Graduation Pow Wow in honour of Aboriginal students	May 3, 2014

Section 11: Distance & Online Education 2013/14 Deadline Dates

Term Start and End Dates	**Start**	**End**
Fall term 2013 (including spanned courses)	please see Section 2	
Winter Term 2014	please see Section 2	
Winter/Summer 2014 spanned courses	Jan. 6, 2014	July 4, 2014
Summer Session 2014	May 5, 2014	Aug. 1, 2014
Registration and Withdrawal Dates	**Start**	**End**
Fall Term 2013 (including spanned courses)	please see Section 3	
Winter Term 2014	please see Section 3	
Winter/Summer 2014 spanned courses:		
Registration and Revision period	Jan. 6, 2014	Jan. 17, 2014
Last date for Voluntary Withdrawal		June 6, 2014
Summer Session 2014		
Registration and Revision period	May 5, 2014	May 16, 2014
Last date for Voluntary Withdrawal		July 11, 2014

Application to write examinations at a location other than the University of Manitoba	**Deadline**
Fall Term 2013 courses	Oct. 1, 2013
Fall 2013/Winter2014 spanned and Winter Term 2014 courses	Feb. 3, 2014
Winter/Summer 2014 spanned courses	May 1, 2014
Summer Session 2014	June 2, 2014

Examination and Test Dates	**Start**	**End**
Fall Term 2013	Please see Section 6	
Winter Term 2014	Please see Section 6	
Winter/Summer 2014 spanned courses	July 7, 2014	July 9, 2014
Summer Session 2014	Aug. 5, 2014 (excluding August 9 & 10)	Aug 11, 2014

Section 12: Summer Session 2012 Start and End Dates

For more detailed information, please consult the Summer Session Calendar available from the Summer Session Office, 166 Extended Education Complex, or umanitoba.ca/summer.

May, June, May-June Day	**Start**	**End**
Classes	May 6, 2013	June 25, 2013
Examinations		
May Day classes	May 31, 2013	June 1, 2013
June Day & May-June Day classes	June 27, 2013	June 28, 2013

May-June, June-Aug., May-Aug. Evening	**Start**	**End**
Classes	May 6, 2013	Aug. 7, 2013
Examinations		
May-June Eve	June 21, 2013	June 22, 2013
June-Aug Eve & May-Aug Eve	Aug. 9, 2013	Aug. 10, 2013

July, Aug., July-Aug. Day	**Start**	**End**
Classes	July 2, 2013	Aug. 21, 2013
Examinations		
July Day	July 26, 2013	July 27, 2013
Aug. Day & July-Aug. Day	Aug. 23, 2013	Aug. 24, 2013

Other	**Start**	**End**
Medicine, B.Sc.	May 27, 2013	Aug. 23, 2013
Nursing	April 22, 2013	July 24, 2013
Occupational Therapy, Year Intermediate Fieldwork 1	May 6, 2013	June 28, 2013
Occupational Therapy, Year 2 Advanced Fieldwork	July 2, 2013 (flexible start date)	must end by Sept. 13, 2013
Physical Therapy, Year 1 2 X 6 wks placements between	Apr. 8, 2013	Aug. 9, 2013
Physical Therapy, Year 3 2 X 4 wks placements between	Apr. 29, 2013	Aug. 16, 2013
Respiratory Therapy, Year 2	April 29, 2013	June 28, 2013

Section 13: Summer Session 2014

Term/Class Start and End Dates	**Start**	**End**
Nursing summer term	April 21, 2014	July 25, 2014
Summer Session Start Date	May 5, 2014	
Medicine B.Sc.	May 26,2014	Aug. 22,2014
Occupational Therapy, Year 1 Intermediate Fieldwork 1	May 5,2014	June 27,2014
Occupational Therapy, Year 2 Advanced Fieldwork	June 30, 2014 (flexible. start date)	must end by Sept.12,2014
Physical Therapy, Year 1 2 X 6 wks placements between	Apr. 7, 2014	Aug. 8, 2014
Physical Therapy, Year 2 2 X 6 wks placements between	Apr. 7, 2014	Sept. 19, 2014
RespiratoryTherapy, Year 2	April 28,2014	June 27,2014

Other Summer Session 2014 dates are not yet available.

Section 14: Faculty of Graduate Studies Submission Dates

For submissions by students expecting to graduate in October 2013	**Date**
Reports on theses/practica (and the corrected copies of the theses/practica), comprehensive examinations and M.Eng. projects to be submitted to Graduate Studies.	Aug. 22, 2013

For submissions by students expecting to graduate in February 2014	**Date**
Receipt, in Graduate Studies Office, of Ph.D. theses (for distribution):	Oct. 1, 2013
Distribution of Master's theses/practica (to examining committee):	Oct. 14, 2013
Reports on theses/practica (and the corrected copies of theses/practica), comprehensive examinations and M.Eng. projects to be submitted to Graduate Studies:	Jan. 3, 2014
Receipt, in Graduate Studies Office, of Ph.D. theses (for distribution):	Jan. 13, 2014

For submissions by students expecting to graduate in May 2014	**Date**
Distribution of Master's theses/practica (to examining committee:	Jan. 20, 2014
Reports on theses/practica (and the corrected copies of theses/practica), comprehensive examinations and M.Eng. projects to be submitted to Graduate Studies:	April 2, 2014

For Progress reports	**Date**
Receipt, by the Faculty of Graduate Studies, of Progress Reports for Master's and Ph.D. students	June 15, 2014

For submissions by students expecting to graduate in October 2014	**Date**
Receipt, in Graduate Studies Office, of Ph.D. theses (for distribution):	June 9, 2014
Distribution of Master's theses/practica (to examining committee):	June 16, 2014
Reports on thesis/practica (and the corrected copies of thesis/practica), comprehensive examinations and M.Eng. projects to be submitted to Graduate Studies:	Aug. 21, 2014

UNIVERSITY POLICIES

Responsibilities of Academic Staff with Regard to Students Policy

I 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; to promote fair and equitable treatment of students.

II Definitions

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

1. 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.

2. Student shall mean any person who is registered as a student in the University.

III 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 for 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.

IV 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 personations, student access to final examination scripts, student discipline, grade appeals, and the University policy regarding sexual harassment.

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

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

a) 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 the 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 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 deadline (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 followed regarding late submission of assignments.

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

b) The academic staff member shall provide in writing to every member of the class, information regarding academic integrity which shall include a reference to the statements on academic dishonesty including "plagiarism and cheating" and "examination personation" found in the University General Calendar; and

- where appropriate, a reference to specific course requirements for individual work and group work. Students should be made aware that group projects are subject to the rules of academic dishonesty and that group members must ensure 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:

a) 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;

b) 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;

c) 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;

d) 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;

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

f) where appropriate, provide written evaluative feedback prior to the voluntary withdrawal deadlines specified in the General Calendar;

g) 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;

h) respect the confidentiality of documentary information about students;

i) keep confidential any information about the academic performance of a student, unless release is authorized by the student, required by his/her instructional team, or requested by an administrative officer in accordance with the University policy on the release of information;

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

k) not obtain any improper personal advantage from a student or student work; and

l) 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 reasons. Whenever a scheduled period of instruction is cancelled, the academic staff member shall:

a) inform the class at the earliest possible time;

b) inform the administrative head of his/her academic unit; and

c) 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 shall correct it without requiring the student affected to appeal his/her grade.

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

B. Collective Responsibilities

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:

a) University, faculty/school or departmental regulations regarding class attendance and penalties, if any, for non-compliance;

b) the information described in section 4 under "Discharge of Responsibilities, A - Individual Responsibilities", that is provided in writing to the class by the academic staff member for each course section;

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

d) University, faculty/school, and/or department policy regarding student access to final examination scripts;

e) University policy on student discipline;

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

g) University policy on the responsibilities of academic staff with regard to students; and

h) 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.

V Cautionary Notice

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

This Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/students/278.html

Respectful Work and Learning Environment Policy

1.0 Reason for Policy

1.1 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.

1.2 The issue of workplace safety and health with respect to a workplace harassment prevention policy is governed by provincial legislation and more specifically Manitoba Workplace Safety and Health Regulation #217. This Regulation identifies certain responsibilities for employers and employees in this regard. A policy on workplace harassment is required.

2.0 Policy Statement

2.1 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.

2.2 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.

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

2.4 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) discrimination or harassment as prohibited in the Manitoba Human Rights Code;

(b) sexual harassment; and

(c) personal harassment.

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

2.6 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.

2.7 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.

2.8 The University of Manitoba will establish mechanisms to give effect to this 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 one or more investigation officer(s) 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.

2.9 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.

2.10 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.

2.11 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.

2.12 The Workplace Safety and Health Regulation #217 requires that every harassment prevention policy contain the following statements:

(a) every employee is entitled to work free of harassment;

(b) the employer must ensure, so far as it is reasonably practicable, that no worker is subject to harassment in the workplace;

(c) the employer will take corrective action respecting any person under the employer's direction who subjects a worker to harassment;

(d) the employer will not disclose the name of the complainant or an alleged harasser or the circumstances related to the complainant to any person except where disclosure is

i) necessary to investigate the complaint or take corrective action with respect to the complaint; or

ii) required by law;

e) a worker has the right to file a complaint with the Manitoba Human Rights Commission;

f) the employer's harassment prevention policy is not intended to discourage or prevent the complainant from exercising any other legal rights pursuant to any other law.

2.13 Workplace Safety and Health Regulation #217 defines "harassment" as "any objectionable conduct, comment or display by a person that

a) is directed at a worker in a workplace;

b) is made on the basis of race, creed, religion, colour, sex, sexual orientation, gender-determined characteristics, political belief, political association or political activity, marital status, family status, source of income, disability, physical size or weight, age, nationality, ancestry or place of origin, and

c) creates a risk to the health of the worker".

This Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/community/230.html

Accessibility for Student with Disabilities Policy

1.0 Reason for Policy

1.1 The University of Manitoba strives to ensure an accessible learning and working environment and is thereby committed to providing reasonable accommodation of the needs of persons with documented disabilities.

1.2 The purpose of this policy is to support an accessible learning environment where students with disabilities, who are admitted to the University of Manitoba, can gain access to all programs for which they are academically qualified.

2.0 Policy Statement

2.1 General

The University shall endeavour to foster, create, and maintain an accessible campus and provide other supports and services to students with disabilities.

2.1.1 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; and have full and safe access to the educational process and learning environment (including but not limited to classes, laboratories, and workshops), the university campus, and university facilities and services.

2.1.2. The University will use reasonable efforts to offer reasonable accommodations in the delivery of academic programs and services to students with disabilities.

2.2 The Student Accessibility Services (SAS) office is the centralized service for the University of Manitoba community. SAS provides a focus for activity and expertise regarding disability-related accommodations within the University, and for liaison with outside organizations regarding accessibility issues, and programs and services for students with disabilities at the University of Manitoba. In providing accommodations, the SAS office will:

2.2.1 request and evaluate appropriate medical documentation from students requesting assistance from SAS and assign appropriate services to meet the needs of each student by adapting services, courses, and programs as feasible;

2.2.2. ensure that the University's criteria for academic excellence will not be compromised; and

2.2.3 inform the University community about the services available to students with disabilities through the SAS office, and seek to ensure that such services are delivered in ways that promote equity, recognizing that performance is not inferior merely because it is different.

2.3 The University is responsible for maintaining the confidentiality of disability related information under The Freedom of Information and Protection of Privacy Act (Manitoba) and The Personal Health Information Act (Manitoba), including limiting the distribution of that information to only those parties that require the information to determine appropriate accommodation.

2.4 The University expects that students, instructors and support staff will share the responsibility for the delivery of reasonable accommodations.

2.5. The University will foster a supportive University community by working to inform and educate community members about issues related to disabilities.

2.6. Students requesting accommodations are responsible to initiate contact with the SAS office and make the nature of their disability and/or their needs known in a timely fashion. Where possible, students are requested to declare their needs to SAS staff before or at the time they register for, or are admitted into, a program.

This Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/students/281.html

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. All student records will be handled in accordance with The Freedom of Information and Protection of Privacy Act (Manitoba) (FIPPA) and the Personal Health Information Act (Manitoba) (PHIA) as appropriate. Students who have questions on this matter should contact the Registrar's Office or the Access and Privacy office.

The FIPPA and PHIA Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/community/244.html

Language Usage Guidelines

Introduction

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 may be 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:

1. problems of designation, and
2. 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.

I. Problems of Designation

A. Ambiguity of Referent:

1. The student is usually the best judge of the value of his counselling.

a. Choices 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).

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

B. Stereotyping:

1. Research scientists often neglect their wives and children.

a. Acknowledge that women as well as men are research scientists (Research scientists often...neglect their families).

b. Mothering (noun substitute - parenting, nurturing).

c. Woman doctor, male nurse, lady lawyer (delete sex description unless necessary to the discussion, then use female doctor, female lawyer).

II. Problems of Evaluation

A. Ambiguity of Referent:

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

B. Stereotyping:

1. men and girls (use parallel terms - men and women, girls and boys, unless specifically wishing to denote adult and child relationship).

2. woman driver (specify only if necessary and then use female driver).

3. Staff members and their wives (staff members and their spouses/friends/guests).

4. The girls in the office (noun substituted - secretaries, staff, office assistants).

NOTE: A more detailed list of examples of the sexist use of language can be obtained by contacting the Office of the President.

This Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/staff/language_usage_guidelines.html

Conflict of Interest Between Evaluators and Students Due to Close Personal Relationships Policy

1.0 Preamble

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.

2.0 Definitions

1. 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.

1. 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:

a) parent/child;

b) spouses;

c) grandparent/grandchild;

d) siblings;

e) in-laws; or

f) persons living in the same dwelling unit.

1. Responsibility for avoiding the conflict of interest rests with the evaluator. In cases of uncertainty, the evaluator shall and the student may refer the matter for determination to the department head (or dean/director, as appropriate). The decision of the department head is subject to review by the dean/director of the academic unit.

2. Where there is a conflict of interest, the evaluator shall immediately withdraw from participation and shall inform the student concerned and the head or dean/director, as appropriate.

a) Where alternative sections or electives exist, the alternative must be taken, unless the dean/director concerned determines that this will create an undue hardship for the student.

b) Where the dean/director has exercised discretion under 2.(a) or where no alternatives exist to compulsory courses, the dean/director shall ensure fair evaluation by having another suitably qualified evaluator review the submitted material or hear the oral presentations. Where practicable, the evaluator shall not participate in setting the examination or other evaluation method.

1. Where the dean or director has a conflict of interest, the President shall name a replacement to act in the matter.

2. In the case of failure to observe these regulations, staff members will be subject to the discipline procedures provided by the appropriate collective agreement or personnel policy of the University.

This Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/students/277.html

Campus Alcohol Policy

1.0 Reason for Policy

This policy is a general statement and guideline, setting out the University's requirement for strict compliance with the Liquor Control Act (Manitoba), as well as any rules and regulations, and any successor or replacement rules and regulations, at all events and facilities at which alcohol is available. This policy is further to the Liquor Control Act (Manitoba), as well as any rules and regulations and directives issued pursuant to the Act (The "MLCC rules and regulations").

2.0 Policy Statement

2.1 Alcohol abuse is a serious health problem and can lead to conduct that may endanger the safety of individuals and result in damage to property both on and off the University of Manitoba Fort Garry and Bannatyne Campuses (the "Campuses"). This in turn may result in legal claims involving the University and others. The purpose of this policy is to explicitly establish the general means by which alcohol abuse on the Campuses can be reduced, and to the extent possible, eliminated.

2.2 The University shall meet the policy's objective by:

2.2.1 Offering an alcohol education and awareness program within the scope of programs offered by or through Student Affairs;

2.2.2 Maintaining University guidelines with respect to the serving and consumption of alcohol on the Campuses;

2.2.3 Requiring that events and facilities at which alcohol is served on the Campuses (the "events and facilities") be managed effectively, and in accordance with the University's policy and procedures and MLCC rules and regulations; and This policy applies broadly, and covers all events and facilities on the Campuses.

This Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/community/253.html

University Parking Regulations

The University of Manitoba recognizes that at any given time there is a large number of motor vehicles driving and parking on campus. In order for the University to maintain orderly conduct of parking of motor vehicles, Parking Regulations must be established. Furthermore, as an ancillary service, parking must be operated on a cost recovery basis. These regulations set out the rules, fees and remedies available in association with parking on University property, and they apply to all staff, students, and the general public. The University of Manitoba Act, which is an act of legislature, empowers the University of Manitoba to govern parking on University property and to make parking regulations. This includes fees and charges for parking violations and actions taken for failure to pay fees and charges.

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.

A complete copy of the Parking Regulations is available online at http://umanitoba.ca/admin/governance/governing_documents/community/255.html.

The Regulations are in addition to any bylaws 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.

Student Discipline Bylaw

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.

1.0 Reason for the Bylaw

The Student Discipline Bylaw and related Procedures provide guidance to those individuals charged with administering disciplinary action ("Disciplinary Authority") while, at the same time, outlining the prohibited conduct and the right of appeal.

2.0 Rule/Principle

2.1 As members of the University Community, students have an obligation to act with academic integrity and in a fair and reasonable manner toward their peers, faculty, staff, administration and the physical property of the University. Academic integrity and personal conduct, both on-campus and off-campus in university-sanctioned activities, are critical elements in achieving these obligations.

2.2 Students will be subject to disciplinary action under this bylaw, for the following matters regardless of whether such behaviour is covered by other University governing documents; (bylaws, policies, procedures and regulations).

2.2.1 Academic dishonesty including, but not limited to:

(a) academic/scientific fraud;

(b) cheating on exams or tests;

(c) contravention of academic regulations;

(d) re-submitting own previous course work as new work;

(e) examination personation;

(f) inappropriate collaboration; and

(g) plagiarism (i.e., passing off the thoughts, writings and work of another person as one's own).

2.2.2 Inappropriate behaviour including, but not limited to:

(a) abuse of computer privileges;

(b) alcohol and substance abuse;

(c) breach of residence hall regulations;

(d) disorderly, violent or threatening behaviour;

(e) false or misleading information made for any purpose including information in connection with:

(i) application for admission;

(ii) application for awards;

(iii) medical certificates;

(iv) letters of permission;

(v) transfer of credits; and

(vi) transcript/student records matters;

(f) harassment and unlawful discrimination;

(g) indecent exposure;

(h) theft;

(i) unprofessional conduct; and

(j) vandalism.

2.3 The specific jurisdiction for each of the Disciplinary Authorities is set out in "Table 1: Jurisdiction of Disciplinary Authorities " ("Table 1") which follows this Bylaw. For the purposes of this document and the related Procedures document, references to Faculty/School will include University 1 and Dean/Director will include the Director of University 1.

2.4 The specific disciplinary actions available for each Disciplinary Authority are set out in "Table 2: Disciplinary Actions Available to Disciplinary Authorities" ("Table 2") which follows this Bylaw.

2.5 Disciplinary Authorities having the closest connection with the particular alleged disciplinary matter are encouraged whenever possible and appropriate to resolve student disciplinary matters informally in the first instance.

2.6 Students who make complaints or appeals which are found by the Disciplinary Authority to be frivolous or made for an improper purpose, may be subject to disciplinary action.

2.7 If the disciplinary matter relates to a criminal offence, the Disciplinary Authority shall provide relevant information to Campus Security Services for potential follow-up by the appropriate policing authority.

2.8 Students have a right to appeal disciplinary actions made by a Disciplinary Authority excluding the decisions of the University Discipline Committee ("UDC") which are final decisions.

2.9 Students are advised that the Disciplinary Authority to whom an appeal has been made may impose a more severe disciplinary action than previously recommended by a lower disciplinary body should the hearing panel, after reviewing the evidence presented by all parties, consider the original disciplinary action insufficient.

2.10 Students are afforded the right to representation when dealing with disciplinary matters in the first instance and with respect to appeals; and both are subject to the limitations set out in the related Procedures [See sections 2.10.3., 2.10.4 and 2.17.5].

2.11 No disciplinary action shall be implemented until the time for appeal has elapsed or until the Student has waived in writing the right to appeal, whichever occurs first. The only exceptions to this rule shall be:

(a) where the disciplinary action would be entered on the academic records of the Student, the Registrar shall be notified by the Disciplinary Authority implementing such disciplinary action, and shall not issue any academic transcripts until the appeal has been disposed of;

(b) where the disciplinary action relating to academic dishonesty or academic fraud may result in a change to the Student's transcript, the Registrar shall be notified by the Disciplinary Authority implementing such disciplinary action, and shall not issue any transcripts until the appeal has been disposed of;

(c) where changes in the Student's courses and/or program are directly related to the matter under disciplinary consideration, such changes shall not be permitted; and

(d) where the disciplinary action were not implemented, the safety of members of the University Community would be compromised.

2.12 Related Procedures are set out in the Governing Document entitled Procedures: Student Discipline.

This Policy is available online at http://umanitoba.ca/admin/governance/governing_documents/students/868.html

Inappropriate or Disruptive Student Behaviour

1.0 Reason for Policy

In the event of a student or students exhibiting inappropriate or disruptive behaviour, the following policy can be implemented.

2.0 Policy Statement

2.1 General

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

2.1.1 The vast majority of students will complete their academic life at the University acting appropriately and without causing disruptions 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 nor disruptive.

A staff member may notice that an individual student is exhibiting debilitating 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.

2.1.2 "Inappropriate 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 Consideration", College Health, April 1986.

Such behaviours would include but would not be limited to the following:

a) threats to the physical safety of the individuals or others;

b) verbal threats to or abuse of students or University personnel;

c) recurring and willful damage of University property;

d) inappropriate or disruptive behaviour as a result of misuse of drugs or alcohol on University property; and

e) actions which habitually interfere with the learning environment or requires the inordinate time and attention of faculty and staff.

2.1.3 Where individual students act inappropriately or disruptively:

a) The majority of such students will accept personal responsibility for their inappropriate or disruptive behaviour, and will accept appropriate referral for voluntary counselling. For the most part, staff members need only use the "Normal Procedure for Dealing with Inappropriate or Disruptive Behaviour" set out below.

b) Information and input received from professionals in the mental health field and professional practitioners at the University would suggest that the numbers of such students who do not accept personal responsibility or appropriate voluntary counselling are small. Where a student to whom this policy should apply is identified by a staff member, he/she will use part 2 of the "Normal Procedure"; and if appropriate in more extreme cases involving physical or mental harm, he/she should use the "Procedure for More Extreme Behaviour".

c) Where an officer(s) of the University believes that a student is inappropriately involving more than one of the various service and administration offices of the University, he/she shall request the Vice-Provost (Students) to initiate a staff conference to facilitate communication and problem resolution.

d) Information regarding an acute problem of inappropriate or disruptive behaviour which is disclosed during the student application process, should be referred to the Director of Admissions or the Dean of Graduate Studies as appropriate. If the information is of serious concern to the respective Director of Admissions or the Dean of Graduate Studies, he/she may seek the advice of the University Legal Counsel and may initiate a staff conference.

2.2 Normal Procedure for Dealing with Inappropriate Behaviour

When a student acts inappropriately or disruptively, staff members should, where appropriate:

2.2.1 Make timely voluntary counselling referrals through existing support services at the University. Such services include:

- Counselling Service
- Psychological Service Centre
- University Health Services
- Faculty (of Medicine) Counselling Services

2.2.2 Use the existing Student Discipline By-law and other policies, rules and regulations where additional action is necessary to deal with inappropriate or disruptive behaviour or students.

2.3 Procedure for More Extreme Behaviour

2.3.1 If a staff member is of the opinion that a student is exhibiting a behaviour of a nature or quality that likely will result in:

a) Serious harm to student,

b) Serious harm to another person, or

c) substantial deterioration of the student's health;

The staff member shall, in addition to using the "Normal Procedure", immediately refer the matter to his/her respective Dean, Director, or Administrative Unit Head.

2.3.2 If the respective Dean, Director, or Administrative Unit Head is of the same opinion, he/she shall:

a) Advise the student to seek professional help; and

b) Contact the Director of University Health Services if the student refuses to voluntarily seek professional help. The Director of University Health Services or designate shall follow mental health legislation and regulations when determining whether or not involuntary psychiatric assessment is advisable.

c) In addition to the foregoing procedure, the Campus Police should be contacted immediately if it is deemed necessary for the protection of the student, other persons, or property. It should also be noted that, subject to the Student Discipline By-law, the President may at any time make an order restricting or prohibiting access by a student to any University property (see policy entitled Student Discipline Bylaw).

This Policy is available online at http://umanitoba.ca/admin/governance/governing_documents/students/279.html

Violent or Threatening Behaviour

To state clearly the University's refusal to tolerate violence, threats or intimidation and to describe possible consequences of such action or actions.

2.0 Policy Statement

The University of Manitoba is committed to creating and maintaining a safe, positive and productive learning and working environment. Therefore, the University will not tolerate threats, intimidation or violence. Individuals who are found to have engaged in such activities will be subject to disciplinary action which may result in termination of employment, expulsion from educational programs and a ban from University property.

2.1 Definitions

For the purpose of this policy, violent or threatening behavior shall be deemed to include intimidation.

a) Threats include verbal and/or physical actions that create fear or apprehension of bodily harm.

b) Intimidation is defined as conduct or harassment that disrupts the work environment and/or results in a reasonable fear for personal safety.

c) Violence is defined as physical attack(s) that may cause injury and/or verbal attacks that may cause emotional trauma.

This Policy is available online at http://umanitoba.ca/admin/governance/governing_documents/community/669.html

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).

Advisor and Program Holds

Students enroled in some programs are required to discuss their course selections and program status with an advisor prior to registration. Advisor and Program Holds normally restrict registration activity only. Other administrative services are available to the student who is on an advisor or program hold. Check your faculty or school's section of the Academic Calendar if you are unsure if your program requires consultation with an advisor.

This Regulation is available online at umanitoba.ca/registar.

Electronic Communication with Students Policy

The University of Manitoba (the "University") is committed to using available technology to communicate among members of the University community. It recognizes an expanding reliance on electronic communication by academic and administrative staff of the University with students due to the convenience, speed, cost-effectiveness, and environmental advantages it provides. This policy will define the proper use of electronic communications between University academic or administrative staff and students. Electronic communications may include, but are not limited to, electronic mail, electronic bulletin boards, and web sites.

When communicating by email it is important to ensure that the email is being directed to the intended individual. In an effort to protect confidentiality and privacy in electronic communications and ensure compliance with applicable legislation and policies including The Freedom of Information and Protection of Privacy Act ("FIPPA"), The Personal Health Information Act ("PHIA") and the University's Computer Usage Policy, all official electronic communications must be directed to University of Manitoba email accounts (see section 2.1).

2.0.1 The University requires all students to activate an official University email account.

2.0.2 The University authorizes the use of electronic communication for official communication between university staff and students, subject only to the confidentiality and privacy provisions outlined below.

2.0.3 All students are expected to comply with established guidelines and procedures that define the proper use of electronic communications as outlined in this policy and in the University's Use of Computer Facilities Policy.

2.1 Provision of University of Manitoba email accounts

The University will provide all students with an official University email address. University email accounts must be obtained by students through the Claim ID process at: http://umanitoba.ca/claimid. The University email account claimed will be the address listed in University directories and contact information available to staff and faculty. The University will direct all official email communications to the official University email account.

2.2 Appropriate use of University email

2.2.1 Certain University electronic communications may be time-critical. Students are responsible for checking their University email account on a regular basis in order to stay current with University communications.

2.2.2 In general, electronic communications, including email, are not appropriate for transmitting sensitive or confidential information, including personal information, unless an appropriate level of security matches its use for such purposes:

Confidentiality regarding student records is protected under FIPPA. All use of electronic communication, including use for sensitive or confidential information, must be consistent with the University FIPPA and PHIA Policy;

Personal Health Information should not be transmitted via electronic communication at any time;

Email shall not be the sole method for notification of any legal action.

2.3 Access to University email

Students who are not in possession of a home computer or laptop, or do not have access to a computer at work, can use computers available in campus labs or in their local library.

2.4 Use of University email for instructional purposes

Academic staff may determine the extent to which electronic communication will be used in their classes. It is highly recommended that if academic staff have electronic communication requirements and expectations, these are specified in course syllabi, and that all assignments sent electronically (including by email) be accepted only when sent from a University email account. Academic staff may reasonably expect that students are accessing their University email account, and may use electronic communication for their courses accordingly.

This policy can be found at: http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html

Final Examinations and Final Grades Policy

To establish the University of Manitoba's policy relating to final examinations and grades and to oversee the procedures related to final examinations, deferred and supplemental examinations, and final grades.

1.1 Use of Terms

a) Final Examination: A final examination is a test scheduled within an examination period which serves as the final evaluation of student performance in a course.[1]

b) Deferred Examination: A deferred examination is a privilege that may be granted to a student:

I) who is unexpectedly unable to write a final examination as scheduled;

or

II) who knows in advance that he or she is unable to write an examination at the scheduled time. Students may request a deferred examination(s) on the grounds that they are unable to write said examination(s) due to:

i. a medical condition; or

ii. participation in an inter-university, provincial, inter-provincial, national or international scholastic or athletic event; or

iii. religious obligations.

Making a false or misleading claim regarding a deferred examination may be considered an offence under the Student Discipline Bylaw. Penalties may range from a failed grade in the course to suspension or expulsion.

c) Supplemental Examination: A supplemental examination is the rewriting of a final examination and is a privilege offered by some faculties, schools, and academic units to students who have not achieved the minimum result in required courses. Within the conditions established by the student's faculty, a student who is granted a supplemental examination is given the opportunity to rewrite a final examination. The impact of a supplemental examination on the final grade is to be determined by regulations within the faculty.

2.1 The Senate has determined that each faculty or school or academic unit shall be responsible for establishing regulations governing evaluation procedures for students enrolled in its courses.

2.2 Those relevant items listed under procedures for final examinations, deferred and supplemental examinations, and final grades shall be incorporated into the regulations established by faculties, schools or academic units.

2.3 Faculties, schools, and academic units shall submit regulations and amendments to evaluation procedures to Senate for its approval via the Senate Committee on Instruction and Evaluation.

2.4 The Senate has determined that each faculty or school or academic unit shall adopt a formal policy for the appeal of grades given for term work, in that faculty or school or academic unit, that has been returned or made available to students before the last day of classes. Policies adopted by a faculty or school or academic unit, after review by the Senate Committee on Instruction and Evaluation, shall be forwarded to Senate for information.

[1] University of Western Ontario, Academic Handbook, Issued 2009 03

This Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/academic/1299.html

GENERAL ACADEMIC REGULATIONS

Introduction

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

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

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.

Residence and Written English and Mathematics Requirements

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. University English and Mathematics Requirements for Undergraduate Students

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

Some degree programs have designated specific written English and mathematics courses to fulfil this requirement.

Some degree programs require that the written English and/or mathematics requirements be completed prior to admission.

See the program descriptions in the faculty and school chapters of the Academic Calendar for details.

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 Université de Saint-Boniface who have completed a written French requirement (at the university) before transferring to the University of Manitoba will be deemed to have met the written English requirement.

3. Approved English and Mathematics Courses

A complete list of all courses which satisfy the university written English and mathematics requirement is provided below. (When searching for courses in Aurora, students may search Course Attributes for courses that satisfy the written English and Mathematics requirements).

Written English Courses

AGRI 2030	Technical Communications (3)
ANTH 1520	Critical Cultural Anthropology (3)
ANTH 2020	Relatedness in a Globalizing World (3)
ANTH 2230	Anthropology of Travel and Tourism (3)
ANTH 3330	Sex and Sexuality (3)
ARTS 1110	Introduction to University (3)
ASIA 1420	Asian Civilization to 1500 (3)
ASIA 1430	Asian Civilization from 1500 (3)
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)
ENGL 0930	English Composition (3)
ENGL 0940	Writing about Literature (3)
ENGL 1XXX	All English courses at the 1000 level
ENGL 2XXX	All English courses at the 2000 level
ENGL 3XXX	All English courses at the 3000 level
ENGL 4XXX	All English courses at the 4000 level
FORS 2000	Introductory Forensic Science
GEOG 2900	Geography of Canadian Prairie Landscapes (3)
GEOG 3480	Canadian Problems (A) (3)
GEOG 3580	Landforms (6)
GEOG 3900	Geography of Manitoba (3)
GEOL 1410	Natural Disasters and Global Change (3)
GEOL 3130	Communication Methods in the Geological Sciences (3)
GMGT 1010	Business and Society (3)
GMGT 2010	Business Communications
GPE 2700	Perspectives on Global Political Economy (3)
GRMN 1300	Masterpieces of German Literature in English Translation (3)
GRMN 1310	Love in German Culture in English Translation (3)
GRMN 2120	Introduction to German Culture 1 (3)
GRMN 2130	Introduction to German Culture 2 (3)
HIST 1XXX	All History courses at 1000 level
HIST 2XXX	All History courses at 2000 level
HMEC 2000	Research Methods and Presentation (3)
HMEC 2030	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)
LABR 1260	Working for a Living (3)
LABR 2300	Workers, Employers, and the State (3)
LABR 4510	Labour Studies Field Placement Seminar (3)
LAW 1470	Legal Methods (5)
LAW 2570	Introduction to Advocacy (4)
LING 2740	Introduction to Interpretation Theory (3)
NATV 1200	The Native Peoples of Canada (6)
NATV 1220	The Native Peoples of Canada, Part 1 (3)
NATV 1240	The Native Peoples of Canada, Part 2 (3)
NATV 2020	The Métis of Canada (3)
NATV 2110	Introduction to Aboriginal Community Development (3)
PHIL 2610	The History and Philosophy of Science (6)
PHIL 2612	A Philosophical History of Science (3)
PHIL 2614	Philosophy of Science (3)
PHIL 2790	Moral Philosophy (6)
PHIL 3220	Feminist Philosophy (3)
POL 1900	Love, Heros and Patriotism in Contemporary Poland (3)
POL 2600	Polish Culture until 1918 (3)
POL 2610	Polish Culture 1918 to the present (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 2500	Elements of Ethology (3)
PSYC 3200	Thinking Critically About Psychological Research (3)
PSYC 4520	Honours Research Seminar (6)
REHB 1520	Principles of Occupational Therapy (4)
RLGN 1320	Introduction to World Religions (6)
RLGN 1420	Ethics in World Religions (3)
RLGN 1424	Religion and Sexuality (3)
RLGN 1440	Evil in World Religions (3)
RLGN 2036	Introduction to Christianity (3)
RLGN 2140	Introducation to Judaism (3)
RLGN 2160	Introduction to Hebrew Scriptures (3)
RLGN 2170	Introduction to the New Testament (3)

RLGN 2222	The Supernatural in Popular Culture (3)
RLGN 2590	Religion and Social Issues (3)
RLGN 2760	Rabbinic Judaism (3)
RLGN 2770	Contemporary Judaism (3)
RLGN 3280	Hasidism (3)
RUSN 1400	Masterpieces of Russian Literature in English Translation (3)
RUSN 2280	Russian Culture 1 (3)
RUSN 2290	Russian Culture 2 (3)
RUSN 2310	Exploring Russia Through Film (3)
RUSN 2410	Russian Literature after Stalin (3)
RUSN 2740	Literature and Revolution (3)
RUSN 3770	Tolstoy (3)
RUSN 3980	Women and Russian Literature (3)
SOC 3100	Practicum in Criminological/Sociological Research (6)
SOC 3350	Feminism and Sociological Theory (3)
UKRN 2200	Ukrainian Myths, Rites and Rituals (3)
UKRN 2410	Ukrainian Canadian Cultural Experience (3)
UKRN 2590	Ukrainian Literature and Film (3)
UKRN 2770	Ukrainian Culture 1 (3)
UKRN 2780	Ukrainian Culture 2 (3)
UKRN 2820	Holodomor and Holocaust in Ukrainian Literature and Culture (3)
UKRN 3970	Women and Ukrainian Literature (3)
WOMN 1500	Introduction to Women's and Gender Studies in the Humanities (3)
WOMN 1600	Introduction to Women's and Gender Studies in the Social Sciences (3)
WOMN 2560	Women, Science and Technology (3)
WOMN 3330	Sex and Sexuality (3)

Mathematics Courses

FA 1020	Math in Art (3)
GEOG 3810	Quantitative Research Methods in Geography (3)
MATH 1XXX	All Mathematics courses at the 1000 level
MATH 2XXX	All Mathematics courses at the 2000 level
MATH 3XXX	All Mathematics courses at the 3000 level
MATH 4XXX	All Mathematics courses at the 4000 level
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)
REHB 2460	Statistics (3)
SOC 2290	Introduction to Research Methods (6)
STAT 1XXX	All Statistics courses at the 1000 level
STAT 2XXX	All Statistics courses at the 2000 level
STAT 3XXX	All Statistics courses at the 3000 level
STAT 4XXX	All Statistics courses at the 4000 level

Course Identification

1. 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. 6 credit hours = 3 hours a week, two terms; and 3 credit hours = 3 hours a week, one term).

For the purposes of registration, courses taught over both the Fall and Winter Terms have been divided into two parts. The credit hour value of the course are divided equally and applied to each part of the course. For example: for a six credit hour spanned course each of the Fall and Winter Term parts of the course will be assigned the value of three credit hours. Students registering for term spanning courses will receive one grade for the course and only when the second part is completed. The course grade will be applied to both the Fall and Winter parts of the course.

2. 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 the chapter of the faculty or school offering the course. 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 the chapter of the faculty or school offering the course.

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 chapter of the faculty or school offering the course.

3. Course Numbers

3.1 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.

3.2 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:

BIOL 3242 Biodiversity: 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 Post Baccalaureate Diploma and the Post-Graduate Medical Education programs.

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.

3.3 Other course numbering information

Courses with numbers that end in 0 or an even number are taught in English, most of which are offered on the Fort Garry or Bannatyne campuses or through Distance and Online Education.

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

Grades and Grade Point Average Calculation

Introduction

Final grades in most courses are expressed as letters, ranging from F, to A+ the highest. A grade of D is the lowest passing grade, however the minimum grade required to use a course as credit toward a degree or diploma program may be set higher by a faculty or school. Refer to faculty and school regulations. Each letter grade has an assigned numerical value which is used to calculate grade point averages. Grading scales used to determine the final letter grade may vary between courses and programs.

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.

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. Courses graded "D" may be repeated for the purpose of improving a GPA. Note that some faculties and schools consider a grade of "D" as unacceptable and will not apply the course toward the program as credit. In most cases the course will need to be repeated to attain the acceptable grade. Refer to faculty and school regulations.

2. Calculation of Grade Point Average

The University of Manitoba will report cumulative and term grade point averages for all students through Aurora Student.

A complete copy of the Grade Point Averages Policy is available online at: http://umanitoba.ca/admin/governance/governing_documents/academic/701.html

2.1 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.

2.2 Quality Point Total

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

2.3 Grade Point Average (GPA)

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

Example:

Course	Credit Hours	Grade	Grade Points	Quality Points
Course 1	3	B	3	9
Course 2	3	B+	3.5	10.5
Course 3	3	C+	2.5	7.5
Course 4	3	B	3	9
Course 5	3	A	4	12
Totals	15			48

Grade point average: 240 Quality Points / 15 Credit Hours = 3.20

2.4 Cumulative Grade Point Average (CGPA)

The CGPA is the grade point average of all courses, institutional or transferred, subject to repeat rules. Separate CGPAs are calculated for courses taken at the same level (non-credit, undergraduate, or graduate). The CGPA is calculated by dividing the quality point total by the total number of credit hours attempted.

2.5 Degree Grade Point Average (DGPA)

The DGPA is the grade point average of all courses acceptable for credit in a student's current degree/program, institutional or transfer, subject to repeat rules. The DGPA is calculated by dividing the Quality Point total by the total number of acceptable credit hours attempted.

2.6 Term Grade Point Average (Term GPA)

The Term GPA is the grade point average of all courses taken during a single term, and is calculated on the basis of all final grades received in the term (eg. Fall, Winter, or Summer terms). Courses completed by means of a Letter of Permission from another institution will not be included in the calculation of Term GPA.

2.7 How Repeated Courses affect Grade Point Averages

When a course has been repeated or an equivalent course is taken, i.e. a course that may not be held for credit with the original course, the last grade

achieved is that which will be used in the calculation of the CGPA and DGPA.

Students are normally permitted to repeat the same or equivalent course only once, and are encouraged to review their faculty/school repeat rules.

Admissions criteria and eligibility rules may vary by faculty with respect to inclusion and calculation of grades for repeated courses.

NOTE: Information on credit hours, courses, prerequisites and corequisites, is found in Course Identification section of the General Academic Regulations.

3. Poor grades and program progression

A course in which a "D" standing is obtained may need to be repeated by probationary students in certain faculties or where a minimum grade of "C" is required in a prerequisite subject or to meet degree requirements.

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 in the Academic Calendar or consult an advisor.

4. Academic Honours

Students qualify for the Honour List (Dean's, Director's, Universtiy 1) when they achieve qualifying grade point averages, as specified by the faculty/school or 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.

Academic Evaluation

1. Methods of Evaluation

Within the first week of the academic term, students shall be informed of the method of evaluation to be used in each course, as specified in the Responsibilities of Academic Staff with Regard to Students Policy, found in the University Policies section of the Academic Calendar.

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.

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.

1.2 Repeating a Course

A course in which a "D" standing is obtained may need to be repeated by probationary students in certain faculties or where a minimum grade of "C" is required in a prerequisite subject or to meet degree requirements.

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.Unless otherwise permitted by a faculty of school, students are normally limited to one repeat of a course,.

1.3 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.

2. Other Forms of Earning Degree Credit

2.1 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 Academic Calendar for the residence and degree requirements of the degree programs in which they are enrolled.

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

2.2 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.

2.3 Application of Course Credit when transferring between Programs within the University of Manitoba

When students transfer into program from another faculty or school within the University of Manitoba, some course credits previously earned may be applied to the new program. The credit hour value assigned by the faculty or school that offers the course is used. That is, there can only be one credit weight designated for a course with a particular course number.

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 Comiteé d'appels at Universitairé 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.

Final Examinations

Introduction

A final examination is a test scheduled within an examination period which serves as the final evaluation of student performance in a course.[1]

A complete copy of the Final Examination Procedures is available at: http://umanitoba.ca/admin/governance/governing_documents/academic/final_examinations_procedures.html

1. General Examination Regulations

Any test or tests, 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 fourteen (14) calendar days ending with the last day of classes in the term during the regular session as defined in the Academic Schedule, or during the last two (2) classes of Summer Evening and the last three (3) classes for other Summer terms.

No project or assignment may be announced during the periods outlined above, unless contained in the course outline or syllabus required to be provided to all students during the first week of classes

This information is outlined in the Responsibilities of Academic Staff with Regards to Students Policy, found in the University Policies section of the Academic Calendar.

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 and Supplemental Examinations.

2. 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. Exact dates for the exam period can be found in the Academic Schedule.

A Preliminary Examination Timetable is posted by the Registrar's Office 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 approximately six to eight weeks prior to each examination period. The examination timetable is made available on the Registrar's Office Website (umanitoba.ca/registrar).

Students are expected to remain available for all examination and test obligations. Any students requesting a deferred examination due to a conflict with vacation or holiday plans shall not normally be granted a deferral.

3. Final Examinations

No final examinations or the submission of take-home final examinations shall be scheduled to occur prior to the examination periods as described Academic Schedule, except with the expressed joint consent of the Deans and Directors involved.

Each examination paper shall indicate the weight of each question, and the name of the instructor or course coordinator.

3.1 Examinations administered by Student Accessibility Services

Examinations administered by Student Accessibility Services are additionally regulated by the Accessibility for Students with Disabilities Policy, found in the University Policies section of the Academic Calendar.

3.2 Responsibilities of invigilators and students

Each student shall display his or her student card and photo identification and shall sign an attendance form.

Any student departing from accepted procedure during an examination will be reported immediately to the Chief Invigilator. The student shall be allowed to continue writing the examination, except in those cases in which the behaviour of a student is disruptive to others writing the examination, or to the conduct of that examination. In such cases, the Chief Invigilator may, after due warning, require that student to cease writing the examination and leave the examination hall.

In the case that a student arrives late for an examination:

a) No student shall be permitted to enter the examination room after at least one other student who is writing the same examination has left the examination room.

b) A student who arrives to write an examination more than thirty (30) minutes after the start of the examination will not be permitted to write the examination.

c) Any student who, due to late arrival, is not permitted to write an examination will be asked to complete the appropriate form and will then be advised to contact the Office of his or her Dean or Director not later than the next business day to discuss possible alternatives.

d) No student scheduled to write an examination in a centrally administered location who arrives late for the examination shall be permitted to write longer than the scheduled end-time for that examination. For those examinations not centrally scheduled, flexibility may be allowed at the discretion of the unit administering the examinations, but all students in a given course with commonly examined sections should have equal opportunities to take advantage of whatever flexibility is afforded.

Should a technical irregularity occur in an examination, such as misprinted information or wrong instruction, invigilators supervising the same examination in other locations must be informed. The Registrar's Office should be contacted immediately should this or other similar problems arise in an examination room.

If a student becomes ill or receives word of a family emergency during the course of an examination and is unable to continue, the student must report at once to the Chief Invigilator, hand in the examination, and indicate either that they wish to submit their examination paper as: (1) completed; or (2) not completed and with the right to request a deferred examination. Only those students who have notified the Chief Invigilator of the reason they cannot complete the examination shall be eligible to apply for a deferred examination. Documentation verifying the illness may be required.

3.3 At the Close of the Examination

a) The time of conclusion of the examination should be announced.

b) No student shall leave the room without signing the attendance form and submitting an examination script. In addition, no student shall be permitted to leave the examination room during the first thirty (30) minutes of an examination.

d) No student may be permitted to re-enter an examination room until all examination scripts have been collected.

4. Unauthorized materials in examinations

Students are not permitted to access any unauthorized materials during an examination. This includes but is not limited to calculators, books, notes, pencil cases, or any electronic device capable of wireless communication and/or storing information (e.g. computer, dictionary, translator, cell phone, pager, PDA, mp3 units, etc.). However, students may bring in such materials or devices when permission has been given by the instructor.

5. Security

Students may store valuables and personal items under the desk or chair of the examination room but may not have access to these items during the examination. Items stowed under the desk or chair must not obstruct the aisles of the examination room. Students must ensure that all items required for the examination are placed on top of the desk prior to the start of the examination.

6. Posting examination answers

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

7. Student access to final examinations

In order to allow proper feedback, students shall have an opportunity to read their own final examination script and any comments written on it prior to the deadline for a formal grade appeal, but only in the presence of the instructor or a staff member appointed by a faculty, school, or academic unit.

Notwithstanding the above, there is no obligation upon the faculty, school, or academic unit to make machine-scored examination answer sheets available for consultation by students. It is expected that faculties, schools, and academic units will provide appropriate means of feedback to students in such circumstances and, where practicable, will encourage instructors to discuss selected questions and answers.

8. 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.

9. 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:

> Everyone 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.

[1] University of Western Ontario, Academic Handbook, Issued 2009 03

Deferred and Supplemental Examinations

Introduction

A complete copy of the Deferred and Supplemental Examinations Procedures is available at

http://umanitoba.ca/admin/governance/governing_documents/academic/deferred_and_supplemental_examinations_procedures.html

1. Deferred Examinations

A deferred examination is a privilege that may be granted to a student who is unexpectedly unable to write an examination as scheduled or a student who knows in advance that he or she is unable to write an examination at the scheduled time. Making a false or misleading claim may be considered an offence under the Student Discipline Bylaw. Penalties may range from a failed grade in the course to suspension or expulsion.

1.1 Application for deferred examination

Students who are unable to write an examination due to an unexpected illness must file an application for a deferred examination with the advising office of the faculty, school, or academic unit (including University 1 or Extended Education) in which they are registered, setting out the reasons for the deferral.

The application must normally be filed within 48 hours of the scheduled date of the missed examination or, in a case where more than one examination was missed, within 48 hours of the scheduled date of the last examination missed. The application 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, an indication of the period of incapacity. Based on the evidence, the Dean or Director shall decide whether the application is approved. Based on the student's ongoing incapacity or other exceptional circumstances a deferral may be granted to a student who files an application after the 48 hour period has lapsed.

Students may request a deferred examination(s) on the grounds that they are unable to write said examination(s) due to:

a) participation in an inter-university, provincial, inter-provincial, national or international scholastic or athletic event;

b) religious obligations; or

c) a medical condition.

Students requesting a deferred examination due to a known condition as listed above must file an application normally twenty (20) working days prior to the day of the scheduled examination with the advising office of the faculty, school, or academic unit (including University 1 or Extended Education) in which they are registered.

1.2 Approval of deferred examination request

Initial approval of all deferred examinations by the student's faculty, school, or academic unit shall be conditional upon verification that the student has completed all required components of the course and that it is mathematically possible for the student to pass the course by writing the final examination. Approval will be rescinded if these conditions are not met.

Any students requesting a deferred examination(s) on the grounds that said examination(s) conflict(s) with vacation or holiday plans shall not normally be granted a deferral.

If a student becomes ill or receives word of a family emergency during the course of an examination and is unable to continue, the student must report at once to the Chief Invigilator, hand in the examination, and indicate either that they wish to submit their examination paper as: (1) completed; or (2) not completed and with the right to request a deferred examination. The Chief Invigilator must record all notifications. Students leaving an examination early in compliance with this section are eligible to apply for a deferred examination under the provisions of 2.1.2. Only students who do not complete the examination and who notify the Chief Invigilator of the reason they cannot complete the examination shall be eligible to apply for a deferred examination.

1.3 Scheduling of deferred examination

When an application for a deferred examination is approved by the faculty, school, or academic unit, the head of the unit in which the course is offered, in consultation with the instructor concerned, shall schedule the deferred examination to take place normally within thirty (30) working days from the end of the examination series from which the examination was deferred, taking into account the following:

a) If a deferred final examination is granted for a course that is a pre-requisite to another course or courses, students may be permitted to remain registered in those affected courses. However, if the examination is written after the revision deadline and the pre-requisite course is not satisfied, the student will be withdrawn from all courses requiring it. Faculties, schools, and academic units are encouraged to schedule deferred examinations in pre-requisite courses early in a term to ensure that results are available prior to the course revision deadline.

b) Faculties, schools, and academic units are requested to schedule deferred examinations as soon as possible for potential graduands so that final grades may be available in sufficient time to meet planned graduation deadlines.

In the event students are unable to write the deferred examination as it has been scheduled, the following may take place:

a) the deferred examination shall be written at the next scheduled examination series in which the course is offered (unless the faculty, school, or academic unit chooses to make other arrangements); subsequent requests for re-deferral may result in the student being denied registration in the current or a future term until all outstanding examination obligations have been completed;

b) the head of the academic unit in which the course is offered, in consultation with the instructor concerned, may assign a grade without examination. In such cases, the grades shall be assigned on the basis of the term work and assignments. Faculty or School Councils shall establish the procedure by which such a decision will be implemented.;

c) 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 term in such cases in which the progression rules of the student's program require the successful completion of an entire academic year before a student is eligible to proceed in 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 in the course.

1.4 Fitness to resume studies

Students who, for medical reasons, withdraw from a program or receive deferred examination privileges for all final examination series, or who fail to write deferred examinations as scheduled, may be prevented by the faculty, school or academic unit from reregistration until they have established, through appropriate medical consultation, their fitness to resume studies.

2. Supplemental Examinations

Supplemental Examinations are offered by some faculties to students who have not achieved the minimum result in required courses. Within the conditions established by the student's faculty, a student who is granted a Supplemental Examination is given the opportunity to rewrite a final examination. The impact of a supplemental examination on the final grade is to be determined by regulations within the faculty or school; additional information may be found in your faculty or school section of the Academic Calendar.

The results of supplemental examinations must be reported to the faculty or school council.

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 thirty (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 a supplemental examination 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 examination 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.

Appeals of Grades

1. Appeal of Term Work

The appeal of term work that has been returned or made available to students before the last day of classes shall be subject to policies and procedures established by Faculty/School Councils; additional information may be found in your faculty or school section of the Academic Calendar.

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 (10) working days after the grades for the term work have been made available to the student.

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.

2. Appeal of Final Grades

A student may enter an appeal, through the Registrar's Office, for assessment of one or more grades. A student wishing to make a final grade appeal must do so by the deadlines set for the following terms and sessions:

a) On a Fall Term course grade the deadline is fifteen (15) working days following the first day in January which the University is open.

b) On a Winter Term course grade the deadline is fifteen (15) working days after Victoria Day.

c) For Summer Session course grades the deadline is thirty (30) working days following the end of the examination period.

d) For all other programs the deadline is twenty (20) working days following the end of the examination period.

Applications must be made on a prescribed form obtainable from the Registrar's Office. On payment of the prescribed fee, such appeals shall be forwarded to the Head of the academic unit in which the course is offered.

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.

Attendance and Withdrawal

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.

2. Withdrawal from Courses and Programs

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.

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.

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 Academic 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.

Academic Integrity

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 personation. (Please see Exam Personation, found in the Examination Regulations section of the General Academic Regulations). 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.

Graduation and Convocation

1. Graduation

Students may graduate from the University of Manitoba in May/June, October, and February of each year. (Convocation ceremonies are held in May and October only).

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 chapter General Academic Regulations 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.

Please refer to the Registrar's Office website (umanitoba.ca/registrar; click on Graduation and Convocation for answers to frequently asked questions about Graduation).

2. Application for Graduation

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

Application is to be made through Aurora Student. (Log into Aurora Student; click Enrolment and Academic Records, then Declarations then Declare Graduation Date.)

Deadline to Apply for Fall 2013 Graduation: July 30, 2013

Deadline to Apply for February 2014 Graduation: September 18, 2013

Deadline to Apply for Spring 2014 Graduation: January 17, 2014

3. Changing a Graduation Date

If you need to change your graduation date after you have made your declaration, you must contact the general office of your faculty or school as soon as possible.

4. Receipt of Information about Graduation

After you have declared your graduation, you will be sent a series of e-mails requesting you to verify your full legal name, asking you about your attendance at convocation, providing convocation information, and so on. It is imperative that you activate your University of Manitoba email account and check it regularly.

5. Convocation

Convocation ceremonies are held in May/June and October of each year. Correspondence with students who declare intention to graduate will be by email. Please be sure you have claimed your University of Manitoba computer account.

February graduates are invited to attend 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 by email their intention to attend Convocation.

Complete details of the time, location, and ceremony arrangements will be included in the material sent by email from the Registrar's Office.

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

The Registrar's Office will hold unclaimed parchments for a maximum of twelve months after graduation when any unclaimed parchments will be destroyed. These will include those not given at Convocation, those that were to be picked up in person but not claimed, those that were mailed but returned to the Registrar's Office by the postal outlet or courier depot, those that were not issued due to a financial hold on a student's records, and those that were reprinted immediately after convocation due to corrections.

It is critical that you update your address, phone number and email through Aurora whenever changes occur. Note that any changes made with the Alumni Association are not reflected in your University of Manitoba student records.

If you do not receive your parchment, it is your responsibility to follow up with the Registrar's Office within a twelve-month period. Any requests for parchments after this time will be processed as replacements; there is a fee charged for replacement parchments.

5.1 Academic Dress

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

5.2 Convocation Information

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

Personal Information

1. Mailing Address

In order to receive University mail, it is essential that you to provide the Registrar's Office with your current address. All mail will be directed to the address you provide. You may change your mailing address and phone number by accessing Aurora Student and then selecting Personal Information.

2. Change of Name

If you have changed your name since you were first admitted or if the name on your record is incomplete or inaccurate, official evidence of the name change or correction must be submitted to the Registrar's Office along with a completed Request for Change of Name form. The University of Manitoba uses your full legal name on its records, transcripts, and graduation documents (a full legal name, for example, includes all names on your birth certificate - first, middle, and last - or on your study permit). Abbreviated names, Anglicized names, or initials should not be used unless they have been proven with appropriate documentation.

ACADEMIC PROGRAMS

Undergraduate Programs Offered

The following is a listing of all degree, diploma and certificate programs offered at the Fort Garry Campus, and at the Bannatyne Campus..

Agricultural and Food Sciences, Faculty of

Science in Agribusiness, Bachelor of

Science in Agriculture, Bachelor of

Science in Agroecology, Bachelor of

Science in Food Science, Bachelor of

Agriculture, Diploma in

Architecture, Faculty of

Environmental Design, Bachelor of

Art, School of

Fine Arts (Honours), Bachelor of

Fine Arts (Honours) (Art History), Bachelor of

Fine Arts, Bachelor of

Fine Arts (Art History), Bachelor of

Art, Diploma in

Arts, Faculty of

Arts (Honours), Bachelor of

Arts (Advanced), Bachelor of

Arts , Bachelor of

Arts (Integrated Studies), Bachelor of

Université de Saint-Boniface

Please see chapter for programs offered at Université de Saint-Boniface

Dental Hygiene, School of

Science in Dental Hygiene, Bachelor of

Dental Hygiene, Diploma in

Dentistry, Faculty of

Dental Medicine, Doctor of

Science in Dentistry, Bachelor of

Education, Faculty of

Education, Bachelor of

Education, Post-Baccalaureate Certificate in

Education, Post-Baccalaureate Diploma in

Music, Bachelor of/Bachelor of Education (Integrated)

Engineering, Faculty 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), Bachelor of

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

Arts in Geography (Honours), Bachelor of

Arts in Geography (Advanced), Bachelor of

Arts in Geography, Bachelor of

Environmental Science (Honours), Bachelor of

Environmental Science (Major), Bachelor of

Environmental Science, Bachelor of

Environmental Studies (Honours), Bachelor of

Environmental Studies (Major), Bachelor of

Environmental Studies, Bachelor of

Science in Geological Sciences (Honours), Bachelor of

Science in Geological Sciences (Major), Bachelor of

Science in Geological Sciences, Bachelor of

Science in Physical Geography (Honours), Bachelor of

Science in Physical Geography (Major), Bachelor of

Extended Education, Division of

Access/Aboriginal Focus Programs

Certificate/Diploma Programs

Human Ecology, Faculty of

Health Sciences, Bachelor of

Health Studies, Bachelor of

Human Ecology (Family Social Sciences), Bachelor of

Human Ecology, Bachelor of

Science (Textile Sciences), Bachelor of

Science in Human Nutritional Sciences, Bachelor of

Kinesiology & Recreation Management, Faculty of

Kinesiology, Bachelor of

Physical Education, Bachelor of

Recreation Mgmt & Community Development, Bachelor of

Law, Faculty of

Juris Doctor

Management, Faculty of/I.H. Asper School of Business

Commerce (Honours), Bachelor of

Medical Rehabilitation, School of

Medical Rehabilitation (Respiratory Therapy), Bachelor of

Medicine, Faculty of

Medicine, Doctor of

Science in Medicine, Bachelor of

Music, Marcel A. Desautels Faculty of

Jazz Studies, Bachelor of

Music, Bachelor of /Bachelor of Education (Integrated)

Music (Composition), Bachelor of

Music (History), Bachelor of

Music (Performance), Bachelor of

Music, Bachelor of

Performance, Post-Baccalaureate Diploma in

Nursing, Faculty of

Nursing, Four-Year Bachelor of

Nursing, Bachelor of BPRN

Pharmacy, Faculty of

Science in Pharmacy, Bachelor of

Science, Faculty of

Computer Science (Honours), Bachelor of

Science (Honours), Bachelor of

Science (Major), Bachelor of

Science, Bachelor of

Social Work, Faculty of

Social Work, Bachelor of

Areas of Study

Each Faculty/School chapter includes a list (where applicable) of Majors, Minors, Concentrations and Focuses which may be included in their degree programs.

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, General	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
Arabic	ARA	Arts
Architecture	ARCG	Architecture
Architecture Interdisciplinary	ARCH	Architecture
Arts Interdisciplinary	ARTS	Arts
Asian Studies	ASIA	Arts
Biochemistry and Medical Genetics	BGEN	Medicine
Biological Sciences	BIOL	Science
Biosystems Engineering	BIOE	Agricultural and Food Sciences
Biotechnology	BTEC	Science
Canadian Studies	CDN	Arts
Catholic Studies	CATH	Arts
Chemistry	CHEM	Science
City Planning	CITY	Architecture
Civil Engineering	CIVL	Engineering
Classical Studies	CLAS	Arts
Community Health Sciences	CHSC	Medicine
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
Environment, Earth, and Resources	EER	Environment, Earth, and Resources
Environmental Architecture	EVAR	Architecture
Environmental Design	EVDS	Architecture
Environmental Interior Environment	EVIE	Architecture
Environmental Landscape and Urbanism	EVLU	Architecture
Family Social Sciences	FMLY	Human Ecology
Film Studies	FILM	Arts
Finance	FIN	Management
Fine Art General Courses	FA	Art
Fine Art Diploma	FNDP	Art
Fine Art: Art History	FAAH	Art

Subject	Code	Faculty/School
Fine Art Studio Courses	STDO	Art
Food Science	FOOD	Agricultural and Food Sciences
Forensic Sciences	FORS	Science
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	HEB	Arts
History	HIST	Arts
Human Nutritional Sciences	HNSC	Human Ecology
Human Resources Manage ment /Industrial Relations	HRIR	Management
Hungarian	HUNG	Arts
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 Civilization	JUD	Arts
Kinesiology	KIN	Kinesiology and Recreation Management
Labour Studies	LABR	Arts
Landscape Architecture	LARC	Architecture
Latin	LATN	Arts
Law	LAW	Law
Linguistics	LING	Arts
Management Information Systems	MIS	Management
Management Science	MSCI	Management
Marketing	MKT	Management
Mathematics	MATH	Science
Mechanical Engineering Graduate	MECG	Engineering
Mechanical Engineering Undergraduate	MECH	Engineering
Medical Microbiology	MMIC	Medicine
Medical Rehabilitation	REHB	Medical Rehabilitation
Medicine	MED	Medicine
Microbiology	MBIO	Science
Music	MUSC	Music
Native Studies	NATV	Arts
Nursing	NURS	Nursing
Occupational Therapy	OT	Medical Rehabilitation
Operations Management	OPM	Management
Oral Biology	ORLB	Dentistry
Pathology	PATH	Medicine
Peace Studies	PEAC	Graduate Studies
Pharmacology	PHAC	Medicine
Pharmacy	PHRM	Pharmacy
Philosophy	PHIL	Arts
Physical Education	PHED	Kinesiology and Recreation Management
Physical Education andRecreation 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
Portuguese	PORT	Arts
Post Graduate Medical Education	PGME	Medicine
Preventive Dental Science	PDSD	Dentistry
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
Slavic Studies	SLAV	Arts
Social Work	SWRK	Social Work

Subject	Code	Faculty/School
Sociology	SOC	Arts
Soil Science	SOIL	Agricultural and Food Sciences
Spanish	SPAN	Arts
Statistics	STAT	Science
Supply Chain Management	SCM	Management
Surgery	SURG	Medicine
Textile Sciences	TXSC	Human Ecology
Theatre	THTR	Arts
Ukrainian	UKRN	Arts
Ukrainian Canadian Heritage Studies	UCHS	Arts
Undergraduate Medical Education	UGME	Medicine
Women's and Gender Studies	WOMN	Arts
Yiddish	YDSH	Arts

ADMISSIONS

SECTION 1: Welcome

You are joining a vibrant community of over 29,000 students and 8,000 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.

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 available to provide academic advice and assistance. During the campus wide 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 document, the Undergraduate Calendar, provides the basic information on admission requirements. 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 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.

The University of Manitoba is honored to provide you with your education.

SECTION 2: An Overview of Undergraduate Admission

The twenty-two faculties and schools of the University of Manitoba offer over 60 different undergraduate programs. Some of these programs are open to high school graduates, or to mature status applicants, while others require a year or more of university-level studies as preparation for admission.

There are several programs that offer direct entry options for qualified high school graduates, see Section 3: Direct Entry Options for the list of these programs. The majority of high school students applying to the University of Manitoba choose University 1, a first year program designed to provide a foundation for studies in Arts, Science, and the professional disciplines.

Many programs offer only an 'advanced entry' option and accept applications from students who have completed a year or more in university-level studies, either in University 1 (or another program at the University of Manitoba) or at another recognized university or college. These programs are listed in Section 4: Advanced Entry Options.

The programs offering the 'direct entry' option also offer an 'advanced entry' option for students who wish to start in University 1 and then select their degree program in second year.

In addition, students can also apply as Auditing, Visiting, or Special Students (see Section 5: Other Admission Categories). Usually students in these applicant categories will apply to General Studies (Extended Education) where they can take degree credit courses in a variety of disciplines to meet entrance requirements for a future degree application or to meet career development and personal goals.

The main criterion for admission for direct and advanced entry programs is the scholastic achievement of the student. In instances such as the Marcel A. Desautels Faculty of Music and the School of Art, additional criteria designed to assess the student's suitability for education are applied.

Most faculties and schools in the University of Manitoba have enrolment limitations, and a process of selection is applied by the university. 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. Booth University College (approved teaching centre) and Université de Saint-Boniface (an affiliated college) are not limited in their enrolment, and interested students are directed to those institutions for information.

Many of the first-year level courses in mathematics and the sciences at the University of Manitoba will have high school subject prerequisites. These prerequisites are listed in the course descriptions sections of this calendar.

All applicants whose primary language is not English must fulfil the English language proficiency requirements described in Section 7: English Language Proficiency.

SECTION 3: Direct Entry Options

Intro

Comprehensive information on the entrance requirements, application process, and deadlines for each of these programs is found at www.umanitoba.ca/admissions.

The following faculties and schools offer direct entry programs which accept students graduating from Manitoba high schools (or the equivalent in other provinces/countries):

University 1

Faculty of Agricultural & Food Sciences (degree programs)

Faculty of Agricultural & Food Sciences (diploma program)

Faculty of Arts

School of Art (Fine Arts studio degree programs)

School of Art (Fine Arts diploma program)

Asper School of Business

School of Dental Hygiene

Faculty of Engineering

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

General Studies (Extended Education)

Faculty of Human Ecology

Faculty of Kinesiology & Recreation Management (except Athletic Therapy)

Marcel A. Desautels Faculty of Music

Faculty of Science

Students applying from high school to a direct entry program must meet two levels of requirements:

- The general entrance requirements
- The specific subject and performance requirements of the program for which admission is sought.

Some University of Manitoba undergraduate courses, particularly mathematics and science courses, will have specific high school courses as prerequisites to register in these courses. These prerequisites may not be required for admission to the direct entry program, but are required for course registration. If students have not completed the necessary high school courses, they can complete a preparatory upgrading course at U of M. See our website for listings of these high school prerequisites.

These programs also accept transfer students; see Section 4: Advanced Entry Options.

3.1 General Entrance Requirements

3.1.1 Manitoba High School Students - General Entrance Requirements

Applicants must present Manitoba high school graduation, with five full credits at the Grade 12 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. 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.

3.1.2 Other Canadian High School Students - General Entrance Requirements

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.

Alberta: High school graduation with a minimum overall average of 60 percent on five acceptable Grade 12 credits .

British Columbia: High school graduation with a minimum average of 60 percent or better over four acceptable Grade 12 credits.

New Brunswick: High school graduation with a minimum average of 60 percent over six acceptable Grade 12 credits.

Newfoundland: High school graduation with a minimum average of 60 percent over ten acceptable Grade 12 credits.

Northwest Territories: High school graduation with a minimum average of 60 percent over five acceptable Grade 12 credits.

Nova Scotia: High school graduation with a minimum average of 60 percent over five acceptable Grade 12 credits.

Nunavut: High school graduation with a minimum average of 60 percent over five acceptable Grade 12 credits.

Ontario: High school graduation with a minimum average of 60 percent over six Grade 12 U or M courses.

Prince Edward Island: High school graduation with a minimum average of 60 percent in a university entrance program.

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

Saskatchewan: High school graduation with a minimum average of 65 percent on seven acceptable Grade 12 credits.

Yukon Territory: High school graduation with a minimum average of 60 percent or better over four acceptable Grade 12 credits.

3.1.3 Countries and Regions outside Canada - General Entrance Requirements

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.

Please see www.umanitoba.ca/student/admissions/international/international-program-requirements.html for additional listings.

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) Diploma de Bachelier de l'Enseignement du Second Degree (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) Attestate o Srednem (Polnom) Certificate and complete General Secondary Education

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

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 Conclusao de Grau or a Diploma de Tecnico de Nivel Medio with a minimum 6.5 average or the examination Concurso Vestibular with a minimum 5 average

China: Senior Middle School Diploma

Czech Republic: Maturitni Zkouska (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: HKDSE/HKCEE Diploma, with at least two HKALE level subjects and three HKCEE level subjects with a minimum overall average of a 'C' and no grade below a 'D'. Two HKASLE level subjects will be held equivalent to one HKALE level subject.

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 Uman (S.M.U.)

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 Persekolahon Malaysia (STPM) or MICSS Unified

Examination Certificate (UEC)

Mexico: Bachillerato certificate with a minimum 7.0 average

Nigeria: Senior School Certificate with WAEC results

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

Philippines: first 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 (Immumgye Kodung Hakkyo Choeupchang)

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.

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 3.1.2 for minimum requirements)

3.1.4 International Baccalaureate Students - General Entrance Requirements

To meet the General Requirements, an I.B. student must present 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 6.1 Advanced Standing for High School Students.

3.1.5 Home Schooled Applicants

Home schooled applicants will be considered for admission for University 1 on an individual basis. Contact the Admissions Office for additional information.

3.1.6 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 classes beginning in May; before July 1 for classes beginning in July; 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.

Mature status students may apply to any of the following direct entry programs: University 1, Engineering, Fine Arts (diploma program), and Music. Members of the Canadian Military are also eligible to apply to General Studies (Extended Education), the Clayton H. Riddell Faculty of Environment, Earth, & Resources, and the Faculties of Arts and Science as mature students. Applicants to Engineering are required to meet the specific high subject requirements of that Faculty, i.e. a minimum of 60% in each of Chemistry 40S, Pre-Calculus Math 40S, and Physics 40S (or the equivalent) plus a minimum 85% average over these subjects.

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. These applicants should apply to one of the 'advanced entry' programs.

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

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

3.2 Specific Subject Requirements and Performance Levels for Admission to Direct Entry Options

In addition to the General Entrance Requirements listed above by Geographic region, applicants must meet the Specific Subject Requirements for their selected program. The requirements are listed for Manitoba high school students, the equivalent from other provinces and countries are acceptable.

Should the number of qualified applicants exceed the number of available positions, the strongest candidates will be selected.

3.2.1 University I

General Entrance Requirements as listed above, plus completion of ONE of the following sets of requirements:

- Set A: One credit of Grade 12 S or U English with a minimum grade of 60%, and
- a minimum average of 70% over three Grade 12 S or U credits OR
- Set B: One credit of Grade 12 S or U English, with a minimum grade of 60%, and
- a minimum average of 63-69.9% over three Grade 12 S or U credits OR
- Set C: A minimum average of 70% over three Grade 12 S or U credits, but lacking the Grade 12 S or U English requirement.

International applicants from other countries should qualify under Set A above.

NOTE: Admission under Set B or C will be considered a limited admission to University 1; some registration restrictions and performance standards will apply, and additional academic supports and services will be provided. See the University 1 section of this Calendar for further details on limited admission.

3.2.2 School of Agriculture (diploma program)

General Entrance Requirements as listed above, plus, a minimum average of 60% over the following three courses:

a. English 40S

b. Mathematics (40S or 45S)

c. a science 40S

Applications will also be accepted from students who do not meet these requirements but an interview will be required.

3.2.3 Agriculture & Food Science (degree programs)

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. one of: Pre-Calculus Mathematics 40S or Applied Mathematics 40S

c. one of: Chemistry 40S, Physics 40S, Biology 40S, or Computer Science 40S

3.2.4 Faculty of Arts

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. two additional 40S or U courses

Note: completion of either Applied Mathematics 40S or Pre-Calculus 40S would facilitate registration in courses used to fulfill the University's mathematics requirement for graduation, but is not required for direct entry to Arts.

3.2.5 School of Art (Fine Arts studio degree programs)

General Entrance Requirements as listed above, plus the same specific subject requirements and performance levels as University 1. Portfolios are required from all applicants (www.umanitoba.ca/schools/art). Grade 12 Art is recommended.

3.2.6 School of Art (Fine Arts diploma program)

Candidates should meet the General Entrance Requirements as listed above, plus the same specific subject requirements and performance levels as University 1, but applications for the diploma program will be accepted from students who have not graduated from high school or who do not meet the University 1 requirements. Portfolios are required from all applicants (www.umanitoba.ca/schools/art). Grade 12 Art is recommended.

3.2.7 Asper School of Business

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. one of: Pre-Calculus Mathematics 40S (recommended) or Applied Mathematics 40S

c. a third 40S course

3.2.8 School of Dental Hygiene

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. two of: Mathematics 40S (Pre-Calculus recommended, or Applied), Biology 40S or Chemistry 40S

3.2.9 Engineering

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. Pre-Calculus Mathematics 40S

b. Chemistry 40S

c. Physics 40S

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

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. Pre-Calculus Mathematics 40S or Applied Mathematics 40S

c. One of: Social Studies 40S (Western Civilization, World Geography, World/Global Issues, Current Topics in First Nations, Metis and Inuit Studies), Biology 40S, Chemistry 40S, Physics 40S or one 'Designated Course 40S' including Economics, Law, and Psychology

3.2.11 General Studies (Extended Education)

Candidates should meet the General Entrance Requirements as listed above, plus the specific subject requirements and performance levels as Set A of University 1. High school graduates interested in working towards a University of Manitoba degree should apply to University 1 or one of the other direct entry programs.

3.2.12 Faculty of Human Ecology

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. one of: Chemistry 40S, Biology 40S, or a Mathematics 40S

c. a third 40S course

3.2.13 Faculty of Kinesiology & Recreation Management

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. Mathematics 40S

c. one of: Biology 40S (recommended), Chemistry 40S, Physics 40S, or a Social Studies 40S (World Human Geography, Western Civilization History, or Social Studies: World Issues)

Please note that candidates interested in Athletic Therapy must apply as Advanced Entry applicants (see Section 4: Advanced Entry Options).

3.2.14 Marcel A. Desautels Faculty of Music

General Entrance Requirements as listed above, plus the same specific subject requirements and performance levels as University 1. An audition and a theory assessment are required (www.umanitoba.ca/music). Grade 12 Music and a second language at the Grade 12 level are recommended.

3.2.15 Faculty of Science

General Entrance Requirements as listed above, plus a minimum 85% average over the following courses, with no less than 60% in each course:

a. English 40S

b. one of: Pre-Calculus Mathematics 40S (recommended) or Applied Mathematics 40S

c. one of: Biology 40S, Chemistry 40S, Computer Science 40S, or Physics 40S

SECTION 4: Advanced Entry Options

Intro

Comprehensive information on the entrance requirements, application process, and deadlines for each of these options is found at www.umanitoba.ca/admissions.

The following faculties and schools offer advanced entry options for applicants with one year (24 credit hours) or more of university-level studies, either in University 1 (or another program) at the University of Manitoba, or at another recognized post-secondary institution.

- Agricultural & Food Sciences (degree programs)
- Architecture (Environmental Design)
- Arts
- Asper School of Business
- Clayton H. Riddell Faculty of Environment, Earth, & Resources
- Dental Hygiene
- Dentistry
- Education
- Engineering
- Fine Arts (Art History)
- Human Ecology
- Kinesiology & Recreation Management
- Law
- Medicine
- Medical Rehabilitation (Respiratory Therapy)
- Nursing
- Pharmacy
- Science
- Social Work

Students with a year or more of course work at the post-secondary level may also apply to any of the following direct entry programs:

- Agricultural & Food Science (diploma program)
- Fine Arts (Studio programs)
- General Studies (Extended Education)
- Marcel A. Desautels Faculty of Music

(Students who have completed 24 credit hours or more of post-secondary institution courses are not normally eligible to apply for admission to University 1.)

Students who have attended university or college, but who have completed less than 24 credit hours of course work at another institution, will normally apply for admission to University 1 (see Section 3.0 Direct Entry Options)

Students applying to an advanced entry option must meet two levels of requirements:

- The minimum performance standard of the University
- The minimum performance standards and specific requirements of the Faculty or School in which admission is sought.

4.1 Minimum Performance Standard of the University

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 who are currently on suspension at another post-secondary institution will not normally be considered for admission to the University of Manitoba.

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. See Section 4.2.

4.2 Minimum Performance Standards and Specific Requirements of the Faculty or School

Each faculty and school has its own admission requirements and processes, including minimum performance standards and specific entrance requirements and restrictions, and this information is provided in the Applicant Information Bulletin posted on the University website (www.umanitoba/admissions). The introductory section of each faculty or school chapter provides a general overview of the admissions requirements, but for specific, comprehensive information on the entrance requirements and selection processes, students must review the Faculty's Applicant Information Bulletin posted on the website.

SECTION 5: Other Admission Categories

5.1 Readmission, Continuing and Returning Students

All students who were admitted and who did not follow through with registration must apply for re-admission (www.umanitoba.ca/applynow).

Students who voluntarily withdraw from their first-year of studies must reapply for admission. The only exceptions are students in Agricultural and Food Science, Arts, General Studies, Human Ecology, Social Work, and University 1 who are permitted to reregister without re-applying for admission.

Former students who have attended other institutions since their last registration at the University of Manitoba must apply 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; Clayton H. Riddell Faculty of Environment,

Earth, and Resources; Human Ecology; Science; Social Work; or University 1. Former students of the Faculty of Arts are required to re-apply for admission if they have been away from their studies for ten or more years.

All students who were admitted to the Asper School of Business, Dental Hygiene, Education, Environmental Design, School of Art, Nursing, Music, or Kinesiology & Recreation Management, 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 application deadline date and must meet the entrance requirements of the faculty of choice.

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 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.

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."

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 who wish to be admitted for the purpose of auditing a course(s) only (not for academic credit). No documentation other than the information requested on the application form is required for admission purposes. 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)

5.5 Students Transiting to Arts or Science from University 1

University 1 students may be admitted to either Arts or Science through a process called 'transiting', and are not required to complete the admission process through the regular application procedures. Students 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 who have completed at least 24 credit hours may choose to transit to the Faculty of Arts or Science.
- Students who have completed 30 credit hours or more in University 1 must choose to transit to Arts or Science, if not admitted to another faculty or school, prior to the next regular term of registration. Students will not normally transit for Summer Session.
- 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.

SECTION 6: Admission with Advanced Standing

Intro

Students who have previously attended a recognized post-secondary institution, including universities, colleges, community and/or technical colleges, and Bible Colleges, who are selected for admission to either a direct entry or an advanced entry program option may qualify for advanced standing. Advanced standing will 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.

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.

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.

6.1 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.

6.2 Students Applying from Bible Colleges

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 Association for Biblical Higher Education (ABHE).
- The U.S. Bible college holds regional accreditation in the U.S., or is accredited by ABHE.

Degrees from Bible Colleges will not qualify applicants for admission to second degree or after degree programs, with the exception of holders of approved degrees from Booth College and Providence College who are applying for admission to the After Degree Bachelor of Education program. These degrees may suffice for admission to the After Degree program; contact the Faculty for specific information.

6.3 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).

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

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

6.5 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.

6.6 Graduates of Extended Education

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 7: Definition of Manitoba Residency

For purposes of undergraduate admission to the University of Manitoba, a Manitoba Resident shall be defined as a Canadian Citizen or Permanent Resident of Canada who, at the application deadline, meets any one of the following four descriptions:

i. Has graduated from a Manitoba high school

ii. Has a recognized degree from a university in Manitoba

iii. Has completed either one year or two consecutive years of full-time academic studies in a recognized program at a university in Manitoba, while physically residing in Manitoba. The duration shall be determined by the program of study and identified in the respective Applicant Information Bulletin or Supplemental Regulations.

iv. Has resided continuously in Manitoba for any two year period following high school graduation. The two year residence period shall not be considered broken where the program's admission committee is satisfied that the applicant was temporarily out of the province on vacation, in short-term volunteer work or employment, or as a full-time student.

SECTION 8: English Language Proficiency

8.1 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.

8.2 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 (CanTEST).
- Achieve a minimum score of 6.5 based upon the academic 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 score of 58 in the Pearson Test of English (Academic).
- 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 (or equivalent program at the University of Winnipeg or Red River College).

- Successful completion of 30 credit hours within the International College of Manitoba with a minimum 2.0 grade point average.
- * Some Faculties may require a specific test or test scores higher than those indicated above.

8.3 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 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.

SECTION 9: Application Procedure

9.1 Applications, Deadlines and Documents

On-line applications and downloadable application material is provided on the university website (www.umanitoba.ca/admissions) and at the Admissions Office, 424 University Centre; telephone (204) 474-8808. All applicants are advised to download the Applicant Information Bulletin for their chosen faculty/school for a careful review of the entrance requirements and selection process and then to apply on-line for admission. Paper application packages will be supplied to any applicant unable to access this electronically.

Students are encouraged to submit their applications as early as possible to provide enough time for documentation submission and application processing. 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).

Students who have attended a university other than the University of Manitoba will be 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. University of Manitoba transcripts are not required of applicants.

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.

9.2 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, Music, 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).

9.3 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.

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.

9.4 Declaration

All persons seeking admission to the University of Manitoba must sign (or accept) 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."

UNIVERSITY 1

University 1 First Year Centre

Program Director: Dr. Bonnie Hallman
Campus Address/General Office: 205 Tier Building
Telephone: (204) 474 6209
Fax: (204) 474 7659
Email Address:
university_1@umanitoba.ca

umanitoba.ca/U1

Chapter Contents

SECTION 1: UNIVERSITY 1

1.1 First Year Study in University 1

University 1 (U1) is a unique approach to first year university studies. It provides students with support and guidance in adjusting to university life and academic expectations, in making decisions about degree planning, and in building the necessary skills and behaviours to achieve academic and personal success. University 1 is the administrative home for most beginning undergraduate students through the first 30 credit hours of courses in most University of Manitoba degree programs. University 1 students have the opportunity to design an individualized first year schedule in order to meet the admission requirements of one or more target degree programs. With the support of specially trained Registration Assistants and Academic Advisors, University 1 students receive academic advisement through one-to-one advising sessions, group and specialty topic sessions, as well as online discussions. University 1 also administers the ARTS 1110 Introduction to University course, a specifically designed first year seminar that focuses on skills development in academic writing, research, critical thinking, and study strategies effective in all academic disciplines.

High school graduates, mature students, and transfer students with less than 24 credit hours of post-secondary education are generally admitted to University 1. Direct Entry options also exist for several Faculties. This may be a suitable option for students that meet the Faculty-specific entry requirements for Direct Entry admission. Please refer to the Admissions Chapter of this Calendar for details.

The courses you select to take while in University 1 are introductory university-level courses that qualify students to enter their chosen target Faculty and degree program. Students who have completed 30 credit hours while in University 1 either transit to the Faculty of Arts or the Faculty of Science, or apply to one of the other Faculties or Schools at the University of Manitoba. Here they complete the requirements of the degree program of their choice in order to graduate.

1.2 The University 1 First Year Centre

The University 1 First Year Centre is home to Registration Assistants and professionally trained Academic Advisors. If you have questions about courses and programs, or challenges arise affecting your academic success, the staff members of the University 1 First Year Centre are available to assist you. Academic Advisors typically assist students with degree program planning, course selection, registration issues, academic expectations and skills, personal issues or concerns, and in connecting with other campus resources. Registration Assistants serve as a welcoming presence in the First Year Centre; they provide students with general information about the university, and can guide students through the use of the Aurora Student online registration system, including solving any registration-related problems.

Newly admitted students should complete the Online Registration Tutorials (see Section 4.1 in this chapter) prior to consulting with a University 1 Academic Advisor.

Please refer to the University 1 website for hours of operation and contact information.

1.3 ARTS 1110: Introduction to University

ARTS 1110, Introduction to University is a three credit hour course offered by University 1. It is designed to help students in the transition from high school, college or the work-place to university studies. It is available to students who have completed fewer than 60 credit hours of university level courses. ARTS 1110 aims to assist students through the adjustment to university life, offering a unique combination of educational principles, practical skills, regular assignments, and the support of a group of fellow students. Features of ARTS 1110 include: strategies for academic success; introduction to libraries and research

methods; exercises in critical thinking; and instruction and extensive practice in effective writing, from first draft to finished work. Successful completion of ARTS 1110 satisfies the university's written English (W) requirement.

1.4 Advising Programming

Making the transition from high school, from another post-secondary institution, or from the workplace, can seem overwhelming. Individual and group advising provide students with the tools and information needed to start the year off strong and find success as a University of Manitoba student. All new students are strongly encouraged to visit the First Year Centre and familiarize themselves with the supports available at the beginning of the first term at the university.

Advising opportunities are strategically planned to provide students with useful information when they need it most. Throughout the year, students are given many opportunities to strengthen connections with first year advising services and the larger campus community, and are encouraged to seek out information and advice at regular intervals. In addition to offering accessible, year-round, one-to-one advising, University 1 regularly plans and participates in campus-wide events like Orientation and Degree Exploration Day, and hosts smaller group advising sessions in cooperation with other student services, like the Academic Learning Centre and Career Services.

SECTION 2: ADMISSION REQUIREMENTS

Intro

Please see the Admissions chapter of this Calendar for a full description of the specific admission requirements to University 1.

2.1 Limited Admission

Canadian high school graduates who do not meet the specific academic requirements for admission to University 1 may be admitted under a special Limited Admission category. Students in this category will have their registration restricted (see section 3.1) and will be provided with additional academic supports and services. For a full description of the Limited Admission program and requirements, please refer to umanitoba.ca/student/u1/advising/limited_admission.htm.

2.2 Transfer of Credit

Students who have completed International Baccalaureate (IB) or Advanced Placement (AP) courses in high school may receive advanced standing for University-level course work, upon request to Admissions.

Students who have completed courses at another post secondary institution prior to admission to University 1 may receive advanced standing, as outlined in the Admissions chapter of this Calendar. Courses completed at another institution 10 years or more before registration in University 1 are not considered for transfer credit.

2.3 Returning to University 1 After an Extended Leave

Students who have been away from University 1 for more than a year are blocked from using Aurora Student and must consult with a University 1 Academic Advisor. If the student has not attended another post-secondary institution, they are eligible to return to University 1. The advisor will determine academic progress, registration date and time, and discuss academic plans. Students planning a return to studies are strongly urged to contact a University 1 Academic Advisor well in advance of the start of registration.

Students who have attended another institution since their last registration in University 1 must normally re-apply for admission. If more than 24 credit hours of U of M plus external courses from another insitution have been completed, the student will not resume studies in University 1 and will be required to apply to a degree program. Students should consult with an advisor in their intended Faculty for information and advice well in advance of the application deadline, which will vary by Faculty, and can be obtained from Admissions.

SECTION 3: UNIVERSITY 1 ACADEMIC REGULATIONS

Intro

Academic regulations which apply to all students are described in the chapters in this Calendar titled 'General Academic Regulations', and 'University Policies'. In addition, University 1 and the Faculties and Schools offering University 1 courses have regulations and requirements that apply specifically to their students. The University 1 Academic Regulations are described below. Please see the specific Faculty or School chapter(s) for the academic regulations that may apply to courses in which you are registered.

3.1 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. Students admitted under the Limited Admission category will be restricted to a maximum of 24 credit hours during the Fall/Winter terms, with a maximum of four courses in each term. In each case, a credit hour overload may be considered for Winter Term based on Fall Term performance. Contact the University 1 First Year Centre to discuss course overload requests.

3.2 Voluntary Withdrawals

Students are permitted to withdraw from courses within the deadlines listed for each term in the Academic Schedule. The responsibility for initiating withdrawals rests solely with the student. Voluntary Withdrawals (VWs) must be done by the student using Aurora Student; non-attendance in courses does not constitute a withdrawal. VWs will not be permitted after the deadlines posted in the Academic Schedule. Students are strongly encouraged to discuss their plans with an Academic Advisor before withdrawing from courses.

In exceptional circumstances, Authorized Withdrawals may be permitted on presentation of appropriate documentation. Consult a University 1 Academic Advisor for information.

3.3 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 Voluntary Withdrawal (VW), unless it is a course required for admission or required once in their target faculty. University 1 students who wish to repeat a course in which they have a final grade must consult with a University 1 Academic Advisor prior to registration. Students may be eligible for a laboratory exemption in classes they are repeating which include a laboratory component (see Section 3.4 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 grades for all courses attempted will be included on the official transcript. In most cases, students will only be given one opportunity to repeat a course in which they have received a final grade. This includes taking a course considered to be equivalent to the course originally attempted.

Students must refer to their target Faculty or School's Applicant Information Bulletin to determine how repeating a course may affect admission eligibility.

3.4 Laboratory Exemptions

University 1 students who are repeating a course with a laboratory component may qualify for a laboratory exemption. Laboratory exemptions are only granted if the lab portion of the course was passed. 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. Students who are eligible for a laboratory exemption should bring written permission from the department offering the course to the University 1 First Year Centre prior to registration.

3.5 Academic Performance

Grades obtained in University 1 become a part of the student's permanent record and will appear on the student's official transcript. Grades earned while in University 1 will determine admission to most faculties and schools, and may also qualify a student for the University 1 Honour List (see section 3.6 in this chapter for details). See the General Academic Regulations chapter of this Calendar for a description of how Grade Point Averages (GPAs) are calculated.

Maximum Number of 'F' Grades

All students in University 1 must meet minimum academic performance requirements and will be placed on Academic Suspension for one year if they have accumulated more than 36 credit hours of 'F' grades, regardless of the origin of the grade (ie. courses transferred from other programs or institutions will be included) or whether the course has been repeated.

Students who are performing marginally or are at risk of exceeding the 'F' limit will be identified and will be provided with academic advising, strategic referrals, and support services as necessary.

Students placed on Academic Suspension are not normally permitted to register in any other faculty or school at the University of Manitoba or to attend any other post-secondary institution for a period of one calendar year.

Following one year of suspension, the student may return upon application to the Faculty of Arts or the Faculty of Science. Please see the Faculty of Arts or Faculty of Science chapters in this Calendar for a complete description of the options available following Academic Suspension.

3.6 University 1 Honour List

Students who achieve a term GPA of 3.75 or higher on a minimum of 12 credit hours offered by the University of Manitoba will be placed on the University 1 Honour List. The University 1 Honour List will be calculated after each term (Fall, Winter, and Summer); the notation "University 1 Honour List" will be recorded on the student's transcript specific to that term.

SECTION 4: UNIVERSITY 1 PROGRAM REQUIREMENTS

4.1 Course Selection and Registration

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.

Course selection information for University 1 students can be found in the Start Book, which describes in detail the courses and course selection options available to University 1 students. The list of Recommended Introductory Courses available to University 1 students is also available in Section 5 of this chapter and on the University 1 website. With special permission, students may register for courses not on this list.

New University 1 students are strongly encouraged to complete the series of Online Registration Tutorials before registering for courses. The tutorials will teach students to use the Aurora Student registration system. Information about course selection, determining a course load, and building a timetable can be found on the University 1 website. Other registration related concerns, such as paying fees and obtaining a photo identification card can be found on the Registrar's Office website.

The Start Book and details about the Online Registration Tutorials will be distributed beginning in May and throughout the summer for students newly admitted to University 1 for the Fall Term; in the Fall for students admitted for the Winter Term; and in the Spring to students admitted for the Summer Term. Detailed registration information, including an online version of the Start Book, is also available at umanitoba.ca/u1.

4.2 University 1 Curriculum

University 1 is normally the first 24-30 credit hours of a student's degree program. 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 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. The remaining 12 credit hours of courses are to be chosen from the list of Recommended Introductory Courses.

The University 1 curriculum will normally be fulfilled through the completion of the admission requirements to faculties and schools as outlined in this Calendar and in the Start Book. 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 enter a faculty or school program once they have completed 24 credit hours, but must complete remaining University 1 coursework in their intended degree program (see Section 4.3 in this chapter).

4.3 Transfer to Faculties and Schools Following University 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. Target Faculties and Schools that admit students directly from University 1 require the completion of either 24 or 30 credit hours, depending on the program. There are often alternative courses that will fulfill admission requirements and, with careful planning, the University 1 course selection can qualify students for admission to more than one program. 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. 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 Start Book, and in the Applicant Information Bulletin available on the Admissions website, or from the Enrolment Services Office, 424 University Centre.

Students who have completed 30 credit hours or more must exit University 1 before registering in the next Fall/Winter terms. Students may transit to the Faculty of Arts or the Faculty of Science, or apply for admission to another Faculty or School. The transit function is performed on Aurora Student, and no formal application or fee is required. Applications to Faculties or Schools other than Arts or Science must be made through the Admissions Office. Normally, students with grade point averages less than 2.00 are not eligible to transfer to Faculties or Schools other than the general degree programs in the Faculty of Arts or the Faculty of Science.

Students who have completed 24 credit hours or more may be eligible to apply for admission to another Faculty or School. Alternatively, students who

have completed between 24 and 29 credit hours may elect to remain in University 1 and register for a full course load.

Students with less than 24 credit hours remain in University 1 for their next registration and may register for a full course load.

SECTION 5: RECOMMENDED INTRODUCTORY COURSES

Intro

Refer to Section 4 in this chapter for information about choosing courses in University 1. To find a description of the courses on this list, go to the chapter in this Calendar for the faculty or school that is offering the course. The chapters are in alphabetical order, and 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 current academic year refer to the class schedule and the University 1 Start Book. 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 Université de Saint-Boniface see a University 1 Academic Advisor or refer to the Class Schedule.

Course Number	Course Name	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 Today and Tomorrow UNIVERSITY 1	3
Plant Science		
PLNT 1000	Urban Agriculture	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.

Faculty of Architecture		
EVDS 1600	Introduction to Environmental Design	3
EVDS 1602	Visual Literacy	3
EVDS 1660	History of Culture, Ideas and Environment 1	3
EVDS 1670	History of Culture, Ideas and Environment 2	3

Course Number	Course Name	Credit Hours
Faculty of Arts		

In addition to the 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 1750	Introduction to Korean	6
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 2750	Intermediate Korean	6
ASIA 2760	Intermediate Chinese (Mandarin)	6
ASIA 2770	Intermediate Japanese	6
Canadian Studies		
CDN 1130	Introduction to Canadian Studies	6
Catholic Studies		
CATH 1190	Introduction to Catholic Studies	3
Classics		
Classical Studies		
CLAS 1270	Introduction to Ancient Greek Culture	3
CLAS 1280	Introduction to Ancient Roman Culture	3
Greek		
GRK 1010	Introduction to the Reading of Ancient Greek 1	3
GRK 1020	Introduction to the Reading of Ancient Greek 2	3
GRK 1030	New Testament Greek	6
GRK 1060	Introductory Modern Greek 1	3
GRK 1070	Introductory Modern Greek 2	3
GRK 1310	Intermediate Readings in Ancient Greek	3
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
Economics		
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3

Course Number	Course Name	Credit Hours
ECON 1210	Introduction to Canadian Economic Issues and Policies	3
ECON 1220	Introduction to Global Environmental Economic Issues and Policies	3

English, Film, and Theatre

English

ENGL 0930	English Composition	3

(Note: This course is not acceptable for credit in the Faculties of Engineering, Nursing and Pharmacy, nor can it be used to meet the Humanities requirement).

ENGL 0940	Writing About Literature	3

(Note: This course is not acceptable for credit in the Faculties of Engineering, Nursing and Pharmacy, nor can it be used to meet the Humanities requirement).

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

FILM 1290	The Art of the Film 1	3
FILM 1310	Film History	3

Theatre

THTR 1220	Introduction to Theatre	6

French, Spanish and Italian

French

FREN 1150	Introductory French	6
FREN 1190	Francais	6
FREN 1200	French 1	6
FREN 1252	Francais Oral 1	3

Spanish

SPAN 1180	Introductory Spanish	6
SPAN 1190	Introductory Spanish 2	3
SPAN 1262	Intermediate Spanish Language and Conversation 1	3
SPAN 1272	Intermediate Spanish Language and Conversation 2	3
SPAN 1280	Spanish for Native Speakers	3
SPAN 1290	Accelerated Intermediate Spanish	6

Italian

ITLN 1080	Introductory Italian	6

Portuguese

PORT 1170	Introductory Portuguese	6
PORT 1282	Intermediate Portuguese Grammar & Conversation	3

German and Slavic Studies

German

GRMN 1120	Beginning German	6
GRMN 1300	Masterpieces of German Literature in English Translation	3
GRMN 1310	Love in German Culture in English Translation	3
GRMN 2100	Intermediate German	6
GRMN 2120	Introduction to German Culture 1	3
GRMN 2130	Introduction to German Culture 2	3
GRMN 2140	Exploring German Literature	3

Hungarian

HUNG 1000	Introduction to Hungarian 1	3
HUNG 1002	Introduction to Hungarian 2	3

Russian

RUSN 1300	Introductory Russian	6
RUSN 1330	Introductory Russian 2	3
RUSN 1400	Masterpieces of Russian Literature in English Translation	3
RUSN 2280	Russian Culture 1	3
RUSN 2290	Russian Culture 2	3
RUSN 2810	Intermediate Russian	6
RUSN 2820	Intermediate Russian 2	3

Ukrainian

UKRN 1230	Language Seminar in Ukraine 1	3
UKRN 1310	Introductory Ukrainian	6
UKRN 1320	Introductory Ukrainian 2	3
UKRN 2720	Intermediate Ukrainian	6
UKRN 2730	Intermediate Ukrainian 2	3
UKRN 2770	Ukrainian Culture 1	3
UKRN 2780	Ukrainian Culture 2	3

Polish

POL 1890	Introductory Polish	6
POL 1900	Love, Heroes & Patriotism in Contemporary Poland	3
POL 2530	Polish Civilization	6
POL 2890	Intermediate 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 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
HIST 1370	An Introduction to Modern World History: 1500-1800	3

Course Number	Course Name	Credit Hours
HIST 1380	An Introduction to Modern World History: 1800-Present	3
HIST 1390	History of Colonial Canada: 1500-1885	3
HIST 1400	History of the Canadian Nation since 1867	3
HIST 1420	Asian Civilizations to 1500	3
HIST 1430	Asian Civilizations from 1500	3
HIST 1440	History of Canada	6
HIST 1500	An Introduction to Modern World History: 1500 - Present	6
HIST 2050	South Asia since 1947	3
HIST 2080	The Byzantine Empire and the Slavic World	3
HIST 2130	Emergence of Modern South Asia: 1757-1947	3
HIST 2140	Colonial Latin America	3
HIST 2150	Independent Latin America	3
HIST 2180	The History of Catholicism to 1540	3
HIST 2210	History of Britain, 1485 to the Present	6
HIST 2220	The Shaping of Modern Ireland, 1500 to the Present	6
HIST 2230	History of the United States from 1607	6
HIST 2240	History of Antisemitism and the Holocaust	6
HIST 2250	Social History of the Jews: Antiquity to Present	6
HIST 2280	Aboriginal History of Canada	6
HIST 2282	Inventing Canada	3
HIST 2284	Democracy and Dissent: Contesting Canada	3
HIST 2286	Modern Canada	3
HIST 2350	Europe 1789-1870	3
HIST 2360	Europe 1870-Present	3
HIST 2370	History of Europe since the French Revolution	6
HIST 2380	The Twentieth-Century World	6
HIST 2400	History of Human Rights and Social Justice in the Modern World	3
HIST 2410	History of India	6
HIST 2420	The Medieval World	6
HIST 2490	History of Russia	6
HIST 2500	History of Africa	6
HIST 2502	The Modern Middle East: A Critical Survey	6
HIST 2520	A History of Germany since the Reformation	6
HIST 2570	Nationalism in Modern Times	3
HIST 2600	Introduction to the Ukraine	3
HIST 2610	Making of Modern Ukraine	3
HIST 2650	Modern China and Japan	6
HIST 2654	History of the People's Republic of China, 1949 – Present	3
HIST 2660	History of the Soviet Union	3
HIST 2670	History of Capitalism	3
HIST 2680	A History of Socialism from the French Revolution to the Present	3
HIST 2720	The World Since 1945	6
HIST 2750	History of the United States from 1607 to 1877	3
HIST 2760	History of the United States from 1877	3
HIST 2820	An Introduction to Historical Method	6
HIST 2840	A History of Russia to 1917	3
HIST 2900	Topics in Social History	6
HIST 2930	The History of the British Isles, 412-1485	6
HIST 2990	The History of Catholicism since 1540	3

Icelandic

ICEL 1200	Introduction to Icelandic	6
ICEL 1210	Conversational Icelandic	3
ICEL 1300	Introduction to Swedish	3
ICEL 1400	Introduction to Contemporary Culture in Iceland	3
ICEL 1410	Introduction to Culture in Medieval Iceland	3

Interdisciplinary

ARTS 1110 Introduction to University 3
(Note: This course is not acceptable for credit in the Faculty of Engineering, nor does it satisfy a Humanities or Social Sciences requirement.)

ARTS 1160 Leadership: An Interdisciplinary Approach 3
(This course will satisfy the Faculty of Arts' Social Sciences requirement.)

Labour Studies

LABR 1260	Working for a Living	3
LABR 1290	Introduction to the Canadian Labour Movement	3

Linguistics

LING 1200	Introduction to Linguistics	6
LING 1340	Semantics	3
LING 1360	Languages of Canada	3
LING 1380	General Phonetics	3
LING 1420	Language and Gender	3
LING 1440	Rules of English Grammar	3

Judaic Studies

Arabic

ARA 1000	Introductory Arabic	6
ARA 2000	Intermediate Arabic	6

Hebrew

HEB 1250	Hebrew 1	6
HEB 1260	Hebrew 2	6

Yiddish

YDSH 1220	Yiddish	6

Course Number	Course Name	Credit Hours
Native Studies		
NATV 1000	Orientation Course: The Colonizers and the Colonized	3
NATV 1200	The Native Peoples of Canada	6
NATV 1220	The Native Peoples of Canada, Part 1	3
NATV 1240	The Native Peoples of Canada, Part 2	3
Native Languages		
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
Philosophy		
PHIL 1200	Introduction to Philosophy	6
PHIL 1290	Critical Thinking	3
PHIL 1320	Introductory Logic	6
PHIL 1510	Historical Introduction to Philosophy	6
Political Studies		
POLS 1000	Democracy and Development	3
POLS 1010	Political Ideas and Ideologies	3
POLS 1040	Global Political Issues	3
POLS 1070	Law, Politics, and Power in Canada	3
POLS 1500	Introduction to Politics	6
Psychology		
PSYC 1200	Introduction to Psychology	6
Religion		
RLGN 1120	Biblical Hebrew	6
RLGN 1320	Introduction to World Religions	6
RLGN 1350	The History of Eastern Christianity	6
RLGN 1390	Readings in Biblical Hebrew 1	3
RLGN 1400	Readings in Biblical Hebrew 2	3
RLGN 1410	Death and Concepts of the Future	3
RLGN 1420	Ethics in World Religions	3
RLGN 1424	Religion and Sexuality	3
RLGN 1430	Food: Religious Concepts and Practices	3
RLGN 1440	Evil in World Religions	3
RLGN 1450	Religion and The Media	3
Sociology		
SOC 1200	Introduction to Sociology	6
Women's and Gender Studies Program		
WOMN 1500	Introduction to Women's and Gender Studies in the Humanities	3
WOMN 1600	Introduction to Women's and Gender Studies in the Social Sciences	3
WOMN 2560	Women, Science and Technology	3

Asper School of Business

Business Administration

GMGT 1010	Business and Society	3
GMGT 2060	Management and Organizational Theory	3
GMGT 2070	Introduction to Organizational Behaviour	3

Entrepreneurship

ENTR 2010	Managing the Smaller Business	3
ENTR 2020	Starting a New Business	3

Marketing

MKT 2210	Fundamentals of Marketing	3

In addition to the courses listed above students may register in any advanced level Business course for which they have the prerequisites, subject to space limitations.

Faculty of Engineering,

ENG 1430	Design in Engineering	3
ENG 1440	Introduction to Statics	3
ENG 1450	Introduction to Electrical and Computer Engineering	3
ENG 1460	Introduction to Thermal Sciences	3
ENG 1900	Occupational Health and Safety Awareness	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.

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

In addition to the courses listed below, University 1 students may take any 2000, 3000 and 4000 level Clayton H. Riddell Faculty of Environment, Earth, and Resources courses for which they have the prerequisite, subject to space limitations.

Environmental Science

ENVR 1000	Environmental Science 1: Concepts	3
ENVR 2000	Environmental Science 2: Issues	3

General Faculty

EER 1000	Earth: A User's Guide	3

Geography

GEOG 1280	Introduction to Human Geography	3
GEOG 1290	Introduction to Physical Geography	3

Geological Sciences

GEOL 1340	The Dynamic Earth	3
GEOL 1400	Time-Trekker's Travelog: Our Evolving Earth	3
GEOL 1410	Natural Disasters and Global Change	3
GEOL 1420	Exploring the Planets	3

Course Number	Course Name	Credit Hours
Faculty of Human Ecology		
Interdisciplinary Health		
HEAL 1600	Health and Health Professions	3
Family Social Sciences		
FMLY 1010	Human Development in the Family	3
FMLY 1012	Introduction to Social Development	3
FMLY 1020	Family Issues Across the Lifespan	3
FMLY 1420	Family Management Principles	3
Human Nutritional Sciences		
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
Textile Sciences		
TXSC 1600	Textiles for Living	3
TXSC 1610	Textiles, Product, and Consumers	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.

Faculty of Kinesiology and Recreation Management		
PERS 1200	Physical Activity, Health and Wellness	3
PERS 1300	Introduction to Leisure Travel	3
PERS 1400	Concepts of Recreation and Leisure	3
PERS 1500	Foundations of Physical Education and Kinesiology	3
Marcel A. Desautels Faculty of Music		
MUSC 1050	The Well-Tempered Concert-Goer	3
MUSC 1280*	Musical Style and Structure 1	3
MUSC 1290*	Musical Style and Structure 2	3
MUSC 1930	Rudiments of Music	3

* Contact the Marcel A. Desautels Faculty of Music for permission to register.

Faculty of Nursing		
NURS 1260	Human Growth and Development	3
NURS 1280	Introduction to Nursing	3

Students in University 1 will not normally be permitted to take advanced level Nursing courses.

Faculty of Science

In addition to the 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.

Biological Sciences		
BIOL 1000	Biology: Foundations of Life	3
BIOL 1010	Biology: Biological Diversity and Interactions	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interaction	3
BIOL 1300	Economic Plants	3
BIOL 1340	The State of the Earth's Environment: Contemporary Issues	3
BIOL 1410	Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human Body	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 1012	Computer Programming for Scientists and Engineers	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 0500	Preparing for University Mathematics	0
MATH 1010	Applied Finite Mathematics	3
MATH 1020	Mathematics in Art	3
MATH 1190	Topics in Mathematics	6
MATH 1200	Elements of Discrete Mathematics	3
MATH 1210	Techniques of Classical and Linear Algebra	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	3
(Note: This course is not acceptable for credit in the Faculty of Engineering.)		
MATH 1690	Calculus	6
MATH 1700	Calculus 2	3
MATH 1710	Applied Calculus 2	3
Microbiology		
MBIO 1010	Microbiology 1	3
MBIO 1220	Essentials of Microbiology	3

Course Number	Course Name	Credit Hours
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
Statistics		
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
Faculty of Social Work		
SWRK 1310	Introduction to Social Welfare Policy	3
SWRK 2080	Interpersonal Communication Skills	3
School of Art		
FA 1020	Mathematics in Art	3
FAAH 1030	Introduction to Art 1A	3
FAAH 1040	Introduction to Art 2A	3
STDO 1210	Drawing: Studio 1	3
STDO 1240	Figure Study 1	3
STDO 1250	Drawing: Studio 2	3
STDO 1410	Visual Language	3
STDO 1510	Art Now	3
STDO 1450	Open Studio 1	3
STDO 1470	Materials Studio	3

Interfaculty Option in Aging

An interfaculty Option in Aging is offered by the faculties of Arts, Human Ecology, Nursing, Kinesiology and Recreation Management, and Social Work. Courses required for the Option in Aging are offered on a rotating basis by each of the participating faculties. Please see an Academic Advisor in University 1 for more information on the Option in Aging.

FACULTY OF AGRICULTURAL AND FOOD SCIENCES

Faculty of Agricultural and Food Sciences/ School of Agriculture
Dean: Michael Trevan
Associate Dean(s): Brian Amiro, Karin Wittenberg
Program Director: School of Agriculture: Michele Rogalsky
Campus Address/General Office: 256 Agriculture Building
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Student Services Office: 160 Agriculture Building
Telephone: (204) 474-9295
Academic Staff:
Please refer to the Faculty of Agricultural and Food Sciences website at umanitoba.ca/afs

Chapter Contents

SECTION 1: PROGRAMS OFFERED

1.1 Degree/Diploma Programs Offered

Degree/Diploma	Years to Completion	Total Credit| Hours
Bachelor of Science in Agriculture (Agronomy, Animal Systems or Plant Biotechnology Major)	4	120
Bachelor of Science in Agribusiness	4	120
Bachelor of Science in Agroecology	4	120
Bachelor of Science in Food Science (Science or Business Option)	4	120
Pre-veterinary Program	2*	60
Diploma in Agriculture (Business Management, Crop Management, Livestock Management or General Agriculture Option)	2	93

*Two full years of university training are required for admission to the Western College of Veterinary Medicine (Saskatoon) comprised of 60 credit hours.

Faculty Overview

The Faculty of Agricultural and Food Sciences has earned a reputation for its high-calibre teaching programs and its friendly helpful staff. Students benefit not only from the expertise of staff in the Faculty, but also from the close proximity of other faculties on campus, federal research facilities, and a vibrant Winnipeg-based agricultural community.

Information on the Faculty's History, Vision and Mission Statements, Research, Programs, Centres, and Departments can be found on our website at: umanitoba.ca/afs.

Degree Programs

The B.Sc. degree programs in Agricultural and Food Sciences provide an applied science background for graduates to enter a range of professions. Students can choose degree specializations in Agribusiness, Agriculture (Agronomy, Animal Systems, Plant Biotechnology), Agroecology, or Food Science. The focus is on the agricultural industry with professions concerned with the production, processing and marketing of food and bioresources. However, the B.Sc. degree also provides students with the education to tackle a range of career opportunities beyond agriculture. 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 make important contributions to the economy and health of Canada and the world. The faculty also offers a two-year pre-veterinary program for students who plan to take the degree Doctor of Veterinary Medicine.

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.

1.2 Available Programs, Options and Minors

1.2.1 Bachelor of Science in Agriculture (Degree)

Available Programs: Agronomy
Animal Systems
Plant Biotechnology

1.2.2 Bachelor of Science in Agribusiness (Degree)

Available Programs: Agricultural Economics
Agribusiness Management
International Agribusiness

1.2.3 Bachelor of Science in Agroecology (Degree)

1.2.4 Bachelor of Science in Food Science (Degree)

Available Options: Science Option
Business Option

1.2.5 Pre-Veterinary Program (Degree)

1.2.6 Diploma in Agriculture

Available Options: Business Management
Crop Management
Livestock Management
General Agriculture

1.2.7 Cooperative Education Program (Degree and Diploma Options)

1.2.8 Minors (Degree Program Only)

Available Minors: Animal Systems
Entomology
Food Science
Plant Biotechnology
Soil Science

1.3 Professional Designations

Graduates of the B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) and B.Sc. (Food Science) degrees are eligible to practice agrology as members of the Manitoba Institute of Agrologists. An agrologist is a "person who is qualified to teach or to practice the science and art of agriculture or to conduct scientific experiments and research in relation thereto." The motto of the profession is Ciba ad Omnes (Food for All). B.Sc. (Food Science) graduates are eligible to become members of the Canadian Institute of Food Science and Technology (CIFST), a professional society associated with the manufacturing, processing and packaging of food.

SECTION 2: ADMISSION REQUIREMENTS

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.

There are two entry options to Agricultural and Food Sciences: Direct entry from high school OR Advanced Entry (transfer from University 1).

Direct Entry: Degree Program High School Prerequisites

High School graduation with 5 credits at the Grade 12 S, G, or U level, with a minimum 85% average over a combination of:

- English 40S,
- Pre-Calculus Math 40S or Applied Math 40S (Recommended Pre-Calculus 40S for B.Sc. (Agribusiness) and B.Sc. (Food Science)), and the Pre-Veterinary Medicine Program.
- one of Biology 40S, Chemistry 40S, Physics 40S or Computer Science 40S
- with no mark less than 60% in each of the above areas.

Advanced Entry Degree Program (transfer from University 1) High School Prerequisites:

High school prerequisites for required University 1 courses include:

- Math: Pre-Calculus Math 40S (60%) for Agribusiness and Food Science programs. Pre-Calculus Math (60%) or Applied Math (70%) required for B.Sc. (Agriculture) includes Agronomy, Animal Systems, Plant Biotechnology and B.Sc. (Agroecology).
- Sciences: Biology 40S and Chemistry 40S required for B.Sc. (Agriculture), (Agroecology), and (Food Science). For B.Sc. (Agribusiness), Biology 40S is recommended but not required.
- Pre-Veterinary Medicine Program: Pre-Calculus Math 40S, Biology 40S, Chemistry 40S and Physics 40S.

Students without the prerequisites will need to take the required preparatory courses.

2.1 Admission Requirements for the 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 from University 1 or other University programs.

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)

Agriculture (9 credit hrs)

- ABIZ 1000
- AGRI 1500
- AGRI 1510

Biology (6 credit hrs)

- BIOL 1020 (See Note 1)
- BIOL 1030 (See Note 1)

Chemistry (See Note 2)

Economics (6 credit hrs)

- ECON 1010
- ECON 1020

Mathematics (6 credit hrs)

- MATH 1300 or MATH 1310
- MATH 1500 or MATH 1520 (See Note 3)

Open Electives (3 credit hrs)

B.Sc. (Agriculture) and B.Sc. (Agroecology)

Agriculture (6 credit hrs)

- AGRI 1500
- AGRI 1510

Biology (6 credit hrs)

- BIOL 1020
- BIOL 1030

Chemistry (6 credit hrs)

- CHEM 1300
- CHEM 1310 or CHEM 1320

Economics (6 credit hrs)

- ECON 1010
- ECON 1020

Mathematics (3 credit hrs)

- MATH 1200 or MATH 1210 or MATH 1300 or MATH 1310 or MATH 1500 or MATH 1520

Open Electives (3 credit hours)

B.Sc. (Food Science)

Agriculture (6 credit hrs)

- AGRI 1500
- AGRI 1510

ABIZ 1000 (See Note 4)

Biology (6 credit hrs)

- BIOL 1020
- BIOL 1030

Chemistry (6 credit hrs)

- CHEM 1300
- CHEM 1310 and CHEM 1320 (See Note 5)

Economics (6 credit hrs)

- ECON 1010
- ECON 1020

Mathematics (6 credit hrs)

- MATH 1300 or MATH 1310 and
- MATH 1500 or MATH 1520 (See Note 3)

Open Electives (nil)

Notes:

1) Students planning to enter the B.Sc. (Agribusiness) degree program are recommended to take BIOL 1020 and BIOL 1030 but may substitute BIOL 1000 and BIOL 1010.

2) Students planning to enter the B.Sc. (Agribusiness) degree program are not required to take chemistry at the university level.

3) Six credit hours of Math courses, consisting of 3 credit hours of MATH 1300 Vectory Geometry and Linear Algebra or MATH 1310 Matricies for Management and Social Sciences and 3 credit hours of MATH 1500 Introduction to Calculus or MATH 1520 Introduction to Calculus for Management and Social Sciences are required for the B.Sc. (Agribusiness) and B.Sc. (Food Sciences) programs.

4) ABIZ 1000 is not required for the B.Sc. Food Science (Food Science option). It is required in the B.Sc. Food Science (Business option).

5) Both CHEM 1310 and CHEM 1320 are required for the B.Sc. (Food Science) Science Option Program.

Other requirements:

High school requirements include Math 40S (Pre-Calculus) (60%) and Biology 40S (50%) for all degree programs, Chemistry 40S (50%) for B.Sc. (Agriculture) includes Agronomy, Animal Systems, Plant Biotechnology, B.Sc. (Agroecology) and B.Sc. (Food Science) students; pre-veterinary students should include Chemistry 40S, Biology 40S and Physics 40S.

Students are required to take three credit hours of Philosophy in their degree.

The written English and Mathematics requirements 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 Academic Advisor (Degree), Faculty of Agricultural and Food Sciences for further information.

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. Grades 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. Students should have a cumulative grade point average of 2.50 and a C+ or better in courses for which transfer is being considered.

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.

A Table of the Transfer of Credit courses between Diploma and Degree can be found at www.umanitoba.ca/afs. Students inquiring about transfer of credits should contact the Student Services Office at 474-9295.

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.

2.2 Admission Requirements for the Diploma Program

Diploma students enter directly to the Agriculture diploma program from high school; University 1 is not required.

Applicants must hold Manitoba high school graduation with a minimum of five Grade 12 credits at the S (Specialized), G (General) or U (Dual Credit-University) level, which include English 40S, Mathematics (40S or 45S) and a Science 40S. The minimum average over these three designated subjects is 60%. The equivalent level of studies from other Canadian provinces or other countries will be accepted.

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. Please contact the Academic Advisor (Diploma), Faculty of Agricultural and Food Sciences for further information.

Transfer of Credit

Courses taken within the degree program in the Faculty of Agricultural and Food Sciences as well as outside the Faculty of Agricultural and Food Sciences or outside of the University of Manitoba may also qualify for credit towards the diploma if the course content and the student's performance are deemed appropriate by the department concerned.

The following Agriculture degree courses can be transferred for credit towards the Ag. Diploma program when a minimum grade of C is obtained:

AGRI 1500 Natural Resources and Primary Agricultural Production (3 credit hours) transferred for credit for DAGR 0420 Introductory Soils and Crops (4 credit hours)
AGRI 1510 Production, Distribution and Utilization of Agricultural Production (3 credit hours) transferred for credit as 4 credit hours as a free elective
AGRI 2030 Technical Communications (3 credit hours) transferred as credit for DAGR 0410 Communications and Learning Skills (4 credit hours)

SECTION 3: FACULTY ACADEMIC REGULATIONS

3.1 Academic Regulations for Degree Program

The B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) and B.Sc.(Food Science) degree programs have the triple objectives of vocational, professional and cultural education. To fulfil the objectives, the degrees are offered in a program of study. Most courses in first year, which are taken in University 1 and some in second year, are prescribed. The remainder of second year courses and all courses in third and fourth years are determined by the program of study, and by the student's selection of elective courses.

It is strongly recommended that all students plan their coursework for third and fourth years before the end of their second academic year.

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Agricultural and Food Sciences has regulations and requirements, published below, that apply specifically to its students. Supplementary academic regulations are on file in the general office. Admission information can be found in the Admissions chapter of this Calendar.

Scholastic Requirements

To obtain a B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology) or B.Sc. (Food Science) degree, a student must pass 120 credit hours normally comprised of 30 hours from University 1 and 90 hours in the Faculty of Agricultural and Food Sciences (i.e., a total of 20 full-courses or the equivalent).

A maximum of 144 credit hours (24 full-courses or the equivalent) may be attempted to obtain the 120 credit hours.

A minimum passing grade of "D" in prescribed courses is required of all students in the faculty.

Elective courses in which passing grades were not obtained need not be repeated.

A student's Grade Point Average (GPA) will be determined from the number of "effective" courses which apply at a particular stage. The effective courses consist of all courses passed in addition to all failures which have not been cleared or substituted for in the student's record.

In order to graduate, students must obtain a minimum GPA of 2.0 calculated over a minimum of 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 reigstration. A candidate for a degree will not be permitted to count toward that degree any courses taken more than ten year prior to the date of awarding the degree.

Probational Standards

Effective Courses to Date	Minimum GPA
1-10 (0-30 credits)	1.80
11-20 (33-60 credits)	1.85
21-30 (63-90 credits)	1.90
31-40 (93-120 credits)	1.95
40+ (120+credits)	2.00

Academic Suspension Regulations

A student is placed on academic suspension when one of the following occurs:

- When a student fails to obtain 12 Weighted Grade Points in the first year program; or
- When a student fails to meet the probational standards after attempting a minimum of 24 credit hours while on probation; or
- When a student accumulates failures in excess of 24 credit hours.

Re-entry Regulations

A student must remain out of faculty for a period of one year and then apply for re-entry.

The student must complete at least 12 credit hours with a minimum Grade Point Average of 2.50 in courses approved by the faculty in the academic term or session in which reinstatement is being attempted.

The student loses credit for all courses in which a grade of "D" was obtained prior to being reinstated.

The student is given credit for courses in which grades of "C" or better were obtained, as well as the courses attempted for reinstatement.

The student is reinstated and placed in the category of "good academic standing."

A student who is placed on academic suspension for the second time, will not be permitted reinstatement in the faculty.

Appeals

Appeals of academic assessment of students must be submitted to the general office of the Faculty of Agricultural and Food Sciences within 21 days of the date of notification of the action sent to the student.

Supplemental Exams

Supplemental Exams are not permitted in the Faculty of Agricultural and Food Science Degree Programs.

Re-registration of Returning Degree Students

All degree students who were previously admitted to the Faculty of Agricultural and Food Sciences who have not been in attendance for one or more years must re-register through the Dean's Office. Application for re-registration must take place before July 1 for those students who wish to begin their studies in the Fall term and before November 1 for those students who wish to begin their studies in Winter Term. Students returning to the faculty will be subject to compliance with the current program requirements.

Graduation With Distinction: Degree Programs

The B.Sc. (Agriculture), B.Sc. (Agribusiness), B.Sc. (Agroecology), and the B.Sc. (Food Science) degrees with distinction will be awarded to students who have achieved a minimum degree GPA of 3.75 upon graduation.

Dean's Honour Roll

Students who have completed a minimum of 12 credit hours of study in either the Fall or Winter terms and who achieved a Term GPA of 3.50 or higher will be placed on the Dean's Honour Roll. Graduating students who achieved Dean's Honour Roll status in the previous term but complete less than 12 credit hours in their final term with a Term GPA of 3.5 or greater, will be eligible to remain 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 1200 or MATH 1210 or MATH 1300 or MATH 1310 or MATH 1500 or MATH 1520, or STAT 1000.

3.2 Academic Regulations for Diploma Program

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 Agriculture 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 Academic Advisor of the School of Agriculture.

Agriculture Diploma to Degree Transfer of Credit Hours

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 academic 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 an Academic Advisor in the Student Services Office for details. Students wishing to enter a degree program without the above qualifications will be evaluated on a course-by- course basis. This transfer articulation is applicable to diploma graduates who have entered the degree program as of September 2005.

Transfer of Credits Diploma/Degree

Diploma	Degree
BIOE 0600 Farm Machinery	BIOE 2090 Machinery for Ag Production
ANSC 0420 Animal Biology & Nutrition	ANSC 2500 Animal Production
ANSC 0670 Beef Production and PLNT 0750 Forage & Pasture Mgmt or ANSC 0680 Dairy Cattle Production & Mgmt and PLNT 0750 Forage & Pasture Mgmt	ANSC 4520 Ruminant Production Systems Meat or ANSC 4530 Ruminant Production Systems Milk
ANSC 0600 Animal Health and Welfare and ANSC 0690 Swine Production or ANSC 0600 Animal Health & Welfare and ANSC 0700 Poultry Production	ANSC 4540 Monogastric Produc tion Systems or ANSC 4550 Avian Production systems
ENTM 0620 Pest Mgmt & Farm In sects	ENTM 0010 Unallocated

Diploma	Degree
PLNT 0410 Cereal & Oilseeds	PLNT 2500 Crop Production
PLNT 0790 Landscape Horticul ture and PLNT 0800 Diversification with Horticultural Crops	PLNT 2510 Fundamentals of Horticulture
PLNT 0770 Weed Mgmt	PLNT 3540 Weed Science
SOIL 0420 Soil Productivity & Land Use and DAGR 0420 Intro Soils & Crops	SOIL 3600 Soils and Landscapes in Our Environment
SOIL 0620 Soil Conservation & Mgmt and BIOE 0690 Water Mgmt	SOIL 4510 Soil & Water Mgmt
ABIZ 0440 Ag Econ & Marketing 1 and ABIZ 0450 Ag Econ & Marketing 2	ABIZ 2510 Agricultural Marketing
ABIZ 0730 Financial Risk Mgmt	ABIZ 3120 Commodity Futures Markets
ABIZ 0680 Ag Business Mgmt	ABIZ 1000 Ag Business Mgmt
ABIZ 0720 Farm Business Mgmt	ABIZ 3530 Farm Management
DAGR 0680 Mgmt Plan I and DAGR 0690 Mgmt Plan Project II	ABIZ 0010 Unallocated
DAGR 0420 Intro Soils & Crops	AGRI 1500 Natural Resources & Ag Production
DAGR 0020 Unallocated	AGRI 1510 Utilization of Ag Prod
DAGR 0410 Communications & Learning Skills (min B grade)	AGRI 2030 Technical Communications

Scholastic Standards

To maintain good academic standing a student must maintain a Degree Grade Point Average (DGPA) 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.

Degree Credit Hours	Degree Grade Point Average (DGPA)	
	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:

1) Degree 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.

3) 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 Academic 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 Director 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 final and supplemental exams are written the higher grade obtained will be used to determine the final grade.

Supplemental Exams 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 3.50 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.

3.3 Course Availability

All courses listed in this Calendar are not offered every year. The course(s) offered for the current academic term are published in the Class Schedule.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 Degree Programs

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.

4.1.1 Faculty Core

Course Number	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management (see Note 1)	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 (See Note 2)	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions (See Note 2)	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry (see Notes 3 and 4)	3
one of the following two courses:		
CHEM 1310	University 1 Chemistry: An Introduction to Physical Chemistry (see Notes 3 and 4)	3
OR		
CHEM 1320	University 1 Chemistry: An Introduction to Organic Chemistry (see Notes 3 and 4)	3
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
MATH 1200	Elements of Discrete Mathematics (See Note 5)	
or		
MATH 1210	Techniques of Classical and Linear Algebra (See Note 5)	
or		
MATH 1300	Vector Geometry and Linear Algebra (See Note 5)	
or		
MATH 1310	Matrices for Management and Social Sciences (See Note 5)	
or		
MATH 1500	Introduction to Calculus (See Note 5)	
or		
MATH 1520	Introductory to Calculus for Management and Social Sciences (See Note 5)	3
STAT 1000	Basic Statistical Analysis 1	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
Total credit hours		**33-39**

NOTES:

1) ABIZ 1000 is not required for the B.Sc. Food Science (Food Science option). It is required in the B.Sc. Food Science (Business option).

2) Students planning to enter the B.Sc. (Agribusiness) degree program are recommended to take BIOL 1020 and BIOL 1030 but may substitute BIOL 1000 and BIOL 1010.

3) Students planning to enter the B.Sc. (Agribusiness) degree program are not required to take chemistry at the university level.

4) Both CHEM 1310 and CHEM 1320 are required for the B.Sc. (Food Science) Science Option Program.

5) Six credit hours of Math courses, consisting of 3 credit hours of MATH 1300 Vector Geometry and Linear Algebra or MATH 1310 Matricies for Management and Social Sciences and 3 credit hours of MATH 1500 Introduction to Calculus or MATH 1520 Introduction to Calculus for Management and Social Sciences are required for the B.Sc. (Agribusiness) and B.Sc. (Food Sciences) programs.

4.1.2 Bachelor of Science (Agriculture)

The four year program 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 Number	Course Name	Credit Hours
AGEC 2370 (BIOL 2300)	Principles of Ecology	3
CHEM 2770 (MBIO 2770)	Elements of Biochemistry 1	3
PLNT 2520 (BIOL 2500)	Genetics	3
Total credit hours		9

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.

Agronomy Program

Chair: D. Flaten
Office: 307 Ellis Building
Telephone: (204) 474-6257
Program Advisor: P. Bullock
Office: 313 Ellis Building
Telephone: (204) 474-8666
Paul.Bullock@ad.umanitoba.ca

The Agronomy program 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.

Course Number	Course Name	Credit Hours
Agronomy Core		
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
ANSC 2500	Animal Production	3
BIOL 2242	The Flowering Plants	3
PLNT 2500	Crop Production	3
PLNT 3500	Plant Physiology	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
Total credit hours		**30**
Restricted Electives		
Group 1		
Two courses (six credit hours) from the following:		
ENTM 3170	Crop Protection Entomology	(3)
ENTM 3190	Introduction to Applied Entomology	(3)
PLNT 3540	Weed Science	(3)
PLNT 4270	Plant Disease Control	(3)
Total credit hours		**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)
Total credit hours		**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 4130	Soil Chemistry and Mineralogy	(3)
SOIL 4400	Soil Ecology	(3)
Total credit hours		**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)
Total credit hours		**3 or 4**
Free Electives		**27**

Course Number	Course Name	Credit Hours
Suggested Progression of Program:		
Second Year		
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 2030	Technical Communications	3
BIOL 2242	The Flowering Plants	3
CHEM 2770 (MBIO 2770)	Elements of Biochemistry 1	3
PLNT 2500	Crop Production	3
PLNT 2520	Genetics	3
SOIL 3600	Soils and Landscapes in Our Environment	3
	Free elective(s)	9
Total credit hours		**30**
Third Year		
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
AGEC 2370 or (BIOL 2300)	Principles of Ecology	3
ANSC 2500	Animal Production	3
PLNT 3500	Plant Physiology	3
PLNT 4590	Physiology of Crop Plants	3
STAT 1000	Basic Statistical Analysis 1	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**

Animal Systems Program

Chair: M. L. Connor
Office: 201 Animal Science Building
Telephone: (204) 474-9219
Program Advisor: L. Onischuk
Office: 236 Animal Science Building
Telephone: (204) 474-9174
E-mail: Loreen.onischuk@ad.umanitoba.ca

The Animal Systems program 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.

Course Number	Course Name	Credit Hours
Animal Systems Core		
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
ANSC 2500	Animal Production	3

Course Number	Course Name	Credit Hours
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
CHEM 2780 (MBIO 2780)	Elements of Biochemistry 2	3
PLNT 2500	Crop Production	3
Total credit hours		**33**

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)
Total credit hours		**3**

Group 2

One course (three credit hours) from the following:

ANSC 4540	Monogastric Production Systems	(3)
ANSC 4550	Avian Production Systems	(3)
Total credit hours		**3**

Group 3

Two courses (six credit hours) from the following:

AGEC 4510	Applications in Agroecology	(3)
ANSC 2530 and AGRI 2190	Nutritional Toxicology and Toxicology Principles	(1.5) (1.5)
ANSC 2540	Companion Animal Nutrition and Management	(3)
ANSC 4090	Livestock Problems	(3)
ANSC 4220	Animal Science Investigations	(3)
ANSC 4280	Applied Animal Genetics	(3)
ANSC 4410 (PLNT 4410)	Grassland Agriculture: Plant, Animal and Environment	(3)
ANSC 4500	Animal Health	(3)
ANSC 4510	Domesticated Animal Behaviour	(3)
ANSC 4570	Advanced Applied Animal Nutrition	(3)
ENTM 3160	Veterinary and Wildlife Entomology	(3)
FOOD 3500	Processing of Animal Food Products	(3)
PLNT 2530	Plant Biotechnology	(3)
Total credit hours		**6**

Course Number	Course Name	Credit Hours

Group 4

One course (three credit hours) from the following:

GMGT 2070	Organizational Behaviour	(3)
GMGT 3120	Regulation	(3)
HRIR 2440	Human Resource Management	(3)
Total credit hours		**3**

Free Electives **24**

Note: Students are encouraged to take free electives from the following courses:

ANSC 2530	Nutritional Toxicology	(1.5)
ANSC 4570	Advanced Applied Animal Nutrition	(3)
ANSC 4090	Livestock Problems	(3)
ANSC 4220	Animal Science Investigations	(6)
PLNT 2530	Plant Biotechnology	(3)
AGEC 4510	Applications in Agroecology	(3)

Suggested progression of program:

Second Year

ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 2030	Technical Communications	3
ANSC 2500	Animal Production	3
ANSC 2510	Anatomy and Physiology 1	3
ANSC 2520	Anatomy and Physiology 2	3
CHEM 2770 (MBIO 2770)	Elements of Biochemistry 1	3
CHEM 2780 (MBIO 2780)	Elements of Biochemistry 2	3
PLNT 2500	Crop Production	3
PLNT 2520	Genetics	3
	Restricted and free electives	3
Total credit hours		**30**

Third Year

ABIZ 2510	Introduction to Agricultural and Food Marketing	3
AGEC 2370 (BIOL 2300)	Principles of Ecology	3
ANSC 3500	Principles of Animal Genetics	3
ANSC 3510	Feeds and Feeding	3
ANSC 3530	The Animal and Its Environment	3
STAT 1000	Basic Statistical Analysis	3
	Restricted and/or Free Electives	12
Total credit hours		**30**

Course Number	Course Name	Credit Hours
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**

Plant Biotechnology Program

Chair and Program Advisor: C. Stasolla
Office: 315 Agriculture Building
Telephone: (204) 474-6098
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The Plant Biotechnology Program 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.

Plant Biotechnology Core

BIOL 2242	The Flowering Plants	3
BIOL 2260	Biology of Fungi and Lichens	3
BIOL 2520	Cell Biology	3
CHEM 2780 (MBIO 2780)	Elements of Biochemistry 2	3
MBIO 1010	Microbiology 1	3
PLNT 2530	Plant Biotechnology	3
PLNT 3500	Plant Physiology	3
PLNT 4600	Issues in Agricultural Biotechnology	3
Total credit hours		**24**

Restricted Electives

Group 1

Two courses (six credit hours) of the following:

ANSC 2500	Animal Production (3)	
ANSC 4410or		
PLNT 4410	Grassland Agriculture: Plant, Animal and Environment (3)	
ENTM 3170	Crop Protection Entomology (3)	
PLNT 2500	Crop Production (3)	
PLNT 2510	Fundamentals of Horticulture (3)	
PLNT 3540	Weed Science (3)	6

Course Number	Course Name	Credit Hours
Group 2		
Five courses (fifteen credit hours) of the following:		
PLNT 3520	Principles of Plant Improvement	(3)
PLNT 3570	Fundamentals of Plant Pathology	(3)
PLNT 4310	Introductory Plant Genomics	(3)
PLNT 4330	Intermediate Plant Genetics	(3)
PLNT 4550	Developmental Plant Biology	(3)
PLNT 4560	Secondary Plant Metabolism	(3)
PLNT 4570	Research Methods in Plant Pathology	(3)
PLNT 4580	Molecular Plant-Microbe Interactions	(3)
PLNT 4590	Physiology of Crop Plants	(3)
PLNT 4610	Bioinformatics	(3)
Total Credit Hours		**15**
Free Electives		**27**

Suggested progression of program:

Second Year

BIOL 2242	The Flowering Plants	3
BIOL 2260	Biology of Fungi and Lichens	3
CHEM 2770 or (MBIO 2770)	Elements of Biochemistry 1	3
CHEM 2780 or (MBIO 2780)	Elements of Biochemistry 2	3
BIOL 2520	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 1010	Microbiology 1	3
AGEC 2370 or (BIOL 2300)	Principles of Ecology	3
ABIZ 1000	Introduction to Agribusiness Management	3
	Free and/or restricted electives	15
Total credit hours		**30**

Fourth Year

PLNT 4600	Issues in Agricultural Biotechnology	3
	Free and/or restricted electives	27
Total credit hours		**30**

4.1.3 Bachelor of Science (Agribusiness)

Agribusiness

Chair: B. Oleson
Office: 356 Agriculture Building
Telephone: (204) 474-9384
Program Advisor: G. Johnson
Office: 379 Agriculture Building
Telephone: (204) 474-9795
E-mail: Gary.Johnson@ad.umanitoba.ca

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.

Course No.	Course Title	Credit Hours
B.Sc. (Agribusiness) Degree Core Course Requirements		
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
ABIZ 2520	Introduction to Management Science	3
ABIZ 3080	Introduction to Econometrics	3
ABIZ 3510	Economics of Food Policy	3
ABIZ 4500	Agribusiness Strategies Seminar	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
MATH 1300	Vector Geometry and Linear Algebra	
or		
MATH 1310	Matrices for Management and Social Sciences	3
and		
MATH 1500	Introduction to Calculus	
or		
MATH 1520	Introduction to Calculus for Management and Social Sciences	3
STAT 2000	Basic Statistical Analysis 2	3
Total Credit Hours		**36**

Restricted Electives

Group 1

Three courses (nine credit hours) from the following:

ABIZ 2390	Introduction to Environmental Economics (3)	
AGEC 2370* (BIOL 2300)*	Principles of Ecology (3)	
ANSC 2500	Animal Production (3)	
PLNT 2500	Crop Production (3)	9

*These courses require BIOL 1020 and BIOL 1030

Group 2

Two courses (six credit hours) from the following:

ABIZ 3120	Commodity Futures Markets (3)	
ABIZ 3530	Farm Management (3)	
ABIZ 3540	Financial Risk Management (3)	
ABIZ 4260	Price Analysis (3)	6

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. 9

Agribusiness Management Option

At least nine credit hours from the Faculty of Management 9

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. 18

Free electives **21-30**

Students are encouraged to take free electives from the following ten courses:

ABIZ 1010	Economics of World Food Issues and Policies
ABIZ 2120	World Agribusiness Study Tour
ABIZ 2210	Transportation Principles
ABIZ 3120	Commodity Futures Markets
ABIZ 3520	Food Distribution and International Merchandising
ABIZ 3530	Farm Management
ABIZ 3550	Environmental Policy
ABIZ 3560	Agribusiness Portfolio Management
ABIZ 4120	Intermediate Econometrics
ABIZ 4260	Price Analysis

Course No.	Course Title	Credit Hours
Suggested progression of program:		
Second Year		
ABIZ 1000	Introduction to Agribusiness Management*	3
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
ABIZ 2520	Introduction to Management Sciences	3
AGRI 2030	Technical Communications	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
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	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		
ABIZ 3080	Introduction to Econometrics	3
ABIZ 3510	Economics of Food Policy	3
ABIZ 3540	Financial Risk Management	3
HRIR 2440	Human Resource 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
	Restricted Elective, Electives for Option and/or Free Electives	27
Total credit hours		**30**

4.1.4 Bachelor of Science (Agroecology)

Agroecology

Chair: G. Martens
Office: 109 Agriculture Building
Telephone: (204) 474-6097
Program Advisor: M. Entz
Office: 309 Agriculture Building
Telephone: (204) 474-6077
E-mail: m.entz@ad.umanitoba.ca

The Agroecology program 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 4550. 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.

Course No.	Course Title	Credit Hours
B.Sc. Agroecology Degree Core		
ABIZ 2390 (ECON 2390)	Introduction to Environmental Economics	3
AGEC 2370 (BIOL 2300)	Principles of Ecology	3
AGEC 3510	Agroecology	3
AGEC 4510	Applications in Agroecology	3
AGEC 4550	Project in Agroecology	6
ANSC 2500	Animal Production	3
BIOL 3312	Community Ecology	3
CHEM 2770 (MBIO 277)	Elements of Biochemistry 1	3
PLNT 2500	Crop Production	3
PLNT 2520	Genetics	3
SOIL 3600	Soils and Landscapes in Our Environment	3
Total credit hours		**36**
Restricted Electives		
Group 1 – Agricultural Science		
Three courses (nine credit hours) of the following:		
Any 2000, 3000 or 4000 level course from -		
ANSC	(Animal Science)	
or		
ENTM	(Entomology)	
or		
PLNT	(Plant Science)	9
Group 2- Land Science		
Six credit hours of the following:		
Any 3000 or 4000 level course from -		
SOIL	(Soil Science)	
or		
GEOG 2250	Introduction to Geographic Information Systems	6
Group 3 – Policy and Economics		
One course (three credit hours) of the following:		
Any 3000 or 4000 level course from -		
ABIZ	(Agribusiness)	3
Free Electives		**27**

Course No.	Course Title	Credit Hours
Suggested Progression of Program:		
Second Year		
CHEM2770 (MBIO2770)	Elements of Biochemistry 1	3
STAT 1000	Basic Statistical Analysis 1	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 (BIOL 2300)	Principles of Ecology	3
PLNT 2520	Genetics	3
	Restricted Electives	6
Total credit hours		**30**
Third Year		
BIOL 3312	Community Ecology	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	18
Total credit hours		**30**
Fourth Year		
AGEC 4510	Applications in Agroecology	3
AGEC 4550	Project in Agroecology	6
	Restricted and/or Free Electives	21
Total credit hours		**30**

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.

4.1.5 Bachelor of Science (Food Science)

Food Science

Program Advisor: A. Hydamaka
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The B.Sc. degree program in Food Science provides the academic foundation of knowledge and skills for the wide range of activities in food science and technology. 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 B.Sc. degree program in Food Science is accredited by the Institute of Food Technologists (IFT).

The B.Sc. (Food Science) degree program offers two options: A Science Option and a Business Option. Students will elect one of two options of study. Both Food Science options require students to complete the Faculty Core courses. A description of each program and their requirements follows after the B.Sc. Food Science Degree Core.

Course No.	Course Title	Credit Hours
B.Sc. Food Science Degree Core		
CHEM 2770 MBIO 2770	Elements of Biochemistry 1	3
FOOD 2500	Food Chemistry	3
FOOD 3010	Food Process 1	3
FOOD 4120	Food Science Seminar	3
FOOD 4150	Food Microbiology 1	3
FOOD 4160	Food Analysis 1	3
FOOD 4200	Quality Control	3
FOOD 4510	Food Product Development	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
MATH 1500 or MATH 1520	Introduction to Calculus Introduction to Calculus for Management and Social Sciences	3
STAT 2000	Basic Statistical Analysis 2	3
Total credit hours		**33**

Food Science – Science Option

The principal areas covered are food processing, chemistry, analysis and safety. 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 and the Food Science Degree Core the following courses are prescribed for the program leading to a B.Sc. in Food Science – Science Option.

Food Science – Science Option Core

BIOE 3530	Engineering Fundamentals	3
CHEM 1310	University 1 Chemistry – An Introduction to Physical Chemistry*	3
CHEM 1320	University 1 Chemistry - Introduction to Organic Chemistry*	3
FOOD 3210	Food Engineering Fundamentals	3
FOOD 4010	Food Process 2	3
FOOD 4250	Food Analysis 2	3
MBIO 1010	Microbiology 1	3
MKT 2210	Fundamentals of Marketing	3
Total Credit Hours*		**21**

*Both CHEM 1310 and CHEM 1320 are required for the Food Science-Science Option program. One of these courses will be credited as part of the Faculty Core.

Course No.	Course Title	Credit Hours
Restricted Electives		
Group 1 – Food Safety		
One course (three credit hours) from the following:		
AGRI 2190 and ANSC 2530	Toxicology Principles (1.5) Nutritional Toxicology (1.5)	
FOOD 1000	Food Safety, Today and Tomorrow	
FOOD 4310	Introduction to HACCP	
FOOD 4500	Food Safety and Regulations	3
Group 2 - General		
Two courses (six credit hours) from the following:		
FOOD 3160	Frozen Dairy Products	
FOOD 3170	Cheese and Fermented Milk Products	
FOOD 3220	Grains for Food and Beverage	
FOOD 3500	Processing of Animal Food Products	
FOOD 4230	Food Research	
FOOD 4260	Water Management in Food Processing	
FOOD 4540	Functional Foods and Nutraceuticals	
HNSC 4270	Sensory Evaluation	6
Food Science – Science Option Free Electives		**21**
Suggested Progression of Program:		
Second Year		
CHEM 1310	University 1 Chemistry: Introduction to Physical Chemistry**	3
or		
CHEM 1320	University 1 Chemistry: Introduction to Organic Chemistry**	3
CHEM 2770 (MBIO 2770)	Elements of Biochemistry 1	3
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
MBIO 1010	Microbiology 1	3
AGRI 2030	Technical Communications	3
FOOD 2500	Food Chemistry	3
	Restricted/and or Free Electives:	9
Total credit hours		**30**
Third Year		
HNSC 1210	Nutrition for Health and Changing Lifestyles	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
MKT 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**

**While both CHEM 1310 and CHEM 1320 are required for the Food Science-Science Option program, normally only one is taken in second year.

Food Science – Business Option

The B.Sc. degree Program in Food Science now offers a Business option which now allows students to specialize in the program. The Business option specifies eight required courses and a minimum of one course from selected groups of Food Science courses plus one course from a selected group of philosophy courses. Additional required courses from Agribusiness and The Faculty of Management provide a level of specialization in economics, finance, marketing and management. There are also twenty-one credit hours (seven courses) available for free electives.

In addition to the courses required for the faculty core and the Food Science Degree Core the following courses are prescribed for the program leading to a B.Sc. in Food Science – Business Option.

Food Science – Business Option Core		
ABIZ 3510	Economics of Food Policy	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
FOOD 4500	Food Safety and Regulations	3
HRIR 2440	Human Resource Management	3
Total Credit Hours		**18**
Restricted Electives		
Group 1 - Marketing		
Two courses (six credit hours) from the following:		
ABIZ 2510	Introduction to Agricultural nd Food Marketing	
ABIZ 3520	Food Distribution and International Marketing	
MKT 2210	Fundamentals of Marketing	6
Group 2 - General		
One courses (three credit hours) from the following:		
AGRI 2190 and ANSC 2530	Toxicology Principles (1.5) Nutritional Toxicology (1.5)	
FOOD 1000	Food Safety, Today and Tomorrow	
FOOD 3160	Frozen Dairy Products	

Course No.	Course Title	Credit Hours
FOOD 3170	Cheese and Fermented Milk Products	
FOOD 3220	Grains for Food and Beverage	
FOOD 3500	Processing of Animal Food Products	
FOOD 4250	Food Analysis	
FOOD 4260	Water Management in Food Processing	
FOOD 4310	Introduction to HACCP	
FOOD 4540	Functional Foods and Nutraceuticals	3
Free Electives		**21**

Suggested Progression of Program:

Second Year

Course No.	Course Title	Credit Hours
ACC 1100	Introductory Financial Accounting	3
CHEM 2770 MBIO 2770	Elements of Biochemistry 1	3
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 2030	Technical Communications	3
FOOD 2500	Food Chemistry	3
HRIR 2440	Human Resource Management	3
	Restricted/and or Free Electives:	6
Total credit hours		**30**

Third Year

HNSC 1210	Nutrition for Health and Changing Lifestyles	3
ECON 2450	Microeconomic Theory and Its Applications 1	3
ECON 2470	Macroeconomic Theory and Its Applications 1	3
FOOD 3010	Food Process 1	3
FOOD 4150	Food Microbiology 1	3
FOOD 4160	Food Analysis 1	3
	Restricted and/or Free Electives:	12
Total credit hours		**30**

Fourth Year

ABIZ 3510	Economics of Food Policy	3
FOOD 4120	Food Science Seminar	3
FOOD 4200	Quality Control in Foods	3
FOOD 4500	Food Safety and Regulations	3
FOOD 4510	Food Product Development	3
	Restricted and/or Free Electives:	15
Total credit hours		**30**

4.1.6 Biosystems Engineering

Biosystems Engineering

Head: D. Mann
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.	Course Title	Credit Hours
BIOE 2090	Machinery for Agricultural Production	4
BIOE 2222	Precision Agriculture Concepts and Applications	4
BIOE 3530	Engineering Fundamentals	3
BIOE 4500	Water Management	3
BIOE 4520	Crop Preservation and Handling	3

4.2 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 (WCVM), 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 60 credit hours 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 six (6) credit hours of: English*, three (3) credit hours in Physics, Biochemistry, Microbiology, six (6) credit hours of Mathematics or Statistics; nine (9) credit hours in Biology or Zoology (including three (3) credit hours in genetics), Chemistry (including three (3) credit hours in 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.

Course No.	Course Title	Credit Hours
First Year/University 1		
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1320	University 1 Chemistry: An Introduction to Organic Chemistry	3

Course No.	Course Title	Credit Hours
MATH 1300 Or MATH 1310	Vector Geometry and Linear Algebra Matrices for Management and Social Sciences	
Or MATH 1500	Introduction to Calculus	
Or MATH 1520	Introductory Calculus for Management and Social Sci ences	3
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* Or ENGL 1300*	Representative Literary Works Literature Since 1900	6
	Elective	3
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
STAT 1000	Basic Statistical Analysis	3
PLNT 2520 (BIOL 2500)	Genetics	3
MBIO 1010	Microbiology 1	3
	Electives	9
Total credit hours		**30**

Please note:

The courses outlined here relate to the entrance requirements for WCVM. Students intending to apply to a different Veterinary College should consult with that College and the Animal Systems Advisor.

4.3 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, Agroecology and Food Science students may complete this minor (this minor is not available to Agribusiness students). The Minor consists of 18 credit hours of Management courses. Students must meet prerequisites for all courses. Completion of a Minor is optional. It should be noted that planning for completion of a Minor should be done early in the program, ideally before 90 credit hours have been completed, due to restricted opportunities for courses later in the program. All 2nd program majors must be declared before 75 credit hours of study have been completed.

Minors in the Faculty of Agricultural and Food Sciences

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.

Entomology

Students may obtain a minor in Entomology (18 credit hours) by completing ENTM 2050 Introductory Entomology plus an additional 15 credit hours in Entomology courses. Many courses are offered in alternating years, so students should consult the Department Head of Entomology to plan their program.

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.

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 4310 Introductory 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, PLNT 4610 Bioinformatics.

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 3160 Field Methods in Land Resource Science, SOIL 4060 Physical Properties of Soils, 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, SOIL 4530 Land Use and Environment.

4.4 Diploma in Agriculture

School of Agriculture

Director: Michele Rogalsky
Office: 160 Agriculture Building
Telephone: (204) 474-9295

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, Crop Management, Livestock Management and General Agriculture. These options are chosen by the student during the first term, first year.

Prescribed Courses for all Students in these options

Course No.	Course Title	Credit Hours
First Year, Fall Term		
BIOE 0600	Farm Machinery	4
ANSC 0420	Animal Biology and Nutrition	4
ABIZ 0440	Agricultural Economics and Marketing 1	4
ABIZ 0460	Financial Management 1	4
DAGR 0410	Communication and Learning Skills	4
DAGR 0420	Introduction to Soils and Crops	4
DAGR 0680	Management Planning Project 1	
Total credit hours		**24**
First Year, Spring Term		
PLNT 0410	Cereal and Oilseed Production Practices	4
SOIL 0420	Soil Productivity and Land Use	4
ABIZ 0470	Financial Management 2	4
DAGR 0680	Management Planning Project 1[1]	3
Total credit hours		**15**
+ 3 courses, according to option*		
[1]continuation 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
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.).

Course No.	Course Title	Credit Hours
Prescribed Courses for Business Management Option		
ABIZ 0680	Agribusiness Management	4
ABIZ 0720	Farm Business Management	4
DAGR 0730	Case Studies and Institutional Lending 1	4
Plus at least one of the following:		
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		
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		**22-24**

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).

Course No.	Course Title	Credit Hours
Prescribed Courses for Livestock Management Option		
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 pro gram.

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.	Course Title	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.

4.5 Cooperative Education Program

Cooperative Education

Cooperative Education/Job Placement Officer: Laura Lazo
Office: 271 Agriculture Building
Telephone: (204) 474-6943

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 and diploma programs apply to the Cooperative Education Program.

Academic Term Requirements

Once having been accepted into the Cooperative Education program there are three requirements for completion of the Work Term(s). Failure to do any of them in a timely fashion will result in a failing grade. Please note the Degree Program requires three four month work terms and the Diploma Program requires one five month Work Term. Please see each program's "Employment Term Requirements" for details.

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 a work-performance evaluation conducted. The student will need to make him/herself available for the interview.

Two weeks after the end of the work term, a work term report is due and must be submitted to the Cooperative Education Coordinator. Both content and format will be marked. (Details as to format and what is required in the report can be found in "Guidelines for Cooperative Education Work Term Report" which can be obtained from the Cooperative Education Coordinator.)

Also, two weeks after the end of the work term, a post employment review is required to be submitted to the Cooperative Education Coordinator.

For Degree the student's program chair will assign each participating student a faculty advisor. For Diploma, the Director of the School of Agriculture, in consultation with the Academic Advisor, will assign each participating student a faculty advisor. The faculty advisor will be responsible for 1) advising the student in regards of the fit of the coop work term in his/her course progression, 2) evaluating the student's work term report and 3) 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. Students successfully completing the three work term(s) will have their "Cooperative Education Option" acknowledged on their graduation parchment.

Degree Program

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 consists of up to three four-month coop work terms, each with a course designation, conducted over twelve months with a faculty approved employer. The student will receive one credit for each completed work term. Students are required to register in the appropriate employment term course within set dead-lines and pay the fee prior to starting the employment term. Preferably, 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 that six hours of academic credit and may not take more than one course at a time.

Diploma Program

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 hours 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.

SECTION 5: COURSE DESCRIPTIONS

5.1 Degree Course Descriptions

Agribusiness -ABIZ 0 Level

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.

Agribusiness and Agricultural Economics-ABIZ 1000 Level

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 Food 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.

Agribusiness and Agricultural Economics-ABIZ 2000 Level

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 1010 and ECON 1020 or the former 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 co requisite: ECON 1010 and ECON 1020 or the former 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-Co requisite STAT 1000 (or 005.100) or equivalent.

Agribusiness and Agricultural Economics-ABIZ 3000 Level

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) and ECON 1010 and ECON 1020 or the former ECON 1200. 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 1010 and ECON 1020 or the former 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 3510 Agricultural Economics Cr.Hrs. 3
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 061.350, 061.418 or ABIZ 3500. Prerequisites: ECON 2450 (or 018.245) and ECON 2470 (or 018.247).

ABIZ 3520 Food Distribution and International Merchandising (3-0:0-0) Cr.Hrs. 3
(Formerly 061.352) An introduction to 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)).

ABZ 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 Managemet 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/or Finance, with 60 credit hours, ACC 1100 (or 009.110) and ECON 1010 OR ECON 1020 or the former ECON 1200 (or 018.120), or permission from instructor. Recommended G.P.A. of 2.80 or higher.

Agribusiness and Agricultural Economics-ABIZ 4000 Level

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 4260 Price Analysis Cr.Hrs. 3
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 018.3180]. Not to be held with ABIZ 4250 (formerly 061.425) or 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 encountered by senior management . Some classes will include participation by senior management followed by a debriefing session. Students must have completed 90 credit hours towards a degree in Agribusiness, or permission of the Department.

Agriculture-AGRI 1000 Level

AGRI 1010 Business Communication Cr.Hrs. 3
Strengthen the thinking, writing, speaking and listening skills required by IEAP students to succeed in the agricultural, food science or agri-business world. Students will develop an understanding of cultural influence in communication tasks used in academic and workplace settings. Pre-requisite: Must be enrolled in the Internationally Educated Agrologists Program.

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 agri-food 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.

Agriculture-AGRI 2000 Level

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 BIOL 2380 formerly 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. 1.5
(Formerly 065.219) A survey of general principles underlying the effects of toxic substances on biological systems, including the history, scope and applications of toxicology, the mechanisms of toxic action. Not to be held with BIOL 2380 or the former 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.

Agriculture-AGRI 3000 Level

AGRI 3000 Business Communication Cr.Hrs. 3
The course helps students advance their writing and presentation skills to succeed in the agricultural workplace. Lectures, course materials, and exercises will address grammar, usage, citation, correspondence, résumés and cover letters, and job interview techniques. Prerequisite: Must be enrolled in the Interationally Educated Agrologists Program (IEAP).

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).

Agriculture-AGRI 4000 Level

AGRI 4000 Practising the Profession of Agrology 1 Cr.Hrs. 3
Introduction to the profession of Agrology in Manitoba with an emphasis on understanding the structure of the agriculture industry, the agriculture network and how it functions. Laboratory sessions will focus on guest speakers and tours of companies and agencies in the agriculture industry. Prerequisite: Must be enrolled into the Internationally Educated Agrologists Program (IEAP).

AGRI 4010 Practising the Profession of Agrology II Cr.Hrs. 3
This course will cover the role of a practising agrologist in Manitoba, with an emphasis on professional ethics and responsibilities, regulations of the agriculture profession in Canada, and the culture of the work environment. Laboratory sessions focus on guest speakers and tours of companies and agencies in the agriculture industry. Prerequisite: Students must be enrolled in the Internationally Educated Agrologists Program.

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.

Agroecology-AGEC 2000 Level

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 BIOL 2300 (formerly BOTN 2370 or ZOOL 2370). It is the normal prerequisite to other courses in ecology. Not to be held with BIOL 2390 (formerly BOTN 2280 or 001.228) or ZOOL 2290 or BIOL 3260 (formerly BOTN 2291 or 022.229, or BOTN 3280 formerly 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- or co-requisite: STAT 1000 or STAT 1001.

Agroecology- AGEC 3000 Level

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: AGEC 2370 (or 065.237) or BIOL 2300 (formerly BOTN 2370 or 001.237 or ZOOL 2370 or 022.237).

Agroecology- AGEC 4000 Level

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 agro ecology. Prerequisite: AGEC 3510 (or 065.351).

AGEC 4550 Project in Agroecology Cr.Hrs. 6
Independent research project on an Agroecological topic. Students perform research and meet regularly with advisors. Progress reports are required, and final results are presented in written and verbal reports. Classes are held on professional topics. Not to be held with AGEC 4540 (or 065.454). Prerequisite: AGEC 3510 (or 065.351).

Animal Science-ANSC 0 Level

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.

Animal Science-ANSC 2000 Level

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. Co requisite: 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). Co requisite: 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. 1.5
(Formerly 035.253) The Science of dietary toxins and their interrelationships with nutrition: mode of action and metabolism of toxic chemicals that occur in food and animal feedstuffs. Prerequisite: AGRI 2190 (or 065.219)

ANSC 2540 Companion animal nutrition and mangement Cr.Hrs. 3
Course material will cover the functional anatomy, genetics, nutrition, reproduction, behavior, and diseases of non-equine companion animals and ornamental fish. Pre-or Co requisite; CHEM 2770 or MBIO 2770 or CHEM 2360 or MBIO 2360 or consent of instructor.

Animal Science- ANSC 3000 Level

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 behavior, welfare and behavioral management, health, and facility design and modification will be considered in the context of animal/environment interactions. Co requisite: ANSC 2520 (or 035.252).

ANSC 3540 Companion animal nutrition and management Cr.Hrs. 3
Course material will cover the functional anatomy, genetics, nutrition, reproduction, behavior, and diseases of non-equine companion animals and ornamental fish. Pre-or Co requisites: CHEM 2770 or MBIO 2770 or CHEM 2360 or MBIO 2360 or consent of instructor.

Animal Science-ANSC 4000 Level

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 4240 Mathematical modeling of biological systems Cr.Hrs. 3
Lectures and computer based laboratory exercises will be used to discuss mathematical modeling methods applied to biological systems taking aspects of animal science as a model to develop modeling techniques. Prerequisite:MATH 1500 ir MATH 1520 or Equivalent.

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 behaviors of animals will be emphasized. Relationships between behavior, 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 mongastric and ruminant nutrition. A laboratory component will provide training in current techniques in feed analyses and computer modeling. Offered in 2005-2006 and alternate years thereafter. Prerequisite: ANSC 3510 (or 035.351)

Biosystems Engineering Course Descriptions-0 Level

BIOE 0222 Precision Agriculture Cr.Hrs. 4
Precision agriculture is a philosophy of agricultural management that has been enabled by modern technology. This course will examine both the technology and the techniques that can be used to improve the efficiency of agricultural operations by decreasing costs, increasing profits, and decreasing hazards to the environment.

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 harvest machines including their selection, adjustment, efficiency, and cost of operation with respect to test data.

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.

Biosystems Engineering Course Descriptions-2000 Level

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 1460 (or 130.112).

BIOE 2222 Precision Agriculture Concepts and Applications Cr.Hrs. 4
Precision agriculture is a philosophy of agricultural management that has been enabled by modern technology. This course examines the technology and the techniques of precision agriculture including GPS, GIS, variagle rate technologies, and yield monitoring that can be used to improve the efficiency of agricultural operations by decreasing costs, increasing profits, and decreasing hazards to the environment.

BIOE 2580 Biosystems Engineering Design Trilogy 1 Cr.Hrs. 4
(Formerly 034.258) Biosystems Engineering and its place in the professions of engineering and agrology. Design concepts, with an emphasis on team building and technical communication skills. Philosophy of project planning. Preparation of a conceptual design by teams in response to design assignment submitted by industry. Written report presented orally. Prerequisite: ENG 1430 OR THE FORMER ENG 1400 (OR 130.140).

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).

Biosystems Engineering Course Descriptions-3000 Level

BIOE 3270 Instrumentation and Measurement for Biosystems Cr.Hrs. 4
(Formerly 034.327) Basic instrumentation for measuring electrical and non-electrical quantities associated with biosystems engineering and industry; transducers for automatic control. Prerequisites: [MATH 2132 (or the former MATH 2110 (or 136.211)] and [ENG 1450 or the former ENG 1180 (130.118)].

BIOE 3320 Engineering Properties of Biological Materials Cr.Hrs. 4
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 2130 (or Math 2100 or 136.210), CIVL 2800 (or 23.280) or MECH 2222 (or Mech 2220 or 025.222) BIOE 2580 (or 034.258). 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 1300 or equivalent] and [MATH 1500 or equivalent] or the former MATH 1680 (136.168).

BIOE 3580 Biosystems Engineering Design Trilogy 2 Cr.Hrs. 4
(Formerly 034.358) Advanced design concepts associated with Biosystems Engineering, with emphasis on the principles of safety and human factors engineering. Theory of project planning. Preparation of a preliminary design by design teams in response to a design assignment submitted by industry. Written report with engineering drawings presented orally. Prerequisites: BIOE 2580 (or 034.258 or 034.214). Not to be held with the former 034.326.

BIOE 3590 Mechanics of Materials in Biosystems Cr.Hrs. 4
(Formerly 034.359) In this course students will be exposed to both the theory and physical behaviour of materials when subjected to loads. The course will be delivered using a combination of lectures and hands-on labs. The materials presented include a wide range of design biosystems engineers may be involved with, including plastics, bone, wood, concrete, steel, other biological materials and composites. Prerequisite: CIVL 2800 (or 023.280), or consent of instructor. Not to be with the former 034.324

Biosystems Engineering Course Descriptions-4000 Level

BIOE 4240 Graduation Project Cr.Hrs. 3
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 3270 (034.327) or approval of department.

BIOE 4390 Unit Operations 1 Cr.Hrs. 4
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 2262 (or 025.226). Corequisites: BIOE 3320 (or 034.332 or 034.323), BIOE 3270 (or 034.327).

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 ((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 4416 Topics in Biosystems Engineering Cr.Hrs. 3
This course will cover contemporary topics in Biosystems Engineering. The specific topics and a detailed outline will be available at the time of registration. Prerequisite: Permission of the department.

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).

BIOE 4440 Bioprocessing for Biorefining Cr.Hrs. 4
This course will provide students with an understanding of the principles involved in the design of proper conditions for processing of biomaterials for production of high-quality biofuels and bioproducts. The content of this course is built on the principles of physics, transport phenomena, thermodynamics, reaction, kinetics, fermentation, and industrial unit operations. Prerequiste:BIOE 2110 (or 034.211). Pre-or corequiste: BIOE 3320 (or 034.332 or 034.323)

BIOE 4460 Air Pollution Assessment and Management Cr.Hrs. 4
Air pollutant sources and characteristics, their impact on the environment, their behaviour in the atmosphere. Methods of sampling and measurement and the basic technological alternatives available for separation/removal and control. Particular problems of regional interest are discussed. Corequisites: CIVL 2790 (or 023.279) or MECH 2262 (or MECH 2260 or 025.226).

BIOE 4480 Environmental Impact Assessment Cr.Hrs. 4
(Formerly 034.448) Basic methodologies for conducting impact assessments, including physical, chemical and ecological impacts. Prerequisite: BIOE 2590 or CIVL 3690.

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. Offered alternate years.

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. Offered alternate years.

BIOE 4530 Analysis and Design of Biomachinery Cr.Hrs. 4
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 2580 (or 034.258).

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
Topics covered include solid and liquid manure, manure characteristics, manure collection, storage, land application and utilization, biological treatment, design of equipment and facilities for manure handling. Environment issues, such as odour and water pollution associated with manure management will also be discussed. Prerequisites: CIVL 2790 (or 023.279) or MECH 2262 (or MECH 2260 or 025.226).

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.

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: BIOL 1412 (or ZOOL 1330 or 022.133).

BIOE 4620 Remediation Engineering Cr.Hrs. 4
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 2262 (or MECH 2260 or 025.226).

BIOE 4630 Pollution Prevention Practices Cr.Hrs. 4
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 2262 (or MECH 2260 or 025.226).

BIOE 4640 Bioengineering Applications in Medicine Cr.Hrs. 4
This course surveys bioengineering applications and medicine from a clinical engineering perspective. Topics include: clinical engineering practice; device development legislation; biomedical sensors; biosensors; biomaterials and biocompatibility; as well as the principles of and design for medical imaging equipment. Prerequisites: BIOL 1410 (or ZOOL 1320 or 022.132) and BIOL 1412 (or ZOOL 1330 or 022.133) and BIOE 3320 (0343.332).

BIOE 4700 Alternative Building Design Cr.Hrs. 4
This course will provide students with experience in the design of structures that utilize natural and green building materials and techniques. Students will get hands-on lab experience with various natural building materials such as straw, straw light clay, cob and stackwall. Prerequisites: BIOE 3590 (or 034.359) or CIVL 3770 (or 023.377).

Entomology Course Descriptions-0 Level

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.

Entomology Course Descriptions-1000 Level

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.

Entomology Course Descriptions-2000 Level

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.

Entomology Course Descriptions-3000 Level

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. Not all courses are offered every year. Please contact the department regarding course availability.

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 3180 Field Techniques in Entomolgy Cr.Hrs. 3
A field course to provide a foundation in field sampling and collection techniques for insects in natural and agroecosystems. The course is run at the University of Manitoba Star lake research station near Whiteshell MB. Transportation to and from the University and accommodations are included. Six day intensive field-based course. Prerequisites: none.

ENTM 3190 Introduction to Applied Entomology Cr.Hrs. 3
A course providing a foundation in applied entomology covering topics including: basic insect biology, insect pest management, insect biodiversity and the biological services provided by insects. Online lecture presentations, weekly readings and online laboratories. Prerequisites: none. May not be held with ENTM 3170.

Entomology Course Descriptions-4000 Level

ENTM 4000 Topics in Entomology Cr.Hrs. 3
A Course of assigned readings and literature review essays for students in the minor in Entomology program. Prerequisite ENTM 2050 (or 038.205) and consent of department head.

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 all courses are offered every year. Please contact the department regarding course availability.

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); AGEC 2370 (or 065.237) or BIOL 2300 (formerly ZOOL 2370 or 022.237) or BOTN 2370 (or 001.237); or consent of instructor. Not all courses are offered every year. Please contact the department regarding course availability.

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. Not all courses are offered every year. Please contact the department regarding course availability.

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 subspecies, 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 consent of instructor. Not all courses are offered every year. Please contact the department regarding course availability.

Food Science Course Descriptions-1000 Level

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 arise and what is and can be done to consistently achieve high quality, safe food. Controversial issues (residues, organic, biotechnology, irradiation) will be discussed in a balanced manner, and prospects for the future presented.

Food Science Course Descriptions-2000 Level

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 Science Course Descriptions-3000 Level

FOOD 3010 Food Process 1 Cr.Hrs. 3
(Formerly 078.301) The basic principles and practices of the major techniques used in food processing and preservation are covered. Emphasis is placed on thermal processing, drying, evaporation, chilling, freezing, separation, packaging and sanitation. Also preservation by salting, smoking, microwave, radiation and chemical techniques is presented. Critical issues in food regulations are introduced. Prerequisite: any MATH course at the 1000 level.

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. Prerequsite: 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 in the food industry. Prerequisite: BIOE 3530 (or 034.353).

FOOD 3220 Grains for Food and Beverage Cr.Hrs. 3
The science and technology behind the functionality of major Canadian cereal grains and grain legumes for food and beverage. Grains covered include wheat, barley, oats peas, beans, and lentils in the context of their processing into products such as bread, pasta and beer, and foods high in dietary fibre. Details are presented on the differing physical and chemical attributes of grains to make quality products with focus on the roles of protein, starch, and non-starch polysaccharides. Prerequisite: FOOD 2500 or equivalent.

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 Science Course Descriptions-4000 Level

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 advanced 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 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
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 4260 Water Management in Food Processing Cr.Hrs. 3
The course is devoted to the management of water and wastewater in food processing. The roles of water in food processing, recycle and reuse opportunities, treatment options for water and wastewater are presented. The course also discusses water stewardship in relation to food processing, water and wastewater regulations and implication for HACCP and ISO. Laboratory sessions are designed for the student to become familiar with Standard Methods for the Examination of Water and Wastewater.

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 co requisite: 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) or consent of instructor. Cannot be held with HNSC 4280 (or 030.428).

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).

Plant Science Course Descriptions-0 Level

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 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 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 identification, 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.

Plant Science Course Descriptions-1000 Level

PLNT 1000 Urban Agriculture Cr.Hrs. 3
Urban environments and their importance for food production, increasing biodiversity, and reducing pollution are presented. Topics include principles of vegetable, fruit and herb production, landscape plants, and utilization of natural systems for composting, water management and reduced pesticide use. Benefits to environment, community development, and human health are discussed.

Plant Science Course Descriptions-2000 Level

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. This course is offered in alternate years.

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 BIOL 2500 or the former 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) or MBIO 2770 (or 060.277) and PLNT 2520 (or 039.252) or BIOL 2500 or the former BOTN 2460 (or 001.246).

Plant Science Course Descriptions-3000 Level

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 BIOL 2500 or the former 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.

PLNT 3500 Plant Physiology Cr.Hrs. 3
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 BIOL 3450 or the former BOTN 2020 (or 001.202) or BIOL 3452 or the former BOTN 3010 (or 001.301) or the former 001.317. 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); BIOL 2242 or the former 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 resources. Conventional, traditional and alternative crop production systems will be discussed. Includes a limited number of tutorials to allow for field tours and guest speakers. Prerequisite: PLNT 2500 (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 BIOL 2500 or the former 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 co requisite: PLNT 2510 (or 039.251) or consent of instructor.

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, modes 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: BIOL 2260 or the former BOTN 2210 (or 001.221).

Plant Science Course Descriptions-4000 Level

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 4310 Introductory Plant Genomics Cr.Hrs. 3
An introduction to plant genomics including mapping and sequencing genomes, gene expression and transformation, comparative, functional and integrative genomics; also covers gene constructs and plant transormation 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. Not to be held with the former PLNT 4540 (or 039.454). Prerequisites: [PLNT 2520 (or 039.252) OR BIOL 2500 or the former BOTN 2460 (or 001.246)] and PLNT 2530 (or 039.253) or consent of instructor.

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 BIOL 2500 or the former 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.

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 sub cellular, 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 defense 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 techniques currently used in the study of plant pathogens will be covered. The laboratory component aims at preparing students for a professional career in plant protection and research in plant pathology. Prerequisite: PLNT 3570 (or 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). This course is offered in alternate years.

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 or MBIO 2770 or 060.277) or CHEM 2360 (or 002.236 or MBIO 2360 or 060.236)]; PLNT 3500 (or 039.350) or BIOL 2242 (or the former BOTN 2010 or 001.201) and BIOL 3450 (or the former 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).

PLNT 4610 Bioinformatics Cr.Hrs. 3
An introduction to the theory, strategies, and practice of data management and analysis in molecular biology. Topics include DNA and protein sequence analysis, biological databases, genomic mapping, and analysis of gene expression data. The course will include problem-solving exercises using Unix server-based software. Prerequisites: PLNT 2530 (039.253) or the former 039.450 or PLNT 3140 (039.314) or MBIO 3410 (060.341) or PLNT 4310 or the former PLNT 4540 or consent of instructor.

Soil Science Course Descriptions-0 Level

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).

Soil Science Course Descriptions-3000 Level

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 3610 Field Methods in Land Resource Science Cr.Hrs. 3
This course provides students with training in field methods used in soil science and related sciences (hydrology, meteorology, ecology, geomorphology, and environmental science). Students participate in a biophysical survey of a field site and in a study of the management, assessment and monitoring of land resources. Prerequisite: SOIL 3600

Soil Science Course Descriptions-4000 Level

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 BIOE 2110 or consent of instructor.

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 SOIL ECOLOGY Cr.Hrs. 3
Explore the application of soil biology to diversity in agro ecosystems, 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: AGEC 2370 or Biol 2300 or SOIL 3600.

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.

5.2 Diploma Course Descriptions

Diploma in Agriculture Courses

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 agri-business 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 Co requisite: 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. Prerequsite: 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.

FACULTY OF ARCHITECTURE

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Please refer to the Faculty website at **umanitoba.ca/architecture**

General Information

Introduction to the Faculty of Architecture

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.Env.D.) became an undergraduate program consisting of two years of shared design studies followed by a third year in one of the 'professional options'. These options included Architecture, City Planning, Interior Design, and Landscape Architecture. University 1 was introduced as a prerequisite for admission to the Environmental Design Program. In 2006 the Faculty of Architecture began to reform the Environmental Design Program to create a four year undergraduate design program by including University 1 in its curriculum offerings. In 2007 the Faculty of Architecture introduced a four year design program consisting of two years of common 'Foundation Studies' (ED1/U1 and ED2) followed by two years of pre-professional 'Intermediate Studies' years (ED3 and ED4). The third and fourth years are referred to as the 'Option Years' and include Architecture, Interior Environments and Landscape + Urbanism (a shared option between City Planning and Landscape Architecture).

The B.Env.D. program is envisioned as a strong multidisciplinary undergraduate degree in its own right. It provides a solid base of design 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, and at other institutions globally.

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

Program/Degree	*Years to Complete	Total Credit Hours
Bachelor of Environmental Design	4	129
Bachelor of Environmental Design AMP (does not require the completion of U1)	2	66

1.1 Available Options

Effective September 2008, the Bachelor of Environmental Design Degree Program has been reformed to require students to declare a specific program Option after the second year of studies (ED2) in the Environmental Design Program. Of the approximately 100 students moving into the third year of studies (ED3), admission into the Options will be divided equally. Students will be required to rank their progam options in order of preference (1st, 2nd, 3rd choice). The selection of students into these Options will be based on the GPA, a Portfolio and Statement of Intent. 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 choice. Students who have not completed 2nd year studios or who still have more than 1 three credit hour lecture course to complete will not be eligible for admission into the Option years.

Architecture Option

The Architecture Option offers a program of studies that focuses on transforming the lessons of history, technology, culture, the environment, and regional and social aspirations into a program for architecture. Students have the academic freedom, one of the program's highlights, to experiment with ideas and methods as they develop their own personal and critical approaches to architectural design. The sequential design studios and supporting courses cover a wide spectrum of investigations ranging in scale from urban design to individual buildings to their construction details, examining the impact of all of these on the environment.

Interior Environments Option (not available to AMP students)

The Interior Environments Option provides an opportunity to study the design of interior spaces within the context of architecture and to investigate the design of objects within the contexts of the human body and interior spaces. Students enrol in a series of design studios and courses to explore the impact of interior environments on human beings and vice versa. The impact of technology – especially sustainable strategies – on buildings and their inhabitants is also studied.

Landscape + Urbanism Option (not available to AMP students)

The departments of Landscape Architecture and City Planning offer a joint option in Landscape + Urbanism for students who have a broad interest in understanding and shaping human settlement and habitat. Design studios and supporting courses recognize that we live in an increasingly globalized world where issues of natural resource depletion, climate change and the demand for sustainable development are paramount. Design and planning issues are addressed within the social, economic, and political contexts that drive development and of the cultural and ecological forces that create the built envronment.

1.2 Available Streams (only available to AMP students)

AMP students entering either Stream One or Stream Two of the program will enter into the Architecture Option years three (AMP 1's) or four (AMP 2's) as outlined above.

SECTION 2: ADMISSION REQUIREMENTS

2.1 Bachelor of Environmental Design (B.Env.D)

To be considered for admission into the Bachelor of Environmental Design Program an applicant must have completed 30 credit hours of university-level coursework with an overall minimum adjusted grade point average of 2.50. For a detailed outline of the admission requirements please see our web site at umanitoba.ca/environmentaldesign.

2.2 Bachelor of Environmental Design - Architecture Master Preparation Option (AMP)

Enrollment in the Environmental Design Master Preparation Option is competitive and limited. Students will be admitted on the basis of an annual selection process. Applicants satisfying the minimum academic requirements are eligible for consideration at the discretion of the Department of Architecture Admissions Selection Committee. For a detailed list of the admission requirements please see our web site at umanitoba.ca/architecture.

SECTION 3: FACULTY ACADEMIC REGULATIONS

3.1 Undergraduate Scholastic Standards

A Grade Point Average (GPA) of 2.00 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).

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 studies in the Environmental Design Program including Years 3 and 4.

3.2 Supplementary Regulations

Special regulations governing admission, attendance, withdrawals, examinations, grading procedures and curriculum requirements are on file in the general office of the Environmental Design Program, Faculty of Architecture.

3.3 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 of Architecture.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 Bachelor of Environmental Design

The Bachelor of Environmental Design Degree is a four year program of studies consisting of two years of common 'Foundation Studies' (ED1/U1 andED2) followed by two years of 'pre-professional 'Intermediate Studies' (ED3 and ED4). The third and fourth years are referred to as the 'Option Years' and include Architecture, Interior Environments and Landscape + Urbanism (a shared option between City Planning and Landscape Architecture). Typically students entering the Environmental Design Program are admitted after completion of the admission requirements.

Foundation Studies:

Year 1 - Apply to University 1 - Complete ED1 / U1

Year 2 - Apply to Environmental Design Program - Complete ED2

Intermediate Studies (Option Years)

Year 3 - Apply to Option - Complete ED 3 Arch Option or ED 3 IE Option or ED 3 L + U Option

Year 4 - Complete ED 4 Arch Option or ED 4 IE Option or ED 4 L + U Option

The Foundation Studies of the Environmental Design Program provide a solid grounding in the basic knowledge and language shared by all of the environmental design disciplines. It also provides opportunity to develop interdisciplinary perspectives through the other academic units in the University of Manitoba. 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 in the Faculty of Architecture. It also enables students to discover their strengths and interests relating to a particular environmental design discipline.

The Intermediate Studies of the Environmental Design Program provide opportunities to pursue a specific professional design discipline including Architecture, City Planning, Interior Design and Landscape Architecture. The third and fourth years are spent studying in the Option Years where students are exposed to, and challenged by, academic and professional design theories and practices specific to a particular design discipline.

Overall, the curriculum is structured around a design studio sequence that provides a forum for exploring the complex relationships between humans and the natural and built environments that constitute the places and artifacts of cultural production. Over a four year period, a student will develop the necessary knowledge and skills to pursue work in a wide variety of design practices.

The professional options are an important curriculum link to the graduate programs. Students holding a B.Env.D degree are eligible to apply to the graduate departments of Architecture, City Planning, Interior Design and Landscape Architecture and to other graduate programs globally. Students who have completed a design degree may be eligible to apply to the graduate program. Interested students should consult the Graduate Calendar, Faculty of Architecture.

In order to be eligible for the Bachelor of Environmental Design Degree students must complete ED2, ED3 and ED4 (total 99 credit hours). Admission enrollment is limited to 100 students on a competitive basis.

Course Sequence

Course No.	Course Name	Credit Hours
FOUNDATION STUDIES (Years 1 and 2)		
Year 1/Admissions Requirement		
EVDS 1600	Introduction to Environmental Design	3
EVDS 1602	Visual Literacy	3
EVDS 1660	History of Culture, Ideas and Environment 1	3
EVDS 1670	History of Culture, Ideas and Environment 2	3
	Faculty of Arts	3
	Faculty of Arts	3
	Faculty of Science	3
	Faculty of Science	3
	Faculty of Arts or Science	3
	Faculty of Arts or Science	3
Total Credit Hours		**30**
Year 2		
EVDS 2100	Urban Media Lab (Pre-Fall)	3
EVDS 2600	Tectonic Precedent	3
EVDS 2200	Ecology and Design	3
EVDS 2300	Materials, Structures and Assemblies	3
EVDS 2702	Natural and Human Systems	3
EVDS 2400	Visual Media 1	3
EVDS 2800	Visual Media 2	3
EVDS 2500	Design Studio 1	6
EVDS 2900	Design Studio 2	6
Total Credit Hours		**33**
INTERMEDIATE STUDIES (Option Years 3 and 4)		
Year 3: Architecture Option		
EVAR 3000	Pre-Modern Architectural History and Theory 1	3
EVAR 3002	Pre-Modern Architectural History and Theory 2	3
EVAR 3004	Architectural Technology 1- Structural and Sustainable Use of Materials	3
EVAR 3006	Architectural Technology 2 – Building Construction, Structures and Envelopes	3
EVAR 3008	Architecture Design Studio 1	9
EVAR 3010	Architecture Design Studio 2	9
EVAR 3014	Drawing: Freehand & Digital	3
Total Credit Hours		**33**
Year 4: Architecture Option		
EVAR 4000	Modern Architectural History and Theory 1	3
EVAR 4006	Modern Architectural History and Theory 2	3
EVAR 4002	Architectural Technology 3 - Building Systems	3
EVAR 4008	Architectural Technology 4 - Comprehensive Design Technology Report	3
EVAR 4004	Architecture Design Studio 3	9
EVAR 4010	Architecture Design Studio 4	9
	Elective	3
Total Credit Hours		**33**
Year 3: Interior Environments Option		
EVIE 3002	Interior Design History and Theory 1	3
EVIE 3004	Materials, Assemblies and Detailing	3
EVIE 3006	Interior Design Media	3
EVIE 3008	Interior Design Studio 3.1	6
EVIE 3010	Interior Design Studio 3.2	6
EVIE 3012	Interior Light and Colour	3
EVIE 4006	Design Methods and Processes	3
EVIE 4008	Digital Media (Winter 2014)	3
	Elective	3
Total Credit Hours		**33**
Year 4: Interior Environments Option		
EVIE 3000	Field Studies or Elective*	3
EVIE 4002	Indoor Systems 1	3
EVIE 4004	Indoor Systems 2	3
EVIE 4006	Design Methods and Processes	3
EVIE 4008	Digital Media (Fall 2013)	3
EVIE 4010	Interior Design Studio 4.1	6
EVIE 4012	Interior Design Studio 4.2	6
EVIE 4014	Advanced Interior Design Media	3
Elective*		3
Total Credit Hours		**33**

*Please note: All students in 4th Year IE Option must do 6 credit hours of Elective courses. EVIE 3000 can be used as three hours towards this requirement but enrolment is limited

Year 3: Landscape + Urbanism Option		
EVLU 3000	History of Designed Environments	3
EVLU 3002	Site Planning	3
EVLU 3004	Ecology + Design 2	3
EVLU 3006	Studio 3: Dwelling / Precinct / Everyday Life	9
EVLU 3008	Studio 4: Networks and Infrastructure	9
EVLU 3010	Landscape + Urbanism Theory	3
EVLU 3012	Site Morphology and Grading	3
Total Credit Hours		**33**

Course No.	Course Name	Credit Hours
Year 4: Landscape + Urbanism Option		

EVLU 4000	Philosophy, Ethics and Aesthetics	3
EVLU 4002	Construction Materials (Alternate 1)*	3
EVLU 4004	Inquiry by Design (Alternate 2)* - not offered	3
EVLU 4006	Special Topics in Community Design (Alternate 3)*	3
EVLU 4008	Plants, Ecosystems and Design (Alternate 4)*	3
EVLU 4010	Community Design Process and Method (Alternate 5)*	3
EVLU 4012	Studio 5: Possible Urbanism(s)	9
EVLU 4014	Studio 6: Emergent Futures	9
EVLU 4016	History of Landscape + Urbanism	3
EVLU 4018	Principles of Urban Design	3
Total Credit Hours		**33**

Students progressing to the Master of Landscape Architecture at the University of Manitoba are required to take courses EVLU 4002 Construction Materials and EVLU 4008 Plants, Ecosystems and Design in their 4th year.

Electives

University credit courses may be taken as electives. They may come from the Faculties of Arts, Science, Engineering, Fine Arts, Management, Agricultural and Food Sciences among others, or with the permission of the Environmental Design Program Chair 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 tuition, student fees, and related expenses, the estimated cost of materials, equipment, and textbooks for students in Environmental Design is approximately $7,000 per year.

The Environmental Design Program offers Field Studies in Years 2, 3 and 4 either as stand alone courses or in conjunction with a design studio offering. These may be regional, national or international. All related costs are to be borne by the students. A valid passport is required. A visa may also be required.

The Environmental Design Program has revised its mandatory computer purchase policy for all students entering Year 2 of the Environmental Design Program, beginning September 2008. Please refer to the Environmental Design website to note laptop computer and software specifications.

The Environmental Design Program has introduced the Urban Media Lab Fee of $330.00 (replacing the Sketch Camp fee). The Urban Media Lab course is offered in Year 2 and is hosted off campus in advance of the regular academic session (late August to early September).

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.

4.2 Bachelor of Environmental Design - Architecture Master Preparation Option (AMP)

This program is for applicants who have a recognized three or four year undergraduate degree in either a non-design discipline (such as Fine Art, Engineering, Science, Philosophy, Theatre, Psychology, Music, Film, English, History, Art History, Urban Studies, Geography, Commerce, etc)

OR

a design-related discipline (such as Interior Design, Landscape Architecture, Industrial Design, etc.) and wish to eventually apply to the graduate Master of Architecture Program.

General Eligibility: All applicants must meet the general admission and entrance requirements set by the Department of Architecture. The entry level into the program will be determined by the Department of Architecture Admissions Committee's evaluation of the individual's application and supporting documents.

Architecture Master Preparation One (AMP 1): (For those with a background in one of the following: Fine Art, Industrial Design, Engineering, Science, Philosophy, Theatre, Psychology, Music, Film, English, History, Art History, Urban Studies, Geography, Commerce, etc.) For applicants who have little or no formal design education with a minimum three-year undergraduate bachelors degree in any disciplinary field from a recognized college or university. A minimum GPA of 3.0 or equivalent B in the last two full years (60 credit hours) of study is required. Upon successful completion of this two-year program students will be eligible to receive an Environmental Design undergraduate degree.

Architecture Master Preparation Two (AMP 2): (For those with a background in one of the following: Interior Design, Interior Architecture or Landscape Architecture) For applicants who already have a three or four-year undergraduate bachelors degree in a design- of-the-environment related field from a recognized college or university. A minimum GPA of 3.0 or equivalent B in the last two full years (60 credit hours) of study is required. These applicants are considered on a case-by-case basis for placement into the second and final year of the undergraduate Architecture Master Preparation Option but will be ineligible to receive the Environmental Design degree.

NOTE: Upon successful completion of the undergraduate Architecture Master Preparation Option (AMP 1 and AMP 2), students who wish to continue into the Master of Architecture Program must officially apply for graduate admissions. Evaluation is based on the student's progress in either the one or two-year Architecture Master Preparation Option, as evidenced in a portfolio submission, GPA and a Faculty of Graduate Studies application.

Please refer to the following for Architecture Master Preparation (AMP) Information and Application Package:

http://umanitoba.ca/faculties/architecture/media/AR_2012_AMP_apppkginfobulletin.pdfhttp://www.umanitoba.ca/student/admissions/application/programs/architecture-application.html

Course Sequence

Course No.	Course Name	Credit Hours
EVAR 3012	Arch Tech Prep (pre term block course)	3
Year 3		
EVAR 3000	Pre-Modern Architectural History and Theory 1	3
EVAR 3002	Pre-Modern Architectural History and Theory 2	3
EVAR 3004	Architectural Technology 1 - Structural and Sustainable use of Materials	3

Course No.	Course Name	Credit Hours
EVAR 3006	Architectural Technology 2 - Building Construction, Structures and Envelopes	3
EVAR 3008	Architecture Design Studio 1	9
EVAR 3010	Architecture Design Studio 2	9
EVAR 3014	Drawing: Freehand & Digital	3
Total Credit Hours		**33**
Year 4		
EVAR 4000	Modern Architectural History and Theory 1	3
EVAR 4006	Modern Architectural History and Theory 2	3
EVAR 4002	Architectural Technology 3 – Building Systems	3
EVAR 4008	Architectural Technology 4 – Comprehensive Technology Report	3
EVAR 4004	Architecture Design Studio 3	9
EVAR 4010	Architecture Design Studio 4	9
Elective		3
Total Credit Hours		**33**

Electives

University credit courses may be taken as electives. They may come from the Faculties of Arts, Science, Engineering, Fine Arts, Management, Agricultural and Food Sciences among others, or with the permission of the Department of Architecture 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.

The Faculty of Architecture offers Field Studies in Years 3 and 4 either as stand alone courses or in conjunction with a design studio offering. These may be regional, national or international. All related costs are to be borne by the students. A valid passport is required. Visas may also be required.

The Faculty of Architecture has revised its mandatory computer purchase policy for all enrolling students beginning September 2008. Please refer to the Faculty of Architecture website to note laptop computer and software specifications.

In addition to tuition, student fees, and related expenses, the estimated cost of materials, equipment, and textbooks for students in Environmental Design After Degree is approximately $7,000 per year.

SECTION 5: COURSE DESCRIPTIONS

Environmental Design Architecture Course Descriptions-3000 Level

EVAR 3000 Pre-Modern Architectural History and Theory I Cr.Hrs. 3
Provides a historical and theoretical understanding of early Greek, Roman, Gothic and non-western architectural topics and their influence. Content is explored using primary texts where possible, and through critical analysis of selected topics. May not be held for credit with the former EVDS 2690, EVDS 2610, ARCH 6320 or ARCH 6420.

EVAR 3002 Pre-Modern Architectural History and Theory II Cr.Hrs. 3
Provides a historical and theoretical understanding of Gothic and Renaissance architectural topics and their influence, up to the work of Claude Perrault. Content is explored using primary texts where possible, and through critical analysis of selected topics. May not be held for credit with EVDS 2620 or ARCH 6340.

EVAR 3004 ARCH TECH 1 Cr.Hrs. 3
Construction materials and structural theory in the analysis and design of simple wood-frame, masonry and light steel construction; fundamental passive energy systems and design strategies for material and energy reduction. May not be held for credit with EVDS 1690 or ARCH 6480.

EVAR 3006 Architectural Technology 2-Building Construction, Structures & Envelopes Cr.Hrs. 3
Architectural, environmental and technical aspects of construction focusing on low-rise and medium sized wood, steel and masonry construction including issues of material production/manufacturing, soils, foundation, envelope systems, basic mechanical systems and their integration and acoustic concerns. May not be held for credit with the former EVDS 2670, EVDS 2700, ARCH 6520 or ARCH 6530

EVAR 3008 Architecture Design Studio 1 Cr.Hrs. 9
An architectural study of the human condition in relation to the natural and built environment through design oriented research exploration, analysis, evaluation and interpretation of a selected subject of inquiry. Various ways of seeing and making are applied as tools for critical thinking to align content with modes of representation. May not be held for credit with former EVDS 2630 or ARCH 6380.

EVAR 3010 Architecture Design Studio 2 Cr.Hrs. 9
Building upon first term explorations, architectural propositions are developed that seek to clarify relations between human inhabitation and the physical environment in a regional context. Design principles influenced by programmatic, theoretical, historical, technological material and environmental criteria are examined. Prerequisite: EVAR 3008. May not be held for credit with former EVDS 2640 or ARCH 6390.

EVAR 3012 Architecture Technology Preparation: Structural Concepts Cr.Hrs. 3
A preparatory block course introducing the fundamentals of structural concepts in architecture that prepares students for the foundation technology courses in architecture. May not be held for credit with EVDS 2300 (or former EVDS 1690), EVDS 1700 or ARCH 6480.

EVAR 3014 Drawing: Freehand/Digital Cr.Hrs. 3
An introduction to drawing skills that allows students to become articulate in proposing and studying architecture through drawing. The course covers a range of media. May not be held for credit with the former ARCH 6532 or ARCH 6370

Environmental Design Architecture Course Descriptions-4000 Level

EVAR 4000 Modern Architectural History and Theory I Cr.Hrs. 3
Provides a historical and theoretical understanding of the origins of modernity in architecture. Content is explored using primary texts where possible, and through critical analysis of selected topics. May not be held for credit with former EVAR 3700, EVAR 3470, ARCH 6460 or ARCH 6450.

EVAR 4002 Architectural Technology 3-Building Systems Cr.Hrs. 3
Intergrated building systems focusing on multi-story steel and concrete construction including: passive and active heating, cooling, and ventilation methods, strategies and designs, electrical, water, communication, security, fire protection, and vertical transportation systems; and building code constraints. May not be held for credit with the former EVAR 3560, EVAR 3570, ARCH 6500 or ARCH 6510.

EVAR 4004 Architecture Design Studio 3 Cr.Hrs. 9
This studio focuses on the broader cultural implications of social interaction and the collective inhabitation of the built and natural environments. Architecture design explorations are influenced by a thorough examination of programmatic, theoretical, historical, technological, material and environmental criteria. May not be held for credit with the former EVAR 3680 or ARCH 6400

EVAR 4006 Modern Architectural History and Theory II Cr.Hrs. 3
Provides an historical and theoretical understanding of 20th century topics in architecture (western and non-western). Content is explored using primary texts where possible, and through critical analysis of selected topics, May not be held with the former EVAR 3330, EVAR 3480, ARCH 6440 or ARCH 6470.

EVAR 4008 Arch Tech 4: Comprehensive Design Technology Report Cr.Hrs. 3
A technical knowledge project-based course integrating with Arch Studio 4. Comprehensive technology issues include: site; material; energy; structures; construction; sustainability; environmental factors; building code; life safety. Student's work will include analysis, technical drawings and calculations. Corequisite: EVAR 4010 Arch Studio 4

EVAR 4010 Architecture Design Studio 4 Cr.Hrs. 9
The previous terms investigations are further developed and synthesized into a comprehensively designed environment. Architectural propositions seek to clarify specific relations between details and the overall design, through the integration of complex social, cultural, programmatic, theoretical, historical, technological, material and environmental principles, systems and criteria. Prerequisite: EVAR 4004 Architecture Design Studio 3. May not be held with the former EVAR 3690 or ARCH 6410. Corequisite: EVAR 4008 Arch Tech 4.

Environmental Design Course Descriptions-1000 Level

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 endeavor, 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.

EVDS 1660 History of Culture, Ideas and Environment 1 Cr.Hrs. 3
(Formerly 079.166) A brief history of the western creative imagination, part 1. Interdisciplinary survey of cultural periods and key works from the Foundations of Civilization to the Enlightenment, including literary readings, film screenings, and illustrated lectures and discussions. Available to non-Environmental Design students only.

EVDS 1670 History of Culture, Ideas and Environment 2 Cr.Hrs. 3
(Formerly 079.167) A brief history of the western creative imagination, part 2. Interdisciplinary survey of cultural periods and key works from the 19th to the 21st centuries, including literary readings, film screenings, and illustrated lectures and discussion. Prerequisite: EVDS 1660 (or 079.166). Available to non-Environmental Design students only.

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. Co requisite: EVDS 1630.

Environmental Design Course Descriptions-2000 Level

EVDS 2100 Urban Media Lab Cr.Hrs. 3
An introduction to visual methods of representation and related media including drawing, photography and video. The intention is to critically engage the urban and suburban contexts as a laboratory for investigating cultural values, aesthetic issues, design principles, and representational techniques, 'prerequisite' to undertaking design studio work.

EVDS 2200 Ecology and Design Cr.Hrs. 3
An examination of principles of Ecology and Design works in which these tenets are considered, engaged, and/or demonstrated. Topics fundamental to the science of Ecology will theoretically structure the course content. Emphasis will be placed on understanding the forces and systems working within and between natural, social and human environments.

EVDS 2300 Materials, Structures and Assemblies Cr.Hrs. 3
This course provides an introduction to applied statics, construction materials and construction system assemblies for landscape, building, and interior constructions. Construction material properties and applications, including impacts on resource depletion and on sustainable building practices will be introduced along with basic strategies and methods to analyze and calculate forces in simple structures.

EVDS 2400 Visual Media 1 Cr.Hrs. 3
An introduction to technical and free-hand drawing processes and techniques, and in various media - to develop, to express, and to communicate design intentions. The focus will be directed to abstract and concrete methods of representation. Emphasis will be placed on the integral relationship between thinking, drawing, and making in relation to critically observing the world at large, and in relation to design studio work.

EVDS 2500 Design Studio 1 Cr.Hrs. 6
Introduction to the elements and principles of visual and spatial design, design process and techniques, requisite methods of representation and communication, and design intentions. Studio work will explore different ways of space and form-making, beginning at the site of the body, in both abstract and environmental contexts.

EVDS 2600 Tectonic Precedent Cr.Hrs. 3
An examination of seminal built works of environmental design, at a range of scales, from the 19th and 20th centuries, with an emphasis on examples that are representative of diverse positions of key issues in contemporary design practice. Methodologically, this course endeavours to critically evaluate the relationships between perception, intention, and making through the exploration of the material and tectonic nature of the work(s).

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 2702 Natural and Human Systems Cr.Hrs. 3
An application of the scientific principles embodied in the natural laws which govern environmental design. Aspects of the bio-physical factors, energy, human physiology and perception, comfort, and resource management are reviewed in the context of substainable planning and design practices.

EVDS 2800 Visual Media 2 Cr.Hrs. 3
This course bridges technical and freehand drawing introduced in Visual Media 1, with computer/digital media. This course advances contemporary digital media in relation to emerging modes of 2, 3, and 4 dimensional modes of representation, in the context of design studio work, and in relation to graphic standards associated with professional design practice.

EVDS 2900 Design Studio 2 Cr.Hrs. 6
An exploration of the fundamental relationships between space, form and order in the context of the built environment, from body to place. Pedagogical emphasis will be directed towards design process, cultural intentions, and environmental accountability.

Environmental Design Course Descriptions-3000 Level

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 2800 or EVDS 2650 (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 2800 or ARCH 6370 or written permission of Instructor.

Environmental Design Interior Environment Course Descriptions-3000 Level

EVIE 3000 Field Studies Cr.Hrs. 3
This course introduces students to the field of Interior Design through first-hand experience and study of innovative and significant examples of historic and contemporary work from interior design and related fields, in a major design center. The course consists of lectures and a field trip. Location may vary from year to year.

EVIE 3002 Interior Design History and Theory 1 Cr.Hrs. 3
Examination of concepts, theories and writings related to the development of Interior Design as a discipline, to Modernism. Not to be held for credit with the former EVIE 3650.

EVIE 3004 Materials, Assemblies and Detailing Cr.Hrs. 3
Workshop and lecture course on materials, joinery and invention. Review of the principles of framing, bracing, and tension applied to casegoods and funiture; exploration or a variety of soft and hard materials and constructions with an emphasis on sustainability. Not to be held for credit with the former EVIE 3630. Prerequisite: EVDS 2200.

EVIE 3006 Interior Design Media Cr.Hrs. 3
This course develops a student's ability to use drawing as a reflective, problem-solving, designing and visual communication tool; interfaces with digital photography; figure drawing, techniques for representing volume, depth and scale, and interfaces with digital photography and media are focus.

EVIE 3008 Interior Design Studio 3.1 Cr.Hrs. 6
Interior Design studio exploring the body as the primary reference in design, and the semantic and cultural meanings of objects and architectural elements as mediators of space. Integration of drawing, design and making through projects.

EVIE 3010 Interior Design Studio 3.2 Cr.Hrs. 6
An in-depth investigation, by design, of the nature of interiors including the physical and perceptual, spatial elements and order, human involvement and experience. Exploration and development of spatial solutions using a variety of visual media. Not to be held for credit with the former EVIE 3680.

EVIE 3012 Interior Light and Colour Cr.Hrs. 3
This course examines interior lighting and colour theories and concepts emphasizing human and ecological issues, exploration of spatial design strategies and practices. Not to be held for credit with the former EVIE 3610.

EVIE 3014 Human Factors and Environmental Experience Cr.Hrs. 3
Theoretical and practical issues related to human characteristics, needs, behaviours, and interactions with and within the built interior environment.

EVIE 3016 Topics in Interior Design Cr.Hrs. 3
This course will explore topics at the cutting edge of interior design, examining political, economic, sociological and technological influences on current and future directions in interior design; examination of current research, writing, projects and works from related and diverse fields.

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 DESIGN STUDIO 6 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).

Environmental Design Interior Environment Course Descriptions-4000 Level

EVIE 4000 Interior Design History and Theory 2 Cr.Hrs. 3
Examinations of concepts, theories and writings related to the development of interior Design as a discipline and profession, from Modernism to the present day. Prerequisite: EVIE 3002 Interior Design History and Theory 1. Not to be held for credit with the former EVIE 3660.

EVIE 4002 Indoor Systems 1 Cr.Hrs. 3
In-depth, whole building examination of variours integrated active and passive environmental controls systems. Focus on working with existing commercial building construction and environmental systems when integrating new interior design and ecological concepts and strategies. Introduction to building performance assessment, construction drawings and schedules. Prerequisite: EVIE 3004 and EVIE 3012. Corequisite: EVIE 4010. Not to be held for credit with the former EVIE 3620.

EVIE 4004 Indoor Systems 2 Cr.Hrs. 3
Broad exploration of a variety of contemporar and innovative building technologies and their integration with interior design. Focus on ecological, new building construction concepts and measure, delivered in the context of integrated design team processes and building systems innovation. Integration and coordination of interior architectural elements with active and passive building systems. Prerequisite: EVIE 4002.

EVIE 4006 Design Methods and Processes Cr.Hrs. 3
Development of knowledge and abilities to collect, analyze, synthesize, interpret, and apply information for the purpose of identifying and solving interior design problems. Not to be held for credit with the former EVIE 3640.

EVIE 4008 Digital Media (AutoCAD) Cr.Hrs. 3
Drafting and designing for Interior Design students with AutoCAD. The course will focus on using AutoCAD Release 200X, with exposure to Autodesk's Architectural Desktop and Revit Version X. The course is set up to take students from the basics of using the program to being able to produce a conventionally correct working drawing and a rendered 3D representation. Not to be held for credit with former EVIE 3670.

EVIE 4010 Interior Design Studio 4.1 Cr.Hrs. 6
Projects that explore the interaction between urban context, programmatic requirements and design concepts; integration of building technology and three-dimensional spatial development; development of communication skills and methods. Not to be held with the former EVIE 3690. Prerequisite: EVIE 3010. Corerequisite: EVIE 4002.

EVIE 4012 Interior Design Studio 4.2 Cr.Hrs. 6
Design studio with the potential for collaboration, exploring regional and global influences, communication technology, history and temporality in the design of interior environments.

EVIE 4014 Advanced Interior Design Media Cr.Hrs. 3
Advanced visual communications media for interior designers, focusing on 3D computer-aided design and presentation. Development in the use of a selected range of drawing and rendering software applications. Further development in integrating hand and digital methods. Prerequisite: EVIE 4008 or consent of instructor.

Environmental Design, Landscape + Urbanism Course Descriptions-3000 Level

EVLU 3000 History of Designed Environments Cr.Hrs. 3
A critical examination and appraisal of design for dwelling in the context of settlement with emphasis on representation of diverse positions on key issues in design practice. Studies will include consideration of cross cultural precedents and lessons from around the world.

EVLU 3002 Site Planning Cr.Hrs. 3
An investigation of the relationship between natural and cultural processes in the formation of the built environment, including a review of the methods and strategies employed for site programming, inventory, analysis, and development at different scales of intervention.

EVLU 3004 Ecology and Design 2 Cr.Hrs. 3
This course will focus on an examination of ecological and technological perspectives on the planning, design and making of the physical environment. This will include a meshing of prediction and advocacy concerning new models of sustainable urbanization, focusing on green technology and infrastructure. Key theories and their application to landscapes at varied scales will be considered along with salient literature, current issues, design precedents and potentials for creative expression and interpretation. Prerequisite EVDS 2200.

EVLU 3006 Studio 3: Dwelling/ Precinct/ Everyday Life Cr.Hrs. 9
A studio/lecture course that examines the notion of dwelling through spatial design with a concentration at the scale of the precinct in the private to semi-private realm focusing on the needs of the individual, on spatial qualities, materials, and site design detail. Theoretical, analytical, conceptual, design, planning and communication skills in landscape + urbanism will be developed and applied in distinct projects. Emphasis is on habitat by design, issues of contested space, ecological design and sustainability. May include a mandatory field studies trip; location and cost to be determined on a yearly basis.

EVLU 3008 Studio 4: Networks and Infrastructure Cr.Hrs. 9
A critical exploration of analytical, conceptual, and developmental aspects of design of the public realm in an experimental studio setting. Social, political, economic, communication, and ecological networks will be studied at the scale of neighborhood and community in the urban realm.

EVLU 3010 Landscape and Urbanism Theory Cr.Hrs. 3
An examination through lectures, readings, seminars and essay assignments, of twentieth and twenty first century philosophical thinking, which has been influential in the theory and practice of landscape architecture, planning and urbanism. Emphasis is on ideas, paradigms, and manifestos. This will include a study of the social, political, religious, cultural, technological, and aesthetic forces behind landscape and urbanism, and the forms that these forces have generated.

EVLU 3012 Site Morphology and Grading Cr.Hrs. 3
An examination of the means and methods used to create landscapes that are shaped by earthwork grading. This will include the study of the forces, principles, and techniques in the modelling and manipulation of the ground plane and the resolution of cultural, ecological and hydrological design considerations implicit in landform design.

EVLU 3014 Placemaking Fundamentals Cr.Hrs. 3
An introduction to placemaking as an integrated community-based application of landscape and urbanism concepts, based on topical themes, such as the Great Neighbourhood or Edens Lost and Found.

Environmental Design, Landscape + Urbanism Course Descriptions-4000 Level

EVLU 4000 Philosophy, Ethics and Aesthetics Cr.Hrs. 3
An examination of philosophical issues and debates regarding ethics and aesthetics, and their influence and potential upon urban design and urban form in the past and present, and to speculate upon the future. Prerequisite: EVLU 3010.

EVLU 4002 Construction Materials Cr.Hrs. 3
A comprehensive introduction to construction materials, methods and processes. Examination of regulatory issues of human safety and techniques for communicating construction proposals with application to how this information is incorporated into contracts. Field trips to nurseries, quarries, lumber yards, and urban sites where students can observe materials transformed to comply with the requirements of designers. Prerequisite: EVLU 3012.

EVLU 4004 Inquiry by Environmental Design:
Researching Space-Place Transformation Cr.Hrs. 3
An exploration of the design/research relationship, from a critical and creative thinking perspective will be the core of this course, viewing design and research as linked forms of inquiry into space-place transformation. A focus will be on design/research methods and approaches appropriate to informing and investigating designed environments and community design contexts.

EVLU 4006 Special Topics in Community Design Cr.Hrs. 3
This course will involve a critical examination of specific topics such as: health and community design; inner city environments; and Canadian community planning and design, and its contexts.

EVLU 4008 Plants, Ecosystems and Design Cr.Hrs. 3
The examination of cultural and technical aspects of designing with plants will be explored in an urban context through field investigations, lectures, seminars and assignments. Issues of plant identification, planting design types, their application to contemporary landscape architecture, technical requirements, planting details and ecological intergration in the urban environment will be included.

EVLU 4010 Community Design Process and Method:
Advanced Placemaking Cr.Hrs. 3
An introduction to the integration of perception, intention and placemaking associated with manifestations of community, especially communities of interest, and systems of 'communities of communities'. A consideration of the relationship of space-place transformation and placemaking, via participatory design processes will be examined as part of a critical design and planning process.

EVLU 4012 Studio 5: Possible Urbanism(s) Cr.Hrs. 9
A radical exploration of analytical, conceptual, and socio-political aspects of urban public place in an experimental studio setting. An emphasis will be placed on design as mediation between competion demands. The studio incorporates the theory and application of three dimensional simulation technology in design.

EVLU 4014 Studio 6: Emergent Futures Cr.Hrs. 9
This studio integrates planning and design from the scale of urban infrastructure through to design detail in the context of landscape and urbanism. An emphasis is placed on the challenges of relevant equitable environmental and social design in the post-industrial world. The studio incorporates the theory and application of CAD and GIS technology in design.

EVLU 4016 History of Landscape and Urbanism Cr.Hrs. 3
An historical survey of human made landscapes and urban settlement form, patterns, and types, including major themes and movements. Prerequisite: EVLU 3000.

EVLU 4018 Principles of Urban Design Cr.Hrs. 3
This course will examine urban design principles, practices, and applications including political and social systems, and their impacts on the contemporary urban condition.

SCHOOL OF ART

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Chapter Contents

SECTION 1: DEGREE AND DIPLOMA PROGRAMS OFFERED

Program/Degree	Years to complete	Total Credit Hours
BFA General Studio	3*	94
BFA Honours Studio	4*	124
Diploma in Art	4*	106
BFA Art History General	3**	91
BFA Art History Honours	4**	121

* Admission is by direct entry from high school with portfolio or through University 1 with portfolio.

- ** This includes 24 to 30 credit hours of study in University 1 before admission to Art History. No portfolio required.

SECTION 2: ADMISSION REQUIREMENTS

The following is a summary of admission requirements in the School of Art. There is an annual admission quota and admission is competitive.

Entry requirements to the University of Manitoba are listed in the Admissions chapter of this Calendar.

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 School of Art's website under "Potential Students".

An acceptance deposit of $100 is required and will be credited towards tuition when registration is complete.

2.1 Admission Requirements: Studio Programs

Bachelor of Fine Arts Studio – General Program

Initially, all students wishing to complete a Fine Arts studio degree are admitted to the Bachelor of Fine Arts General Program. Admission to the School of Art is directly from high school or from University 1. Grade 12 Art is recommended. In addition to academic standing in high school of University 1, each applicant must submit a portfolio. Information about the admission and portfolio requirements is available on the School of Art website under "Potential Students".

Bachelor of Fine Arts Studio – Honours Program

The School of Art offers two Honours Degree Programs: Graphic Design and Studio. In order to be transferred to either of the Honours Degree Programs, a student must have completed 64 credit hours and have a minimum grade point average of 3.0 (B). The Student Advisor will be able to transfer the student from General to Honours. In order to be eligible to do the final fourth year Honours year (the Senior Studio and Honours Seminar courses), students in the Honours Degree must have completed 15 credit hours of Studio courses at the 3000 level and have successfully passed a minimum of 100 credit hours.

Diploma in Art

Admission to the Diploma in Art requires a high school diploma. Applicants must submit a portfolio and satisfy high school course requirements as described in the application bulletin available from the Admissions Office.

2.2 Admission Requirements: Art History Programs,

Students wishing to complete an Art History degree must first complete 24-30 credit hours in University 1, including 12 credit hours from the list that follows, and achieve a minimum degree GPA of 2.5. No portfolio required.

FAAH 1030 Introduction to Art 1A (3)

FAAH 1040 Introduction to Art 2A (3)

English Literature: ENGL 1310 Literary Topics (3); or ENGL 1200 Representative Literature (6); or ENGL 1300 Twentieth Century Literature (6).

HIST 1200 or PHIL 1200 or 1510 or ASIA 1420 and ASIA 1430 (6)

FA 1020, Math in Art or MATH 1020 or any other course that meets the University of Manitoba Math requirement (3)

A language course - French, German, or Italian recommended (6)

Science or Social Science elective (6)

Once University 1 regulations are met, students will initially be admitted to the Bachelor of Fine Arts Art History – General Program.

Honours Program

To transfer to the Art History Honours program, a student must successfully complete 70 credit hours of study in the General Program, with a degree GPA of 2.5. Contact the School of Art Student Advisor to arrange for a transfer once the 70 credit hours have been achieved.

2.3 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 program after completing 25 credit hours in the Diploma Program.

Transfer Students: A student seeking transfer to the School of Art from another faculty at the University of Manitoba should contact the School of Art Student Advisor regarding transfer of credit. Academic courses completed at other institutions will be assessed for equivalency only after a student is admitted to the School and paid the deposit. The maximum transferable to the B.F.A. General Program is 30 credit hours. The maximum transferable to the B.F.A. Honours Program 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 Fine Arts degree. The student should check with the School of Art Student Advisor first about the application; the student's course choice is dependent on previous courses taken as pre-requisites and space availability in the class.

Audit Students: Art history courses may be audited with the permission of the instructor. Studio courses cannot be audited.

Visiting Students: A visiting student can take courses in the School of Art on a letter of permission from the home university. The specific courses for which permission is granted must be listed in the Letter of Permission.

SECTION 3: FACULTY ACADEMIC REGULATIONS

The provisions of the chapter General Academic Regulations and Requirements University Policies apply to all students. In addition, the School of Art has the following regulations and requirements.

3.1 Scholastic Standards

General Scholastic Standards for all Degree and Diploma Programs:

A minimum Grade Point Average of 2.5 is required.

A student placed on probation at the end of an academic year must clear the probationary status by the end of the next academic session or will be required to withdraw permanently from the School of Art.

Studio First Class Honours: Upon completion of the requirements for the BFA Honours Program, a student who achieves a degree GPA of 3.5 in courses applicable to the last two years of the Honours program will be awarded the BFA Honours Degree First Class.

Art History First Class Honours: Upon completion of the requirements for a BFA Art History Honours Program, a student who achieves a degree GPA of 3.75 in courses taken in the last two years will be awarded BFA Art History Honours Degree First Class.

Students in BFA Honours Studio must obtain a minimum grade of B for STDO 4810 (Senior Studio 1), STDO 4820 (Senior Studio 2), STDO 4910 (Honours Seminar 1) and STDO 4920 (Honours Seminar 2).

Field Trip Policy

The Field Trips are a requirement for all School of Art programs. Exemption is granted only on compassionate, medical or legal grounds. In case of accommodation, the student must register for the field trip and pay the fee and an alternate assignment must be completed successfully for credit. It is the student's responsibility to acquire all necessary travel documentation at least three months prior to departure. This includes a valid passport, and for international students, a travel visa for the United States. Students under the age of eighteen require written parental or guardian permission. Students with questions should check with Canada Border Services Agency to determine the correct documentation required for their citizenship status

3.2 University Written English and Mathematics Requirement

Students in the BFA Studio and Art History Programs are required to complete, within the first 60 credit hours of their programs, the Written English and Mathematics requirements.

The School of Art accepts all courses from any department with a "W" designation to fulfill the Written English Requirement for BFA Studio General/Honours Students. Art History General and Art History Honours Degree Programs require three credit hours of any English Literature.

The Mathematics requirement for all Studio and Art History 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 mathematics requirement.

Students in the Diploma Program do not need to fulfil the Written English or Mathematics requirement.

Refer to the chapter on General Academic Regulations and Requirements of this Calendar for the complete Written English and Mathematics policy.

3.3 Attendance

The School of Art supports and follows the University of Manitoba policies on attendance and withdrawal found in the General Calendar (General Academic Regulations, Section 7.1) which states that regular attendance is expected of all students in all courses. Grade reductions could occur if a particular course has an attendance or participation percentage as specified on the course outline given to students at the beginning of each course. Students who have unexcused absences for more than three classes will receive a reminder letter from the instructor about attendance. Students who fail to attend class but do not withdraw by each term's stated Voluntary Withdrawal deadline will receive a grade of F.

3.4 Voluntary Withdrawal Policy

Refer to the general policy on voluntary withdrawal from programs and courses in the chapter, General Academic Regulations and Requirements.

3.5 Residency Requirement

Studio Programs:

A student in the BFA General Studio degree may take up to 30 credit hours applicable to the program at another institution allowable for transfer. All

Senior Studio courses must be taken at this University.

3.6 Dean's Honour List

School of Art students who achieve a Sessional GPA of 3.3 and carry the minimum required credit hours in the current year of study will be included on the Dean's Honour List. Students holding incomplete or deferred status are not eligible for the Honour List.

3.7 Academic Dishonesty and Inappropriate Behaviour Policy

The School of Art supports and follows the University of Manitoba policies on academic dishonesty found in the General Calendar (Section 8, General Academic Regulations). The School's own policy will be that for the first instance of academic dishonesty, the student will receive a grade of F in the assignment and will receive a warning. For the second instance, the student will be suspended for one year and a possible Disciplinary comment will be put on the transcript which could be later removed at the student's request. For the third instance, the student will be required to withdraw and will receive a permanent Disciplinary comment on the transcript.

The School of Art will follow the University of Manitoba's policies on inappropriate behavior, "Student Discipline Bylaw", found in the General Calendar (Section 8, University Policies).

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 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 elective courses outside the School of Art. 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, graphic design, painting, photography, print media, sculpture and video.

The School of Art offers two Honours Degree Programs, Graphic Design and Studio. In order to be transferred from the General Degree to either of the Honours Degree Programs, a student must have completed 64 credit hours and have a minimum grade point average of 3.0 (B). The Student Advisor will be able to transfer the student from General to Honours. In order to be eligible to do the final fourth year Honours year (the Senior Studio and Honours Seminar courses), students in the Honours Degree must have completed 15 credit hours of Studio courses at the 3000 level and have successfully passed a minimum of 100 credit hours.

The school reserves the right to retain temporarily or permanently any work done by students in fulfilment of course requirements. The following degrees have links to their appropriate Worksheets. For a listing of degree requirements, please see the worksheets.

General Studio Degree: See BFA General Degree Requirement Form.

Honours Studio Degree: See BFA Honours Degree Requirement Form.

Honours Graphic Design Degree: See BFA Honours Graphic Design Degree Requirement Form.

4.2 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. Please click on the link below for the Diploma Worksheet.

Diploma in Art: See Diploma in Art Program Requirement Form.

4.3 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. The BFA Art History General Degree is 91 credit hours.

Students must choose courses from the following list in order to apply for admission to the BFA Art History General Degree:

First Year-University 1: (24-30 credit hours)

FAAH 1030	Introduction to Art 1A	3
FAAH 1040	Introduction to Art 2A	3
One of:		
HIST 1200		
PHIL 1200		
PHIL 1510		
ASIA 1420 and ASIA 1430		**6**
Language Requirement		6
English Literature Requirement		3
Mathematics Requirement		3
Science/Social Science elective		6
TOTAL CREDIT HOURS		30

NOTE: If 24 credit hours are completed in year one, the student must take an additional 6 credit hours elsewhere in the program.

For a complete BFA Art History General Degree requirements, see BFA Art History General Degree Course Requirement Worksheet.

Art History (Honours)

The BFA Art History Honours Degree totals 121 credit hours. Students may choose to be switch to Honours after completing 70 credit hours and consulting with the Student Advisor.

For complete BFA Art History Honours Degree requirements, see BFA Art History Honours Degree Course Requirement Worksheet.

4.4 Elective Subjects and Academic Requirements

In addition to the Art History courses in the School of Art, the following courses from other faculties fulfil the Art History elective requirement. Not all courses are offered every year.

CLAS 2670	Greek Art and Archaeology	3
CLAS 2680	Roman Art and Archaeology	3
RLGN 2570	Indian Religious Art and Architecture	3
TXSC 2420	History of Textiles	3

SECTION 5: FINE ARTS COURSE DESCRIPTIONS

Fine Arts-1000 Level

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 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 Department of Mathematics as MATH 1020. This is a terminal course and may not be used as a prerequisite for other Mathematics courses. This course cannot 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 Mathematics courses with the exception of MATH 1010 (136.101), MATH 1190, MATH 1191 (136.119). Not to be taken concurrently with any other Mathematics course with the exception of MATH 1010, MATH 1190, or MATH 1191. Not to be held for credit with MATH 1020 (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. 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.

Fine Arts-3000 Level

FA 3440 Field Trip Cr.Hrs. 0
(Formerly 054.344) A field trip conducted by members of faculty. 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.

Fine Arts Art History-1000 Level

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 or 054.104.

FAAH 1100 Survey of Asian Art Cr.Hrs. 3
An introductory survey of the arts of India, China and Japan from prehistory to the present. May not be held with FAAH 2100 (or 054.210 or 054 247 or 054.248).

Fine Arts Art History-2000 Level

FAAH 2060 Medieval to Early Renaissance Art and Arcitecture 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. Prerequisite: FAAH 1030 (or 054.103). May not be held with 054.206.

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. Prerequisite: FAAH 1040 (or 054.104) or written permission of the instructor. May not be held with 054.207.

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. Prerequsite: FAAH 1040 (or 054.104). May not be held with 054.208.

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 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.

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 2930 Writing about Art Cr.Hrs. 3
This course is designed to give students in Art History and Studio programs the opportunity to develop their writing skills with a focus on academic and critical writing on both historical and contemporary art. The practical needs of professional artists will also be covered. Prerequisites: FAAH 1030 or FAAH 1040 or FAAH 1100. May not be held with FA 2620.

Fine Arts Art History-3000 Level

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. 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. 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. Prerequisite: FAAH 2070 (or 054.207) or FAAH 2080 (or 054.208) 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. 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 054.318. Prerequisite: FAAH FAAH 1040 (or 054.104) or written permission of the instructor.

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,or written permission of instructor, but STDO 2330 (Ceramics 1) will be helpful. May not be held with 054.319.

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 1040 or written permission of the instructor. May not be held with 054.320.

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 or 054.323. Prerequisite: FAAH 2100 (or 054.210) or FAAH 1100 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 054.248 or 054.324. Prerequisite: FAAH 2100 (or 054.210) or FAAH 1100 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 1040 or written permission of the instructor. Not to be held with 054.326.

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 1040 or written permission of the instructor. Not to be held with 054.327.

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: FAAH 1030 and FAAH 1040 or FAAH 2060 or written permission of the instructor. Not to be held with 054.328.

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: FAAH 3280 or FAAH 1030 and FAAH 1040 or FAAH 2060 or written permission of the instructor. May not be held with 054.329 or 054.387.

FAAH 3430 Inuit Art Cr.Hrs. 3
(Formerly 054.343) The history and analysis of Inuit Art. Prerequisite: FAAH 1030 and FAAH 1040 or FAAH 2090; or written permission of the instructor. Not to be held with 054.358 or 054.343.

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. Prerequisites: FAAH 1030 and FAAH 1040 or FAAH 2100 (or 054.210) or FAAH 1100. May not be held with 054.359.

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 3930 Introduction to Curatorial Studies Cr.Hrs. 3
A survey introduction to the theory and practice of art display and gallery collecting. Prerequisite: FAAH 2080 or by permission of the instructor.

FAAH 3940 History of Visual Communication Cr.Hrs. 3
A concentration of the advent of Modernism in visual communication and subsequent graphic design movements in the twentieth century. Prerequisites: STDO 2660 or[FAAH 1030 and FAAH 1040]. May not be held with STDO 3960.

Fine Arts Art History-4000 Level

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 4250 Seminar on Curatorial Studies Cr.Hrs. 3
Students receive hands-on experience within a critical context of curating an exhibition. Instructional methods include seminar format and practicum in School of Art Gallery. Prerequisites: FAAH 3930 and one 3000-level Art History course or by 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.

Fine Arts Studio Courses-1000 Level

STDO 1210 Drawing: Studio 1 Cr.Hrs. 3
Students are introduced to key concepts and competencies used in contemporary drawing practice. Prerequisite for further study in fine arts studio courses. May not be held with STDO 1200 (054.120).

STDO 1240 Figure Study 1 Cr.Hrs. 3
Traditional and experimental approaches to rendering the figure, culminating in the production of a portfolio of drawings. Prerequisite to further study in the Fine Arts Studio courses. May not be held with STDO 1200 (054.120) or STDO 1230.

STDO 1250 Drawing: Studio 2 Cr.Hrs. 3
Building on competencies developed in STDO 1210 Drawing: Studio 1, students integrate individual research with methods and materials of contemporary drawing. Prerequisite for further study in fine arts studio courses. May not be held with STDO 1200 (054.120). Prerequisite: STDO 1210.

STDO 1410 Visual Language Cr.Hrs. 3
An introduction to communication in contemporary visual art through traditional and experimental 2D and 3D modes. Prerequisite for further study in fine arts studio courses. May not be held with STDO 1200 (054.120) or STDO 1220 (054.122).

STDO 1450 Open Studio 1 Cr.Hrs. 3
Expanding concepts and ideas developed in Visual Language, students investigate the nature of contemporary art and design. Prerequisite for further study in fine arts studio courses. May not hold with STDO 1200 (054.120) or STDO 1220 (054.122). Prerequisite: STDO 1410.

STDO 1470 Materials Studio Cr.Hrs. 3
Students choose among individual studio area modules to learn material technologies used in art, facilitating students' ability to work in School of Art workshopes. Prerequisite for further study in fine arts studio courses. May not be held with STDO 1220 (054.122). Prerequisite: STDO 1410.

STDO 1510 Art Now Cr.Hrs. 3
Introduction to current activities in art practices through gallery talks/visits, journal writing, formal critique methods and research methodology. It supports FA 1990 (Field Trip) which all first year BFA students must take. Pre-requisite to further study in Fine Arts Studio courses. May not be held with STDO 1200 (054.120), STDO 1220 (054.122) or STDO 1430.

Fine Arts Studio Courses-2000 Level

STDO 2210 Sculpture 1 Cr.Hrs. 6
(Formerly 054.221) This course introduces materials, processes and ideas informing the making of contemporary sculptural practices. Prerequisites: Successful completion of 21 credit hours of 1000-level STDO courses. May not be held with 054.221.

STDO 2220 Painting 1 Cr.Hrs. 6
(Formerly 054.222) Basic instruction in oil painting and pictorial composition. Prerequisite: Successful completion of 21 credit hours at 1000-level STDO courses. May not be held with 054.222.

STDO 2230 Ceramics 1 Cr.Hrs. 6
(Formerly 054.223) Introduction to ceramic art, including contemporary processes, techniques, and history. Prerequisite: Successful completion of 21 credit hours at 1000-level STDO courses. May not be held with 054.223.

STDO 2250 Drawing 1 Cr.Hrs. 6
Creative use of drawing with emphasis on the human figure. Prerequisites: Succesful completion of 21 credit hours at 1000- level STDO courses. May not be held with STDO 2240 (054.224)or (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: Successful completion of 21 credit hours at 1000-level STDO courses. May not be held with 054.240.

STDO 2460 Digital Photography 1 Cr.Hrs. 6
This is a Studio course introducing the basic technical foundation and critical understanding of contemporary photo-based image production. Pre-requisites:Successful completion of 21 credit hours at 1000-level STDO courses. May not be held with STDO 2450.

STDO 2500 Printmaking Intaglio A Cr.Hrs. 3
An introduction to the basic techniques in Intaglio. Prerequisites: Successful completion of 21 credit hours at 1000-level STDO courses.

STDO 2502 Printmaking Intaglio B Cr.Hrs. 3
A continuation in the basic techniques in Intaglio. Prerequisites: STDO 2500 or 054.255 or STDO 2550.

STDO 2510 Printmaking Silkscreen A Cr.Hrs. 3
An introduction to the basic techniques in Silkscreen. Prerequisites: Successful completion of 21 credit hours at 1000-level STDO courses.

STDO 2512 Printmaking Silkscreen B Cr.Hrs. 3
A continuation in the basic techniques in Silkscreen. Prerequisites: STDO 2510 or 054.255 or STDO 2550.

STDO 2520 Printmaking Lithography A Cr.Hrs. 3
An introduction to the basic techniques in Lithography. Prerequisites: Successful completion of 21 credit hoursat 1000-level STDO courses.

STDO 2522 Printmaking Lithography B Cr.Hrs. 3
A continuation in the basic techniques in Lithography. Prerequisites: STDO 2520 or 054.255 or STDO 2550.

STDO 2530 Relief and Monoprints Cr.Hrs. 3
This course introduces the student to working in a printshop environment, using various mediums and methods of creating works on paper. Projects are structured to explore traditional and experimental approaches to monoprinting and relief printmaking. Technical proficiency and skill will require practice and attention to detail. Prerequisites: Successful completion of 21 credit hours at 1000-level STDO courses.

STDO 2610 Video 1 Cr.Hrs. 6
(Formerly 054.261) The creative use of video as an art medium. Prerequisite: Successful completion of 21 credit hours at 1000-level STDO courses. May not be held with 054.261.

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. Prerequisite: Successful completion of 21 credit hours at 1000-level STDO course. May not be held with 054.263.

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. Prerequisite: Successful completion of 21 credit hours at 1000-level STDO courses. May not be held with 054.265.

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 2690 Special Topicsa in Studio Practice 1 Cr.Hrs. 3
Individual three credit hour courses offered in multiple discipline areas. Courses will provide opportunities for skill building, conceptual development and depth of topics of interest. Pre-requisites: [STDO 1210, STDO 1230, STDO 1250, STDO 1410, STDO 1430, STDO 1450, STDO 1470 and FA 1270] or [STDO 1200, STDO 1220, and FA 1270].

STDO 2710 Interdisciplinary Critique 1 Cr.Hrs. 3
Complementary to 2000-level Studio practice courses. Students will engage in discussion, readings, and critiques based on work produced in practice courses. Pre-requisite: Successful completion of 21 credit hours at 1000-level STDO courses.

STDO 2740 Open Media Cr.Hrs. 6
This interdisciplinary studio course encourages the research, creation, and presentation of works of a diverse nature. Prerequisites:[STDO 1210, STDO 1230, STDO 1250, STDO 1410, STDO 1430, STDO 1450, STDO 1470 and FA 1270]; or [STDO 1200, STDO 1220, and FA 1270].

Fine Arts Studio Courses-3000 Level

STDO 3330 Advanced Drawing 2 Cr.Hrs. 6
(Formerly 054.333) Continuation of Advanced Drawing 1 (STDO 2240), with stress on finished drawings and experimental techniques. Prerequisite: STDO 2240 (or 054.224).

STDO 3370 Advanced Ceramics Cr.Hrs. 6
(Formerly 054.337) Continuation of Ceramics 1 (STDO 2230). Prerequisite: STDO 2230 (or 054.223).

STDO 3420 Advanced Painting Cr.Hrs. 6
(Formerly 054.342) Continuation of Painting 1 (STDO 2220) with increasing emphasis on painting techniques, theory, and use of expressive idioms. Prerequisite: STDO 2220 (or 054.222).

STDO 3460 Advanced Sculpture Cr.Hrs. 6
(Formerly 054.346) Continuation of Sculpture 1 (STDO 2210), with emphasis on one of modeling, 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) or Digital Photography (STDO 2450), with emphasis on print quality and personal imagery. Prerequisite: STDO 2400 (or 054.240) or STDO 2450.

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) or STDO 2450.

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 3680 Special Topics in Studio Practice 2 Cr.Hrs. 3
Individual three credit hour courses offered in multiple discipline areas. Courses will provide opportunities for skill building, conceptual development and depth on topics of interest. Pre-requisites: will vary depending on the course.

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 3910 Design Studio 4 Cr.Hrs. 3
This course builds on stduents' abilities to solve graphic design problems in visual communications as developed in Design Studio 3, and to increase the repertroire of design problems typically encountered in professional practice. Prerequisite: STDO 3920. May not be held with STDO 3940, 054.347, 054.366.

STDO 3920 Design Studio 3 Cr.Hrs. 3
This course builds on students' abilities to solve graphic design problems in visual communications as developed in Design Studio 1, and to increase the repertoire of design problems typically encountered in professional practice. Prerequisite: C+ or better in STDO 2630 and STDO 2640. May not be held with: 054.228, 054.347, 054.366, or STDO 3930.

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 3970 Interdisciplinary Critique 2 Cr.Hrs. 3
Complementary to 3000 level Studio practice courses. Students will engage in discussion, readings, and critiques based on work produced in practice courses. Pre-requisite: STDO 2710.

Fine Arts Studio Courses-4000 Level

STDO 4450 Advanced Drawing 3 Cr.Hrs. 6
(Formerly 054.445) Advanced individual instruction in creative drawing. Pre-requisite: 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 4810 Senior Studio 1 Cr.Hrs. 6
Students develop and complete a self-directed program of Studio work. Regular peer and faculty review of Studio program of work. Taught by individual faculty or two-faculty teams. May not hold with STDO 4880 or 054.488. Open only to students in fourth year Honours. Pre-requisite: 21 credit hours of 3000 level Studio courses.

STDO 4820 Senior Studio 2 Cr.Hrs. 6
Taken after Senior Studio 1 (STDO 4810) students develop and complete their self-directed program of Studio work. Regular peer and faculty review of Studio program of work. Taught by individual faculty or two-faculty teams. Open only to students in fourth year of Honours program. Pre-requisite: STDO 4810. Corequisite: STDO 4920. May not be held with STDO 4880 or 054.488.

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 4910 Honours Seminar 1 Cr.Hrs. 3
This Seminar is taken in the fourth year of the Bachelor of Fine Arts Honours Degree as the first of two Honours Seminar courses and taken co-currently with Senior Studio 1 and Senior Studio 2. Issues of professional practice are examined against contemporary art theory. Students document their work and create artists statements and interact with visiting artists. Prerequisites: 21 credit hours of 3000-level Studio courses. Co-requisite: STDO 4810. May not be held with STDO 4890 or 054.489.

STDO 4920 Honours Seminar 2 Cr.Hrs. 3
A continuation of STDO 4910, Honours Seminar 1. Issues of professional practice are examined against contemporary art theory. Students document their work and create artists and interact with visiting artists. Co-requisite: STDO 4820. Pre-requisite: STDO 4910. May not be held with STDO 4890 (054.489).

FACULTY OF ARTS

Dean: Jeffery Taylor
Associate Dean(s): Lori Wilkinson (Undergraduate), Greg Smith (Graduate), Robert Hoppa (Research)
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Academic Staff: For complete listings of the Faculty of Arts Academic Staff, please refer to departmental websites.

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED LEADING TO A B.A.

1.1 Degrees

Degree	Years to Complete (Full-time) *	Total Credit Hours
Bachelor of Arts (General)	3*	90
Bachelor of Arts (Advanced)	4*	120
Bachelor of Arts (Honours)	4*	108-120
Bachelor of Arts Integrated Studies	3*	90

*This includes one year (30 credit hours) of study in University 1. There is no time limit for completion of any of the above degree programs. Students may complete their degree on a full-time or part-time basis.

1.2 Available Honours, Major, Minor and Concentration Programs

		Concentration*	Minor	General Major	Single Advanced Major	Double Advanced Major	Single Honours	Double Honours
Anthropology		•	•	•	•		•	
Asian Studies		•	•	•				
Canadian Studies		•	•	•			•	•
Catholic Studies		•	•					
Central and East European Studies		•	•	•	•			•
The Changing Workplace		•						
Classics	Classical Studies	•	•	•	•			
	Greek	•	•		•			
	Latin	•	•		•			
Economics		•	•	•	•		•	•
	Economics-Mathematics						•	
	Economics-Statistics						•	
English, Film, and Theatre	English	•	•	•	•	•	•	•
	Film Studies	•	•	•	•	•		
	Theatre	•	•	•	•	•		
French, Spanish and Italian	French	•	•	•	•		•	•
	Spanish	•	•	•	•			
	Italian	•	•					
	Italian Studies			•	•			
German and Slavic Studies	German	•	•	•			•	•
	Russian	•	•	•				
	Ukrainian	•	•	•				
	Polish	•	•					
Global Political Economy				•	•			
History		•	•	•	•		•	•
History of Art		•	•	•				
Icelandic		•	•	•			•	•
Judaic Studies		•	•					
Labour Studies		•	•	•	•			
Latin American Studies		•	•					
Linguistics		•	•	•	•			
	Linguistics (UofM) and American Sign Language/ English Interpretation (RRC)			•				
Management		•	•					
Mathematics		•	•	•	•			

Medieval and Renaissance Studies		•	•	•	•			
Option in Aging		•						
Native Studies		•	•	•	•			
	Native Languages	•	•					
	Aboriginal Governance Stream with required Minor in Business				•			
Philosophy		•	•	•	•		•	•
Political Studies		•	•	•	•		•	•
Psychology		•	•	•	•		•	•
Religion		•	•	•	•		•	•
Sociology		•	•	•	•		•	•
	Criminology			•			•	
Ukrainian Canadian Heritage Studies		•	•	•	•			
Women's and Gender Studies		•	•	•	•		•	•
	NOTES: Students in the General and Advanced Degree programs may complete a Double Major. See Section 3.1.4 or 3.2.4 for information on the declaration of a Double Major in the respective degree program. Effective September 2009 Arts students may complete Minor programs offered by other Faculties/Schools not listed above providing the Minor Program consists of a minimum of 18 credit hours and all other degree requirements are satisfied. Students in the B.A.I.S. Degree Program may complete Minor programs offered by other Faculties/Schools to satisfy the Concentration requirement providing the Minor program consists of a minimum of 18 credit hours. *Concentrations other than the Option in Aging (which is open to all Arts students) are available only to students in the B.A.I.S. degree program.								

SECTION 2: ADMISSION TO THE FACULTY OF ARTS B.A. GENERAL, ADVANCED OR HONOURS DEGREE PROGRAMS

The following is a summary of the admission requirements. All admission requirements, as well as application deadline dates and forms, are included in the Faculty of Arts 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.

Other than Direct Entry students, completion of a minimum of 24 credit hours of university level courses is required. 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 academic warning.

At the point of admission or transfer to the Faculty of Arts all students proceeding to an undergraduate B.A.Degree are automatically in the General Degree Program. Subsequently, students may apply through the Faculty of Arts General Office for admission to either the Advanced Degree Program or the Honours Degree program.

The specific requirements for the General, Advanced and Honours Degree programs are given in Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Each department and program outlines its entry and requirements in Section 8: Departments in, and Programs and Courses Offered by, the Faculty of Arts.

2.1 Direct Entry from High School for September 2013

Eligible students may apply to enter the Faculty of Arts upon completion of a high school diploma. Eligible students must meet the criteria listed below:

- Manitoba high school graduation, with five full credits at the Grade 12 level, in courses designated S (Specialized), G (General), or U (Dual Credit-University), or the equivalent standard from other provinces and countries will be considered.
- Must have a minimum average of 85% in three Grade 12 S or U credits and a minimum grade of 60% in each of the three credits.
- One of the three credits included in the minimum average of 85% must be Grade 12 S or U English.

Note: High school mathematics is NOT required for admission to the Faculty of Arts. However, it is recommended students complete either applied mathematics or pre-calculus within the Manitoba high school curriculum, or equivalent, to facilitate their ability to fulfill the University's "M" (or "mathematics") requirement for graduation.

2.2 Admission from University 1

a) Students who have completed 30 credit hours or more of coursework and who are not admissible to oher faculties or schools will be required to transfer to the Faculty of Arts or Faculty of Science.

b) Students who have completed either 24 or 27 credit hours of coursework may choose to transfer to the Faculty of Arts or Faculty of Science.

In either a) or b), the student will either transit to Arts in good standing or on academic warning depending on their performance in University 1. Students who are transited on academic warning from University 1 are advised to see an Arts academic advisor prior to registration.

Note: Students who have exceeded 36 credit hours of "F" grades will not normally be admissible until a suspension has been served. Students may contact the Faculty of Arts for further information and advice.

2.3 Admission as a Transfer Student

Students transferring to the Faculty of Arts from another faculty or school at the University of Manitoba are called "internal transfers." Students transferring to the Faculty of Arts from another university or college are called "external transfers."

Transfer students must apply for admission to the Faculty of Arts at the Admissions Office or on-line at www.umanitoba.ca/applynow by the application deadline date.

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.

Students who apply to transfer to the Faculty of Arts must have completed no fewer than 24 credit hours of university level coursework and must have achieved a minimum cumulative grade point average of 2.00. Students who have completed 24 credit hours or more and who have not achieved at least a 2.00 cumulative grade point average will be considered for admission on the basis of an adjusted grade point average which is a 2.00 grade point average on the best 24 credit hours. Students who have exceeded the maximum number of "F" grades permitted on courses acceptable for credit in Arts (see Section 5.10) should contact the Faculty of Arts for further information and advice.

Anyone who has been placed on academic suspension by another faculty, school, or external institution will not normally 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 5.2.1 and 5.2.2.

2.4 Admission as a Student Seeking a Second Degree

A student who holds an undergraduate degree from a recognized university program may apply for admission to pursue a second undergraduate degree. For information regarding possible transfer credit see Section 5.14.

2.5 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.

2.6 Admission as a Special Student

A student who holds a first degree and who wishes to take courses out of interest may apply for admission as a "special" student.

SECTION 3: BASIC FACULTY REGULATIONS FOR THE B.A. GENERAL, ADVANCED AND HONOURS DEGREE PROGRAMS

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 Université de Saint-Boniface, see the Annuaire of the Université 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 Academic Calendar.

It is **highly recommended** that all students entering the Faculty of Arts to pursue a General, Advanced or Honours 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 3.2 and 3.3).

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 the Faculty of Arts General Office. 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.

3.1 General Degree Program

3.1.1 Its General Purpose

The General Degree in the Faculty of Arts involves taking courses in what are traditionally referred to as the "liberal" arts. The goal of a liberal arts education is to provide students with an education in the humanities and social sciences and at the same time prepare them for future careers. An Arts education is intended to provide students with "employability skills" that are highly valued by employers and needed in the contemporary workplace. Some of these skills include reading, writing, listening, speaking effectively, knowledge of language, critical thinking, problem solving, basic numeracy, information literacy, and an appreciation of our cultural, political, and economic milieu.

The General Degree would not normally prepare students for graduate studies. Most graduate programs require students complete a four year degree. Therefore students interested in a graduate program should complete the Bachelor of Arts Advanced or Honours Degree Program following discussion with a departmental graduate program advisor.

3.1.2 Entrance into the B.A. General Degree Program

1) At the point of admission or transfer to the Faculty of Arts all students proceeding to an undergraduate B.A. Degree are automatically in the General Degree Program. Subsequently, students may apply through the Faculty of Arts 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 and a Minor. Once the Major(s) or Minor is declared it can be changed to a different subject field at some later registration. Students may also declare a second or Double Major in lieu of a Minor. Students who want to declare a Double Major must complete a Double Major declaration form available in the Faculty of Arts General Office or on the Faculty of Arts website. Students should note that for entry into most Majors/Minors, the faculty requirement is a grade of "C" or better in the prerequisite course(s).

For entry into a Major(s)/Minor requiring courses from more than one department, the faculty requirement is an average of "C" or better in all courses which are eligible to count towards the Major(s)/Minor.

For detailed information regarding entry and specific course requirements for Majors and Minors, see the specific listing for the relevant department in Sections 8 and 9 of this Calendar.

Students who have not declared a Major or Minor by the time 60 credit hours of coursework have been completed, will not be able to continue registration until a Major/Minor is declared.

3.1.3 Requirements for Continuing in the B.A. General Degree Program

1) By the time students complete 60 credit hours, they should have six credit hours in each of five different subject fields.

2) Students admitted to the Faculty of Arts, 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) Students must meet the minimum performance level as outlined in Section 5.10.

3.1.4 Ten Faculty Requirements for Graduating with a B.A. General Degree

1) A student must successfully complete 90 credit hours of 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 90 credit hours of passed coursework must include the remaining nine faculty requirements.

2) There must be at least six credit hours from subject fields designated Humanities and at least six credit hours from subject fields designated Social Science, and at least six credit hours from subject fields offered by the Faculty of Science (see Section 5.1.1).

3) There must be at least six credit hours completed in each of five different subject fields (as listed in Section 5.1.1). In addition, a subject field may also satisfy other Bachelor of Arts Degree requirements such as Humanities, or Social Sciences, or Sciences, or Mathematics, or Written English.

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 5.1.1). 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 who declares only one Major must also complete a Minor. A student who declares a Double Major will not be required or allowed to complete a Minor, but must complete five full course equivalents as specified by the Major department (i.e. 30 hours of credit in each subject field). Students who have questions about a Major in a particular subject are strongly urged to consult an instructor in the appropriate department. A Major may be declared once the prerequisite is satisfied.

Students who declare and complete a Major in Global Political Economy **will not** be required nor 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 a 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 5.1.1). A student who declares only one Major must also complete a Minor. A student who declares a Double Major will not be required nor allowed to complete a Minor. A Minor may be declared once the prerequisite has been satisfied. 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"). No course can be used to satisfy both the Major(s) and the Minor requirement. A Minor may be declared once the prerequisite is satisfied.

6) There must be at least 30 credit hours of coursework taken and successfully completed outside the Major(s) and Minor subject fields. In addition, there must be at least 12 credit hours of coursework taken and successfully completed in any subject acceptable for credit in the Faculty of Arts including courses in the Major(s) and Minor. Note: Students who complete a Double Major will satisfy this 12 credit hour requirement within their Double Major.

7) Normally, a student's Major and Minor cannot be from the same department. (For details on these six exceptions, see the departmental listings in Section 8 for Classics; English, Film, and Theatre; French, Spanish and Italian; German and Slavic Studies; Judaic Studies; and Native Studies.)

8) There must be at least 60 credit hours that have been taught by the Faculty of Arts (may include up to 24 credit hours from the Department of Mathematics, Marcel A. Desautels Faculty of Music List A or Art History courses considered as Humanities, see Section 5.1.1), or which have been accepted on transfer as equivalent to courses taught by the Faculty of Arts.

9) There must be at least 30 credit hours numbered at or above the 2000 level.

10) Residency Requirement: A student in the B.A. General Degree Program must complete University of Manitoba residency requirements (see Section 5.3 for details).

3.2 Advanced Degree Program

3.2.1 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. The Advanced Degree in the Faculty of Arts involves taking courses in what are traditionally referred to as the "liberal" arts. The goal of a liberal arts education is to provide students with an education in the humanities and social sciences and at the same time prepare them for future careers. An Arts education is intended to provide students with "employability skills" that are highly valued by employers and needed in the contemporary workplace. Some of these skills include: reading, writing, listening, speaking effectively, knowledge of language, critical thinking, problem solving, basic numeracy, information literacy, and an appreciation of our cultural, political, and economic milieu.

While most graduate programs require students complete an Honours Degree, it may be possible to enter a graduate program on the basis of the Advanced Degree. Students should discuss this possibility with a departmental graduate program advisor.

3.2.2 Entrance to the B.A. Advanced Degree Program

1) To enter an Advanced Degree Program, a student must have successfully completed six credit hours in each of four different subject fields (see Section 5.1.1), and also complete an application form which is available in the Faculty of Arts General Office or on-line at http://umanitoba.ca/faculties/arts/student/index.html and have it approved by an academic advisor. At the point of admission to the Advanced Degree Program, the student must indicate their intention to complete a Single Advanced Major or a Double Advanced Major.

Once admitted to the Faculty of Arts it is possible to enter this program at any point up to one month prior to graduation provided the student has successfully completed six credit hours in each of four different subject fields.

2) All students are required, upon entering the Single Advanced Major Program, to declare a Major and Minor. Students entering the Double Advanced Major Program are required to declare two Majors. Students should note that for entry into a Major(s) requiring courses from only one department, the faculty requirement is a grade of "C" or better in the prerequisite course(s).

For entry into a Major(s) 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. Students with questions about an Advanced Major in a particular subject should consult an instructor in the appropriate department.

3) For entry to the Minor a grade of "C" or better in the prerequisite course(s) is required.

3.2.3 Requirements for Continuing in the B.A. Advanced Degree Program

1) Students admitted to the Faculty of Arts, 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) Students must meet the minimum performance level as outlined in Section 5.10.

3.2.4 Ten 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 minimum grade point average of 2.00 (i.e. "C" or better) on these 120 credit hours. (Students who choose to complete a Double Advanced Major will be required to complete more than 120 credit hours.)

The 120 credit hours of passed coursework must include the remaining nine faculty requirements.

2) There must be at least six credit hours in Humanities subject fields and at least six credit hours in Social Science subject fields, and at least six credit hours in courses taught by the Faculty of Science (see Section 5.1.1).

3) There must be at least six credit hours completed in each of five different subject fields (as listed in Section 5.1.1). In addition, a subject field may also satisfy other Bachelor of Arts requirements such as Humanities, or Social Sciences, or Sciences, or Mathematics, or Written English.

4) Single Advanced Major: There must be at least 48 credit hours which constitute a **Single Advanced Major** in one of the subject fields approved by the Faculty of Arts (see Section 5.1.1). 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). A student who declares a Single Advanced Major must also complete a Minor with the exception of students whose Major is Global Political Economy. Students with an Advanced Major in Global Political Economy **will not** be required nor allowed to complete a Minor for purposes of satisfying the degree requirements.

Double Advanced Major: There must be at least 42 credit hours which constitute a **Double Advanced Major** in each of two subject fields approved by the Faculty of Arts (see Section 5.1.1). 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 each Major including only the last grade of any course that has been repeated and excluding any failed course(s). A student who declares a Double Advanced Major will not be required nor allowed to complete a Minor, but must complete the Double Advanced Major in accordance with the requirements as specified by the Major department. A Major may be declared once the prerequisite has been satisfied.

Note: No course can be used to satisy both the Single Advanced Major and Minor requirement. Similarily no course can be used to satisfy both Double Advanced Majors. Not every department offers a Single or Double Advanced Major. See the departmental listings in Sections 8 and 9 for information.

5) Minor: There must be 18 credit hours in a field that is different from the Single Advanced Major, and which constitute a **Minor** in one of the subject fields approved by the Faculty of Arts (see Section 5.1.1). A student who declares a Single Advanced Major must also complete a Minor. A student who declares a Double Advanced Major will not be required nor allowed to complete a Minor. No course can be used to satisfy both the Advanced Major(s) and the Minor requirement. A student having 18 credit hours in more than one subject field can declare only one of them as his/her Minor. A Minor may be declared once the prerequisite has been satisfied.

6) A student who declares a Single Advanced Major with a Minor must have at least 42 credit hours in subjects other than those used towards the Single Advanced Major and Minor subject fields. In addition, students in a Single Advanced Major must successfully complete 12 credit hours of coursework in any subject acceptable for credit in the Faculty of Arts including courses in the Major and Minor.

A student who declares a Double Advanced Major must have at least 36 credit hours in subjects other than those used towards their Double Advanced Major subject fields.

7) Normally, a student's Single or Double Advanced Major and Minor cannot be from the same department. (For exceptions, see the departmental listings, in Section 8, for Classics; English, Film and Theatre; French, Spanish and Italian; German and Slavic Studies; Judaic Studies; and Native Studies.)

8) There must be at least 81 credit hours that have been taught by the Faculty of Arts (may include up to 36 credit hours from the Department of Mathematics, Marcel A. Desautels Faculty of Music List A or Art History courses considered as Humanities, see Section 5.1.1), or which have been accepted on transfer as equivalent to courses taught by the Faculty of Arts.

9) There must be at least 42 credit hours numbered at or above the 2000 level.

10) Residency Requirement: A student in the B.A. Advanced Degree Program must complete University of Manitoba residency requirements (see Section 5.3 for details).

3.3 Honours Degree Program

3.3.1 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 Degree programs. The Honours Degree program is the preferred program for students seeking entrance to graduate study.

3.3.2 Entrance to the B.A. Honours Degree Program

To enter an Honours Degree program, a student must complete an application form which is available in the Faculty of Arts General Office. Students must have successfully completed six credit hours in each of four different subject fields (see Section 5.1.1), with a minimum grade point average of 3.0 (3.25 for entry to Psychology) on all courses including failed and repeated courses. 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) including failed and repeated courses. Students applying for Honours History must have a grade of "B" or higher in all 3000 and 4000 level History courses.

3.3.3 Requirements for Continuing in the B.A. Honours Degree Program

1) Prior to each registration, Honours students must have their courses approved by the department in person, and then by the Faculty of Arts General Office, and 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, 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 Degree 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). In order to continue in Honours History students must also maintain a "B" grade or higher in each History course at the 3000 and 4000 levels.

Students who fail to maintain the required minimum degree grade point average are required to withdraw from the Honours Degree 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." These students may be eligible to apply to the Advanced Degree Program.

3.3.4 Four Faculty Requirements for Graduating with a B.A. Honours Degree

It should be noted that not every department has an Honours Degree program. For specific information on available single and Double Honours, please consult the specific listing for the relevant department in Section 8.

Note: Students in an Honours Degree program who satisfy the requirements for a Minor (in accordance with the Minor requirements listed under the B.A. General Degree; Section 3.1.4, point 5 - Minor) may request to have the Minor recorded on their transcript. These students must come to the Faculty of Arts General Office to formally declare their intention to have their Minor recorded on their transcript.

1) The number of credit hours which a student must successfully complete 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 a student in the B.A. Honours Degree program must satisfy the University of Manitoba residency requirements (see Section 5.3 for details) 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 each of five different subject fields (as listed in Section 5.1.1).

4) Among the courses presented for graduation there must be at least six credit hours in Humanities subject fields and six credit hours in Social Science subject fields, and at least six credit hours in courses offered by the Faculty of Science (see Section 5.1.1).

3.4 Bachelor of Arts Degree Program Requirements Chart

GENERAL DEGREE PROGRAM (90 Credit Hours)	**ADVANCED DEGREE PROGRAM (120 Credit Hours)**	**HONOURS DEGREE PROGRAM (108-120 Credit Hours)**
REQUIREMENT 1: Major(s) or Honours (See Section 8 for Major and Honours requirements)		
- minimum 30 credit hours - grade point average of 2.00 on all courses taken for purposes of satisfying the Major	- Single Advanced Major: minimum 48 credit hours (some departments require more) - Double Advanced Major: minimum 42 credit hours - grade point average of 2.00 on all courses taken for purposes of satisfying the Major	- Single Honours: varies by Honours subject field - Double Honours: varies by Honours subject field(s)
REQUIREMENT 2: Minor (See Section 8 for Minor requirements)		
- minimum 18 credit hours; except when Major is Global Political Economy	- minimum 18 credit hours; except when Major is Global Political Economy or students in a Double Advanced Major Program	- optional Minor (see note in Section 3.3.4)
REQUIREMENT 3: Options		
- minimum 30 credit hours outside student's chosen Major(s) and Minor - minimum 12 credit hours in area of choice	- Single Advanced Major: minimum 42 credit hours outside student's chosen Major and Minor - Single Advanced Major: minimum 12 credit hours in area of choice - Double Advanced Major: minimum 36 credit hours outside student's chosen Majors	Single Honours: ancillary options: minimum 24 to 30 credit hours over years 2, 3, and 4 Double Honours: ancillary options: minimum 6 credit hours over years 2, 3, and 4
Within the above 3 requirements, students must also satisfy the following requirements. Note: a course may satisfy more than one requirement.		
REQUIREMENT 4: Written English and Math		
- Written English and Math Requirement (minimum 3 credit hours in each)	- Written English and Math Requirement (minimum 3 credit hours in each)	- Written English and Math Requirement (minimum 3 credit hours in each)
REQUIREMENT 5: Humanities Requirement (See Section 5)		
- 6 credit hours from subjects identified as Humanities	- 6 credit hours from subjects identified as Humanities	- 6 credit hours from subjects identified as Humanities

GENERAL DEGREE PROGRAM (90 Credit Hours)	ADVANCED DEGREE PROGRAM (120 Credit Hours)	HONOURS DEGREE PROGRAM (108-120 Credit Hours)
REQUIREMENT 6: Social Science Requirement (See Section 5)		
- 6 credit hours from subjects identified as Social Sciences	- 6 credit hours from subjects identified as Social Sciences	- 6 credit hours from subjects identified as Social Sciences
REQUIREMENT 7: Sciences Requirement (See Section 5)		
- 6 credit hours from course subjects taught by the Faculty of Science	- 6 credit hours from course subjects taught by the Faculty of Science	- 6 credit hours from course subjects taught by the Faculty of Science
REQUIREMENT 8: General Requirements		
- 60 credit hours of courses must be taken from courses taught by the Faculty of Arts (may include 24 credit hours of Mathematics, Music or Art History courses) - 30 credit hours must be at the 2000 level or higher - 6 credit hours (c.h.) in each of 5 subject areas (e.g., 6 c.h. Psychology, 6 c.h. Economics, 6 c.h. Computer Science, 6 c.h. French, 6 c.h. Women's and Gender Studies)	- 81 credit hours of courses must be taken from courses taught by the Faculty of Arts (may include 36 credit hours of Mathematics, Music or Art History courses) - 42 credit hours must be at the 2000 level or higher - 6 credit hours (c.h.) in each of 5 subject areas (e.g., 6 c.h. Psychology, 6 c.h. Economics, 6 c.h. Computer Science, 6 c.h. French, 6 c.h. Women's and Gender Studies)	- 6 credit hours (c.h.) in each of 5 subject areas (e.g., 6 c.h. Psychology, 6 c.h. Economics, 6 c.h. Computer Science, 6 c.h. French, 6 c.h. Women's and Gender Studies)
REQUIREMENT 9: Residency Requirements		
- degree: 48 credit hours or the final 30 credit hours must be taken at the University of Manitoba - Major(s): 18 credit hours at the University of Manitoba	- degree: 60 credit hours must be taken at the University of Manitoba - Single Advanced Major: 30 credit hours at the University of Manitoba on a Single Advanced Major requiring 48 to 57 credit hours; or 36 credit hours at the University of Manitoba on a Single Advanced Major requiring more than 57 credit hours - Double Advanced Major: 27 credit hours at the University of Manitoba on a Double Advanced Major requiring 42 credit hours	- degree: must satisfy a residency requirement as specified in Section 5.3 - Honours subject(s): 33 credit hours at the University of Manitoba on single Honours requiring 54 to 69 credit hours; or 39 credit hours at the University of Manitoba on single Honours requiring more than 69 credit hours; or 24 credit hours at the University of Manitoba on Double or Joint Honours requiring 42 to 45 credit hours; or 21 credit hours at the University of Manitoba on Double or Joint Honours requiring less than 42 credit hours; or 33 credit hours at the University of Manitoba on Double or Joint Honours requiring more than 45 credit hours
REQUIREMENT 10: Graduating Grade Point Average (GPA)		
- 2.00 grade point average on 90 credit hours of passed coursework offered for degree credit	- 2.00 grade point average on 120 credit hours of passed coursework offered for degree credit	- 3.00 grade point average on total passed credit hours offered for degree credit

SECTION 4: ADMISSION REQUIREMENTS AND BASIC FACULTY REGULATIONS FOR THE B.A. INTEGRATED STUDIES (B.A.I.S.) DEGREE PROGRAM

4.1 General Purpose

The Bachelor of Arts Integrated Studies is a 90 credit hour degree program which is geared to serve working adults who have completed some post secondary education. The degree requires areas of Concentration rather than the traditional Major/Minor requirement, providing a more flexible path for degree completion but also ensuring academic rigor (e.g., appropriate writing and quantitative skills, breadth requirements, and an appropriate percentage of upper level courses).

4.2 Admission Requirements for the B.A.I.S. Degree Program

Students must complete one of the following:

a) University of Manitoba Certificate in Financial and Management Accounting (FMA) with a minimum cumulative grade point average of 2.5.

b) University of Manitoba Certificate Program in Human Resources Management (HRM) with a minimum cumulative grade point average of 2.5.

c) University of Manitoba Certificate in Adult and Continuing Education (CACE) with a minimum cumulative grade point average of 2.5.

d) Canadian Institute of Management Certificate Program in Management and Administration (CIM) from any accredited post-secondary institution with a minimum cumulative grade point average of 2.5.

e) University of Manitoba diploma program (as defined by the Non-Degree Program Taxonomy approved by Senate) or a diploma completed at any accredited post-secondary institution.

f) Successful completion of a minimum of 24 credit hours of university level coursework with a cumulative grade point average of 2.0. Students who have not achieved a 2.0 cumulative grade point average may be eligible for special consideration.

Students who have exceeded 36 credit hours of "F" grades are not admissible until a period of suspension has been served. Students may contact the Faculty of Arts for further information and advice.

Applicants must also submit with their application for admission all of the following:

-A resumé providing evidence of normally three (3) years of full-time workplace experience (i.e., = 30 hours/week) preferably with the same employer.

[Applicants who do not strictly fall into this definition of workplace experience may request special consideration from the B.A. Integrated Studies Admissions Committee.]

-Two letters of support (normally one must be from the current or most recent employer). [Applicants who are unable to supply the two letters of support as stipulated may request special consideration from the B.A. Integrated Studies Admissions Committee to consider alternate sources for letters of support.]

-A letter of intent. The letter of intent must be no fewer than 250 and no more than 1000 words and include the applicant's rationale and suitability to enter the program. For example, why has the applicant chosen this program instead of other degree programs at the University of Manitoba? Why does the applicant see a good fit between herself/himself and the program? How does the applicant envision successful completion of this degree enhancing her/his career development? The letter of intent and resumé must provide evidence of satisfactory writing and problem-solving skills.

Students who hold a first undergraduate degree in the Faculty of Arts may not apply for the B.A. Integrated Studies Degree Program.

For detailed admission information, including required averages for admission and application deadline dates, please refer to the Faculty of Arts Applicant Information Brochure at http:/www.umanitoba.ca/student/admissions/media/arts_bulletin.pdf.

4.3 General Structure of the B.A.I.S. Degree Program

The Bachelor of Arts Integrated Studies Program is comprised of 90 credit hours divided into three components: Foundation Courses (21 credit hours), Area of Concentration (18 credit hours) and options (51 credit hours).

Foundation Courses

Course No.	Course Name	Credit Hours
ARTS 1110	Introduction to University	3
EDUA 1560	Adult Learning and Development	3
SWRK 2080 or ENGL 0930	Interpersonal Communication Skills English Composition	3 3
A three credit hour course that satisfies the mathematics requirement[1]		3
ARTS 1160	Leadership: An Interdisciplinary Approach	3
Six credit hours of introductory courses from the Departments of Psychology or Sociology or Anthropology or Political Studies[2]		6
Total credit hours		**21**

Notes:

1 See Appendix A, List of Approved Written English and Mathematics courses found under the heading General Academic Regulations in the Undergraduate Calendar.

2 Students who wish to take courses beyond the 1000 level in these departments should consult the course descriptions to ensure the necessary prerequisites are satisfied.

Students may not substitute another course for a Foundation course.

Area of Concentration

Each student must complete the course requirements of at least one Concentration. For purposes of this degree program all Minor programs offered by the Faculty of Arts will be referred to as Concentrations. All Concentrations consist of 18 credit hours of required or specified courses. There are some Concentrations that are not offered as Minors. For a listing of the Minors and Concentrations offered by the respective departments in the Faculty of Arts, please see Section 1.2 and also refer to the departmental entries in Section 8 and 9. For entry into most Concentrations, the faculty requirement is that the student must have a grade of "C" or better in the prerequisite course(s).

A student in the B.A. Integrated Studies Degree Program may also fulfill the requirements of a Concentration by completing the specified requirements of Minor programs offered by other Faculties and Schools providing the Minor consists of a minimum of 18 credit hours. A Minor program offered by other Faculties/Schools will be referred to as a Concentration for purposes of the B.A. Integrated Studies Degree Program. For details on such Concentration (Minor) programs please refer to the relevant Faculty/School's chapter in the Academic Calendar.

A Concentration may be declared once the prerequisite has been satisfied. A course that satisfies the Foundation requirement of the program cannot also be used towards a Concentration. An alternate course/credit hours within the Concentration field must be completed. For example, if PSYC 1200 (6) is taken to satisfy the Foundation requirement, and the student has chosen to complete a Psychology Concentration, then PSYC 1200 will not form part of the 18 credit hours required for the Concentration. The student will complete an additional 6 credit hours of other Psychology courses in lieu of PSYC 1200.

Students who wish to take additional courses from a second Concentration may do so within their elective component. Students who complete the requirements of a second Concentration may submit a written request to the Dean's Office to have a second Concentration recorded on their transcript.

Options

Students must complete 51 credit hours of options outside the Foundation courses and those courses used to satisfy an area of Concentration.

4.4 Requirements for Continuing in the B.A.I.S. Degree Program

1) By the time students complete 60 credit hours, they must normally have three credit hours in each of five different subject fields.

2) Students 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 in the Undergraduate Calendar entitled 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) Students must meet the minimum performance level as outlined in Section 5.10.

4.5 Eight Faculty Requirements for Graduating with a B.A.I.S. Degree

1) A student must successfully complete 90 credit hours of coursework 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 90 credit hours of passed coursework must include the remaining seven faculty requirements.

2) There must be six credit hours from subject fields designated Humanities and six credit hours from subject fields designated Social Science, and six credit hours from subject fields offered by the Faculty of Science (see Section 5.1.1).

3) There must be at least three credit hours completed in each of five different subject fields (as listed in Section 5.1.1). In addition, a subject field may also satisfy other B.A.I.S requirements such as Humanities, or Social Sciences, or Sciences, or Mathematics, or Written English.

4) Concentration: There must be 18 credit hours which constitute a Concentration in one of the subject fields approved by the Faculty of Arts (see Section 5.1.1) or by other Faculties and Schools. A Concentration may be declared once the prerequisite has been satisfied. A student who has 18 credit hours in more than one subject field can declare only one of them as a Concentration. No course can be used to satisfy both a Foundation requirement and the Concentration requirement. A student who has completed the requirements for a second Concentration may apply at the Faculty of Arts General Office to have the second Concentration recorded on their transcript.

5) There must be at least 51 credit hours of options which are taken and successfully completed in subject fields outside the Foundation and Concentration courses.

6) There must be at least 30 credit hours that have been taught by the Faculty of Arts (may include up to 12 credit hours from the Department of Mathematics, Marcel A. Desautels Faculty of Music List A or Art History courses considered as Humanities, see Section 5.1.1) or which have been accepted on transfer as equivalent to courses taught by the Faculty of Arts.

7) There must be at least 15 credit hours numbered at or above the 2000 level plus 6 credit hours at or above the 3000 level.

8) Residency Requirement: A student in the B.A. Integrated Studies degree program must complete University of Manitoba residency requirements (see Section 5.3 for details).

4.6 Additional Faculty Regulations and Policies

Students in the B.A. Integrated Studies Degree Program are subject to the regulations and policies found in Section 5, Section 6, Section 7, Section 8 and Section 9.

SECTION 5: ADDITIONAL FACULTY REGULATIONS AND POLICIES APPLICABLE TO ALL DEGREE PROGRAMS IN THE FACULTY OF ARTS

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 (with the exception of the B.A. Integrated Studies) 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 Biological Sciences. Students in the B.A. Integrated Studies Degree Program must complete 3 credit hours in each of 5 different course subjects.

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: Arabic, Asian Studies, Canadian Studies, Catholic Studies, Classical Studies, English (excluding ENGL 0930, ENGL 0940, ENGL 2000, ENGL 2001), Film Studies, French, German, Greek, Hebrew, History, Hungarian, Icelandic, Italian, Judaic Civilization, Latin, Native Languages, Native Studies, Philosophy, Polish, Portuguese, Religion, Russian, Spanish, Theatre, Ukrainian, and Yiddish. In addition the following courses may be used: Women's and Gender Studies WOMN 1500, WOMN 2530, WOMN 2570, WOMN 2600, WOMN 3600 and WOMN 3620.

2) Course subjects offered by other units which can be used towards the **Humanities** requirement: Music (i.e. except ensemble courses) and History of Art (i.e. all courses listed with course prefix FAAH). (For details on History of Art courses, 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 and Gender Studies WOMN 1600, WOMN 2500, WOMN 2510, WOMN 2560, WOMN 3100, WOMN 3510, WOMN 3550, WOMN 3560 and Others ARTS 1160. Note: Geography courses completed prior to September 1, 2006 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, Biological Sciences, Biotechnology, Botany, Chemistry, Computer Science, Forensic 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, 2006 will be considered a Science.

5.1.2 Major, Minor (Concentration) or Honours Programs

1) The Faculty of Arts offers various Majors, Minors (Concentrations) and Honours programs. For a listing of the programs see Section 1.2 and also refer to the respective departmental entries in Section 8 and 9.

2) Major and Minor (Concentration) programs offered by other Faculties or Schools are listed in Section 9. These include a General Major, Advanced Major and Minor (Concentration) offered by the Department of Mathematics, a Minor in Business offered by the Faculty of Management/I.H. Asper School of Business, and a General Major and Minor (Concentration) in History of Art offered by the School of Art.

An Arts student may declare a Minor (Concentration) (dependent on the student's program) offered by any Faculty and School providing the Minor (Concentration) program consists of a minimum of 18 credit hours. For details on those Minor (Concentration) programs please refer to the relevant Faculty/School's chapter in this Calendar.

5.2 Courses Acceptable for Credit in the Faculty of Arts

In addition to all courses offered by the Faculty of Arts there are two other categories of courses acceptable for credit in the Faculty of Arts:

5.2.1 Courses Offered by Other Faculties or Schools at the University of Manitoba:

Effective September 2007, 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.

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 2.1, 2.2 and 5.10 and they will all

be taken into account when determining the student's grade point averages in accordance with Sections 5.8 and 5.10. 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 the courses did not conflict with some other graduation or continuing regulation (such as the Residency Requirement).

5.2.2 Courses Offered at Other Universities and Colleges:

Effective September 2007, 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.

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 University of Manitoba degree 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 approved for a student who has not completed at least 24 hours of coursework at the University of Manitoba or who is in academic jeopardy or on academic suspension. As of 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 5.11 and 5.12 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 2.1, 2.2 and 5.10.

As of 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" grades permitted in an Arts degree (see Section 5.10). 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 5.11 and 5.12 for details). 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, 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. (Some exceptions may be considered for students in the B.A. Integrated Studies Degree Program.)

Students who wish to request a review or reassessment of transfer credit must do so within eight months of the initial determination of transfer of credit to the University of Manitoba.

5.3 Residency Requirement

As indicated in Section 3 and Section 4, each of the four 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 the degree. Effective September 2009, students admitted to the Faculty of Arts B.A. General, Advanced and Honours Degree Programs will also be required to satisfy a residency requirement on the Major(s), Advanced Major(s) or Honours subject(s) in addition to the residency requirement on the degree. Similarly students admitted to the B.A. Integrated Studies Degree Program will be required to satisfy a residency requirement on the Concentration in addition to a residency requirement on the degree.

1) B.A. General Degree

a) Degree: There are two ways in which the Residency Requirement for the B.A. General Degree 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.

b) Major: A minimum of 18 credit hours of the 30 credit hours required for the Major must be successfully completed at the University of Manitoba or through an approved University of Manitoba Exchange Program.

2) B.A. Advanced Degree

a) Degree: 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.

b) Single and Double Advanced Majors: Students must successfully complete at the University of Manitoba or through an approved University of Manitoba exchange program the hours of coursework in their program as noted below:

- In a Single Advanced Major requiring 48 to 57 credit hours, 30 credit hours must be completed at the University of Manitoba or through an approved University of Manitoba Exchange Program.
- In a Single Advanced Major requiring more than 57 credit hours, 36 credit hours must be completed at the University of Manitoba or through an approved University of Manitoba Exchange Program.
- In a Double Advanced Major requiring 42 credit hours, 27 credit hours must be completed at the University of Manitoba or through an approved University of Manitoba Exchange Program.

3) B.A. Honours Degree

a) Degree: 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.

b) Honours Subject(s): Students must successfully complete at the University of Manitoba or through an approved University of Manitoba exchange program the hours of coursework in their Honours subject(s) as noted below:

- In a single Honours subject requiring 54 to 69 credit hours, 33 credit hours must be completed in the Honours subject.
- In a single Honours subject requiring more than 69 credit hours, 39 credit hours must be completed in the Honours subject.

- In a double or joint Honours subject requiring 42 to 45 credit hours in one Honours subject, 24 credit hours must be completed in that Honours subject.
- In a double or joint Honours subject requiring less than 42 credit hours in one Honours subject, 21 credit hours must be completed in that Honours subject.
- In a double or joint Honours subject requiring more than 45 credit hours in one Honours subject, 33 credit hours must be completed in that Honours subject.

c) Once admitted to an Honours program, students are expected to take all their courses at the University of Manitoba. For information on exceptions to this requirement, the student should consult the Faculty of Arts General Office.

4) B.A. Integrated Studies Degree

a) Degree: To receive the B.A. Integrated Studies Degree, the student must successfully complete at the University of Manitoba no fewer than 36 credit hours of the required 90 credit hours (these 36 credit hours may be taken at various points in the student's career).

b) Concentration(s): A minimum of 9 credit hours of the 18 credit hours required for the Concentration must be successfully completed at the University of Manitoba or through an approved University of Manitoba Exchange Program.

Residency Requirement Université de Saint-Boniface:

In order to satisfy the University of Manitoba, Faculty of Arts residency requirement, students who transfer from Université 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.

5.4 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/Integrated-Studies 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

5.5 Maximum Number of Courses During a Term

Normally a student may attempt a maximum of 15 credit hours during a Fall or Winter term or a maximum of 18 credit hours during the Summer Session. If a student has taken the maximum credit hours in the previous term and has obtained a degree grade point average of 2.75 and is in good standing, he/she may apply at the Faculty of Arts General Office to be allowed to take 3 additional credit hours per term.

5.6 Prerequisite, Corequisite, and Course Availability

Prerequisite: Minimum grades of "C" are required in all courses listed as prerequisites, except as otherwise noted in the course descriptions published in each department and program section of this chapter. If a course is a prerequisite for a second course, the prerequisite must be met in order to continue in the second course.

Some course descriptions 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 specific course, you may register for it in the same term.

Corequisite: Where a course identifies another course as a corequisite, both courses must be taken 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

5.7 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 on the Faculty of Arts website. The Academic Schedule in the front of this Calendar contains the relevant registration deadline dates appropriate to challenge for credit. Students on academic warning or academic suspension are not permitted to challenge courses for credit.

5.8 Repeating a Course

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

- To repeat a course, a student must request permission to do so from the Faculty of Arts General Office or on-line at http://umanitoba.ca/faculties/arts/student/index.html.
- 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 will be used in the calculation of the grade point average in the Major field, the cumulative grade point average and in the calculation of the grade point average required for the degree.
- Repeating a course will not remove the original course or grade from the transcript.
- All courses with "F" grades that are repeated count towards the limit of "F" grades permitted in an Arts degree as outlined in Section 5.10.

5.9 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 General 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/apply towards satisfying degree requirements nor affect the degree 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."

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

Effective September 2013, each student in the Faculty of Arts will be placed on academic suspension for one year regardless if there has been evidence of improved performance if they have more than 36 credit hours of "F" grades.

Following a one year suspension, the student may return upon application to the Faculty of Arts General Office by selecting one of the following irreversible options:

(a) to continue with no possibility of further "F" grades. Any further "F" grades will result in academic suspension for two years. (Following the two year suspension, the student may apply to the Faculty of Arts General 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.)

5.11 Dean's Honour List and Graduating with Distinction or First Class Honours

Dean's Honour List

Effective September 2013 to qualify for this list a student must be registered in one of the four degree programs offered by the Faculty of Arts and complete at least 12 credit hours offered by the University of Manitoba during a term and attain a minimum term grade point average of 3.75. The notation "Dean's Honour List" will be included on the student's transcript specific to that term.

With Distinction

Students graduating with a B.A. General or a B.A. Integrated Studies 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 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.

5.12 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 grade point average of 3.85 on all 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, Integrated Studies, 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.

5.13 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 in the Faculty of Arts General Office or 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.

5.14 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 another degree.

Students who have completed an undergraduate degree may apply and be admitted to the Faculty of Arts seeking a second undergraduate degree. Students who hold a first degree from the Faculty of Arts may not apply for the B.A. Integrated Studies Degree Program as a second degree.

Effective the 2002-2003 Regular Session and thereafter, students who have graduated with a first undergraduate 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 or another awarded degree, diploma or certificate, 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 5.2.2).

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.

Students cannot obtain a second degree in the same discipline at the same or lower level as any of their previously awarded degree(s).

5.15 Application to Graduate with a B.A. Degree

In order to officially receive a degree in any of the four 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, B.A. Integrated Studies 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 revert to the B.A. General Degree Program in order to graduate, 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 September 30. For graduation in February, the request must be received by January 30.

Category 3: Those students previously admitted to and registered in one of the respective degree programs in the Faculty of Arts and who have completed **all** of the requirements for the degree while registered in the Faculty of Arts, but who are currently registered in another Faculty or School at the University of Manitoba (excluding Extended Education) may submit a request in writing to graduate to the Faculty of Arts General Office.

Deadline Dates to declare expected Graduation Date by Aurora Student:

May Graduation: end of registration revision period for Winter Term

October Graduation: August 1

February Graduation: end of registration revision period for Fall Term

SECTION 6: STUDENT RESPONSIBILITIES

6.1 Students' Code of Responsibilities

6.1.1 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.

6.1.2 Rights and Responsibilities

As a student in the Faculty of Arts you are entitled to the use of all appropriate resources (human and other) for the successful completion of your studies. But you are also responsible for the use of those resources in a manner that is honest, fair and equitable. For example, when you enrol in a course you implicitly accept the terms of a contract whereby the professor is committed to teaching to the best of his/her ability, while you and the other students are committed to learning to the best of yours. Repeated absences, or the neglect of reading or writing assignments, are not just matters of individual concern; because they undermine the effectiveness of discussion for others as well, they are a failure to honour the academic and social contract that is implicitly a part of your membership in this community. Similarly, borrowing a book from the library is a direct commitment to honour the rules and regulations governing the circulation of such material. To damage a library book by writing in it, highlighting, or worse, is not just an act of individual vandalism; it is the wilful partial destruction of a resource that other students (and even other generations of students) have the right and the need to consult. It is to forget, in other words, that public property is not no one's property; it is everyone's property.

Similar obligations to ethical conduct are an inherent part of all the academic work you do as requirements of your program. Participation in the free exchange of ideas, upon which the scholarly community depends, obligates all members of that community to complete honesty and to adequate documentation of their intellectual debts. Plagiarism, the representing of someone else's words or ideas as your own, or any other form of academic dishonesty such as cheating, is a betrayal not just of individual honour, but of the whole basis of civilized discourse upon which all other members of the community depend.

The Manitoba Code of Human Rights guarantees everyone the right to be free of discrimination on the basis of gender or sexual orientation, age, ancestry, religion, family status, physical or mental handicap, and political beliefs. The rights and responsibilities of students thus go well beyond the classroom, library, or computer facility. Every student in the Faculty of Arts is at all times entitled to pursue his/her activities and program of study free of any social discrimination, harassment, exploitation or abuse of power on the part of others, staff or students. Consequently, every student also has a reciprocal obligation to act in a similarly ethical fashion toward all other members of the community. In order that we all be fully empowered to take advantage of the pursuit of knowledge, the development of skills and the special opportunities for personal growth offered by the faculty, there must be on everyone's part a commitment to avoid irresponsible behaviour that damages the academic potential or self-esteem of others.

6.1.3 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.

6.1.4 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.

6.2 General 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 four 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 normally within three months following the term in which the course was taken or from the date of the academic decision. Appeals will not be considered beyond three years after the end of the course or from the date of the academic decision:

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 Faculty of Arts General Office. Special forms are available in the General Office.

SECTION 8: DEPARTMENTS IN, AND PROGRAMS AND COURSES OFFERED BY, THE FACULTY OF ARTS

8.1 Department of Anthropology

Acting Head: Greg Monks
General Office: 435 Fletcher Argue Building
Telephone: 204 474 9361
E-mail:um-anthro@cc.umanitoba.ca

Website: umanitoba.ca/anthropology/

8.1.1 Program Information

Anthropology is a science that examines human issues from both cultural and biological perspectives. The most fundamental concern of this discipline is the survival of humanity and 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), 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.

8.1.2 Anthropology

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
ANTH 1210 and ANTH 1220 (or ANTH 1520)	• ANTH 2000, ANTH 2100, ANTH 2860 • ANTH 2020 or ANTH 2530 • 12 credit hours from courses at the 2000 level and above (of these a minimum of 6 credit hours must be at the 3000 and/or 4000 level)[1, 2, 3]		
SINGLE ADVANCED MAJOR[4] TOTAL: 48 CREDIT HOURS			
ANTH 1210 and ANTH 1220 (or ANTH 1520)	• ANTH 2000, ANTH 2100, ANTH 2860, ANTH 3470, ANTH 4850 • ANTH 2020 or ANTH 2530 • 3 credit hours from: ANTH 2820, ANTH 2890, ANTH 3720, ANTH 3730, ANTH 3930, ANTH 3950, ANTH 3980, ANTH 3990 • 3 credit hours from courses at the 4000 level[3] • 18 credit hours from courses at the 2000 level and above (of these a minimum of 9 credit hours must be at the 3000 and/or 4000 level)[1, 2, 3]		
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
ANTH 1210 and ANTH 1220 (or ANTH 1520)	12 credit hours from courses at the 2000 level and above[2, 3] ANTH 2000 is recommended for students taking a Minor because the course is fundamental to many subsequent Anthropology courses.		
SINGLE HONOURS			
ANTH 1210 and ANTH 1220 (or ANTH 1520)	• ANTH 2000, ANTH 2100, ANTH 2860 • ANTH 2020 or ANTH 2530	• ANTH 3470 • 3 credit hours from one of the following: ANTH 2820, ANTH 2890, ANTH 3720, ANTH 3730, ANTH 3930, ANTH 3950, ANTH 3980, ANTH 3990 • 9 credit hours from courses at the 3000 level	• ANTH 4850 • 9 credit hours from courses at the 4000 level[1]
	• 15 credit hours from courses at the 2000 level and above[2, 3] • 36 credit hours in ancillary options[4]		

NOTES:
[1] No more than 6 credit hours may be taken from ANTH 4830 or ANTH 4840.
[2] ANTH 2370 is recommended.
[3] Courses NATV 2070 and NATV 2080 offered by the Department of Native Studies may be used to satisfy this requirement in the General Major, Single Advanced Major and Honours programs.
[4] 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).

8.1.3 Anthropology Course Descriptions-1000 Level

ANTH 1210 Human Origins and Antiquity 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 1220 Cultural Anthropology 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 1520 Critical Cultural Anthropology Cr.Hrs. 3
(Formerly 076.152) An introduction to social cultural anthropology that critically examines production and exchange systems, age, gender, kinship and other social distinctions, belief systems, politics, and interactions between cultural systems. Learning and performance assessment is based upon supervised reading and essay writing. Students may not hold credit for ANTH 1520 (076.152) and any of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or the former 076.120.

8.1.3 Anthropology Course Descriptions-2000 Level

ANTH 2000 Culture, Society, and Power Cr.Hrs. 3
An advanced introduction to cultural anthropology that focuses on anthropological approaches to the cross-cultural organization, dynamics, and tensions of social relationships at individual, group, and societal levels. Students may not hold credit for ANTH 2000 and any of: ANTH 2001 or the former ANTH 2390 (076.239) or the former 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 076.120] or written consent of instructor.

ANTH 2020 Relatedness in a Globalizing World Cr.Hrs. 3
Anthropological approaches to diverse practices of human relatedness across cultures and over time, including 21st century reconfigurations or marriage, family, reproduction and kinship.

ANTH 2040 Native North America: A Sociocultural Survey 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 076.120] or written consent of instructor.

ANTH 2060 European Archaeology 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. 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 2100 Introduction to Archaeology 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 ANTH 2100 (076.210) and any of: ANTH 2101 or 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 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 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 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 Cr.Hrs. 3
(Formerly 076.235) A survey of culture and society in traditional and contemporary Africa. Students may not hold credit for both ANTH 2350 (076.235) and the former ANTH 2351 (076.235). 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 the former ANTH 2361 (076.236) or the former 076.120] or written consent of instructor.

ANTH 2370 Language and Culture 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 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 076.120] or written consent of instructor.

ANTH 2430 Ecology, Technology and Society 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 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. 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 2470 Anthropology of Mass Communication 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 076.120] or written consent of instructor.

ANTH 2500 Culture, Environment, and Technology Cr.Hrs. 3
(Formerly 076.250) Study of ecological systems, focusing 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. Students may not hold credit for both ANTH 2500 (076.250) and ANTH 2430 (076.243). 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 2510 Anthropology of Economic Systems 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 076.120] or written consent of instructor.

ANTH 2530 Anthropology of Political Systems 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 076.120] or written consent of instructor.

ANTH 2550 Culture and the Individual 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 076.120] or written consent of instructor.

ANTH 2560 Anthropology of Illness 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 076.120] or written consent of instructor.

ANTH 2570 Urban Anthropology 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 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 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 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 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 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 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 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 2860 Evolution and Human Diversity 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. Students may not hold credit for both ANTH 2860 (076.286) and ANTH 2861. 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 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 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 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 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. As the course content will vary from year to year, students may take this course more than once for credit.

8.1.3 Anthropology Course Descriptions-3000 Level

ANTH 3200 Anthropology of Food Cr.Hrs. 3
Considers the diversity of ways that anthropologists have used food as a productive entry point for understanding culture, society, and human ecology. The course will survey highpoints in the history of the anthropology of food and address current topics such as food security and food movements. 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 3320 Women in Cross-Cultural Perspective 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 076.120] or written consent of instructor.

ANTH 3330 Sex and Sexualities Cr.Hrs. 3
Comparative approaches to the study of human sexuality and the diversity of sexual expression and identification from a feminist and cross-cultural ethnographic perspective. Sex and sexualities are examined as social and cultural constructions, experiences, discourses, identities, and practices located in specific local contexts and shaped by wider social processes including colonialism and globalization. This course is also offered as WOMN 3330. Students may not hold credit for ANTH 3330 and any of: WOMN 3330 or the former ANTH 3350 or WOMN 3500 (156.350) with the topic "Anthropology of Sex and Sexualities." Prerequisite: [a grade of "C" or better in a minimum of three credit hours of Anthropology or Women's and Gender Studies courses] or written permission of instructor.

ANTH 3380 Anthropology and Contemporary Social Issues 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 each of ANTH 2000 (or ANTH 2001) and 3 credit hours from the following: ANTH 2020 or ANTH 2530 (076.253) or ANTH 2831 (076.283)] or [a grade of "C" or better in the former ANTH 2390 (076.239) or the former ANTH 2391 (076.239)] or written consent of instructor.

ANTH 3470 History of Anthropology 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 each of ANTH 2000 (or ANTH 2001) and 3 credit hours from the following: ANTH 2020 or ANTH 2530 (076.253) or ANTH 2831 (076.283)] or [a grade of "C" or better in the former ANTH 2390 (076.239) or the former ANTH 2391 (076.239)] or written consent of instructor.

ANTH 3500 Peoples of the Arctic 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 076.120] or written consent of instructor.

ANTH 3550 Canadian Subcultures 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 3600 Archaeological Method and Theory 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 3720 Demography of Past Populations 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 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 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 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 one of: ANTH 1220 (076.122) or ANTH 1221 (076.122) or ANTH 1520 (076.152) or ANTH 2000 or ANTH 2001 or the former ANTH 2390 (076.239) or the former ANTH 2391 (076.239) or the former 076.120] or written consent of instructor.

ANTH 3810 Anthropology of Belief Systems 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 076.120] or written consent of instructor.

ANTH 3910 Archaeological Field Training 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 3930 Ethnographic Research Methods Cr.Hrs. 3
A survey of ethnographic research methods with an emphasis on qualitative approaches, including both field and analytical techniques. Students may not hold credit for both ANTH 3930 and the former ANTH 3390 (076.339).

ANTH 3950 Artifact Analysis 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 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 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. As the course content will vary from year to year, students may take this course more than once for credit.

ANTH 3980 Botanical Analysis in Archaeology 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 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.

8.1.3 Anthropology Course Descriptions-4000 Level

ANTH 4760 Practicum in Archaeology 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 4780 Selected Topics in Cultural Anthropology Cr.Hrs. 3
(Formerly 076.478) Prerequisite: written consent of instructor or department head. As the course content will vary from year to year, students may take this course more than once for credit.

ANTH 4790 Selected Topics in Archaeology Cr.Hrs. 3
(Formerly 076.479) Prerequisite: written consent of instructor or department head. As the course content will vary from year to year, students may take this course more than once for credit.

ANTH 4800 Seminar in Applied Anthropology 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 4830 Advanced Reading and Research Cr.Hrs. 3
(Formerly 076.483) Prerequisite: written consent of instructor and department head. As the course content will vary from year to year, students may take this course more than once for credit.

ANTH 4840 Advanced Independent Work Cr.Hrs. 6
(Formerly 076.484) Prerequisite: written consent of instructor and department head. As the course content will vary from year to year, students may take this course more than once for credit.

ANTH 4850 Advanced Seminar in Anthropological Theory 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 ANTH 3470 (076.347) or ANTH 3471 (076.347)] or written consent of instructor or department head.

ANTH 4860 Selected Topics in Biological Anthropology 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. As the course content will vary from year to year, students may take this course more than once for credit.

8.2 Asian Studies Centre

Director: William Lee
Centre Office: 357 University College
Telephone: 204 474 7047
E-mail: asian_studies@umanitoba.ca

Website: umanitoba.ca/asian_studies

8.2.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Major Program

For entry to the Major, the prerequisite is a grade of "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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in both ASIA 1420 (HIST 1420) and ASIA 1430 (HIST 1430).

8.2.2 Asian Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
ASIA 1420 (HIST 1420) and ASIA 1430 (HIST 1430)	• 6 credit hours in one of the language courses numbered at the 1000 level from List A • 6 credit hours from ASIA 2080, ASIA 2620 or ASIA 2630 • 6 credit hours in courses numbered at the 2000 level from List A	6 credit hours from courses in List A numbered at the 3000 level and above (Students may substitute up to 6 credit hours in Asian language courses numbered at the 2000 level.)	
Students who wish to concentrate heavily on languages may take an Asian language course numbered at the 1000 level in Year 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 (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
ASIA 1420 (HIST 1420) and ASIA 1430 (HIST 1430)	12 credit hours chosen from List A		

List A Courses Acceptable for Asian Studies Credit

Course No.	Course Name	Credit Hours
Faculty of Arts		
Anthropology		
ANTH 2450	Ethnology of China	3
Asian Studies Asian Languages		
ASIA 1750	Introduction to Korean	6
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 2750	Intermediate Korean	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 A	dvanced Japanese	6
ASIA 3790*	Advanced Hindi-Urdu	6
ASIA 3792	Linguistic Analysis of Japanese	3
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 2080	South Asian Civilization	3
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 3560	Themes and Genres in Asian Literature	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

Course No.	Course Name	Credit Hours
English, Film, and Theatre		
FILM 2380	The International Cinema 1 [Acceptable for credit only when the topic is Asia related]	3
FILM 2390	The International Cinema 2 [Acceptable for credit only when the topic is Asia related]	3
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 2654	History of the People's Republic of China, 1949-Present	3
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 4070	Issues in Modern Asian History 1: Selected Topics (M,B)	3
HIST 4080	Issues in Modern Asian History 2: Selected Topics (M,B)	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 2010	Introduction to Hinduism (B)	3
RLGN 2020	Introduction to Buddhism (B)	3
RLGN 2540*	Modern Movements in World Religions	6
RLGN 2570	Indian Religious Art and Architecture	3
RLGN 2700	Religions of China and Japan	6
RLGN 3150	Buddhism in East Asia (B)	3
RLGN 3160	Tibetan Religious Traditions (B)	3
RLGN 3210	Indian Philosophy (B)	3
RLGN 3220	Indian Religion and Society (C)	3
RLGN 3260	Indian Buddhism (B)	3
RLGN 3266	Readings in Buddhist Texts (B)	3
RLGN 3270	Guru and Disciple (B)	3
RLGN 3750	Topics in Indian Religious Art and Architecture	3
RLGN 4060	The Yoga Tradition (B)	3
RLGN 4100	Advanced Studies in Buddhism (B)	3
RLGN 4190	Advanced Studies in Hinduism (B)	3
020.266*	Religions of Indian Origin	6
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.

8.2.3 Asian Studies Course Descriptions-1000 Level

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 1750 Introduction to Korean Cr.Hrs. 6
(Lab required) An introduction to spoken and written Korean for students with little or no previous knowledge of the language. Students will be taught basic pronunciation, vocabulary, and grammar, as well as the Hangul writing system. Students who have received all or a portion of their elementary or secondary education in the Korean language may not normally enrol. Not open to students who have previously obtained credit in ASIA 2750.

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. Students who have received all or a portion of their elementary or secondary education in the Chinese language may not normally enrol. Not open to students who have previously obtained credit for ASIA 2760 (150.276) or ASIA 3760 (150.376) or the former ASIA 2360 (150.236).

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 the former ASIA 2790 (150.279) or the former ASIA 3790 (150.379).

8.2.3 Asian Studies Course Descriptions-2000 Level

ASIA 2080 South Asian Civilization Cr.Hrs. 3
An interdisciplinary study of the Indian subcontinent from the ancient to the contemporary period, focusing on geographic, religious, historic, sociological, and political developments. Students may not hold credit for both ASIA 2080 and the former ASIA 2070 (150.207).

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 2750 Intermediate Korean Cr.Hrs. 6
(Lab required) A continuation of the study of spoken and written Korean for students who have successfully completed ASIA 1750. Students will be taught advanced pronunciation, vocabulary, and grammar. Students who have received all or a portion of their elementary or secondary education in the Korean language may not normally enrol except by special permission of the instructor. Prerequisite: [a grade of "C" or better in ASIA 1750] or written consent of instructor.

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) or the former ASIA 2360 (150.236). 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.

8.2.3 Asian Studies Course Descriptions-3000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

ASIA 3560 Themes and Genres in Asian Literature Cr.Hrs. 3
A study of selected works of Asian literature organized around specific themes or genres in English translation. Content may vary from year to year, but will include literary works from two or more regions and two or more historical periods. Prerequisite: [a grade of "C" or better in ASIA 1420 (150.142) (HIST 1420 or the former 011.142) or ASIA 1430 (150.143) (HIST 1430 or the former 011.143)] or written consent of instructor. As the course content will vary from year to year, students may take this course more than once for credit.

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 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 3660 (150.366) or the former ASIA 2360 (150.236). 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 3792 Linguistic Analysis of Japanese Cr.Hrs. 3
This course analyses structures and usage of the Japanese language, using linguistic methodology to understand the language and associated social, cultural, psychological, and cognitive factors. Prerequisite: [a grade of "C" or better in ASIA 2770 (150.277)] or written consent of instructor.

8.3 Canadian Studies Program

Acting Program Coordinator: Barry Ferguson
Program Office: 251 St. John's
Telephone: 204 474-6407
E-mail: Barry.Ferguson@ad.umanitoba.ca

Website: umanitoba.ca/canadian_studies/

8.3.1 Program Information

This is an interdisciplinary program that offers 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Program.

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 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 (Concentration) Program

For entry to the Minor (Concentration), 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Single Honours

Single Honours will consist of:

1) 54 credit hours from the list of approved courses in Canadian Studies, to be taken in the three Honours years, of which a maximum of 24 credit hours and minimum of 12 credit hours must be taken in any one department. At least 24 credit hours must be taken in courses designated as Honours courses. One of these may be a 4000-level interdisciplinary Honours seminar in Canadian Studies.

2) The minimum total credit hours that students must hold in order to complete an Honours program in Canadian Studies are 30 in Year 1; 30 in Year 2; 24 in Year 3; and 24 in Year 4.

Double Honours

Double Honours shall consist of:

1) 36 credit hours in one of the participating departments, not necessarily courses in the Canadian field, selected in accordance with the regulations of that department.

2) 36 credit hours chosen from the list of approved courses in Canadian Studies. At least 18 credit hours from the 36 must be Honours courses. One of these may be a 4000-level interdisciplinary seminar in Canadian Studies.

3) The minimum total credit hours that students must hold in order to complete a Double Honours program in Canadian Studies are 30 in Year 1; 30 in Year 2; 24 in Year 3; and 24 in Year 4.

A reading knowledge of French, while not 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 academic 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

YEAR 1	YEAR 2	YEAR 3	YEAR 4
MAJOR[1] 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		
MINOR (CONENTRATION)[2] 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		
SINGLE HONOURS[3]			
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
DOUBLE HONOURS[3]			
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 (Concentration) 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.

[3] Honours Courses: all 4000 level courses.

8.3.2.1 List of Approved Courses in Canadian Studies

In the following list of approved courses the designation (H) indicates an Honours course. Courses designated (USB) are offered in French at Université de Saint-Boniface.

* In the list below indicates courses no longer offered.

Course No.	Course Name	Credit Hours
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) (USB)	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) (USB)	3
ANTH 3500	Peoples of the Arctic (B)	3
ANTH 3501	Peuples de l'Arctique (B) (USB)	3
ANTH 3550	Canadian Subcultures	3
ANTH 3551	Sous-cultures canadiennes (USB)	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 (USB)	3
ECON 2280*	Social Welfare and Human Resources	6
ECON 2310	Canadian Economic Problems	6
ECON 2311	Les problèmes économiques du Canada (USB)	6
ECON 2350	Community Economic Development	3
ECON 2360*	Women in the Canadian Economy	6
ECON 2362	Economics of Gender	3
ECON 3300	Canadian Economic History	6
ECON 3301	Histoire économique du Canada (USB)	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

Course No.	Course Name	Credit Hours
English, Film, and Theatre		
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 2430	The Canadian Film	3
Français (USB)		
FRAN 2831	L'individu et le pays (USB)	3
FRAN 2881	Civilisation canadienne-française (USB)	3
FRAN 3531	Le théâtre québécois (USB)	3
FRAN 3541	Le théâtre de l'Ouest (USB)	3
FRAN 3831	L'époque de la contestation (USB)	3
FRAN 3841	La révolution tranquille et le roman (USB)	3
FRAN 3851	Le théâtre de l'Ouest: poésie, nouvelles (USB)	3
FRAN 3861	Le théâtre de l'Ouest: romans (USB)	3
FRAN 4831	Littérature de l'Acadie et des Cajuns (USB)	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 (USB)	6
HIST 2191	Histoire économique et sociale canadienne du XIXe siècle (USB)	6
HIST 2280	Aboriginal History of Canada (C)	6
HIST 2282	Inventing Canada (C)	3
HIST 2284	Democracy and Dissent: Contesting Canada (C)	3
HIST 2286	Modern Canada (C)	3
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 (USB)	6
HIST 2960*	The New Dominion: 1867 to 1921 (C)	6
HIST 2961*	Le nouveau Dominion: de 1867 à 1921 (USB)	6
HIST 2970*	Modern Canada: 1921 to the Present (C)	6
HIST 2971	Le Canada moderne: de 1921 à nos jours (USB)	6
HIST 3050	Canada since 1945 (C)	6
HIST 3052	Canada since the 1960s (C)	3
HIST 3054	Canada and the United States (C)	3
HIST 3220*	The History of Canadian-American Relations (A,C)	6
HIST 3250	Canada and the World, 1867 to the Present (C)	6
HIST 3442	Race, Ethnicity, Immigration, and Nation in Canadian History (C)	3
HIST 3572	The History of Women, Gender, and Sexuality in Canada (C)	6
HIST 3690	History of Northern Canada (C)	6
HIST 3721	Histoire du Manitoba (C) (USB)	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 (USB)	3
HIST 3790	Studies in Canadian History 2 (C)	3
HIST 3791	Études choisies en histoire du Canada 2 (USB)	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) (H)	6
HIST 4340	Introduction to Archival Science (G) (H)	6
HIST 4390*	The History of White Attitudes and Policies towards Native Peoples in North America (C) (H)	6
HIST 4680	Social History of Health and Disease in Modern Canada (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 (USB)	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

Course No.	Course Name	Credit Hours
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
Linguistics		
LING 1360	Languages of Canada	3
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 2272	Intermediate Ojibway 1	3
NATV 2274	Intermediate Ojibway 2	3
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
NATV 3240	Native Medicine and Health	3
NATV 3270	The Métis Nation	3
NATV 3280	Aboriginal Peoples and the Canadian Justice System	3
NATV 3300	Native Language Planning and Development	3
NATV 3310	Canadian Law and Aboriginal Peoples	3
NATV 3320*	Aboriginal Organizations	3
NATV 3340*	Circumpolar Cultures and Lifestyles	3
NATV 3370	Political Development in the North	3
NATV 3380	Cultural Constructions of Gender in Canadian Aboriginal Societies	3
NATV 4200	First Nations Government	3
NATV 4210	Seminar in Contemporary and Historical Métis Issues	3
NATV 4220	Environment, Economy and Aboriginal People	3
NATV 4230	Traditional Knowledge and Native Studies Research	3
NATV 4240	Arctic Lifestyles	3
NATV 4250	Topics on Aboriginal Identities	3
NATV 4260*	Sacred Lands and Sacred Spaces of Indigenous Peoples	3
NATV 4280	Missionaries, Colonialism and Aboriginal Peoples	3
032.090*	Introductory Cree	6
032.091*	Introductory Ojibway	6
032.121*	Intermediate Ojibway	6
032.130*	Intermediate Cree	6
032.205*	Coastal Indians of Canada	3
032.220*	Native Societies and the Political Process	3
032.321*	The Native Identity	6
032.323*	Native Peoples and the Law 2	3
032.325*	Native Peoples and the Law 1	6
032.373*	Art of the North American Native Peoples	3
Political Studies		
POLS 1070	Law, Politics and Power in Canada	3
POLS 2070	Introduction to Canadian Government	6
POLS 2071	Introduction au système gouvernemental Canadien (USB)	6
POLS 2561	Questions d'actualité en politique Canadienne (USB)	6
POLS 2570*	Introduction to Public Administration	6
POLS 2571	Initiation à l'administration publique (USB)	6
POLS 3100	Gender and Politics in Canada	3
POLS 3170	The Canadian Charter of Rights and Freedoms	3
POLS 3470	Canadian Public Management	3
POLS 3520	Canadian Foreign and Defence Policy	6
POLS 3561	Politique étrangère Canadienne (USB)	6
POLS 3670	Canadian Political Parties	3
POLS 3860	Canadian Federalism	3
POLS 3960	Canadian Politics	6
POLS 4140	Canadian Political Ideas (H)	3

Course No.	Course Name	Credit Hours
POLS 4150	Indigenous Governance (H)	3
POLS 4180	Provincial Politics in Canada (H)	3
POLS 4190	Manitoba Politics and Government (H)	3
POLS 4660	The State in the Economy (H)	6
POLS 4860	The Canadian Policy Process (H)	6
019.156*	Introduction to Canadian Government	6
019.156F*	Introduction au système gouvernemental Canadienne (USB)	6
019.206*	Urban and Local Politics	6
019.256*	Issues of Canadian Politics	6
019.266*	Human Rights and Civil Liberties	6
019.286*	Canadian Political Parties	6
019.356*	Canadian Foreign Policy	6
019.366*	Quebec and the Canadian Political System (H)	3
019.368*	Canadian Defense Policy	3
019.476*	Manitoba Politics and Voting Behaviour	6
019.487*	Government and Public Sector Unionism (H)	6
Religion		
RLGN 2410*	Religion in Canada (C)	6
RLGN 2411*	Les religions au Canada (USB)	6
RLGN 2590	Religion and Social Issues (C)	3
RLGN 2591	La religion et les problèmes sociaux (USB)	3
020.272*	Dimensions of Religiosity in Contemporary Canadian Literature	6
Slavic Studies		
UKRN 2410	Ukrainian Canadian Cultural Experience	3
UKRN 2420*	Ukrainian Canadian Literature	3
UKRN 2430*	Ukrainian Canadian Folklore	3
Sociology		
SOC 2320	Canadian Society and Culture	3
SOC 2321	La société Canadienne et sa culture (USB)	3
SOC 2370	Ethnic Relations	3
SOC 2371	Rapports ethniques (USB)	3
SOC 2531	Sociologie du Manitoba (USB)	6
SOC 2610	Sociology of Criminal Justice and Corrections	3
SOC 2620	The Sociology of Aging	3
SOC 3380	Power, Politics and the Welfare State	3
SOC 3470*	Political Sociology	3
SOC 3471	Sociologie politique (USB)	3
SOC 3700	Sociology of Law	3
Ukrainian Canadian Heritage Studies		
UCHS 3100	The Ukrainian Arts in Canada	3

Course No.	Course Name	Credit Hours
School of Art		
FAAH 3260	Canadian Art and Architecture to World War II	3
FAAH 3270	Canadian Art Since World War II	3
FAAH 3430	Inuit Art	3
054.358*	Inuit Culture and Art	3
054.375*	Canadian Art 1	3
054.376*	Canadian Art 2	3
Clayton H. Riddell Faculty of Environment, Earth, and Resources		
Geography		
GEOG 2450*	The Making of the Prairie Landscape (A)	6
GEOG 2570	Geography of Canada (A)	3
GEOG 2900	Geography of Canadian Prairie Landscapes (A)	3
GEOG 3431	Géographie du Canada (USB)	3
GEOG 3480	Canadian Problems	3
GEOG 3481	Particularités de la géographie du Canada (USB)	3
GEOG 3700*	Canada: The Making of the Human Landscape (A)	6
GEOG 3701	Canada: évolution de l'écoumène (USB)	6
GEOG 3900	Geography of Manitoba (A)	3
053.369*	Historical Geography of Indian Peoples in the Canadian Fur Trade	6
053.378*	Historical Geography of Canadian Indians (A)	6
053.470*	Historical Geography of the Ojibway Indians (H)	3

8.3.3 Canadian Studies Course Descriptions

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 Aboriginal 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. As the course content will vary from year to year, students may take this course more than once for credit.

8.4 Catholic Studies Program

Acting Program Coordinator: Christopher Adams
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Telephone: 204 474 9165
E-mail: rector_stpaulscollege@umanitoba.ca

Website: 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Minor Program

For entry to the Minor (Concentration), 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

YEAR 1	YEAR 2	YEAR 3	YEAR 4
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
CATH 1190 and at least 3 credit hours from the List of Approved Courses in Catholic Studies	• RLGN 3870 • 9 credit hours from the List of Approved Courses in Catholic Studies		

List of Approved Courses in Catholic Studies

Course No.	Course Name	Credit Hours
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	6
History		
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

* Indicates course no longer offered.

8.4.3 Catholic Studies Course Descriptions

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 pursing 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. As the course content will vary from year to year, students may take this course more than once for credit.

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 [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 [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.

8.5 Central and East European Studies Program

Acting Program Coordinator: Elena Baraban
Program Office: 322 Fletcher Argue
Telephone: 204 474 9735
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Website: umanitoba.ca/european_studies/

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 continue 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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, Ukrainian or Yiddish and six credit hours from the list of approved courses in Central and East European Studies 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in both six credit hours of Russian, German, Polish, Ukrainian or Yiddish and six credit hours from the list of approved courses in Central and East European Studies below.

Honours Program (Double Honours Only)

For entry to the Honours program, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

This program is only available to students registered in the Honours program in Economics, History or Political Studies.

Courses used toward the Major, Minor (Concentration) or Honours may not also be used toward a Major, Minor (Concentration) or Honours in the department in which they are offered.

8.5.2 Central and East European Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours in a language from courses numbered at the 1000 or 2000 level[2] in Russian, German, Ukrainian, Polish or Yiddish, plus 6 credit hours from the List of Approved Courses in Central and East European Studies	18 credit hours from the List of Approved Courses in Central and East European Studies, of which at least 6 credit hours must be taken in two subject fields[5]		
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours in a language from courses numbered at the 1000 or 2000 level[2] in Russian, German, Ukrainian, Polish or Yiddish, plus 6 credit hours from the List of Approved Courses in Central and East European Studies	36 credit hours from the List of Approved Courses in Central and East European Studies, of which at least 12 credit hours must be taken in two subject fields[5]		
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours in a language from courses numbered at the 1000 or 2000 level[2] in Russian, German, Ukrainian, Polish or Yiddish, plus 6 credit hours from the List of Approved Courses in Central and East European Studies[4]	6 credit hours from the List of Approved Courses in Central and East European Studies		
DOUBLE HONOURS[1]			
6 credit hours in a language from courses numbered at the 1000 or 2000 level[2] in Russian, German, Ukrainian, Polish or Yiddish	• 6 credit hours from the List of Approved Courses in Central and East European Studies • 6 credit hours in a language from courses numbered at the 1000 or 2000 level in Russian, German, Ukrainian, Polish or Yiddish[3] • 6 credit hours in a language from courses numbered at the 3000 level in Russian, German, Ukrainian or Polish • 6 credit hours from courses numbered at the 3000 level in History, Economics, Political Studies, Russian, Ukrainian, German or Fine Arts[6] • 12 credit hours in other Honours field • 6 credit hours in ancillary options	• 12 credit hours from courses numbered at the 4000 level in Economics, German, History, Political Studies, Russian Ukrainian or Fine Arts[6] (of these at least 6 credit hours must be taken from two subject fields) • minimum of 12 hours of credit in other Honours field	

NOTES:

[1] Students must ensure that all course prerequisites are met when selecting courses for the Double Honours program. Students should consult the program coordinator when selecting courses in Year 1 and 2 of the program.

[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 their language instruction in Year 1 with 6 credit hours of courses numbered beyond the 1000 level may take 6 credit hours at the 1000 or 2000 levels in a different language approved by the program coordinator.

[4] Students who have declared a Major in Russian, German or Ukrainian can either take 12 credit hours from at least two different subject fields from the List of Approved Courses in Central and East European Studies, or 6 credit hours from courses numbered at the 1000 or 2000 level in a language (Russian, German, Ukrainian, Polish or Yiddish) other than their declared Major and 6 credit hours from the List of Approved Courses in Central and East European Studies.

[5] Students may substitute up to 6 credit hours with language courses numbered at the 1000 or 2000 level in Russian, German, Ukrainian, Polish or Yiddish.

[6] Courses must be individually approved by the program coordinator as relevant to Central and East European Studies. For information on available courses, please contact the program coordinator.

List of Approved Courses in Central and East European Studies

Course No.	Course Name	Credit Hours
Faculty of Arts		
Economics		
ECON 2270*	European Economic History	6
ECON 2510	The Economy of Ukraine	3
ECON 4450*	Comparative Economic Systems	6
German and Slavic Studies		
GRMN 1300	Masterpieces of German Literature in English Translation	3
GRMN 1310	Love in German Culture in English Translation	3
GRMN 2120	Introduction to German Culture 1	3
GRMN 2130	Introduction to German Culture 2	3
GRMN 3260	Representations of the Holocaust	3
GRMN 3262	Representations of the Holocaust in English Translation	3
GRMN 3270	Studies in Contemporary German Cinema	3
GRMN 3280	Sex, Gender and Cultural Politics in the German-Speaking World	3
GRMN 3282	Sex, Gender and Cultural Politics in the German-Speaking World in English Translation	3
GRMN 3290	History in Literature in German-Speaking Countries	3
GRMN 3390	German Representations of War	3
GRMN 3392	German Representations of War	3
GRMN 3520*	Special Topics in Comparative German and Slavic Studies	6
GRMN 3530	Special Topics in Comparative German and Slavic Studies	3
HUNG 1000	Introduction to Hungarian 1	3
HUNG 1002	Introduction to Hungarian 2	3
POL 1900	Love, Heroes and Patriotism in Contemporary Poland	3
POL 2600	Polish Culture until 1918	3
POL 2610	Polish Culture 1918 to the Present	3
RUSN 1400	Masterpieces of Russian Literature in Translation	3
RUSN 2280	Russian Culture 1	3
RUSN 2290	Russian Culture 2	3
RUSN 2310	Exploring Russia through Film	3
RUSN 2410	Russian Literature after Stalin	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
SLAV 3520*	Special Topics in Comparative German and Slavic Studies	6
SLAV 3530	Special Topics in Comparative German and Slavic Studies	3
SLAV 3920	Gogol	3
UKRN 2200	Ukrainian Myth, Rites and Rituals	3
UKRN 2770	Ukrainian Culture 1	3
UKRN 2780	Ukrainian Culture 2	3
UKRN 2800	Literature and Revolution in Ukraine	3
UKRN 2820	Holodomor and Holocaust in Ukrainian Literature and Culture	3
UKRN 3100	Ukrainian Story Writing Through the Ages	3
UKRN 3300	Literature of Independent Ukraine	3
UKRN 3670*	Contemporary Ukrainian Literature	3
UKRN 3850*	Ukrainian Short Story	3

Course No.	Course Name	Credit Hours
History		
HIST 2080	The Byzantine Empire and the Slavic World (D)	3
HIST 2240	History of Antisemitism and the Holocaust (E)	6
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 3062	German and German-Jewish History, 1618 to the Present (E)	6
HIST 3064	German and German-Jewish History, 1618-1900 (E)	3
HIST 3066	German and German-Jewish History, 1900 to the Present (E)	3
HIST 3180*	Modern Russia: The Soviet Era and Beyond	6
HIST 4300	Problems in Modern Russian and Soviet History	6
011.255*	History of Ukraine	6
Judaic Studies		
YDSH 2320	Yiddish Literature and Language	6
Political Studies		
POLS 3720	Politics, Government and Society in Ukraine	3
POLS 3810	Introduction to Marxism	3
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
RLGN 2530	Eastern Christianity in the Contemporary World (A)	3
RLGN 3280	Hasidism (A)	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
FAAH 4070	Seminar in Art History 1 (when its focus is on Central and Eastern Europe	3
FAAH 4080*	Seminar in Art History 2 (when its focus is on Central and Eastern Europe)	3

Course No.	Course Name	Credit Hours
Clayton H. Riddell Faculty of Environment, Earth, and Resources		
Geography		
GEOG 3600*	Geography of Ukraine	3

* Indicates course no longer offered.

Students are advised to consult the respective departmental Calendar entries for specific information on prerequisites and restrictions.

8.6 The Changing Workplace Program

Program Coordinator: Arts General Office
Program Office: 3rd Floor Fletcher Argue
Telephone: 204 474 9100
E-mail: arts_inquiry@umanitoba.ca

8.6.1 Program Information

The Changing Workplace is a Concentration only available to students in the B.A. Integrated Studies degree program. This program is not available as a Minor program.

The Changing Workplace is an interdisciplinary concentration and has been developed in response to information received from employees and mid-career working adults interested in pursuing a degree. Successful completion of this concentration provides learners with an understanding of the workplace in its current context and its changing nature.

Concentration Program

For entry to the Concentration, the prerequisite is a minimum grade of "C" or better in the first 6 credit hours of courses required for the Concentration.

The Concentration in The Changing Workplace will consist of 18 credit hours from the following list of courses. Students must meet the departmental prerequisites for entry into any course in this list. No course can be used to satisfy more than one Concentration.

Course No.	Course Name	Credit Hours
Faculty of Arts		
Anthropology		
ANTH 2500	Culture, Environment, and Technology (B)	3
Economics		
ECON 1210	Introduction to Canadian Economic Issues and Policies	3
Labour Studies		
LABR 1260	Working for a Living	3
LABR 1290	Introduction to the Canadian Labour Movement	3
LABR 2100	The Political Economy of Labour	3
LABR 3060	Workplace Health and Safety	3
Philosophy		
PHIL 2830	Business Ethics	3
Sociology		
SOC 2390	Social Organization	3

NOTE: Specific course sections of ECON 2610 Special Topics in Economics (3) may satisfy the concentration requirement. Students should contact the Department of Economics for information.

For course descriptions, see departmental listings.

8.7 Department of Classics

Head: Mark Joyal
General Office: 364 University College
Telephone: 204 474 9502
E-mail: classics@umanitoba.ca

Website: umanitoba.ca/classics

8.7.1 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 (Concentration) programs in Classical Studies, Greek, and Latin.

8.7.2 Classical Studies

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in both CLAS 1270 and CLAS 1280, or written permission of the department head.

8.7.3 Classical Studies

YEAR 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.)		
SINGLE 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 (CONCENTRATION) 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 (Concentration) in Classical Studies

History

HIST 2420	The Medieval World (D)	6
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

* Indicates course no longer offered.

For course descriptions, see the departmental listings in this Calendar.

8.7.4 Greek

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in both GRK 1010 and GRK 1020, or written consent of the department head.

8.7.5 Greek

YEAR 1	YEAR 2	YEAR 3	YEAR 4
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
GRK 1010 and GRK 1020	GRK 1310, GRK 2770 plus 36 credit hours in Greek		
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
GRK 1010 and GRK 1020	GRK 1310 plus 9 credit hours in Greek		

8.7.6 Latin

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in both LATN 1080 and LATN 1090, or written consent of the department head.

8.7.7 Latin

YEAR 1	YEAR 2	YEAR 3	YEAR 4
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
LATN 1080 and LATN 1090	LATN 1320, LATN 2760 plus 36 credit hours in Latin		
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
LATN 1080 and LATN 1090	LATN 1320 plus 9 credit hours in Latin		

8.7.8 Classics Course Descriptions-Classical Studies-1000 Level

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.

8.7.8 Classics Course Descriptions-Classical Studies-2000 Level

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.

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.

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.

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.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 2612 Greek Literature in Translation Cr.Hrs. 3
A survey in English of selected works of such major figures in Greek literature as Homer, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, and Plato. The course includes discussion of the influence of these and other works on the arts and literature of the world. Students may not hold credit for both CLAS 2612 and the former CLAS 3610 (003.361).

CLAS 2622 Latin Literature in Translation Cr.Hrs. 3
A survey in English of selected works of such major figures in Latin literature as Vergil, Ovid, Terence, Livy, Cicero, Horace and Seneca. The course includes discussion of the influence of these and other works on the arts and literature of the world. Students may not hold credit for both CLAS 2622 and the former CLAS 3620 (003.362).

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.

8.7.8 Classics Course Descriptions-Classical Studies-3000 Level

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 3264 Pompeii and Herculaneum Cr.Hrs. 3
This course will study the art and archaeology of Pompeii, Herculaneum, and other sites destroyed by Mount Vesuvius in 79 C.E., with attention to social history, artistic developments, and daily life. Students may not hold credit for both CLAS 3264 and the former CLAS 3730 (003.373) when titled "Pompeii and Herculaneum."

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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.7.8 Classics Course Descriptions-Greek-1000 Level

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. 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.

8.7.8 Classics Course Descriptions-Greek-2000 Level

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 2732 Readings in Greek Poetry Cr.Hrs. 3
Readings from the works of selected poets of the Archaic and Classical periods. Students may not hold credit for both GRK 2732 and the former GRK 2730 (003.273). Prerequisite: a grade of "C" or better in GRK 1310 (003.131).

GRK 2752 Readings in Greek Prose Literature Cr.Hrs. 3
Readings from the works of selected prose authors of the Classical period. Students may not hold credit for both GRK 2752 and the former GRK 2750 (003.275). 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 practice 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).

8.7.8 Classics Course Descriptions-Greek-3000 Level

GRK 3750 Homer Cr.Hrs. 3
(Formerly 003.375) At least three complete books of the Iliad or Odyssey are read with attention to compositional technique and metre. Prerequisite: [a grade of "C" or better in GRK 2732 or GRK 2752 or the former GRK 2730 (003.273) or the former GRK 2750 (003.275)] or written consent of department head.

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 2732 or GRK 2752 or the former GRK 2730 (003.273) or the former GRK 2750 (003.275)] or written consent of department head.

GRK 3790 The Greek Tragedians Cr.Hrs. 3
(Formerly 003.379) Reading of at least one tragedy from among those of Aeschylus, Sophocies or Euripides. Prerequisite: [a grade of "C" or better in GRK 2732 or GRK 2752 or the former GRK 2730 (003.273) or the former GRK 2750 (003.275)] or written consent of department head.

GRK 3810 Aristophanes Cr.Hrs. 3
(Formerly 003.381) Reading of at least one complete comedy. Prerequisite: [a grade of "C" or better in GRK 2732 or GRK 2752 or the former GRK 2730 (003.273) or the former GRK 2750 (003.275)] or written consent of department head.

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 2732 or GRK 2752 or the former GRK 2730 (003.273) or the former GRK 2750 (003.275)] or written consent of department head.

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 2732 or GRK 2752 or the former GRK 2730 (003.273) or the former GRK 2750 (003.275)] or written consent of department head.

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 2732 or GRK 2752 or the former GRK 2730 (003.273) or the former GRK 2750 (003.275)] or written consent of department head.

GRK 3930 Advanced Studies in Greek Prose Literature Cr.Hrs. 3
Readings 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. As the course content will vary from year to year, students may take this course more than once for credit.

GRK 3940 Advanced Studies in Greek Poetry Cr.Hrs. 3
Readings 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. As the course content will vary from year to year, students may take this course more than once for credit.

8.7.8 Classics Course Descriptions-Latin-1000 Level

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).

8.7.8 Classics Course Descriptions-Latin-2000 Level

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).

8.7.8 Classics Course Descriptions-Latin-3000 Level

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)] or written consent of department head.

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)] or written consent of department head.

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)] or written consent of department head.

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)] or written consent of department head.

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)] or written consent of department head.

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)] or written consent of department head.

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)] or written consent of department head.

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)] or written consent of department head.

LATN 3932 Advanced Studies in Latin Prose Literature Cr.Hrs. 3
Readings 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. As the course content will vary from year to year, students may take this course more than once for credit.

LATN 3942 Advanced Studies in Latin Poetry Cr.Hrs. 3
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. As the course content will vary from year to year, students may take this course more than once for credit.

8.8 Cross-Disciplinary Programs

The Faculty of Arts offers the following Cross-Disciplinary programs. For course descriptions and prerequisites, refer to departmental sections in this Calendar.

Asian Studies	See Section 8.2
Canadian Studies	See Section 8.3
Catholic Studies	See Section 8.4
Central and East European Studies	See Section 8.5
The Changing Workplace	See Section 8.6
Global Political Economy	See Section 8.13
History of Art	See Section 9.1
Labour Studies	See Section 8.18
Latin American Studies	See Section 8.19
Medieval and Renaissance Studies	See Section 8.21
Ukrainian Canadian Heritage Studies	See Section 8.28
Women's and Gender Studies	See Section 8.29

8.9 Department of Economics

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8.9.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Major Program

For entry to the General or Advanced Major, the prerequisite is a grade of "C" or better in both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200. 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200.

Honours Program

For entry to the Honours program, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

It is recommended that students complete ECON 2800, ECON 3800, and ECON 3810 before attempting ECON 4430.

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, ECON 4120 Intermediate Econometrics and ECON 4130 Seminar in Econometrics in combination with some basic statistics courses 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 8.5.

8.9.2 Economics

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR[1,2] TOTAL: 30 CREDIT HOURS			
Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200[8]	• Two of: ECON 2450[2], ECON 2460[2], ECON 2470[2], ECON 2480[2] • An additional 18 credit hours in Economics, of which at least 6 hours must be from courses numbered at the 3000 level		
ADVANCED MAJOR[1] TOTAL: 48 CREDIT HOURS			
Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200[8]	• ECON 2450[3,4], ECON 2460[3,4], ECON 2470[3,4], ECON 2480[3,4], ECON 3170[4], ECON 3180[4] • ECON 4820[4] or ECON 4830[4] • An additional 18 credit hours in Economics		
MINOR (CONCENTRATION)[1] TOTAL: 18 CREDIT HOURS			
Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200[8]	An additional 12 credit hours in Economics		
HONOURS SINGLE[5, 6, 9, 10]			
Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200[8]	• 54 credit hours in Economics courses, to include the following: - 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 - 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, 9, 10]			
Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200[8]	• 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 - 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		

8.9.3 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.

NOTES:

[1] For the purposes of satisfying program requirements in the Major, Advanced Major and Minor (Concentration) programs, and of satisfying course prerequisites, Honours courses are accept able 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] A maximum of 6 credit hours at the 1000 level may be used towards a Major, Minor (Concentration) or Honours Program.

[9] Ancillary options are courses taken from outside the Honours field of study.

[10] Honours courses: ECON 2700, ECON 2800, ECON 3700, ECON 3800, ECON 3810 and all 4000 level courses.

Joint Honours Program

Students in the Joint Honours program will follow the regulations outlined in the Honours program, see Section 3.3: Honours Degree Program.

8.9.4 Economics-Mathematics Joint Honours Program

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS[7] TOTAL: 120 CREDIT HOURS			
• Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200; 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 "Written English" course	• ECON 2700, ECON 2800, MATH 2202, MATH 2352, MATH 2750, MATH 2800 • Plus 6 credit hours of approved electives[6]	• ECON 3700; ECON 3800; ECON 3180[3] (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 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 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700.

[2] The combination of MATH 1500 (or MATH 1510 or MATH 1520) 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.

[7] Economics Honours courses: ECON 2700, ECON 2800, ECON 3700, ECON 3800, ECON 3810 and all 4000 level courses.

8.9.5 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 3.3: Honours Degree Program.

8.9.6 Economics-Statistics Joint Honours Program

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS[5] TOTAL: 120 CREDIT HOURS			
• Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220, or the former ECON 1200; MATH 1300[1]; MATH 1500[1,2]; MATH 1700[1,2]; STAT 1000[3]; COMP 1010[3] • Plus 9 credit hours of electives which should include the required "Written English" course	• ECON 2700, ECON 2800, MATH 2202, MATH 2352, MATH 2750, STAT 2000, STAT 2400 • Plus 3 credit hours of approved Economics electives[4]	• ECON 3700, ECON 3800, MATH 3740 or MATH 3760, STAT 3400, STAT 3470, STAT 3480, STAT 3490, STAT 3800 • Plus 3 credit hours of approved Economics electives[4]	• ECON 4120, ECON 4130, STAT 4100, STAT 4520, STAT 4530, STAT 4580 • Plus 12 credit hours of approved Economics electives[4]
30 HOURS	30 HOURS	30 HOURS	30 HOURS

NOTES:

[1] MATH 1310 may be taken in place of MATH 1300; MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700.

[2] The combination of MATH 1500[1] and MATH 1700[1] 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 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.

[5] Economics Honoours courses: ECON 2700, ECON 2800, ECON 3700, ECON 3800, ECON 3810 and all 4000 level courses.

8.9.7 Economics Course Descriptions-1000 Level

ECON 1010 Introduction to Microeconomic Principles Cr.Hrs. 3
This course introduces students to the study of microeconomics. Topics include: demand and supply, price determination, market structure and resource allocation; the behaviour of consumers and firms; and market intervention by government. Selected economic topics are examined such as: welfare programs, environmental regulation, the economics of discrimination, pay equity, and taxation. Students may not hold credit for ECON 1010 and any of: ECON 1011 or ECON 1210 (018.121) or ECON 1211 (018.121) or ECON 1220 (018.122) or ECON 1221 (018.122) or the former ECON 1200 (018.120) or the former ECON 1201 (018.120).

ECON 1020 Introduction to Macroeconomic Principles Cr.Hrs. 3
This course introduces students to the study of macroeconomics. Topics include: aggregate performance and policy; the determinants of national income, employment and the price level, the role of monetary and fiscal policies in stabilizing the economy and promoting economic growth. Students may not hold credit for ECON 1020 and any of: ECON 1021 or ECON 1210 (018.121) or ECON 1211 (018.121) or ECON 1220 (018.122) or ECON 1221 (018.122) or the former ECON 1200 (018.120) or the former ECON 1201 (018.120).

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 1010 or ECON 1011 or ECON 1020 or ECON 1021 or the former ECON 1200 (018.120) or the former ECON 1201 (018.120).

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 1010 or ECON 1011 or ECON 1020 or ECON 1021 or the former ECON 1200 (018.120) or the former ECON 1201 (018.120).

8.9.7 Economics Course Descriptions-2000 Level

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 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 2362 Economics of Gender Cr.Hrs. 3
This course will use both neo-classical and feminist economic theory to explore how gender differences may lead to different economic outcomes for men and women, both within families and in the marketplace. Topics covered may include gender aspects of production (both inside and outside the household), leisure, marriage and divorce, fertility, childcare, education, migration, aging and development. Students may not hold credit for both ECON 2362 and the former ECON 2360 (018.236). Prerequisite: a grade of "C" or better in ECON 1010 or ECON 1011 or ECON 1210 (018.121) or ECON 1211 (018.121) or the former ECON 1200 (018.120) or the former ECON 1201 (018.120).

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 ECON 1010 or ECON 1011 or the former ECON 1200 (018.120) or the former ECON 1201 (018.120)] or [a grade of "C" or better in both ECON 1210 (or ECON 1211 or the former 018.121) and ECON 1220 (or ECON 1221 or the former 018.122)].

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 ECON 2420 (018.242) and any of: LABR 2420 (153.242) or LABR 2100. 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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)].

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 ECON 1010 or ECON 1011 or the former ECON 1200 (018.120) or the former ECON 1201 (018.120)] or [a grade of "C" or better in both ECON 1210 (or ECON 1211 or the former 018.121) and ECON 1220 (or ECON 1221 or the former 018.122)].

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 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 ECON 1020 or ECON 1021 or the former ECON 1200 (018.120) or the former ECON 1201 (018.120)] or [a grade of "C" or better in both ECON 1210 (or ECON 1211 or the former 018.121) and ECON 1220 (or ECON 1221 or the former 018.122)].

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 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 six credit hours of 1000 level Economics] and [a grade of "C" or better in MATH 1500 (136.150) or MATH 1520 (136.152)].

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 ECON 2540 (018.254).

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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.

8.9.7 Economics Course Descriptions-3000 Level

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 be held with ABIZ 3080 (061.308). Prerequisite: [a grade of "C" or better in ECON 3170 (018.317)] or [a grade of "C" or better in each of STAT 2000 (005.200) and six credit hours of 1000 level economics].

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 3362 Labour Economics 1 Cr.Hrs. 3
An introduction to labour economics, including labour supply, labour demand and the determination of wages and employment. Students may not hold credit for both ECON 3362 and the former ECON 3360 (018.336). Prerequisite: a grade of "C" or better in ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270).

ECON 3364 Labour Economics 2 Cr.Hrs. 3
Analysis of topics in labour economics such as unemployment, immigration, gender discrimination and the impact of unions. Students may not hold credit for both ECON 3364 and the former ECON 3360 (018.366). Prerequisite: a grade of "C" or better in ECON 3362.

ECON 3374 Public Expenditure Analysis and Policy Evaluation Cr.Hrs. 3
The study of the role of government in the economy, government budget and expenditure evaluation issues, benefit-cost analysis, as well as government intervention regulation, public pricing, and ownership issues. Students may not hold credit for both ECON 3374 and the former ECON 3370 (018.337). Prerequisite: a grade of "C" of better in ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270).

ECON 3376 Taxation, Tax Policy and Inter-government Public Finance Issues Cr.Hrs. 3
A study of the principles of taxation, tax policy in Canada and elsewhere, government deficit and debt issues and fiscal federalism with emphasis on inter-governmental finance issues. Students may not hold credit for both ECON 3376 and the former ECON 3370 (018.337). Prerequisite: a grade of "C" or better in ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270).

ECON 3392 An Introduction to Development Economics Cr.Hrs. 3
The definition and major challenges of development and an introduction to theories of growth and development. Students may not hold credit for both ECON 3392 and the former ECON 3390 (018.339). 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 2470 or ECON 2471 (018.247) or ECON 2800 (018.280)] or written consent of instructor.

ECON 3394 Development Economics: Problems and Policies Cr.Hrs. 3
Processes and problems of development policies to accelerate change. Economic relations between developed and developing regions. Students may not hold credit for both ECON 3394 and the former ECON 3390 (018.339). 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 2470 (018.247) or ECON 2471 (018.247) or ECON 2800 (018.280)] and [a grade of "C" or better in ECON 3392 or ECON 2630 (018.263)] or written consent of instructor.

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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)].

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 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 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 more than three credit hours of the following: ECON 2700 (018.270) or 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 ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270).

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 3742 Industrial Organization and Firm Strategy Cr.Hrs. 3
Market structure and firms' strategic decisions will be analyzed. Topics may cover monopoly pricing strategies such as price discrimination; non-pricing strategies such as advertising, quality decisions and differentiated products; dynamic oligopoly models; mergers; anti-competitive behaviour; and auctions. This course assumes students have a sound background in economic theory, as well as single-variable calculus and basic statistics. Students may not hold credit for both ECON 3742 and the former ECON 3740 (018.374). Prerequisite: [a grade of "C" or better in ECON 2450 (018.245) or ECON 2451 (018.245) or ECON 2700 (018.270)] or consent of the instructor.

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 more than three credit hours of the following: ECON 2800 (018.280) or 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.

8.9.7 Economics Course Descriptions-4000 Level

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
This is a course in applied micro-economic policy analysis using the techniques of cost-benefit analysis as its foundation. Students will learn the welfare foundations of cost-benefit analysis, techniques for decision-making under conditions of risk and uncertainty, and how these techniques may be applied to public policy. The course will include examples from all areas of public policy, including health, education, social services criminal justice, etc. 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 4480 Game Theory Cr.Hrs. 3
The course will analyze the strategic interaction between firms in oligopolistic markets, between agents in common resource settings, and between government and its citizens. Market failure arising from asymmetric information and externalities will be examined. Negotiation and bargaining between agents will also be examined. Prerequisite: [a grade of "B" or better in ECON 2530 (018.253) or MATH 1500 (136.150) or MATH 1510 (136.151) or MATH 1520 (136.152) or MATH 1690 (136.169)] or written consent of instructor.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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)].

8.10 English, Film, and Theatre

Head: Arlene Young
General Office: 625 Fletcher Argue Building
Telephone: 204 474 9678
E-mail: english@umanitoba.ca

Website: umanitoba.ca/english_film_and_theatre

8.10.1 English 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs. 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.

Notes

ENGL 0930, ENGL 0940, ENGL 1061 and ENGL 1071 are not designed to teach English as a second language.

For students who need help with basic writing skills, the Department of English, Film, and Theatre 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 Single Advanced Major, the 42 hours for a Double Advanced Major, the 30 hours for a General Major, or the 18 hours for a Minor (Concentration). 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.

Study Resources

All students taking English should own a writing handbook and a good dictionary such as Webster's New Collegiate, Funk and Wagnall's Standard College, The Concise Oxford, The Gage Canadian, or The New World. Students will also find useful The MLA Handbook and M.H. Abrams, A Glossary of Literary Terms.

8.10.2 English

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR[1, 2, 4] 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 at the 2000 level and above to include at least 9 credit hours of literature prior to 1900[4] [of the credit hours listed above, at least 6 credit hours must be at the 3000 level].		
SINGLE ADVANCED MAJOR[1, 2, 4, 9] 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[3] at the 2000 level and above to include at least 15 credit hours of literature prior to 1900[4] [of the credit hours listed above, at least 9 credit hours must be at the 3000 level].		
DOUBLE ADVANCED MAJOR[4, 9] TOTAL: 42 CREDIT HOURS			
ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340	36 credit hours in English at the 2000 level and above to include at least 12 credit hours of literature prior to 1900 [of the credit hours listed above, at least 9 credit hours must be at the 3000 level].		
MINOR (CONCENTRATION)[2, 4] 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 at the 2000 level and above to include at least 6 credit hours of literature prior to 1900 [of the credit hours listed above, at least 3 credit hours must be at the 3000 level]. Students may not offer literature in translation courses[4] to satisfy the requirements of the Minor (Concentration).		
SINGLE HONOURS [4, 5, 7, 8]			
ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340	• ENGL 2640 (in Year 2) • 24 credit hours of literature prior to 1900[4], 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] • 6 credit hours in Canadian literature, selected from the following English courses: ENGL 2270, ENGL 3270[6] • 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 3990[6] • 9 credit hours in other English courses at the 2000 level and above [of the credit hours listed above, at least 9 credit hours must be at the 3000 level]. • 9 credit hours in Honours courses (4000 level) in Years 3 and 4. Honours courses that are double-numbered with a graduate course will be limited to fourth-year Honours students. • 24 credit hours in ancillary options		
DOUBLE HONOURS [2, 4, 7, 8]			
ENGL 1200 or ENGL 1300 (or the former 004.126) or both ENGL 1310 and ENGL 1340	• ENGL 2640 (in Year 2) • 18 credit hours of literature prior to 1900[4] • 6 credit hours in other English courses at the 2000 level and above [of the credit hours listed above, at least 6 credit hours must be at the 3000 level]. • 6 credit hours in Honours courses (4000 level). Honours courses 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] Students may offer up to 6 credit hours in Film Studies or Theatre courses, with the exception of FILM 1290, FILM 1310 (or the former FILM 1300), THTR 1220, THTR 2170, THTR 2180 and THTR 2490, toward both the General Major and Single Advanced Major in English. Any Film Studies or Theatre courses so applied may not also be offered toward a Minor (Concentration) in Film Studies or Theatre.

[2] 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 (Concentration) in Film Studies or as an ancillary option in Honours.

[3] Credit in ENGL 2000 may be offered toward the 48 hours in general courses required for a Single Advanced Major only.

[4] Students may offer up to 6 credit hours of literature in translation courses (ENGL 2490, CLAS 2612, CLAS 2622, ICEL 3320, ICEL 3330) to satisfy requirements for a General Major, Single Advanced Major, Double 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, Single Advanced Major, Double Advanced Major, Single Honours or Double Honours. Students may not offer literature in translation courses to satisfy the requirements for a Minor (Concentration).

[5] Film and Theatre courses, other than Introductory (1000 level), may be used for credit towards an Single Honours program.

[6] Certain courses that vary in content from year to year, such as Honours courses and Special Topics courses, may also satisfy this requirement, as determined by the Department.

[7] Ancillary options are courses taken from outside the Honours field of study.

[8] Honours courses: all 4000 level courses.

[9] It is recommendd that students complete a six credit hour theory course, specifically ENGL 2640.

Literature Prior to 1900

Students declaring a four-year Advanced Major in English must take at least 15 credit hours from the courses listed below. Students declaring a three-year General Major in English must take at least 9 credit hours from the list. Students declaring a Minor (Concentration) 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 (Concentrations) 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 No.	Course Name	Credit Hours
English		
ENGL 2070	Literature of the Sixteenth Century	6
ENGL 2080	Medieval Literature	6
ENGL 2090	Literature of the Seventeenth Century	6
ENGL 2120	Literature of the Restoration and Eighteenth Century	6
ENGL 2130	Literature of the Romantic Period	6
ENGL 2140	Literature of the Victorian Period	6
ENGL 2170	American Literature to 1900	6
ENGL 3000	Chaucer	6
ENGL 3010	Shakespeare	6
ENGL 3020	Milton	6
ENGL 3030	Studies in Sixteenth-Century Literature	3
ENGL 3050	Studies in Old English	6
ENGL 3080	Studies in Medieval Literature	3
ENGL 3090	Studies in Seventeenth-Century Literature	3
ENGL 3120	Studies in Restoration and Eighteenth-Century Literature	3
ENGL 3130	Studies in the Romantics	3
ENGL 3140	Studies in the Victorians	3
ENGL 3180	Studies in Renaissance Literature	3

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 4. Contact the department for further information on restrictions.

Classics (Classical Studies)		
CLAS 2612	Greek Literature in Translation (taught with ENGL 2490)	3
CLAS 2622	Latin Literature in Translation (taught with ENGL 2490)	3
CLAS 3610*	Greek Literature in Translation (taught with ENGL 2490)	3
CLAS 3620*	Latin Literature in Translation (taught with ENGL 2490)	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.

8.10.3 English Course Descriptions-0 Level

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. This course does not satisfy the Humanities requirement.

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. This course does not satisfy the Humanities requirement.

8.10.3 English Course Descriptions-1000 Level

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 both ENGL 1200 (004.120) and ENGL 1201 (004.120). English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted.

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 both ENGL 1300 (004.130) and ENGL 1301 (004.130). English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted.

ENGL 1310 Literary Topics 1 Cr.Hrs. 3
(Formerly 004.131) Topics relating to literature and culture will vary yearly. See the Class Schedule for a list of current topics. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 1340 Introduction to Literary Analysis Cr.Hrs. 3
(Formerly 004.134) This course is intended to provide students with reading, writing, and analytic skills required for literary studies.

8.10.3 English Course Descriptions-2000 Level

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 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 both ENGL 2070 (004.207) and ENGL 2071 (004.207). 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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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. 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 [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 both ENGL 2090 (004.209) and ENGL 2091 (004.209). 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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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. 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 [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. 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 [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. 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 [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 both ENGL 2160 (004.216) and ENGL 2161 (004.216). 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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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. 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 [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. 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 [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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)]. As the course content will vary from year to year, students may take this course more than once for credit.

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. 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 [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 4 in the program table under section 8.10.2 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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)]. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 2550 Critical Practise Cr.Hrs. 3
(Formerly 004.255) An introduction to the critical idioms and methods for the analysis of literary texts. This course emphasizes the application of critical idioms and methods in the analysis of literary texts. Students may not hold credit for both ENGL 2550 (004.255) and the former 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 [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 [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 [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. 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 [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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 [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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)]. As the course content will vary from year to year, students may take this course more than once for credit.

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 [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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

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 [a grade of "C" or better in each of ENGL 1310 (004.131) and ENGL 1340 (004.134)].

8.10.3 English Course Descriptions-3000 Level

ENGL 3000 Chaucer Cr.Hrs. 6
(Formerly 004.300) Critical study of the works of this author, including historical context. 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 both ENGL 3010 (004.301) and ENGL 3011 (004.301). Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

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 both ENGL 3020 (004.302) and the former ENGL 3021 (004.302). Prerequisite: a grade of "C" or better in six hours of English at the 2000 level.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3080 Studies in Medieval Literature Cr.Hrs. 3
(Formerly 004.308) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3090 Studies in Seventeenth-Century Literature Cr.Hrs. 3
(Formerly 004.309) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3120 Studies in Restoration and Eighteenth-Century Literature Cr.Hrs. 3
(Formerly 004.312) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3130 Studies in the Romantics Cr.Hrs. 3
(Formerly 004.313) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3140 Studies in the Victorians Cr.Hrs. 3
(Formerly 004.314) Students may not hold credit for both ENGL 3140 (004.314) and ENGL 3141 (004.314). 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3170 Studies in American Literature Cr.Hrs. 3
(Formerly 004.317) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3180 Studies in Renaissance Literature Cr.Hrs. 3
(Formerly 004.318) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3270 Studies in Canadian Literature Cr.Hrs. 3
(Formerly 004.327) Students may not hold credit for both ENGL 3270 (004.327) and ENGL 3271 (004.327). Prerequisite: a grade of "C" or better in six hours of English at the 2000 level. As the course content will vary from year to year, students may take this course more than once for credit.

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. 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 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 (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 at least two months prior to the start of the course. Enrolment for this course will be limited. NOTE: The content of this course will vary from year to year. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3890 Studies in Writing and Gender Cr.Hrs. 3
(Formerly 004.389) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3960 Drama 2 Cr.Hrs. 3
(Formerly 004.396) Advanced study of selected topics. Students may not hold credit for both ENGL 3960 (004.396) and ENGL 3961 (004.396). 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, Film, and Theatre Handbook for detailed course descriptions.

ENGL 3970 Poetry 2 Cr.Hrs. 3
(Formerly 004.397) Advanced study of selected topics. 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, Film, and Theatre Handbook for detailed course descriptions.

ENGL 3980 Studies in Modernism Cr.Hrs. 3
(Formerly 004.398) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

ENGL 3990 Studies in Post-Modernism Cr.Hrs. 3
(Formerly 004.399) 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, Film, and Theatre Handbook for detailed course descriptions. As the course content will vary from year to year, students may take this course more than once for credit.

8.10.3 English Course Descriptions-4000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.10.4 Film Studies

Chair: George Toles
Program Office: 364 University College
Telephone: 204 474 9581
E-mail: filmstudies@umanitoba.ca

8.10.5 Film Studies Program Information

Film is the most important popular culture art form of the twenty-first 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 artifact 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in both FILM 1290 and FILM 1310 (or the former FILM 1300).

8.10.6 Film Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR[1] TOTAL: 30 CREDIT HOURS			
FILM 1290 and FILM 1310	24 credit hours in Film Studies courses, including FILM 3420		
SINGLE ADVANCED MAJOR[1] 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		
DOUBLE ADVANCED MAJOR[1] TOTAL: 42 CREDIT HOURS			
FILM 1290 and FILM 1310	• FILM 2280; FILM 2380 or FILM 2390 or FILM 2430; FILM 3420 or ENGL 2640 • 24 additional credit hours in Film Studies at the 2000 level and above (of the 24 credit hours, at least 6 credit hours, excluding FILM 3420, must be at the 3000 level)		
MINOR (CONCENTRATION)[1] TOTAL: 18 CREDIT HOURS			
FILM 1290 and FILM 1310	12 credit hours in Film Studies courses		

NOTE:

[1] The content of topics courses (FILM 2380, FILM 2390, FILM 2460, FILM 3250, FILM 3260, FILM 3270, FILM 3400, FILM 3410) will very from term to term and may be taken more than once for credit.

Course No.	Course Name	Credit Hours
List A		
Faculty of Arts		
Classics		
CLAS 2612	Greek Literature in Translation	3
CLAS 2622	Latin Literature in Translation	3
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
English, Film, and Theatre		
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

Course No.	Course Name	Credit Hours
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
French, Spanish and Italian		
FREN 3500	Littérature du 17e siècle (B)	3
FREN 3580	Travail indépendant (A, B)	3
German and Slavic Studies (German)		
GRMN 2370*	Modern German Literature in Translation	6
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
Judaic Studies		
HEB 2210	Modern Hebrew Literature	6
SEM 2210*	Modern Hebrew Literature	6
List B		
Faculty of Arts		
English, Film, and 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
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

*Indicates course no longer offered.

8.10.7 Film Studies Course Descriptions-1000 Level

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.

8.10.7 Film Studies Course Descriptions-2000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.10.7 Film Studies Course Descriptions-3000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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.

8.10.8 Theatre Program

Program Chair: William Kerr
Program Office: 364 University College
Telephone: 204 474 9581
E-mail: theatre@umanitoba.ca

8.10.9 Theatre Program Information

Theatre is a way of finding out what it means to be human and is therefore a very effective component of a liberal, humanist education. The Theatre Program is focused yet multi-faceted, offering both creative and intellectual opportunities. An intensive, hands-on experience in every aspect of play creation is a hallmark of University of Manitoba Theatre. The interrelationship between the academic program and the Black Hole Company provides students with excellent balance in the creation and interpretation of theatre.

Although it is not a professional acting program in the style of the National Theatre School, the program provides excellent preparation for professional training. It also offers a particular focus on new play development and directing. Many University of Manitoba Theatre graduates have gone on to pursue professional careers in theatre, opera, and film, with or without further

study. Many others students have pursued graduate studies or have taken the skills of theatre and applied them in making an impact in careers as diverse as education, advertising, the media, law, business, politics, psychology, fine arts, and design.

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 Single or Double 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 for students who have previously completed a Major in Drama to complete a Minor in Theatre.

Courses used toward the Major in Theatre 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 Theatre Major.

Minor (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in THTR 1220.

8.10.10 Theatre

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR[1] TOTAL: 30 CREDIT HOURS			
THTR 1220	• 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 specified above and/or from List A		
SINGLE ADVANCED MAJOR[1, 2] 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 specified above and/or from List A		
DOUBLE ADVANCED MAJOR[1, 2, 3] TOTAL: 42 CREDIT HOURS			
THTR 1220	• THTR 2470 • 9 credit hours from THTR 2150, THTR 2160, THTR 2170, THTR 2180, THTR 2490, THTR 3470 • 24 additional credit hours from Theatre courses at the 2000 level and above		

MINOR (CONCENTRATION)[1] 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	

NOTES:

[1] The content of topics courses (THTR 2600, THTR 2610, THTR 3470, THTR 3610, THTR 3620) will vary from term to term and may be taken more than once for credit.

[2] It is recommended that students complete a three credit hour theory course, specifically THTR 3460.

[3] It is strongly recommended that students enrolled in a Double Advanced Major in Theatre and Film Studies complete THTR 2160.

Course No.	Course Name	Credit Hours
List A		
English, Film, and Theatre		
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, Film, and Theatre Department Special Studies courses approved in advance by the chair of the Theatre Program.	

* Indicates course 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 Theatre Major.

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

Course No.	Course Name	Credit Hours
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

* Indicates course no longer offered.

8.10.11 Theatre Course Descriptions-1000 Level

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.

8.10.11 Theatre Course Descriptions-2000 Level

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 special workshops, such as voice, stage movement, mime, or directing, from the Prairie Theatre Exchange Adult Program and approved in advance by the University of Manitoba Theatre Program. Students may hold credit for only two of: THTR 2170 (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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.10.11 Theatre Course Descriptions-3000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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.

8.11 Department of French, Spanish and Italian

Head: Enrique Fernandez
General Office: 430 Fletcher Argue Building
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8.11.1 French 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 and culture courses, with a particular emphasis on French Canadian literature. Language instruction also includes translation courses in French, Spanish and Italian.

8.11.2 French

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in FREN 1190 or FREN 1200. Only one of FREN 1190 or FREN 1200 may be used for credit in the 30 hour Major. 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in FREN 1190 or FREN 1200. Only one of FREN 1190 or FREN 1200 may be used for credit in the 18 hour Minor (Concentration).

Honours Program

For entry to the Honours program, see see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

8.11.3 French

YEAR 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	
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
FREN 1190 or FREN 1200	• 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		
MINOR (CONCENTRATION)[1] 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	
SINGLE HONOURS[1, 2, 3]			
FREN 1190 or FREN 1200	• FREN 2660, FREN 2870, FREN 2910 • 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	• 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	• 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

YEAR 1	YEAR 2	YEAR 3	YEAR 4
DOUBLE HONOURS[1, 2, 3]			
FREN 1190 or FREN 1200	• 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	• 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	• 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

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.
[3] Honours courses: all 4000 level courses.

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 Université de Saint-Boniface.

For information regarding Canadian Studies, see Section 8.3.

8.11.4 French Course Descriptions-1000 Level

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 1252 or the former 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 1252 Français oral 1 Cr.Hrs. 3
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. Not open to students from Français or Immersion high school programs. Students may not hold credit for both FREN 1252 and the former FREN 1250 (044.125). 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].

8.11.4 French Course Descriptions-2000 Level

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 "C" or better in FREN 1252 or the former 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: [a grade of "C" or better in FREN 1190 (044.119) or 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

FREN 2642 Special Topics (B) Cr.Hrs. 3
The content of this course will vary 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. As the course content will vary from section to section, students may take this course more than once for credit.

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-Denys 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 [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 2770 Littératures francophones d'Afrique et des Antilles (B) Cr.Hrs. 3
Études des principales tendances littéraires de l'Afrique et des Antilles francophones depuis l'époque coloniale jusqu'à nos jours: négritude, engagement anticolonial, post-indépendance et désillusion, créolité, immigration. Lecture d'oeuvres marquantes. 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 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 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.

8.11.4 French Course Descriptions-3000 Level

FREN 3020 Révision intensive de la grammaire française (A) Cr.Hrs. 3
Étude systématique et avancée de la grammaire française avec révision de vocabulaire. Ce cours est la suite logique de FREN 2620 (Grammaire et lexique) mais on peut s'y inscrire sans l'avoir suivi. Dans ce cours-ci, nous parlerons des nuances de la langue qui ne sont pas traitées en deuxième année mais nous reverrons aussi quelques-unes des questions fondamentales examinées auparavant. Prerequisite: [a grade of "C" 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 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 "C" 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 "C" 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 "C" 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 conversation. Prerequisite: [a grade of "C" or better in FREN 2610 (044.261)] or written consent of department head.

FREN 3500 Littérature du 17e siècle (B) Cr.Hrs. 3
(Formerly 044.350) Ce cours constitue une analyse d'ouvrages marquants tirés du domaine de la littérature française classique. Prerequisite: [a grade of "C" 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

FREN 3842 Special Topics (B) Cr.Hrs. 3
The content of this course will vary 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. As the course content will vary from section to section, students may take this course more than once for credit.

FREN 3850 Civilisation canadienne-française (A, B, C) Cr.Hrs. 3
(Formerly 044.385) Aspects du développement de la culture du Canada français. Eléments de la vie politique, sociale et artistique des Québécois et des francophones hors Québec surtout au 20e siècle. Prerequisite: [a grade of "C" 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 "C" 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)] or written consent of department head.

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] or written consent of department head.

8.11.4 French Course Descriptions-4000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 XVIe au XVIIIe 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.

8.11.5 Spanish

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 1190 and SPAN 1262 (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 1262 and SPAN 1272 (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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in SPAN 1180, or a grade of "C" or better in both SPAN 1190 and SPAN 1262 (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 and SPAN 1190 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 Université de Saint-Boniface.

For information regarding the Minor program in Latin American Studies, see Section 8.19.

8.11.6 Spanish

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR (OPTION 1)[1] TOTAL: 30 CREDIT HOURS			
SPAN 1180	SPAN 1262 (or the former SPAN 1260) and SPAN 1272 (or the former SPAN 1270), or SPAN 1290, or SPAN 1280[3] and 3 credit hours from Spanish courses numbered at the 2000 level	• 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 1190	• SPAN 1262 (or the former SPAN 1260) and SPAN 1272 (or the former SPAN 1270), or SPAN 1290, or SPAN 1280[3] and 3 credit hours from Spanish courses numbered at the 2000 level • SPAN 2550 • 6 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	• SPAN 2550 • 9 credit hours from Spanish courses numbered at the 2000 level	12 credit hours from Spanish courses numbered at the 3000 level	
SINGLE ADVANCED MAJOR (OPTION 1)[1] TOTAL: 48 CREDIT HOURS			
SPAN 1180	SPAN 1262 (or the former SPAN 1260) and SPAN 1272 (or the former SPAN 1270), or SPAN 1290, or SPAN 1280[3] and 3 credit hours from Spanish courses numbered at the 2000 level	• 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
SINGLE ADVANCED MAJOR (OPTION 2)[1] TOTAL: 48 CREDIT HOURS			
SPAN 1190	• SPAN 1262 (or the former SPAN 1260) and SPAN 1272 (or the former SPAN 1270), or SPAN 1290, or SPAN 1280[3] and 3 credit hours from Spanish courses numbered at the 2000 level • SPAN 2550 • 6 credit hours from Spanish courses numbered at the 2000 level	• 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
SINGLE ADVANCED MAJOR (OPTION 3)[2] TOTAL: 48 CREDIT HOURS			
SPAN 1280 and 3 credit hours from Spanish courses numbered at the 2000 level	• SPAN 2550 • 9 credit hours from Spanish courses numbered at the 2000 level	• 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 (CONCENTRATION) (OPTION 1)[1] TOTAL: 18 CREDIT HOURS			
SPAN 1180	SPAN 1262 (or the former SPAN 1260) and SPAN 1272 (or the former SPAN 1270), or SPAN 1290, or SPAN 1280[3] and 3 credit hours from Spanish courses numbered at the 2000 level	• 3 credit hours from Spanish courses numbered at the 2000 level • SPAN 2550	
MINOR (CONCENTRATION) (OPTION 2)[1] TOTAL: 18 CREDIT HOURS			
SPAN 1190	• SPAN 1262 (or the former SPAN 1260) and SPAN 1272 (or the former SPAN 1270), or SPAN 1290, or SPAN 1280[3] and 3 credit hours from Spanish courses numbered at the 2000 level • SPAN 2550	6 credit hours from Spanish courses numbered at the 3000 level	
MINOR (CONCENTRATION) (OPTION 3)[2] TOTAL: 18 CREDIT HOURS			
SPAN 1280 and 3 credit hours from Spanish courses numbered at the 2000 level	• 3 credit hours from Spanish courses numbered at the 2000 level • SPAN 2550	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.

[3] With written consent of the department head students may be allowed to substitute both SPAN 1262 and SPAN 1272 (or SPAN 1290) with both SPAN 1280 (3) and an additional 3 credit hours of 2000 level Spanish courses.

8.11.7 Spanish Course Descriptions-1000 Level

SPAN 1180 Introductory Spanish Cr.Hrs. 6
(Formerly 044.118) (Lab required) 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 1171 or SPAN 1190 or SPAN 1191 or the former SPAN 1181 (former TRAD 1181 or former 122.118). Not open to students who have previously obtained credit in SPAN 1262 or the former SPAN 1260 (044.126) or SPAN 1261 (former TRAD 1261 or former 122.126) or SPAN 1272 or the former SPAN 1270 (044.127) or SPAN 1271 (former TRAD 1271 or former 122.127) or SPAN 1280 or SPAN 1290.

SPAN 1190 Introductory Spanish 2 Cr.Hrs. 3
(Lab required) The second term of SPAN 1180 Introductory Spanish. This course is intended for students who have already 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 SPAN 1180. Students may not hold credit for SPAN 1190 and any of: SPAN 1191 or SPAN 1180 (044.118) or the former SPAN 1181 (former TRAD 1181 or former 122.118). Not open to students who have previously obtained credit in SPAN 1262 or the former SPAN 1260 (044.126) or SPAN 1261 (former TRAD 1261 or former 122.126) or SPAN 1272 or the former SPAN 1270 (044.127) or SPAN 1271 (former TRAD 1271 or former 122.127) or SPAN 1280 or SPAN 1290. Prerequisite: [a grade of "C" or better in SPAN 1171] or [Senior 4 Spanish] or written consent of instructor or department head.

SPAN 1262 Intermediate Spanish Grammar and Conversation 1 Cr.Hrs. 3
(Lab required) This course is the first of the intermediate Spanish language sequence. Focus is on developing intermediate skills in reading, writing, speaking and listening. The primary goals are to build communicative competence and enhance social and cultural awareness of the Spanish-speaking world. Not open to students with native oral fluency. Students may not hold credit for SPAN 1262 and any of: SPAN 1261 (former TRAD 1261 or former 122.126) or SPAN 1280 or SPAN 1290 or the former SPAN 1260 (044.126). Prerequisite: [a grade of "C" or better in SPAN 1180 (044.118) (the former SPAN 1181 or the former TRAD 1181 or the former 122.118) or SPAN 1190 or SPAN 1191] or written consent of instructor or department head.

SPAN 1272 Intermediate Spanish Grammar and Conversation 2 Cr.Hrs. 3
(Lab required) This course is the second of the intermediate Spanish language sequence. Focus is on continued development of intermediate skills in reading, writing, speaking and listening. The primary goals are to further enhance communicative competence and social and cultural awareness of the Spanish-speaking world. Not open to students with native oral fluency. Students may not hold credit for SPAN 1272 and any of: SPAN 1271 or SPAN 1280 or SPAN 1290 or the former SPAN 1270 (044.127) or TRAD 1271 (122.127). Prerequisite: [a grade of "C" or better in SPAN 1262 or the former SPAN 1260 (044.126) or SPAN 1261 (or the former TRAD 1261 or the former 122.126)] or written consent of instructor or 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 1262 or the former SPAN 1260 (044.126) or SPAN 1261 (former TRAD 1261 or former 122.126) or SPAN 1272 or the former SPAN 1270 (044.127) or SPAN 1271 (former TRAD 1271 or former 122.127) or SPAN 1290. Prerequisite: written consent of instructor or department head.

SPAN 1290 Accelerated Intermediate Spanish Cr.Hrs. 6
(Lab required) This is a one term accelerated course which combines the content of SPAN 1262 and SPAN 1272 (or the former SPAN 1260 (044.126) and the former SPAN 1270 (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 1262 or the former SPAN 1260 (044.126) or SPAN 1261 or SPAN 1272 or the former SPAN 1270 (044.127) or SPAN 1271 or SPAN 1280 or the former TRAD 1261 (122.126) or the former TRAD 1271 (122.127). Prerequisite: [a grade of "C" or better in SPAN 1180 (044.118) (or the former SPAN 1181 or the former TRAD 1181 or the former 122.118) or SPAN 1190 or SPAN 1191] or written consent of instructor or department head.

8.11.7 Spanish Course Descriptions-2000 Level

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 1262 or SPAN 1261 or SPAN 1272 or SPAN 1271 or SPAN 1280 or SPAN 1290 or the former SPAN 1260 (044.126) or the former TRAD 1261 (122.126) or the former SPAN 1270 (044.127) or the former TRAD 1271 (122.127)] or written consent of department head.

SPAN 2210 Voices and Images of Latin America Cr.Hrs. 3
A study of the important figures that have influence on social and artistic movements of the Latin American culture such as Frida Khalo, Diego Rivera, Che Guevara, and Fernando Botero. Prerequisite: [a grade of "C" or better in one of: SPAN 1262 or SPAN 1261 or SPAN 1272 or SPAN 1271 or SPAN 1280 or SPAN 1290 or the former SPAN 1260 (044.126) or the former TRAD 1261 (122.126) or the former SPAN 1270 (044.127) or the former TRAD 1271 (122.127)] 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 1262 or SPAN 1261 or SPAN 1272 or SPAN 1271 or SPAN 1280 or SPAN 1290 or the former SPAN 1260 (044.126) or the former TRAD 1261 (122.126) or the former SPAN 1270 (044.127) or the former TRAD 1271 (122.127)] 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 1262 or SPAN 1261 or SPAN 1272 or SPAN 1271 or SPAN 1280 or SPAN 1290 or the former SPAN 1260 (044.126) or the former TRAD 1261 (122.126) or the former SPAN 1270 (044.127) or the former 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. Students may not hold credit for both SPAN 2550 (044.255) and SPAN 2551. Prerequisite: [a grade of "C" or better in one of: SPAN 1262 or SPAN 1261 or SPAN 1280 or SPAN 1290 or the former SPAN 1260 (044.126) or the former 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 1262 (the former SPAN 1260 (044.126)) and SPAN 1272 (the former SPAN 1270 (044.127))] or [a grade of "C" or better in both SPAN 1261 (the former TRAD 1261 (122.126)) and SPAN 1271 (the former 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. As the course content will vary from year to year, students may take this course more than once for credit.

SPAN 2580 Contemporary Spanish Female Playwrights Cr.Hrs. 3
This course introduces students to the study of Spanish theater written by contemporary women writers. The course will explore how they use their work and the stage to denounce a contemporary Spanish society that needs to be reexamined. Analysis will underscore how these playwrights treat dis/similar subject matters: search for identity, gender, sexuality, relationships, patriarchal values, feminism, among others. The course will be taught in Spanish. All class readings and examinations are in Spanish. Prerequisite: [a grade of "C" or better in one of: SPAN 1262 or SPAN 1261 or SPAN 1272 or SPAN 1271 or SPAN 1280 or SPAN 1290 or the former SPAN 1260 (044.126) or the former TRAD 1261 (122.126) or the former SPAN 1270 (044.127) or the former TRAD 1271 (122.127)] or written consent of department head.

8.11.7 Spanish Course Descriptions-3000 Level

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 3080 Contemporary Latin American Novel Cr.Hrs. 3
This course will concentrate on the major writers of the Latin American "Boom" such as: Gabriel Garcia Marquez, Carlos Fuentes, Julio Cortazar and Mario Vargas Llosa. It may also include other authors connected with the Boom such as: Alejo Carpentier, Juan Rulfo, Jorge Luis Borges, Manuel Puig. 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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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 SPAN 3340 and any of: SPAN 3441 or 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 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 3780 Short Fiction in Spanish Cr.Hrs. 3
(Formerly 044.378) A study of short narrative fiction as a genre in Spain and Latin America through the close reading of representative works. Prerequisite: [a grade of "C" or better in any 2000-level Spanish course] or written consent of department head.

SPAN 3790 Latin American Cinema and Society Cr.Hrs. 3
(Formerly 044.379) A survey of contemporary Latin American society through its cinema. The course will be taught in Spanish. All class readings, movies and examinations are in Spanish. Prerequisite: [a grade of "C" or better in any 2000-level Spanish course] or written consent of department head.

8.11.8 Italian

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Minor (Concentration) Program

For entry to the Minor (Concentration), 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.

8.11.9 Italian

YEAR 1	YEAR 2	YEAR 3	YEAR 4
MINOR (CONCENTRATION) 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	

8.11.10 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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.

8.11.11 Italian Studies

YEAR 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		
SINGLE 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		

Course No.	Course Name	Credit Hours
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 2622	Latin Literature in Translation	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

Course No.	Course Name	Credit Hours
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 3136	History of Medieval Italy, 568-1300 (D)	3
HIST 3138	History of Medieval Italy, 1300-1500 (D)	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
Marcel A. Desautels Faculty of Music		
MUSC 1070	Introduction to the History of Music	3
MUSC 1080	History of Music 2	3
MUSC 3100	Opera Repertoire	3

*indicates course no longer offered.

For course descriptions, see departmental listings.

8.11.12 Italian Course Descriptions

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 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 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.

8.11.13 Portuguese Course Descriptions

PORT 1170 Introductory Portuguese Cr.Hrs. 6
(Lab required) A course designed for those with little or no previous knowledge of Portuguese. 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 Portugal and Brazil. Students with high school Portuguese or its equivalent may not normally take the course for credit. Not open to students who have previously obtained credit in PORT 1282.

PORT 1282 Intermediate Portuguese Grammar and Conversation 1 Cr.Hrs. 3
(Lab required) This course is the first of the intermediate Portuguese language sequence. Focus is on developing intermediate skills in reading, writing, speaking and listening. The primary goals are to build communicative competence and enhance social and cultural awareness of Portugal and Brazil. Not open to students with native oral fluency. Prerequisite: [a grade of "C" or better in PORT 1170] or written consent of instructor or department head.

8.12 German and Slavic Studies

Head: (Acting) Stephan Jaeger
Campus Address/General Office: 328 Fletcher Argue Building
Telephone: 204 474 9370
Email Address: german_slavic@umanitoba.ca

Website: umanitoba.ca/german_and_slavic/

8.12.1 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, literature and culture 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.

8.12.2 German Program Information

For entry, continuation and graduation requirements for the General Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

General Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in 6 credit hours in German courses at any 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.

Minor (Concentration) Program

For entry to the Minor (Concentration), 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

8.12.3 GERMAN

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
30 credit hours of German to include: GRMN 1120[1] GRMN 2100[2] GRMN 2120 or GRMN 2130 or GRMN 2140 GRMN 3200			
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours in German	12 credit hours in German		

SINGLE HONOURS[5]	
• 36 credit hours of German (of which at least 24 credit hours must be German courses numbered at the 2000, 3000 or 4000 level to include: GRMN 1120[1] GRMN 2100[2] GRMN 2120 or GRMN 2130 GRMN 2140 GRMN 3200 • In years 2 and 3 students must also complete 30 credit hours of ancillary options.	• GRMN 4600[3] • GRMN 4570 • 6 additional credit hours in German courses numbered at the 4000 level[4] • 6 additional credit hours in German courses numbered at the 3000 or 4000 level • 6 credit hours in ancillary options
DOUBLE HONOURS[5]	
• 30 credit hours of German (of which at least 18 credit hours must be German courses numbered at the 2000, 3000 or 4000 level) to include: GRMN 1120[1] GRMN 2100[2] GRMN 2120 or GRMN 2130 GRMN 2140 GRMN 3200 • In years 2 and 3 students must also complete 6 credit hours of ancillary options and 24 credit hours in second Honours field.	• GRMN 4600[3] • GRMN 4570 • 3 additional credit hours in German courses numbered at the 4000 level[4] • 3 additional credit hours in German courses numbered at the 3000 or 4000 level • 12 credit hours in other Honours field

NOTES:

[1] Students with superior language ability will not be required to complete GRMN 1120 if they complete either GRMN 2100 or GRMN 3200 with a minimum grade of "C".

[2] Students with superior language ability will not be required to complete GRMN 2100 if they complete GRMN 3200 with a minimum grade of "C".

[3] With written consent of department head, students may substitute GRMN 4600 with GRMN 4200.

[4] Students enrolled in the fourth year of the Honours program may be permitted to substitute up to 6 credit hours of graduate level courses.

[5] Honours courses: all 4000 level courses.

8.12.4 German Course Descriptions-1000 Level

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 1300 Masterpieces of German Literature in English Translation Cr.Hrs. 3
Language of instruction: English. The course introduces students to representative works (prose, poetry, and drama) by German-speaking writers such as Goethe, Kleist, Thomas Mann, Kafka, and Rilke, with an emphasis on the ages of Classicism, Romanticism, and Modernism. Stresses the development of English reading and writing skills. The course is designed for students who have little or no prior knowledge of German literature.

GRMN 1310 Love in German Culture in English Translation Cr.Hrs. 3
Language of instruction: English. An introduction to the discourse and meaning of love through German culture from the Middle Ages to the present; analyzes the expression of different concepts of love (spiritual, courtly, erotic, romantic, sexual, free, same-sex, familial, virtual) in literature and other cultural forms. Stresses the development of English reading and writing skills. The course is designed for students who have little or no prior knowledge of German culture.

8.12.4 German Course Descriptions-2000 Level

GRMN 2100 Intermediate German Cr.Hrs. 6
(Formerly 008.210) 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 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. 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 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. As the course content will vary from year to year, students may take this course more than once for credit.

8.12.4 German Course Descriptions-3000 Level

GRMN 3200 Deutsche Sprachpraxis 1 Cr.Hrs. 6
(Formerly 008.320) Modern German usage through conversation, writing and practical exercises; study of contemporary fictional and non-fictional texts and films. Emphasis on vocabulary and 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 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. 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
Language of instruction: German. 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. Students may not hold credit for both GRMN 3260 and GRMN 3262. Prerequisite: [a grade of "C" or better in GRMN 2140] or written consent of department head.

GRMN 3262 Representations of the Holocaust in English Translation Cr.Hrs. 3
Language of instruction: English. 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. Students may not hold credit for both GRMN 3262 and GRMN 3260. 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 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
Language of instruction: German. 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. Students may not hold credit for both GRMN 3280 and GRMN 3282. Prerequisite: [a grade of "C" or better in GRMN 2140] or written consent of department head.

GRMN 3282 Sex, Gender and Cultural Politics in the German-Speaking World in English Translation Cr.Hrs. 3
Language of instruction: English. 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. Students may not hold credit for both GRMN 3282 and GRMN 3280. 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 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. Students may not hold credit for both GRMN 3390 and GRMN 3392. 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 3392 German Representations of War Cr.Hrs. 3
Language of Instruction: German. Focuses on representations of war, particularly World War II from a German and European perspective in fiction, historiography, film, photography, and memorial culture. Students may not hold credit for GRMN 3392 and GRMN 3390. Prerequisite: [a grade of "C" or better in GRMN 2140] 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

GRMN 3530 Special Topics in Comparative German and Slavic Studies Cr.Hrs. 3
Language of instruction: English. Topics comparing German and Slavic – Ukrainian, Russian, Polish – literatures and cultures. Course is co-taught by a member from the German and one from the Slavic Section. Course content will vary from year to year depending on interests and needs of students and staff. Possible topics include Memory of World War II, Cold War and Post-Cold War, and Modernism. Students may not hold credit for both GRMN 3530 and SLAV 3530 when topic is the same. Prerequisite: [a grade of "C" or better in a minimum of 30 credit hours of university level coursework] or written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

8.12.4 German Course Descriptions-4000 Level

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 a 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.12.5 Program Information: Slavic Studies - Russian

For entry, continuation and graduation requirements for the General Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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. 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in six credit hours from RUSN 1300 (or RUSN 1330), RUSN 2810 (or RUSN 2820).

8.12.6 Russian

YEAR 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 (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours from RUSN 1300, RUSN 1330, RUSN 2810 or RUSN 2820	12 credit hours in Russian (RUSN) or Slavic Studies (SLAV) courses		
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 2830, RUSN 3200, RUSN 3210, RUSN 3220. The following courses count as literature and culture courses: RUSN 1400, RUSN 2280, RUSN 2290, RUSN 2310, RUSN 2410, RUSN 2740, RUSN 3330, RUSN 3580, RUSN 3770, RUSN 3780, RUSN 3790, RUSN 3900, RUSN 3980, SLAV 2260, SLAV 2270, SLAV 3530, SLAV 3920.			

8.12.7 Russian Course Descriptions 1000 Level

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 1400 Masterpieces 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. Students may not hold credit for both RUSN 1400 and the former RUSN 2770.

8.12.7 Russian Course Descriptions-2000 Level

RUSN 2280 Russian Culture 1 Cr.Hrs. 3
(Formerly 052.228) A survey of the Russian cultural heritage from the pre-Christian era to the end of the nineteenth century. Mythology, the arts and literature. Lectures in English. Readings are available in both English translation and in the original.

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 2310 Exploring Russia through Film Cr.Hrs. 3
A survey of Russian cinema from its origins to the present. The course focuses on the role of film in Russian culture, ideological uses of film, and cinema as a medium of cultural dissent and witness to social change. Lectures in English; all films are in Russian with English subtitles; no prior knowledge of Russian language or culture is required.

RUSN 2410 Russian Literature after Stalin Cr.Hrs. 3
A survey of Russian literature from the period of High Stalinism to the present. The course examines effects of ideological and political change on literary production. 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 2810 Intermediate Russian Cr.Hrs. 6
(Formerly 052.281) Grammar review, conversation, translation and reading of selected texts. Development of communication skills through practical exercises. Cultural content is introduced through use of audio-visual and internet materials. Students may not hold credit for both RUSN 2810 (052.281) and RUSN 2820 (052.282). 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 both RUSN 2820 (052.282) and RUSN 2810 (052.281). Prerequisite: successful completion of a placement test administered by the department.

RUSN 2830 Special Topics in Russian Cr.Hrs. 3
A study of the Russian language through listening, reading, writing, and conversation, with a strong cultural component. The content of this course will vary from year to year, depending on the needs and interests of the students and staff. Prerequisite: written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

8.12.7 Russian Course Descriptions-3000 Level

RUSN 3200 Advanced Russian 1 Cr.Hrs. 3
Advanced composition, translation, reading and study of selected literary and other texts. Development of overall communication skills. Students may not hold credit for both RUSN 3200 and the former RUSN 3930 (052.393). Prerequisite: [a grade "C" or better in RUSN 2810 (052.281) or RUSN 2820 (052.282)] or written consent of department head.

RUSN 3210 Advanced Russian 2 Cr.Hrs. 3
Continues RUSN 3200. Further work in advanced composition, translation, reading and study of selected literary and other texts. Development of overall communication skills. Students may not hold credit for RUSN 3210 and any of: the former RUSN 3930 (052.393) or the former RUSN 3940 (052.394). Prerequisite: [a grade "C" or better in RUSN 3200] or written consent of department head.

RUSN 3220 Selected Topics in Russian Cr.Hrs. 3
Language of instruction: Russian. Advanced study of the Russian language through reading and analysis of literary or/and non-fictional texts including academic writing. The content of this course will vary from year to year, depending on the needs and interests of instructors and students. Prerequisite: [a grade "C" or better in one of: RUSN 2810 (052.281), RUSN 2820 (052.282), RUSN 3200, RUSN 3210, the former RUSN 3930 (052.393), the former RUSN 3940 (052.394)] or written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

RUSN 3330 Chekhov Cr.Hrs. 3
(Formerly 052.333) The study of selected short stories and plays. Lectures in English. Readings are available in both Russian and English translation.

RUSN 3580 Russian Poetry Cr.Hrs. 3
(Formerly 052.358) A study of major Russian poetry of the 19th and 20th centuries, including works by Pushkin, Lermontov, Tiutchev, Fet, Blok, Mayakovsky, Akhmatova, Esenin, Evtushenko, Vinokurov, Kazakova. Lectures and readings in Russian. Prerequisite: [a grade of "C" or better in one of: RUSN 3200 or RUSN 3210 or the former RUSN 3930 (052.393) or the former RUSN 3940 (052.394)] 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. As the course content will vary from year to year, students may take this course more than once for credit.

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 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, Tsvetaeva, and Chukovskaia. Lectures in English. Readings in the original and/or in English.

8.12.7 Russian Course Descriptions-4000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.12.8 Program Information: Slavic Studies - Ukrainian

For entry, continuation and graduation requirements for the General Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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). 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in six credit hours from UKRN 1310 (or UKRN 1320), UKRN 2720 (or UKRN 2730).

8.12.9 Ukrainian

YEAR 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 (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours from UKRN 1310, UKRN 1320, UKRN 2720 or UKRN 2730	12 credit hours in Ukrainian (UKRN) or Slavic Studies (SLAV) courses of which at least 3 credit hours must be in literature/culture		
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 1310, UKRN 1320, UKRN 2260, UKRN 2720, UKRN 2730, UKRN 3950, UKRN 3960. The following courses count as literature and culture courses: UKRN 2100, UKRN 2200, UKRN 2410, UKRN 2590, UKRN 2770, UKRN 2780, UKRN 2800, UKRN 2820, UKRN 3100, UKRN 3300, UKRN 3440, UKRN 3840, UKRN 3880, UKRN 3910, UKRN 3970, SLAV 2260, SLAV 2270, SLAV 3530, SLAV 3920.			

8.12.10 Ukrainian Course Descriptions-1000 Level

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 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.

8.12.10 Ukrainian Course Descriptions-2000 Level

UKRN 2100 Exploring Ukrainian Literature Cr.Hrs. 3
Language of Instruction: Ukrainian. An introduction to Ukrainian literature that simultaneously helps students improve their language skills. This is a transitional course that builds upon a basic reading knowledge. A number of works by major authors and from different genres are discussed. Activities and assignments focus on developing reading competency, vocabulary, written and oral expression. Prerequisite: [a grade of "C" or better in UKRN 2720 (052.272) or UKRN 2730 (052.273) or UKRN 3950 (052.395) or UKRN 3960 (052.396)] or written consent of department head.

UKRN 2200 Ukrainian Myth, Rites and Rituals Cr.Hrs. 3
An exploration of folk mythology, and the rites, rituals and festivals associated with the calendar cycle. Lectures and readings in English. Students may not hold credit for UKRN 2200 and any of: the former UKRN 2510 (052.251) or the former UKRN 2520 (052.252).

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. Prerequisite: [a grade of "C" or better in UKRN 1310 (052.131) (or its equivalent)] and written consent of the department head.

UKRN 2410 Ukrainian Canadian Cultural Experience Cr.Hrs. 3
A study of the legacy left by several generations of Ukrainian Canadians in literature and the performing arts, music, art and architecture, with particular attention to the construction of identity and the critique of culture. Lectures and readings in English. Students may not hold credit for both UKRN 2410 and the former UKRN 2420 (052.242).

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 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 UKRN 2730 (052.273). 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 UKRN 2720 (052.272). 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 2800 Literature and Revolution in Ukraine Cr.Hrs. 3
A study of literature and its relationship to the arts in the decade that followed the Revolution of 1917. Lectures in English. Readings available in English and in the original. Viewing and discussion of films.

UKRN 2820 Holodomor and Holocaust in Ukrainian Literature and Culture Cr.Hrs. 3
A study of how the Holodomor (Famine) of 1932-33 and the Holocaust have been represented, and of the international impact of these representations. References to art and film. Lectures and readings in English.

8.12.10 Ukrainian Course Descriptions-3000 Level

UKRN 3100 Ukrainian Story Writing Through the Ages Cr.Hrs. 3
Masterpieces of the short story genre from early modern times to the present. Focusing on great works and writers, the course provides insights into the genre and into different periods in Ukrainian literature. Film adaptations of some works will be viewed and discussed. Students may not hold credit for both UKRN 3100 and the former UKRN 3850 (052.385).

UKRN 3300 Literature of Independent Ukraine Cr.Hrs. 3
A study of recent writings from Ukraine, focusing on the post-1991 period. References to art and film of the period.

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 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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. Prerequisite: [a grade of "C" or better in UKRN 2720 (052.272) or UKRN 2730 (052.273)] 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. 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, Kobylianska, Iaroshynska, and Ukrainka. Lectures in English. Readings in the original and/or in English.

8.12.10 Ukrainian Course Descriptions-4000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.12.11 Program Information: Slavic Studies - Polish

For entry, continuation and graduation requirements for the General Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Minor (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in POL 1890.

8.12.12 Polish

YEAR 1	YEAR 2	YEAR 3	YEAR 4
POLISH MINOR (CONCENTRATION)[1] TOTAL: 18 CREDIT HOURS			
POL 1890	POL 2890	6 credit hours from the following Polish/Slavic Studies courses: POL 1900, POL 2600, POL 2610, POL 2660, POL 2690, POL 3890, SLAV 2260, SLAV 2270	
NOTE: [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.			

8.12.13 Polish Course Descriptions-1000 Level

POL 1890 Introductory Polish Cr.Hrs. 6
(Formerly 052.189) Basic grammar, conversation, composition, readings, language laboratory sessions.

POL 1900 Love, Heroes and Patriotism in Contemporary Poland Cr.Hrs. 3
A study of the impact of Romanticism on contemporary Polish national consciousness, images of love, and the role of art and the artist in society. The course explores diverse written and visual sources representing Polish and European Romanticism and its mutual influences. Lectures and readings in English.

8.12.13 Polish Course Descriptions-2000 Level

POL 2600 Polish Culture until 1918 Cr.Hrs. 3
An introductory survey from the beginnings of the Polish state to 1918. This is a lecture style course devoted to studying the achievements of Polish culture and their impact on world culture. Students will observe the creation of Polish national identity through the examination of documents from literature and culture. Lectures and readings in English. Students may not hold credit for both POL 2600 and the former POL 2530 (052.253).

POL 2610 Polish Culture 1918 to the Present Cr.Hrs. 3
An introductory survey from 1918 to the present. This is a lecture style course devoted to studying the achievements of Polish culture and their impact on shaping of the contemporary Polish society. Students will observe the cultural changes that defined Poland following one hundred years of non-existence as a nation. The re-examining of the Polish national identity will be studied through documents from literature, art, mythology and music. Lectures and readings in English. Students may not hold credit for both POL 2610 and the former POL 2530 (052.253).

POL 2660 Special Topics in Polish Literature and Culture Cr.Hrs. 3
Topics dealing with Polish literature and culture. Content of this course will vary from year to year, depending on the needs and interests of instructors and students. As the course content will vary from year to year, students may take this course more than once for credit.

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.

8.12.13 Polish Course Descriptions-3000 Level

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.

8.12.14 Slavic Studies-General Course Descriptions 2000 Level

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.

8.12.14 Slavic Studies-General Course Descriptions-3000 Level

SLAV 3530 Special Topics in Comparative German and Slavic Studies Cr.Hrs. 3
Language of instruction: English. Topics comparing German and Slavic – Ukrainian, Russian, Polish – literatures and cultures. Course is co-taught by a member from the German and one from the Slavic Section. Course content will vary from year to year depending on interests and needs of students and staff. Possible Topics include Memory of World War II, Cold War and Post-Cold War, and Modernism. Students may not hold credit for both SLAV 3530 and GRMN 3530 when topic is the same. Prerequisite: [a grade of "C" or better in a minimum of 30 credit hours of university level coursework] or written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

SLAV 3920 Gogol Cr.Hrs. 3
(Formerly 052.392) A study of the author's major fiction and his influence on Russian and Ukrainian cultures and identity politics.

8.12.15 Hungarian Course Descriptions

HUNG 1000 Introduction to Hungarian 1 Cr.Hrs. 3
(Lab required) The course is intended for students with little or no previous knowledge of Hungarian. Students are introduced to basic grammar and vocabulary as well as aspects of Hungarian culture. Emphasis is placed on communication skills. Satisfactory completion of this course enables students to proceed to HUNG 1002 Introduction to Hungarian 2.

HUNG 1002 Introduction to Hungarian 2 Cr.Hrs. 3
(Lab required.) The course is intended for students with some elementary knowledge of Hungarian. Students will expand their understanding of basic grammar and vocabulary, as well as aspects of Hungarian culture. Emphasis is placed on communication skills. Prerequisite: [a grade of "C" or better in HUNG 1000] or written consent of department head.

8.13 Global Political Economy Program

Program Coordinator: Mark Hudson
Program Office: 333 Isbister Building
Telephone: 204 272 1655
E-mail: hudsonm@cc.umanitoba.ca
Website: umanitoba.ca/global_political_economy/

8.13.1 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 1010 and ECON 1020, or ECON 1210 and ECON 1220, or the former ECON 1200; SOC 1200; (no more than 6 credit hours from) POLS 1000, POLS 1040, POLS 2040; (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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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.

8.13.2 Global Political Economy

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 57 CREDIT HOURS			
• Anthropology: ANTH 2000; ANTH 2530; ANTH 3320 or Sociology SOC 3810 • Economics: ECON 1010 and ECON 1020, or ECON 1210 and ECON 1220; ECON 2540; ECON 2550; ECON 2630, or ECON 3392 and ECON 3394 • History: 12 credit hours from: HIST 1370, HIST 1380, HIST 1500, HIST 2380, HIST 2720 • Political Studies: 6 credit hours from: POLS 1000, POLS 1040 or POLS 2040; POLS 3220 • Sociology: SOC 1200; SOC 3380 or SOC 3838 or SOC 3840 or SOC 3890 or Anthropology ANTH 2500; SOC 3810 or Anthropology ANTH 3320			

SINGLE ADVANCED MAJOR TOTAL: 78 CREDIT HOURS

- Anthropology: ANTH 2000; ANTH 2530; ANTH 3320 or Sociology SOC 3810; ANTH 3750
- Economics: ECON 1010 and ECON 1020, or ECON 1210 and ECON 1220; ECON 2540; ECON 2550; ECON 2630, or ECON 3392 and ECON 3394
- Global Political Economy: GPE 2700; GPE 4700
- History: 12 credit hours from: HIST 1370, HIST 1380, HIST 1500, HIST 2380, HIST 2720
- Political Studies: 6 credit hours from: POLS 1000, POLS 1040, POLS 2040; POLS 3220; POLS 3250 or POLS 3810 or POLS 3840
- Sociology: SOC 1200; SOC 2290; SOC 3380 or SOC 3838 or SOC 3840 or SOC 3890 or Anthropology ANTH 2500; SOC 3810 or Anthropology ANTH 3320

Course No.	Course Name	Credit Hours
List of Courses for Global Political Economy		
See the departmental Calendar section for full course descriptions.		
Anthropology		
ANTH 2000	Culture, Society, and Power	3
ANTH 2390*	Social Organization in Cross-Cultural Perspective (B)	6
ANTH 2500	Culture, Environment, and Technology	3
ANTH 2530	Anthropology of Political Systems	3
ANTH 3320	Women in Cross-Cultural Perspective	3
ANTH 3750	Globalization and the World-System	3
Economics		
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
ECON 1200*	Principles of Economics	6
ECON 1210	Introduction to Canadian Economic Issues and Policies	3
ECON 1220	Introduction to Global and Environmental Economic Issues and Policies	3
ECON 2540	Political Economy 1: Production and Distribution	3
ECON 2550	Political Economy 2: Economic Growth and Fluctuations in a Global Economic Environment	3
ECON 2630	An Introduction to the World's Economies	6
ECON 3392	An Introduction to Development Economics	3
ECON 3394	Development Economics:Problems and Policies	3
Global Political Economy		
GPE 2700	Perspectives on Global Political Economy	3
GPE 4700	Studies in Global Political Economy	6
History		
HIST 1370	An Introduction to Modern World History: 1500-1800 (M)	3
HIST 1380	An Introduction to Modern World History: 1800 - Present (M)	3
HIST 1500	An Introduction to Modern World History: 1500 - Present (M)	6
HIST 2380	The Twentieth-Century World (G,M)	6
HIST 2720	The World Since 1945 (G,M)	6
Political Studies		
POLS 1000	Democracy and Development	3
POLS 1040	Global Political Issues	3
POLS 2040	Introduction to International Relations	6
POLS 2530*	Elements of Foreign Policy	6
POLS 3220	Globalization and the World Economy	3
POLS 3250	International Political Economy	3
POLS 3810	Introduction to Marxism	3
POLS 3840	Approaches to the Study of International Relations	3
019.383*	The Politics of International Economic Relations	6
Sociology		
SOC 1200	Introduction to Sociology	6
SOC 2290	Introduction to Research Methods	6
SOC 3380	Power, Politics and the Welfare State	3
SOC 3470*	Political Sociology	3
SOC 3690*	Sociology of the Developing Societies	3
SOC 3810	Sociological Perspectives on Gender and Sexuality	3
SOC 3838	Ecology and Society	3
SOC 3840	Community and Social Reconstruction	3
SOC 3870*	Social Inequality	3
SOC 3890	Power and Inequality in Comparative Perspective	3
List of Suggested Electives		
Faculty of Arts		
Anthropology		
ANTH 1220	Cultural Anthropology	3
ANTH 1520	Critical Cultural Anthropology	3
ANTH 2460*	Peasantry in a Changing World (B)	3
ANTH 2500	Culture, Environment, and Technology	3
ANTH 2510	Anthropology of Economic Systems	3
ANTH 2570	Urban Anthropology	3
ANTH 3320	Women in Cross-Cultural Perspective	3
ANTH 3380	Anthropology and Contemporary Social Issues	3
076.244*	Peasant Society and Culture (B)	3
Asian Studies		
ASIA 1420	Asian Civilizations to 1500 (Cross-listed with History HIST 1420)	3
ASIA 1430	Asian Civilizations Since 1500 (Cross-listed with History HIST 1430)	3

Course No.	Course Name	Credit Hours
ASIA 2070*	South Asian Civilization	6
ASIA 2080	South Asian Civilization	3
150.211*	East Asian Civilization	6
Economics		
ECON 2420	Economics of the Labour Process and Labour Relations (Cross-listed with Labour Studies LABR 2420)	3
ECON 2490*	Economic Accounting	3
ECON 2560	Corporations in the Global Economy	3
ECON 2630	An Introduction to the World's Economies	6
ECON 3390	Development Economics	6
ECON 3660	Economic Ideas and Social Institutions	6
ECON 3710	Sustainable Development: Issues and Policy	3
ECON 4510*	Economy and State in a Modern Period: Western Europe and North America	6
History		
HIST 2670	History of Capitalism (M)	3
HIST 2680	History of Socialism from the French Revolution to the Present (M)	3
HIST 2710*	Women in History (G)	6
HIST 3260	Commerce, Rights and Empire in European Thought, 500-2000 (M)	3
HIST 3580	Topics in Recent World History 1 (M)	3
HIST 3590	Topics in Recent World History 2 (M)	3
HIST 4010	Imperialism, Decolonization and Neo-Colonialism, 1700 to the Present (G,M)	6
HIST 4320	Studies in World History since 1945 (G,M)	3
011.341*	The British Empire and Commonwealth Since 1815 (G)	6
Labour Studies		
LABR 1260	Working for a Living	3
LABR 1270*	Introduction to the Political Economy of Labour	3
LABR 1290	Introduction to the Canadian Labour Movement	3
LABR 2100	Political Economy of Labour	3
LABR 2300	Workers, Employers and the State	3
LABR 2420	Economics of the Labour Process and Labour Relations (Cross-listed with Economics ECON 2420)	6
LABR 3090	Globalization and Labour	3
LABR 3210	Working People in Hard Times	3
LABR 3220	Global Sweatshops, Global Struggles	3
Political Studies		
POLS 2040	Introduction to International Relations	6
POLS 2070	Introduction to Canadian Government	6
POLS 2530	Elements of Foreign Policy	6
POLS 3200	International Security and Conflict Management	6
POLS 3330	Politics of the European Union	3
POLS 3810	Introduction to Marxism	3
POLS 3880	Comparative Foreign Policy	3
POLS 4530	Regionalism in International Politics	3
POLS 4660	The State in the Economy	6
019.156*	Introduction to Canadian Government	6
019.273*	International Conflict Resolution	6
Sociology		
SOC 2480	Population Problems	3
SOC 3380	Power, Politics and the Welfare State	3
SOC 3470*	Political Sociology	3
SOC 3690*	Sociology of the Developing Societies	3
SOC 3810	Sociological Perspectives on Gender and Sexuality	3
SOC 3838	Ecology and Society	3
SOC 3840	Community and Social Reconstruction	3
SOC 3870*	Social Inequality	3
SOC 3890	Power and Inequality in Comparative Perspective	3
Clayton H. Riddell Faculty of Environment, Earth, and Resources		
Geography		
GEOG 1280	Introductory Human Geography	3
GEOG 2210	Economic Geography	6
GEOG 3590	Geography of Developing Countries	6
GEOG 3800	Geography of Transportation Development	3
GEOG 4640	Models in Urban Geography	3

* Indicates course no longer offered.

8.13.3 Global Political Economy Course Descriptions

GPE 2700 Perspectives on Global Political Economy Cr.Hrs. 3
(Formerly 157.270) An interdisciplinary seminar exploring issues in political economy at the global level from the perspectives of Anthropology, History, Economics, Political Studies, and Sociology. Prerequisite: written consent of Global Political Economy coordinator.

GPE 4700 Studies in Global Political Economy Cr.Hrs. 6
(Formerly 157.470) An advanced interdisciplinary seminar that will study the effects of institutions, structures, and dynamics operating in the current global political economy. Students, working in groups, will be expected to do case studies on selected local (or regional) political economies. Prerequisite: written consent of Global Political Economy coordinator.

8.14 Department of History

Head: Mark Gabbert
Campus Address/General Office: 403 Fletcher Argue Building
Telephone: 204 474 8401
Email Address: history@umanitoba.ca

Website: umanitoba.ca/history

8.14.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

In addition, students are to have a grade point average of 3.0 or better in all History courses completed before admission.

To continue in the Honours program a 3.0 grade point average, with minimum grades of "B" in all 3000- and 4000-level History courses, must be maintained. Normally, students who fail to maintain a minimum grade of "B" in all 3000- and 4000-level courses will be required to withdraw from the Honours program.

It is recommended that students complete History HIST 4400 or HIST 4580 in Year 4 if they intend 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, Single Advanced Major, Single Honours or Double Honours in History, CLAS 2140, CLAS 2150, CLAS 2160 and CLAS 2170 also count for credit towards a Minor (Concentration) in History.

8.14.2 History

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours in History courses numbered at the 1000 or 2000 level **or** 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	12 credit hours in History courses numbered at the 2000 level	• 6 credit hours in History courses numbered at the 3000 level • 6 credit hours in History courses numbered at the 2000 or 3000 level	
	Within the 30 credit hours, students must choose 6 credit hours from each of 3 different areas of study.		
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours in History courses numbered at the 1000 or 2000 level **or** 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	18 credit hours in History courses numbered at the 2000 level	18 credit hours in History courses numbered at the 3000 level, **or** 12 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 2000 level, **or** 12 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 4000 level	6 credit hours in History courses numbered at the 4000 level
	Within the 48 credit hours, students must choose 6 credit hours from each of 3 different areas of study.		

YEAR 1	YEAR 2	YEAR 3	YEAR 4
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours in History courses numbered at the 1000 or 2000 level **or** 3 credit hours in History courses numbered at the 1000 level and 3 credit hours in History courses numbered at the 2000 level	6 credit hours in History courses numbered at the 2000 level	6 credit hours in History courses numbered at the 2000 or 3000 level	
SINGLE HONOURS[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	• 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	• HIST 3990 • 6 credit hours in History courses numbered at the 3000 level • 12 credit hours in ancillary options	24 credit hours in History courses numbered at the 4000 level
	Honours students must choose from a minimum of three different defined areas of historical study.		
DOUBLE HONOURS[1, 2, 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	• HIST 3990 • 6 credit hours in History courses numbered at the 3000 level • 12 credit hours in other Honours field	• 12 credit hours in History courses 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] Ancillary options are courses taken from outside the Honours field of study.

[3] Honours courses: all 4000 level courses.

History courses are arranged into groups and areas of study as follows:

Groups:

numbered at the 1000 level: Introductory

numbered at the 2000 level: General

numbered at the 3000 level: Special

numbered at the 4000 level: Honours

Areas:

A: The Americas

B: Asian

C: Canadian

D: Ancient and Medieval

E: European

G: General

M: Modern World

R: African

For information regarding Cross-Disciplinary Programs, see Section 8.8 and for Canadian Studies, see Section 8.3.

8.14.3 History Course Descriptions-1000 Level

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 1260 New Directions in History: Inquiries into the Cultural Basis of the Modern World (G) Cr.Hrs. 3
(Formerly 011.126) The history of cultural change focusing on such topics as leisure and popular culture, sexuality and history, and the social consequences of creativity and genius. The specific content will vary from year to year.

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 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 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 ASIA 1420 (150.142) or the former HIST 1410 (011.141).

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 ASIA 1430 (150.143) or the former ASIA 1410 (011.141).

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 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).

8.14.3 History Course Descriptions-2000 Level

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 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 2220 The Shaping of Modern Ireland, 1500-Present (E) Cr.Hrs. 6
The history of Ireland from 1500 to the end of the twentieth century focusing on changes in political, social, religious, economic and cultural relationships in shaping Modern Ireland.

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 2750 or 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 the former 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.

HIST 2282 Inventing Canada (C) Cr.Hrs. 3
This course examines the "invention" and "reinvention" of Canada both before and after Confederation. It examines the process of invention from a range of different perspectives: political, cultural, economic, and social.

HIST 2284 Democracy and Dissent: Contesting Canada (C) Cr.Hrs. 3
This course examines how Canadian democracy (in its broadest meaning) has been contested, debated, and challenged. The history of dissent and citizen engagement is key to the democratic evolution of Canada. The course will evaluate the impact of dissenting voices in Canadian society, such as those of workers, the poor, women, indigenous peoples, and racial and ethnic minorities.

HIST 2286 Modern Canada (C) Cr.Hrs. 3
This course addresses the history of Canada since the First World War with attention to social, political, economic, diplomatic and cultural topics such as: interwar and postwar life, struggles for equality, international and internal conflict, immigration, new technologies, nationalism, aboriginal affairs, the arts and Canada's role in the world. Students may not hold credit for HIST 2286 and any of: HIST 2971 (011.297) or HIST 3050 (011.305) or the former HIST 2970 (011.297).

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 2400 History of Human Rights and Social Justice in the Modern World (G,M) Cr.Hrs. 3
Introductory course examining the emergence of the modern human rights era and social justice movements globally. Possible topics of study: human rights as global norm; non-Western conceptions of rights; workplace rights; indigenous rights; women's and gender rights.

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.

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 2500 History of Africa (R) Cr.Hrs. 6
A broad survey of African history from pre-colonial times through colonialism to the post-colonial present.

HIST 2502 The Modern Middle East: A Critical Survey (R) Cr.Hrs. 6
Survey of the major issues in the history of the modern Middle East. Emphasis on understanding today's social and political context in the Middle East through the lens of history. Students may not hold credit for both HIST 2502 and HIST 2900 with the topic "The Middle East from the Rise of Islam to the Nation State."

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 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.

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.

HIST 2650 Modern China and Japan (B) Cr.Hrs. 6
(Formerly 011.266) An examination of the major developments in East Asian history from the mid-1800s to the present. Topics to be studied include Western imperialism in East Asia, the Chinese revolutions, Japanese and Chinese approaches to modernization, democracy movements in Japan and China, and how Sino-Japanese relations shape the history of region.

HIST 2654 History of the People's Republic of China, 1949-Present (B) Cr.Hrs. 3
This course examines the history of the People's Republic of China from its founding in 1949 through the present day. The course considers continuity and change between the Maoist and post-1976 periods as well as changing meanings of socialism and their impact on state power and social orders.

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 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 2680 A History of Socialism from the French Revolution to the Present (M) Cr.Hrs. 3
(Formerly 011.268) The history of socialism, both revolutionary and nonrevolutionary from the French Revolution to the present. The course covers the history of theory and political action, and of both European and non-European socialism.

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 2750 History of the United States from 1607 to 1877 (A) Cr.Hrs. 3
A survey of the development of the American people and their institutions from Colonial times to Reconstruction. Students may not hold credit for HIST 2750 and any of: HIST 2230 (011.223) or HIST 2041 (011.204).

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 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 the former HIST 2821 (011.282).

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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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 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.

8.14.3 History Course Descriptions-3000 Level

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 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. Students may not hold credit for both HIST 3050 (011.305) and HIST 2286. Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3052 Canada since the 1960s (C) Cr.Hrs. 3
Examines fundamental topics and themes in Canada's politics, economy and society from the 1960s to the present, including: Quebec nationalism after 1960; western regionalism and the reassertion of provincial rights since the 1970s; the women's movement and first nations' activism since the 1960s; constitutional reform, patriation and the Charter of Rights and Freedoms in the 1980s and 1990s; free trade and globalization since the 1980s. Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3054 Canada and the United States (C) Cr.Hrs. 3
This course will undertake a detailed and comprehensive study of Canada's relationship with its neighbour from the eighteenth century to the present. Students may not hold credit for both HIST 3054 and HIST 3220 (011.322). Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3062 German and German-Jewish History, 1618 to the Present (E) Cr.Hrs. 6
The history of Germany from 1618 to the present with a focus on the experience of German Jewry. Students may not hold credit for HIST 3062 and any of: HIST 3064 or HIST 3066 or the former HIST 3060 (011.306). Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3064 German and German-Jewish History, 1618-1900 (E) Cr.Hrs. 3

The history of Germany from 1618 to 1900 with a focus on the experience of German Jewry. Students may not hold credit for HIST 3064 and any of: HIST 3062 or the former HIST 3060 (011.306). Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3066 German and German-Jewish History, 1900 to the Present (E) Cr.Hrs. 3
The history of Germany from 1900 to the present with a focus on the experience of German Jewry. Students may not hold credit for both HIST 3066 and HIST 3062. Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3070 History of the United States from 1877 to 1939 (A) Cr.Hrs. 6
(Formerly 011.307) This course will trace the political, social, economic, and cultural history of the United States from the period of Reconstruction to the start of the Second World War. Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3080 History of American Consumer Culture (A) Cr.Hrs. 3
(Formerly 011.308) This course will trace the development of American consumer society from the colonial era to the present. Topics addressed include the histories of: branding, mass distribution, department stores, advertising, mass-market magazines, consumer organizing, and consumer protest. Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3090 Studies in Asian History (B) Cr.Hrs. 3
(Formerly 011.309) The content of this course will vary. It is designed to provide in-depth examination of specialized themes or areas in modern Asian history. Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

HIST 3136 History of Medieval Italy, 568-1300 (D) Cr.Hrs. 3
An examination of the political, social, economic and cultural history of the Italian peninsula from the arrival of the Lombards to the development of city republics. Students may not hold credit for both HIST 3136 and HIST 3140. Prerequisite: [a grade of "C" or better in six credit hours of history] or written consent of department head.

HIST 3138 History of Medieval Italy, 1300-1500 (D) Cr.Hrs. 3
An examination of the political, social, economic and cultural history of the Italian peninsula during the later Middle Ages. Students may not hold credit for both HIST 3138 and HIST 3140. 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. Students may not hold credit for HIST 3140 and any of: HIST 3136 or HIST 3138. 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. Students may not hold credit for both HIST 3220 (011.322) and HIST 3054. 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 3260 Commerce, Rights and Empire in European Thought, 500-2000 (M) Cr.Hrs. 3
This course will scrutinize the intersection of commerce and governance in Europe from c.500 to the present, paying particular attention to the way that debates about commerce, war and peace have generated notions of human rights over the past three centuries. We will explore whether and how debates about the proper way to govern trade played important roles not only in the creation of the modern categories of the "state" and the "economy," but also in understandings of the person as a rational actor of politics with substantial rights. 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 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 3442 Race, Ethnicity, Immigration, and Nation in Canadian History (C) Cr.Hrs. 3
This course examines topics in the history of immigration, colonization, race, and ethnicity in Canada. Beginning with the incursions of European immigrants onto First Nations territories, the course investigates attitudes and policies concerning immigration, the interaction of colonization and immigration, discourses of race and ethnicity, and race and ethnic relations within Canadian society. Students may not hold credit for both HIST 3442 and HIST 3780 (011.378) with the topic "Race and Immigration in Canadian History." 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 3572 The History of Women, Gender, and Sexuality in Canada (C) Cr.Hrs. 6
This course examines the history of women, gender, and sexuality in Canada's past and how gender and sexuality have structured the histories of Indigenous people, English and French colonization, nation-building, immigration and urbanization, politics, war, and protest. Students may not hold credit for both HIST 3572 and the former HIST 3570 (011.357). 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

HIST 3680 Europe, 1870-1945 (E) Cr.Hrs. 6
(Formerly 011.368) Europe at the zenith of its power. The course examines the dominant forces and personalities of the period between Bismarck and Hitler. It emphasizes nationalism and minorities questions; the origins and events of the two world wars; and the domestic concerns of the major European states. 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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

HIST 3800 History of Winnipeg from 1870-2000 (C) Cr.Hrs. 3
A study of the social history of the city of Winnipeg from its origins through to the Aboriginal Justice Inquiry (1991). Students may not hold credit for both HIST 3800 and HIST 3790 (011.379) with the topic "History of Winnipeg." 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 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 3990 Seminar in Selected History Topics (G) Cr.Hrs. 6
This course will provide a systematic introduction to advanced research seminars, paying particular attention to the development of: oral skills and public presentation of ideas and research; focused historiographical discussion and analysis; and advanced historical research and writing skills. This course provides the skills and preparation for Year IV of the History Honours program. Prerequisite: [a grade of "C" or better in six credit hours of History] and written consent of department head.

8.14.3 History Course Descriptions-4000 Level

HIST 4000 Topics in History (G) Cr.Hrs. 3
The content of this course will vary. It is designed to provide students with specialized topics and themes in History. A description of the course is available in advance at the History Department Office. Prerequisite: written consent of department head. As the course will vary from year to year, students may take this course more than once for credit.

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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 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 4500 Jewish and European History and Historiography (E) Cr.Hrs. 6
This seminar examines issues relating to Jewish history and historiography in the context of European history and historiography. 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 4660 History of Health and Disease (G) Cr.Hrs. 6
Introduction to some of the principal issues and approaches in the history of health and disease. It is not meant to be a strictly chronological survey. Topics and themes may include the development of nursing and medical professions; transformation of the hospital; mental health; alternative therapies; colonization, infectious disease and aboriginal health; and health and the state. Prerequisite: written consent of department head.

HIST 4680 Social History of Health and Disease in Modern Canada (C) Cr.Hrs. 6
This course explores the history of health and health care in Canada, with a focus on the late 19th and 20th centuries. Topics will include colonization, infectious disease, and Aboriginal health; the evolution of medical and nursing professions; the emergence of the modern hospital; mental health, psychiatry and the asylum; cancer; alternative therapies; childbirth; health and old age; and health and the state. Analytical categories of gender, race, ethnicity, class, and sexuality will run throughout the material. 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 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 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.15 Department of Icelandic

Head: Birna Bjarnadóttir
Campus Address/General Office: 357 University College
Telephone: 204 474 8487
Email Address: um_icelandic@umanitoba.ca
Website: umanitoba.ca/icelandic

8.15.1 Program Information

The department offers a study of a cultural heritage that crosses centuries, oceans and continents, which includes courses in Icelandic language and literature and the poetics of immigration. The study of Icelandic prepares students for opportunities in research, teaching, translation, writing, interpretation and publishing.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in either ICEL 1200 or ICEL 2200. 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in ICEL 1400 and ICEL 1410, or ICEL 1200 or ICEL 2200.

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.

8.15.2 Icelandic

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR (OPTION 1) TOTAL: 30 CREDIT HOURS			
ICEL 1200[1]	ICEL 2200	18 credit hours in Icelandic courses numbered at the 2000, 3000, or 4000 level	
GENERAL MAJOR (OPTION 2) TOTAL: 30 CREDIT HOURS			
ICEL 2200	24 credit hours in Icelandic courses numbered at the 2000, 3000, or 4000 level		
MINOR (CONCENTRATION) (OPTION 1) TOTAL: 18 CREDIT HOURS			
ICEL 1200[1]	ICEL 2200	6 credit hours in Icelandic	
MINOR (CONCENTRATION) (OPTION 2) TOTAL: 18 CREDIT HOURS			
ICEL 1400 and ICEL 1410, or ICEL 1200	12 credit hours in Icelandic		
SINGLE OR DOUBLE HONOURS[2, 3]			
ICEL 2200	ICEL 2220, ICEL 2420, ICEL 2430	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 1200 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.
[3] Honours courses: ICEL 2310, ICEL 2420, ICEL 2430, ICEL 3400 and all 4000 level courses.

8.15.3 Icelandic Course Descriptions-1000 Level

ICEL 1200 Introduction to Icelandic Cr.Hrs. 6
The course is intended for students with little or no previous knowledge of Icelandic. Emphasis will be placed on reading comprehension and conversation skills, and students will also learn the basic grammatical structure of Icelandic and how to write short compositions. Pronunciation is developed in weekly language laboratory exercises. Students may not hold credit for both ICEL 1200 and the former ICEL 1240 (012.124).

ICEL 1210 Conversational Icelandic Cr.Hrs. 3
This course is offered as part of the Summer Session course offerings. Intensive study of conversational Icelandic during a field trip to Iceland. Students will be trained in groups in a classroom setting before they try their language skills in authentic situations. The course is designed for beginners as well as intermediate students. Regular attendance is obligatory. Taught in English. Open to all students.

ICEL 1300 Introduction to Swedish Cr.Hrs. 3
The course is intended for beginners. Emphasis will be placed on conversation skills and reading comprehension, and students will also learn the basic grammatical structures of the language and how to write short compositions. Pronunciation is developed in weekly language laboratory exercises. Open to all students.

ICEL 1400 Introduction to Contemporary Culture in Iceland Cr.Hrs. 3
The aim of this course is to study and explore a selection of literature, music, and visual art, and cultural critique. Students will also get an opportunity to study and explore both global and local Icelandic cultural characteristics and the fusion of cultural influences in contemporary Iceland. Open to all students. Taught in English. Students may not hold credit for both ICEL 1400 and the former ICEL 1220 (012.122).

ICEL 1410 Introduction to Culture in Medieval Iceland Cr.Hrs. 3
The aim of this course is to study a selection of sagas, history fragments and mythological sources. Students will also get an opportunity to explore the way in which world-renowned modern poets and writers have been drawn to, and seriously seduced by, the culture of medieval Iceland. Open to all students. Taught in English. Students may not hold credit for both ICEL 1410 and the former ICEL 1220 (012.122).

8.15.3 Icelandic Course Descriptions-2000 Level

ICEL 2200 Intermediate Icelandic 1 Cr.Hrs. 6
Emphasis on expanding the vocabulary. Students are trained to read texts with more complex grammatical structures by studying fictional as well as non-fictional texts. Conducted in Icelandic. Students may not hold credit for both ICEL 2200 and the former ICEL 2240 (012.224). Prerequisite: [a grade of "C" or better in ICEL 1200 or the former ICEL 1240 (012.124)] or written consent of instructor.

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 individual characteristics and place within the broader field of Canadian literature.

ICEL 2310 An Introduction to Old Icelandic Language and Literature Cr.Hrs. 6
(Formerly 012.231) Text: Sigrid Valfells and James E. Cathey. Old Icelandic: An Introductory Course (Oxford, 1981). Prerequisite: written consent of department head.

ICEL 2400 Icelandic Folktales in a European Context Cr.Hrs. 3
Reading of Icelandic legends and fairy tales and how they compare with stories from Northern and Central Europe. For the analysis, students will be introduced to central concepts and approaches to the study of folktales. Open to all students. Taught in English. Students may not hold credit for both ICEL 2400 and the former ICEL 2250 (012.225).

ICEL 2410 Special Topics Cr.Hrs. 3
Topics dealing with Icelandic literature, culture or language. Course content will vary from year to year depending on interest and needs of students and staff. As the course content will vary from year to year, students may take this course more than once for credit.

ICEL 2420 Poetics of Immigration in Icelandic-Canadian Literature Cr.Hrs. 3
A study of Icelandic-Canadian literature, focusing on the poetics of immigration in the writings of Icelandic settlers and the first generation of Icelandic-Canadians. As a special assignment, students will study the voice of the poet, philosopher, and social prophet Stephan G. Stephansson, and the universal references of his poetics. Taught in English. Open to all students. Students may not hold credit for both ICEL 2420 and the former ICEL 2300 (012.230).

ICEL 2430 Translation of Cultures in Icelandic-Canadian Literature Cr.Hrs. 3
A study of Icelandic-Canadian literature, focusing on the translation of cultures in the writings of modern and contemporary Icelandic-Canadian poets and writers. Students will read a selection of prose and poetry. They will also study ideas on the indispensable role of the translation of cultures in the context of world literature. Open to all students. Taught in English. Students may not hold credit for both ICEL 2430 and the former ICEL 2300 (012.230).

8.15.3 Icelandic Course Descriptions-3000 Level

ICEL 3200 Intermediate Icelandic 2 Cr.Hrs. 6
Reading of selected fictional and non-fictional texts. Translation exercises and composition followed by relevant review of grammar. A special focus is placed on syntax, word formation, and the use of idiomatic phrases. Conduced in Icelandic. Students may not hold credit for both ICEL 3200 and the former ICEL 3230 (012.323). Prerequisite: [a grade of "C" or better in ICEL 2200 or the former ICEL 2240 (012.224)] or written consent of instructor. Prerequisite or corequisite: [LING 1200 (126.120) or LING 1440 (126.144) or the former ENGL 2470 (004.247)] or written consent of instructor.

ICEL 3210 Romanticism in Icelandic Literature Cr.Hrs. 3
The aim of this course is to study the concept of Romanticism in Icelandic literature and the key players in the Romantic movement in nineteenth century Iceland. A selection of poems, prose texts, and fragments will be read carefully, in particular the writings of Jónas Hallgrimsson. Taught in English. Prerequisite: [a grade of "C" or better in a minimum of 30 credit hours of university level coursework] 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.

8.15.3 Icelandic Course Descriptions-4000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.16 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
The Changing Workplace	See Section 8.6
Global Political Economy	See Section 8.13
History of Art	See Section 9.1
Labour Studies	See Section 8.18
Latin American Studies	See Section 8.19
Medieval and Renaissance Studies	See Section 8.21
Ukrainian Canadian Heritage Studies	See Section 8.28
Women's and Gender Studies	See Section 8.29

8.16.1 Interdisciplinary-Others Course Descriptions

ARTS 1110 Introduction to University Cr.Hrs. 3
(Formerly 099.111) A seminar course designed to help students make the transition 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 fewer than 60 credit hours of course work. Students may not hold credit for both ARTS 1110 (099.111) and ARTS 1111 (099.111).

ARTS 1160 Leadership: An Interdisciplinary Approach Cr.Hrs. 3
This course provides an introduction to the key issues and concerns of leadership and leadership studies, focusing on the central question of "what is leadership." Students will examine the philosophical and historical foundations of leadership theory and practice, along with the more contemporary (and often more theoretical) reflections on both leadership practices and the varied disciplines that study them. This course will satisfy the Faculty of Arts Social Science requirement. Students may not hold credit for both ARTS 1160 and LEAD 2010.

8.17 Judaic Studies

Program Coordinators: Benjamin Baader, Justin Jaron Lewis
General Office: 328 Fletcher Argue
Telephone: 204 474 6691
E-mail: Judaic_Studies@umanitoba.ca

Website: umanitoba.ca/judaic_studies

8.17.1 Program Information

The Judaic Studies Program promotes the study of Jewish civilization, of Jewish religious expressions and traditions, and of Jewish cultural, social, and political formations and movements in all their variety. It supports teaching and research on Jewish life and Judaism from the Biblical period to the twenty-first century, in all parts of the world where Jews have lived. Judaic Studies approaches these subjects from all disciplinary angles and scholarly perspectives, and equally welcomes Jewish and non-Jewish scholars and students.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Major Program

Effective the 1989-1990 Regular Session, the General Major and Single Advanced Major in Judaic Studies will not be offered until further notice.

Minor (Concentration) Program

A) Judaic Studies

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in the first six credit hours of Judaic Studies and/or List A courses.

B) Yiddish

Effective with the 1989-1990 Regular Session, the Minor (Concentration) in Yiddish will not be offered until further notice.

8.17.2 Judaic Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR JUDAIC STUDIES [NOT CURRENTLY OFFERED] TOTAL: 30 CREDIT HOURS			
• 6 credit hours in Language and Literature (Hebrew[1], Yiddish, or Arabic[2]) • 6 credit hours in Judaic Civilization • 18 credit hours in Judaic Studies			
SINGLE ADVANCED MAJOR JUDAIC STUDIES [NOT CURRENTLY OFFERED] TOTAL: 48 CREDIT HOURS			
• 12 credit hours in Language and Literature (Hebrew[1], Yiddish, or Arabic[2]) • 12 credit hours in Judaic Civilization • 24 credit hours in Judaic Studies			
MINOR (CONCENTRATION) JUDAIC STUDIES TOTAL: 18 CREDIT HOURS			
18 credit hours in Judaic Studies and/or List A			
MINOR (CONCENTRATION) YIDDISH [NOT CURRENTLY OFFERED] TOTAL: 18 CREDIT HOURS			
YDSH 1220	YDSH 2320	6 credit hours in Hebrew Language and Literature or Judaic Civilization	
NOTES: [1] A language-placement interview is required before registration. Normally, elementary Hebrew day school graduates begin with HEB 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.			

List A Courses Acceptable for Judaic Studies Credit

With written consent of the program coordinator courses not on this list may be taken for credit if they include sufficient Judaic Studies content.

Course No.	Course Name	Credit Hours
Faculty of Arts		
Classics		
CLAS 3260	Hellenistic Civilization: History and Archaeology	3
GRK 2810	Prose Writings of the Hellenistic and Greco-Roman Periods	3
German and Slavic Studies		
GRMN 3260	Representations of the Holocaust	3
GRMN 3262	Representations of the Holocaust in English Translation	3
Course No.	**Course Name**	**Credit Hours**
UKRN 2820	Holodomor and Holocaust in Ukrainian Literature and Culture	3
History		
HIST 2240	History of Antisemitism and the Holocaust (E)	6
HIST 2250	Social History of the Jews: Antiquity to Present (G)	6
HIST 3062	German and German-Jewish History, 1618 to the Present (E)	6
HIST 3064	German and German-Jewish History, 1618-1900 (E)	3
HIST 3066	German and German-Jewish History, 1900 to the Present (E)	3
HIST 4500	Jewish and European History and Historiography (E)	6
Political Studies		
POLS 3340	Middle East Politics	3
Religion		
RLGN 1120	Biblical Hebrew (A)	6
RLGN 1390	Readings in Biblical Hebrew 1 (A)	3
RLGN 1400	Readings in Biblical Hebrew 2 (A)	3
RLGN 2140	Introduction to Judaism (A)	3
RLGN 2150	The Talmud (A)	3
RLGN 2160	Introduction to Hebrew Scriptures (A)	3
RLGN 2231	Étude de l'Ancien Testament (A)	6
RLGN 2760	Rabbinic Judaism (A)	3
RLGN 2770	Contemporary Judaism (A)	3
RLGN 3280	Hasidism (A)	3
RLGN 3790	Prophets of Ancient Israel (A)	6
RLGN 3800	Selected Old Testament Literature and Themes (A)	6
RLGN 3824	Kabbalah (A)	3
RLGN 3830	The Bible as Story (A)	3
RLGN 4300	Advanced Topics in Judaism (A)	3

8.17.3 Judaic Studies Course Descriptions-Arabic

ARA 1000 Elementary Arabic Cr.Hrs. 6
(Lab required) An introductory course in written and oral Arabic, for students with little or no previous knowledge of the language. Language laboratory exercises will be included in addition to class time. Students may not hold credit for ARA 1000 and any of: the former ARA 2260 or the former SEM 2260 (055.226). Not open to students who have previously obtained credit in ARA 2000. Prerequisite: written consent of instructor.

ARA 2000 Intermediate Arabic Cr.Hrs. 6
(Lab required) This intermediate class will improve writing, reading, conversation and listening comprehension for everyday Arabic, and cover many of the important grammatical features of the language. By the end of this course, the learner should be able to communicate in many situations with fluency or near fluency. Prerequisite: [a grade of "C" or better in ARA 1000 or the former ARA 2260 or the former SEM 2260 (055.226)] or written consent of instructor.

ARA 3000 Advanced Arabic Cr.Hrs. 6
(Lab required) Students who have already mastered beginning and intermediate vocabulary and grammar will learn to use the language in a broader cultural context, developing their skills in reading and writing Arabic. The course utilizes communication-based activities and interactive learning techniques. Prerequisite: [a grade of "C" or better in ARA 2000] or written consent of instructor.

8.17.3 Judaic Studies Course Descriptions-Hebrew

HEB 1120 BIBLICAL HEBREW Cr. Hrs. 6
(Formerly SEM 1120 or 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 HEB 1120 and any of: RLGN 1120 (020.112) or the former SEM 1120 (055.112).

HEB 1250 HEBREW 1 Cr. Hrs. 6
(Formerly SEM 1250 or 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. Students may not hold credit for both HEB 1250 and the former SEM 1250 (055.125). Prerequisite: written consent of program coordinator.

HEB 1260 HEBREW 2 Cr. Hrs. 6
(Formerly SEM 1260 or 055.126) For students who have taken HEB 1250 or the former 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. Students may not hold credit for both HEB 1260 and the former SEM 1260 (055.126). Prerequisite: written consent of program coordinator.

HEB 2210 Modern Hebrew Literature Cr. Hrs. 6
(Formerly SEM 2210 or 055.221) Uri Zvi Greenberg, Lamdan, Sholonsky, Agnon, Burla, Hazzaz, Yizhar, Shamir Amihay, S. Shalom - poetry and prose. The modern Isreal short story. Students may not hold credit for both HEB 2210 and the former SEM 2210 (055.221). Prerequisite: written consent of program coordinator.

HEB 2250 Rabbinic Hebrew Cr. Hrs. 6
(Formerly SEM 2250 or 055.225) Study of the style, vocabulary, grammar, and syntax of halakhic and aggadic rabbinic texts. A representative selection of Talmud, Midrashim Codes, and Responsa will be drawn from both the medieval and modern periods. Students may not hold credit for both HEB 2250 and the former SEM 2250 (055.225). Prerequisite: written consent of program coordinator.

HEB 2280 Introduction to Hebrew Literature Cr. Hrs. 6
(Formerly SEM 2280 or 055.228) A study of the history and forms of Hebrew Literature from biblical to modern times. Students may not hold credit for both HEB 2280 and the former SEM 2280 (055.228). Prerequisite: [a grade of "C" or better in HEB 1260 or the former SEM 1260 (055.126)] or written consent of program coordinator.

HEB 2350 HEBREW 3 Cr. Hrs. 6
(Formerly SEM 2350 or 055.235) For students who have taken HEB 1260 or the former SEM 1260 (055.126) or the equivalent. Further oral practise, vocabulary expansion and grammar review, and development of reading and writing skills. Students may not hold credit for both HEB 2350 and the former SEM 2350 (055.235). Prerequisite: written consent of program coordinator.

HEB 3360 Hebrew Communication Arts Cr. Hrs. 6
(Formerly SEM 3360 or 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. Students may not hold credit for both HEB 3360 and the former SEM 3360 (055.336). Prerequisite: written consent of program coordinator.

HEB 3370 Hebrew Language and Literature Cr. Hrs. 6
(Formerly SEM 3370 or 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. Students may not hold credit for both HEB 3370 and the former SEM 3370 (055.337). Prerequisite: written consent of program coordinator.

HEB 3380 The Creation of Modern Hebrew Cr. Hrs. 6
(Formerly SEM 3380 or 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. Students may not hold credit for both HEB 3380 and the former SEM 3380 (055.338). Prerequisite: written consent of program coordinator.

8.17.3 Judaic Studies Course Descriptions-Judaic Civilization

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) A socio-historical study of the cultural, religious, and intellectual interaction between Jewish and non-Jewish cultures, e.g., the relationship of Judaism with other cultures of the ancient Near East and Hellenism, with medieval and modern Christendom and Islam, and with modern/contemporary secularism.

JUD 2650 Field Studies in Biblical Lands Cr.Hrs. 6

(Formerly 055.265) Offered as part of the Summer Session, the course consists of three weeks on-campus study to be followed by three weeks travel in the Holy Land visiting Major sites and points of interest.

JUD 3010 Topics in Jewish Studies Cr.Hrs. 3

An opportunity for the study of selected topics or themes in Jewish Studies. Consult the Judaic Studies program office or website for details. As the course content will vary from year to year, students may take this course more than once for credit.

8.17.3 Judaic Studies Course Descriptions-Yiddish

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) Survey of Yiddish literature; review of Yiddish language skills. This course is intended for graduates of Yiddish day schools, those who have completed YDSH 1220 (055.122) or equivalent, and students with other previous training in Yiddish. Prerequisite: [a grade of "C" or better in YDSH 1220 (055.122)] or written consent of program coordinator.

8.18 Labour Studies Program

Program Coordinator: Julie Guard
Program Office: 114 Isbister
Telephone: 204 474 8356
E-mail: labour_studies@umanitoba.ca

Website: umanitoba.ca/labour_studies

8.18.1 Program Information

This interdisciplinary program examines the social, economic and political realities of work. Social justice and fundamental rights, the way work is organized, the dynamics of power in the workplace and the political economy of labour are examined critically. We explore the past, present and future of the labour movement and the wide-ranging effects of globalization on our daily lives. Using theoretical and practical approaches, we examine the forces that shape working people's lives and our responses to them.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Major Program

For entry to the Major, the prerequisite is a grade of "C" or better in both LABR 1260 (the former 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 (Concentration) Program

For entry to the Minor, the prerequisite is a grade of "C" or better in both LABR 1260 (the former 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 (Concentration) may not be used towards a Major/Minor (Concentration) or Honours in the second field.

8.18.2 Labour Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
LABR 1260 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		
SINGLE ADVANCED MAJOR TOTAL: 54 CREDIT HOURS			
LABR 1260 and LABR 1290	• 6 credit hours of LABR courses at the 2000 level • 21 credit hours of LABR courses at the 3000 level • 9 credit hours of LABR courses at the 4000 level • 12 credit hours from LABR courses and/or the list of electives below		
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
LABR 1260 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.

Course No.	Course Name	Credit Hours
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 2362	Economics of Gender	3
ECON 2500*	Labour and Technology (same as former Labour Studies LABR 2450)	3
ECON 2540	Political Economy 1: Production and Distribution	3
ECON 2550	Political Economy 2: Economic Growth and Fluctuations in a Global Economic Environment	3
ECON 3170	Introduction to Quantitative Methods in Economics	3
ECON 3300	Canadian Economic History	6
ECON 3360*	Labour Economics	6
ECON 3362	Labour Economics 1	3
ECON 3364	Labour Economics 2	3
ECON 3510	Industrial Relations (same as Labour Studies LABR 3510)	6
ECON 3660	Economic Ideas and Social Institutions	6
History		
HIST 2282	Inventing Canada (C)	3
HIST 2284	Democracy and Dissent: Contesting Canada (C)	3
HIST 2286	Modern Canada (C)	3
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 3572	The History of Women, Gender, and Sexuality 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 3800	History of Winnipeg from 1870-2000 (C)	3
HIST 4030*	The History of Communism and Socialism since 1945 (M) (H)	6
Native Studies		
NATV 3320*	Aboriginal Organizations	3
Philosophy		
PHIL 2290	Ethics and Society	6
PHIL 2830	Business Ethics	3
PHIL 3710*	Critiques of Contemporary Society	6
Political Studies		
POLS 3470	Canadian Public Management	3
POLS 3570	Administrative Theory in the Public Sector	3
POLS 3810	Introduction to Marxism	3
POLS 4370	Comparative Public Administration (H)	3
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

Course No.	Course Name	Credit Hours
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 3380	Power, Politics and the Welfare State	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
SOC 3890	Power and Inequality in Comparative Perspective	3
Women's and Gender Studies		
WOMN 2500	Race, Class and Sexuality	3
WOMN 3550	Feminist Community Organizing: Theories and Practices	3
I.H. Asper School of Business (Faculty of Management)		
Business Administration		
GMGT 2030*	Administrative Theory	3
GMGT 2060	Management and Organizational Theory	3
GMGT 2070	Introduction to Organizational Behaviour	3
GMGT 2080*	Introduction to Management and Organization Theory	3
GMGT 3030	Contemporary Social Issues in Business	3
GMGT 4210	Seminar in Management and Capitalism	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

* Indicates course no longer offered.

For course descriptions, see departmental listings.

8.18.3 Labour Studies Course Descriptions-1000 Level

LABR 1260 Working for a Living Cr.Hrs. 3
An introduction to the study of working lives in the contemporary world and the global transformation that has made working for wages central to human existence. Students may not hold credit for both LABR 1260 and the former LABR 1270 (153.127).

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.

8.18.3 Labour Studies Course Descriptions-2000 Level

LABR 2100 The Political Economy of Labour Cr.Hrs. 3
This course examines the dynamics of work organization, the production and reproduction of labour power, labour markets and class conflict in capitalist societies, with attention to contemporary Canada. Students may not hold credit for LABR 2100 and any of: LABR 2420 (153.242) or ECON 2420 (018.242). Prerequisite: [a grade of "C" or better in three credit hours of 1000 level Labour Studies] or written consent of the Labour Studies coordinator.

LABR 2300 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. Students may not hold credit for both LABR 2300 and the former LABR 3300. Prerequisite: [a grade of "C" or better in three credit hours of 1000 level Labour Studies] or written consent of the Labour Studies coordinator.

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 LABR 2420 (153.242) and any of: LABR 2100 or ECON 2420 (018.242). Prerequisite: [a grade of "C" or better in both LABR 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] or [a grade of "C" or better in six credit hours of 1000 level Economics].

8.18.3 Labour Studies Course Descriptions-3000 Level

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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] or [a grade of "C" or better in both HRIR 3450 (027.345) and 6 credit hours of other HRIR courses] 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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] or written consent of the Labour Studies coordinator.

LABR 3050 Issues in Occupational Health and Safety and Workers' Compensation Cr.Hrs. 3
This course will explore historical, legal and political issues surrounding health and safety in Canadian workplaces with an emphasis on Manitoba. It will critically examine both the Workers' Compensation and the Workplace Health and Safety systems as they currently exist and review the role of workers, employers, unions and government in these processes. It will investigate various challenges and emerging issues in health and safety including but not limited to industrial disease, gender concerns, precarious employment and globalization. Prerequisite: [a grade of "C" or better in three credit hours of 1000 level Labour Studies] or [a grade of "C" or better in both HRIR 3450 (027.345) and an additional 6 credit hours of HRIR courses] 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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] or [a grade of "C" or better in both HRIR 3450 (027.345) and 6 credit hours of other HRIR courses] 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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] or [a grade of "C" or better in both HRIR 3450 (027.345) and 6 credit hours of other HRIR courses] or written consent of the Labour Studies coordinator.

LABR 3080 Labour and Community Organizing Cr.Hrs. 3
This course examines the theory and practice of collaborative community and labour organizing, with particular emphasis on Latin America, to identify the strengths and limitations of this approach for reviving unions, protecting workers' rights and advancing social justice. Prerequisite: [a grade of "C" or better in both LABR 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] 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: [a grade of "C" or better in six credit hours of 1000 level Labour Studies] or written consent of the Labour Studies coordinator. As the course content will vary from year to year, students may take this course more than once for credit.

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: [a grade of "C" or better in six credit hours of 1000 level Labour Studies] or written consent of the Labour Studies coordinator. As the course content will vary from year to year, students may take this course more than once for credit.

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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] or [a grade of "C" or better in both HRIR 3450 (027.345) and 6 credit hours of other HRIR courses] 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 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] or [a grade of "C" or better in both HRIR 3450 (027.345) and 6 credit hours of other HRIR courses] 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. Prerequisite: [a grade of "C" or better in six credit hours of 1000 level Labour Studies] or written consent the Labour Studies coordinator.

LABR 3210 Working People in Hard Times Cr.Hrs. 3
What have recent changes in work and society meant for people who work for wages or who live with those who do? How did these changes happen? What do they mean for youth today? How do the growing demands of our jobs affect our lives with family and friends? How have employers' actions affected unions, and how have unions responded? This course will explore these questions and others that arise from them. Prerequisite: [a grade of "C" or better in three credit hours of 1000 level Labour Studies] or written consent of the Labour Studies coordinator.

LABR 3220 Global Sweatshops, Global Struggles Cr.Hrs. 3
This course explores the past and present of sweated work in various industries in the Global North and South. We explore circumstances that support sweatshops, including off-shoring and the new international division of labour; migrant, child and female labour forces; global supply chains and the role of retailers and contractors. We also compare and evaluate strategies to eliminate sweatshops, including NGO activities, government regulations, consumer boycotts and the international labour, student and social justice movements. Prerequisite: [a grade of "C" or better in three credit hours of 1000 level Labour Studies] or written consent of the Labour Studies coordinator.

LABR 3400 Racism and Work Cr.Hrs. 3
This course explores three central questions: What are racism and colonialism? How do racism and colonialism shape work in Canada? What strategies exist for combating racism at work, and which are most effective? Students may not hold credit for both LABR 3400 and LABR 3110 when titled "Racism and Work." Prerequisite: [a grade of "C" or better in three credit hours of 1000 level Labour Studies] or written consent of the Labour Studies coordinator.

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 both LABR 1260 (the former LABR 1270 or 153.127) and LABR 1290 (153.129)] 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.

8.18.3 Labour Studies Course Descriptions-4000 Level

LABR 4110 Selected Topics in Labour Studies Cr.Hrs. 3
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. As the course content will vary from year to year, students may take this course more than once for credit.

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. Corerequisite: LABR 4520. 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. Corequisite: LABR 4510. Prerequisite: formal declaration of the Labour Studies Advanced Major and written consent of the Labour Studies coordinator.

8.19 Latin American Studies Program

Program Coordinator: Jorge A. Nállim
Program Office: 405 Fletcher Argue Building
Telephone: 204 474 6387
E-mail: Jorge.Nallim@ad.umanitoba.ca

8.19.1 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 (Concentration) in Latin American Studies consists of at least 18 credit hours from a minimum of two different departments chosen from the following list.

Course No.	Course Name	Credit Hours
Faculty of Arts		
Anthropology		
ANTH 2690	Peoples and Cultures of Contemporary Latin America	3
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
French, Spanish and Italian		
SPAN 2200	Spanish American Culture and Civilization	3
SPAN 2210	Voices and Images of Latin America	3
SPAN 2540	Spanish-American Literature 2	3
SPAN 2570	Special Studies (Acceptable for credit only when course content is on Latin American studies)1	3
SPAN 3080	Contemporary Latin American Novel	3
SPAN 3270	Special Studies (Acceptable for credit only when course content is on Latin American studies)1	3
SPAN 3300	Cinema and Literature	3
SPAN 3320	Testimony and Human Rights in Latin America	3
SPAN 3780	Short Fiction in Spanish	3
SPAN 3790	Latin American Cinema and Society	3
History		
HIST 2900	Topics in Social History (G) (Acceptable for credit only when course content is on Latin American studies)1	6
HIST 3110	Topics in History 1 (G) (Acceptable for credit only when course content is on Latin American studies)1	3
HIST 3120	Topics in History 2 (G) (Acceptable for credit only when course content is on Latin American studies)1	3
HIST 3130	Issues in Social History (G) (Acceptable for credit only when course content is on Latin American studies)1	3
HIST 3740	Topics in Latin American History (A)	3
HIST 4000	Topics in History (G) (Acceptable for credit only when course content is on Latin American studies)1	3
HIST 4150	The Social History of the Latin American State (1492-2005) (A)	6

NOTE:

1Written consent of program coordinator required to use course in the Minor (Concentration).

For entry to the Minor (Concentration) in Latin American Studies, the prerequisite is a grade of "C" or better in six credit hours from the approved list.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

For course descriptions, see departmental listings.

8.20 Department of Linguistics

Head: Terry Janzen
Campus Address/General Office: 534 Fletcher Argue Building
Telephone: 204 474 9596
Email Address: lingdpt@cc.umanitoba.ca
Website: umanitoba.ca/linguistics

8.20.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), 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.

8.20.2 Linguistics

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
LING 1200[1]	• at least 9 credit hours chosen from the core courses[2] numbered at the 2000 level • at least 6 credit hours chosen from the core courses[2] numbered at the 3000 level • 9 additional credit hours of Linguistics		

YEAR 1	YEAR 2	YEAR 3	YEAR 4
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
LING 1200[1]	• at least 12 credit hours chosen from the core courses[2] numbered at the 2000 level LING 3200 or LING 3300 or LING 3400 • 6 additional credit hours chosen from the core courses[2] numbered at the 3000 level • 18 additional credit hours of Linguistics		
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
LING 1200[1]	• at least 6 credit hours chosen from the core courses[2] 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.

Course No.	Course Name	Credit Hours
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

* Indicates course no longer offered.

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:

Course No.	Course Name	Credit Hours
Deaf Studies Program (prerequisite) - RRC		
DSP-D101 DSP-D201 DSP-D300	American Sign Language 1 American Sign Language 2 American Sign Language 3 Total credit hours for these 3 courses	6
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 or ANTH 1520	Cultural Anthropology (A) Critical Cultural Anthropology (A)	3 3
	Science	3
(In the Deaf Studies Certificate Program (RRC) and in Year 1 of the Joint Linguistics (U of M) and ASL (RRC) Program students must complete a 3 credit hour Science course for a total of 6 credit hours of Science. A minimum of 3 credit hours of the Science courses must be in mathematics, statistics, or physics. Students seeking a second degree are not required to complete a mathematics, statistics, or physics course.)		
Total Hours		**12**

Following successful completion of this prerequisite year, a Certificate in Deaf Studies is awarded by Red River College and selection for continuation for the joint degree program is made by RRC and the Linguistics department.

Linguistics (U of M) and American Sign Language/English Interpretation (RRC)

Year 1 RRC		
AEI-I320	Cross-language Processing in Interpretation	3
AEI-I120	Language Processing in Interpretation-English	3
AEI-I220	Language Processing in Interpretation-ASL	3
AEI-I101	English Comprehension and Expression	3
Total Hours		**12**
Year 1 - U of M		
LING 2200	Syntax	6
LING 2460	Morphology	3
LING 2740	Interpretation Theory	3
ENGL XXXX	English	6
	Science	3
(In the Deaf Studies Certificate Program (RRC) and in Year 1 of the Joint Linguistics (U of M) and ASL (RRC) Program students must complete a 3 credit hour Science course for a total of 6 credit hours of Science. A minimum of 3 credit hours of the Science courses must be in mathematics, statistics, or physics. Students seeking a second degree are not required to complete a mathematics, statistics, or physics course.)		
Total Hours		**21**

Course No.	Course Name	Credit Hours
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) (Before selecting the 6 credit hours of electives, contact the General Office to ensure the selection satisfies the subject field requirement.)	6
Total Hours		**9**

8.20.3 Linguistics Course Descriptions-1000 Level

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. Not open to students who are currently enrolled in, or have previously obtained credit in LING 2200 (126.220).

8.20.3 Linguistics Course Descriptions-2000 Level

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 systems 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 Indoeuropean 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 from infancy through childhood. Aspects of phonology, morphology, pragmatics and syntax acquisition are discussed, as well as formal theories of acquisition, second language and bilingual acquisition, atypical development and the relationship of language acquisition with literacy. Also offered as PSYC 2860. Students may not hold credit for both LING 2860 (126.286) and PSYC 2860. Prerequisite: [a grade of "C" or better in LING 1200 (126.120) or PSYC 1200 (017.120) or the former 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 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.

8.20.3 Linguistics Course Descriptions-3000 Level

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 3820 Special Topics Cr.Hrs. 3
(Formerly 126.382) Topics of current interest in the language sciences. Prerequisite: written consent of instructor. As the course content will vary from year to year, students may take this course more than once for credit.

LING 3840 Special Topics in ASL Cr.Hrs. 3
(Formerly 126.384) Topics of current interest in ASL linguistics. Prerequisite: written consent of instructor. As the course content will vary from year to year, students may take this course more than once for credit.

LING 3920 Special Studies Cr.Hrs. 3
(Formerly 126.392) Supervised study. Prerequisite: written consent of instructor. As the course content will vary from year to year, students may take this course more than once for credit.

8.21 Medieval and Renaissance Studies Program

Program Advisor: Roisin Cossar
Program Office: 454 Fletcher Argue Building
Telephone: 204 474 8885

8.21.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

The following entries contain information which is not contained in Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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:

Course No.	Course Name	Credit Hours
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

* Indicates course 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) Single 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 (Concentration) Program

For entry to the Minor (Concentration) program, the prerequisite is a grade of "C" or better in six credit hours considered relevant to the Minor by the program advisor.

A Minor (Concentration) 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 (Concentration) in this area may not be used for Major, Minor (Concentration) or Honours in a second field.

8.22 Department of Native Studies

Head: Renate Eigenbrod
Campus Address/General Office: 204 Isbister Building
Telephone: 204 474 9266
Email Address: native_studies@umanitoba.ca
Website: umanitoba.ca/native_studies

8.22.1 Program Information

Courses in this department examine the history, art, literature, and the philosophical and religious traditions of Canada's original inhabitants. Other courses explore the legal, political, and health care systems in relation to Aboriginal people. Aboriginal and non-Aboriginal students may specialize in either Native studies or Native languages, Cree and Ojibway.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

A) Native Studies

For entry to the Minor (Concentration), 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 (Concentration), 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 both NATV 2272 and NATV 2274 (the former 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.

8.22.2 Native Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
NATIVE STUDIES GENERAL MAJOR[1] TOTAL: 30 CREDIT HOURS			
NATV 1200 or NATV 1220 and NATV 1240	• 18 credit hours in Native Studies numbered at the 2000 level or above[1] • 6 credit hours in Native Studies or Native Language courses numbered at the 3000 level or above.		
NATIVE STUDIES SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
NATV 1200 or NATV 1220 and NATV 1240	• 21 credit hours in courses offered by Native Studies[2] • 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 (CONCENTRATION) 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 MINOR (CONCENTRATION)[5] **(OPTION 1)** TOTAL: 18 CREDIT HOURS			
NATV 1250 and NATV 1260 or NATV 1270 and NATV 1280	NATV 2250, or both NATV 2272 and NATV 2274	NATV 2300 and NATV 2320, or NATV 2310 and NATV 2330, or 6 credit hours approved by the department[3,4]	
NATIVE LANGUAGES MINOR (CONCENTRATION)[5] **(OPTION 2)** TOTAL: 18 CREDIT HOURS			
NATV 2250, or both NATV 2272 and NATV 2274	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:
The following courses count as Native Language courses: NATV 1250, NATV 1260, NATV 1270, NATV 1280, NATV 1290, NATV 2250, NATV 2272, NATV 2274, NATV 2300, NATV 2310, NATV 2320, NATV 2330 and NATV 3300.
[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 2272, NATV 2274.
[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.

8.22.3 Native Studies Aboriginal Governance Stream

Students interested in pursuing an Single 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 departmental listing in this Calendar. The conditions for entry, continuation and graduation requirements may be found in Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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, GMGT 2030, HRIR 2440 or MKT 2210 with a grade of "C" or better in each.

For information on this program contact the Department of Native Studies.

8.22.4 Native Studies Aboriginal Governance Stream

YEAR 1	YEAR 2	YEAR 3	YEAR 4
NATIVE STUDIES SINGLE ADVANCED MAJOR - ABORIGINAL GOVERNANCE STREAM TOTAL: 51 CREDIT HOURS			
NATV 1200 or NATV 1220 and NATV 1240	• ECON 1010 or ECON 1210 or ECON 1220 • NATV 2110, POLS 2070, STAT 1000 • 12 credit hours from Political Governance courses: NATV 2220, NATV 3310, NATV 3280, NATV 3370, NATV 4200, POLS 4150 • 12 credit hours from Aboriginal Business and Economics courses: NATV 3120, NATV 3160, NATV 3350, NATV 4320 • 6 credit hours from Traditional Knowledge courses: NATV 2030, NATV 3330, NATV 4220, NATV 4230		
REQUIRED MINOR IN BUSINESS FOR THOSE STUDENTS IN A DECLARED ABORIGINAL GOVERNANCE STREAM[1] TOTAL: 18 CREDIT HOURS			
ACC 1100, HRIR 2440, MKT 2210	6 credit hours from: ACC 1110, COMP 1260, ENTR 2010, ENTR 2020, GMGT 2010, GMGT 3300, LEAD 2010, FIN 2200, FIN 3470, HRIR 4410, MIS 2000		
NOTE: [1] Students must ensure that all course prerequisites are met when selecting courses for the Minor.			

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

Course No.	Course Name	Credit Hours
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
Marcel A. Desautels Faculty of Music		
033.386*	Topics in Music (when the topic is "Music in Traditional Aboriginal Society")	3

* Indicates course no longer offered.

8.22.5 Native Studies Course Descriptions-1000 Level

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 First Nations, 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 First Nations, 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 First Nations, 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) (Lab required) 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) (Lab required) 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.

8.22.5 Native Studies Course Descriptions-2000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

NATV 2020 The Métis of Canada Cr.Hrs. 3
(Formerly 032.202) A history of the Métis of Canada.

NATV 2030 Working with Aboriginal Elders Cr.Hrs. 3
This course provides an opportunity for students to develop culturally relevant community service skills in Native Studies and to acquire an understanding of traditional teachings by Elders from the Cree and Ojibway traditions. The course includes participation in the annual Elders and Traditional Teachers Gathering conference. Students may not hold credit for both NATV 2030 and NATV 2000 when titled "Working with Elders." 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 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 Saysi Dene, north of the Churchill River. This course may include a field trip component. Prerequisite: [a grade of "C" or better in NATV 1200 (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 2110 Introduction to Aboriginal Community Development Cr.Hrs. 3
Community development is the main strategy available for achieving the level of governance that most Aboriginal communities seek. It involves a plan that captures the spirit of a community and stirs the imagination of the members. Obstacles include lack of time, resources, vision and understanding of what a community plan for development can accomplish. This course will examine community development within an Aboriginal context. Students may not hold credit for both NATV 2110 and NATV 2000 (032.200) when titled "Introduction to Aboriginal Community Development." 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 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.

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 2272 Intermediate Ojibway 1 Cr.Hrs. 3
This course is a continuation of Introductory Ojibway 1 and 2 and the entry-level course for fluent speakers. It focuses on development of conversational fluency, Ojibway orthography, composition and translation. Students may not hold credit for both NATV 2272 and the former NATV 2270 (032.227). Prerequisite: [a grade of "C" or better in both NATV 1270 (032.127) and NATV 1280 (032.128)] or [Matriculation Ojibway] or written consent of instructor or department head.

NATV 2274 Intermediate Ojibway 2 Cr.Hrs. 3
This course is a continuation of Intermediate Ojibway 1. It focuses on the further development of conversational fluency, Ojibway orthography, and translation and also offers an introduction to the linguistic structure of Ojibway. Students may not hold credit for both NATV 2274 and the former NATV 2270 (032.227). Prerequisite: [a grade of "C" or better in NATV 2272] 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 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 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 both NATV 2272 and NATV 2274] or [a grade of "C" or better in both NATV 1220 (032.122) and NATV 1240 (032.124)] or [a grade of "C" or better in NATV 1200 (032.120) or the former 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 both NATV 2272 and NATV 2274] or [a grade of "C" or better in the former 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.

8.22.5 Native Studies Course Descriptions-3000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 the former 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 3150 Residential School Literature Cr.Hrs. 3
This course focuses on the analysis of literary responses to Residential Schools in the form of memoirs, fiction, poetry, and plays; it will also include aesthetic representations of school experiences through other media like film and art. 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 3160 Fundraising for Aboriginal Organizations Cr.Hrs. 3
This course examines effective fundraising skills as critical for the longevity of many programs in the Aboriginal community. While government fundraising is an important source, understanding grantsmanship and other funding strategies are critical for sustained program existence and effective use of scarce human and financial resources. Students may not hold credit for both NATV 3160 and NATV 3000 (032.300) when titled "Financing Strategies for Aboriginal Non-Profit Initiatives." 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 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.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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."

8.22.5 Native Studies Course Descriptions-4000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 the former 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.

8.23 Department of Philosophy

Head: Carl Matheson
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8.23.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in six credit hours in Philosophy.

The Minor (Concentration) may consist entirely of courses numbered beyond the 1000 level.

Honours Program

For entry to the Honours program, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

8.23.2 Philosophy

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR[1] TOTAL: 30 CREDIT HOURS			
6 credit hours in Philosophy courses numbered at the 1000 level	• 6 credit hours of History of Philosophy courses • an additional 18 credit hours in Philosophy courses		
SINGLE ADVANCED MAJOR[1] 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 1510[5] • at least 12 credit hours from History of Philosophy courses • at least 6 credit hours from PHIL 2430 or PHIL 2760 • at least 12 credit hours from Philosophy courses numbered at the 3000 level and above. (Students must obtain written permission of the department head to take honours courses)			
MINOR (CONCENTRATION)[1] TOTAL 18 CREDIT HOURS			
6 credit hours in Philosophy	12 credit hours in Philosophy courses		
SINGLE HONOURS[1, 2, 4]			
6 credit hours in Philosophy courses numbered at the 1000 level	• PHIL 2430[3] • PHIL 2760 • 6 credit hours from PHIL 2612, PHIL 2614, 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 2612, PHIL 2614, PHIL 2630, PHIL 2640, PHIL 2650, PHIL 2660, PHIL 2780, PHIL 2790, PHIL 3580 • an additional 3 credit hours from History of Philosophy courses • 3 credit hours in Honours Philosophy courses or History of Philosophy courses • 6 credit hours outside Philosophy	• 12 credit hours in Honours Philosophy courses • 6 credit hours in Philosophy courses numbered at the 2000 level and above • 6 credit hours outside Philosophy
DOUBLE HONOURS[1, 2, 4]			
6 credit hours in Philosophy courses numbered at the 1000 level	• 6 credit hours from History of Philosophy courses • PHIL 2430 or PHIL 2760 • 18 credit hours outside Philosophy	• 6 credit hours in Honours Philosophy courses • 3 credit hours from PHIL 2612, PHIL 2614, PHIL 2630, PHIL 2640, PHIL 2650, PHIL 2660, PHIL 2780, PHIL 2790, PHIL 3580 • an additional 3 credit hours from History of Philosophy courses • 12 credit hours outside Philosophy	• 6 credit hours in Honours Philosophy courses • 6 credit hours in Philosophy courses numbered at the 2000 level and above • 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.
[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 the former PHIL 1330 in their first year will substitute six other credit hours in Philosophy for PHIL 2430 in Year 2.
[4] Honours courses: PHIL 3430, PHIL 3440, PHIL 3580, PHIL 3630, PHIL 3640, PHIL 3650, PHIL 3760, PHIL 3770 and all 4000 level courses.
[5] If PHIL 1510 is taken to satisfy this requirement, it will also satisfy 6 credit hours towards the History of Philosophy requirement.

History of Philosophy

Course	Course Name	Credit Hours
PHIL 1510*	Historical Introduction to Philosophy	6
PHIL 2300	Political Philosophy	6
PHIL 2610*	The History and Philosophy of Science	6
PHIL 2612	A Philosophical History of Science	3
PHIL 2630	Continental Rationalism	3
PHIL 2640	British Empiricism	3
PHIL 2650	Plato	3
PHIL 2660	Aristotle	3

Course	Course Name	Credit Hours
PHIL 2710	Twentieth-Century European Philosophy: Existentialism	3
PHIL 2720*	Twentieth-Century European Philosophy: Phenomenology	3
PHIL 2780	Thomas Aquinas	3
PHIL 2790	Moral Philosophy	6
PHIL 2820*	Existentialism	6
PHIL 3580	Kant	3
PHIL 3690*	The Rise of Analytic Philosophy	3

* indicates course no longer offered

8.23.3 Philosophy Course Descriptions-1000 Level

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 1510 (015.151) or PHIL 1511 (015.151) or the former PHIL 1261 (015.126).

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 1291 or 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 the former 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 1291 or the former PHIL 1330 (015.133).

8.23.3 Philosophy Course Descriptions-2000 Level

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]. As the course content will vary from year to year, students may take this course more than once for 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]. As the course content will vary from year to year, students may take this course more than once for credit.

PHIL 2290 Ethics and Society Cr.Hrs. 6
(Formerly 015.229) An examination of some contemporary ethical theories and their application to a number of practical issues. Current issues to be discussed may include: ethics and the environment; abortion and euthanasia; sexual freedom and human equality; civil disobedience; individual liberty vs. state authority; punishment; and, justice and utility. Students may not hold credit for PHIL 2290 (015.229) and any of: PHIL 2531 (015.253) or PHIL 2740 (015.274) or PHIL 2741 or PHIL 2750 (015.275) or PHIL 2751. 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 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: the former PHIL 1330 (015.133) or the former PHIL 3750 (015.375).

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 the former PHIL 2450 (015.245). Prerequisite: a grade of "C" or better in six credit hours of Philosophy at the 1000 level.

PHIL 2612 A Philosophical History of Science Cr.Hrs. 3
A philosophical study of the evolution of science and scientific methodology from the ancient Greeks to the present. A background in science is not required. Students may not hold credit for both PHIL 2612 and the former PHIL 2610 (015.261). Prerequisite: successful completion of 30 hours of university credit.

PHIL 2614 Philosophy of Science Cr.Hrs. 3
A critical study of the nature of scientific knowledge. A background in science is not required. Students may not hold credit for both PHIL 2614 and the former PHIL 2610 (015.261). 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 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 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 the former 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 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 stoïcism. 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 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).

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 2701 (015.270) or the former PHIL 2700 (015.270).

PHIL 2740 Ethics and Biomedicine Cr.Hrs. 3
(Formerly 015.274) An examination of some important ethical issues arising out of recent developments in biology and medicine. Examples of topics to be covered include: the allocation of scarce medical resources; genetic engineering; euthanasia vs. the prolongation of life; abortion and infanticide, and experimentation on human subjects. Students may not hold credit for PHIL 2740 (015.274) and any of: PHIL 2741 or PHIL 2290 (015.229) or PHIL 2531 (015.253). Prerequisite: successful completion of 30 hours of university credit.

PHIL 2750 Ethics and the Environment Cr.Hrs. 3
(Formerly 015.275) An examination of some important ethical issues connected with environmental pollution and resource depletion. Examples to be covered include: the ideal of liberty and environmental limits; scarcity and the ideal of justice; growth vs. steady-state economics; animal rights, and survival ethics vs. welfare ethics. Students may not hold credit for PHIL 2750 (015.275) and any of: PHIL 2751 or PHIL 2290 (015.229) or PHIL 2531 (015.253). Prerequisite: successful completion of 30 hours of university credit.

PHIL 2760 Introduction to the Theory of Knowledge Cr.Hrs. 6
(Formerly 015.276) This course challenges and investigates our claims to knowledge. Problems dealt with normally include: the nature of knowledge, sense experience, truth and necessary truth, the analytic-synthetic distinction, memory, induction, etc. Prerequisite: [a grade of "C" or better in six credit hours of Philosophy] or written consent of department head.

PHIL 2770 Philosophy of Art Cr.Hrs. 6
(Formerly 015.277) An introductory analysis of some contemporary aesthetic theories and an examination of such problems as the relation between art and morality, meaning and expression in art, the nature and functioning of criticism, and the justification of standards of aesthetic evaluation.

PHIL 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 the former PHIL 2321 (015.232).

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 the former PHIL 3710 (015.371). Prerequisite: successful completion of 30 hours of university credit.

PHIL 2830 Business Ethics Cr.Hrs. 3
(Formerly 015.283) The course will explore the application of ethical theory to business. Topics to be discussed will normally include: theories of justice, corporate responsibility, the ethics of advertising, consumer and environmental protection, and preferential hiring. Students may not hold credit for both PHIL 2830 (015.283) and PHIL 2831. 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. Students may not hold credit for both PHIL 2840 (015.284) and PHIL 2841.

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 PHIL 2861.

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 PHIL 2871.

8.23.3 Philosophy Course Descriptions-3000 Level

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 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 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 3580 (015.358) counts as a Group 2 and Group 4 course.

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 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.

8.23.3 Philosophy Course Descriptions-4000 Level

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

PHIL 4580 Honours Seminar Cr.Hrs. 6
(Formerly 015.458) A seminar course with subject matter varying from year to year, designed to meet special needs of Honours Philosophy students. Prerequisite: written consent of department head.

PHIL 4600 Science and Philosophy since Newton Cr.Hrs. 3
(Formerly 015.460) This course traces the major threads of humankind's intellectual evolution from the time of Newton to the present. Figures studied include Newton, Kant, Maxwell, Darwin, Peirce, and Einstein. Issues include the nature of space and time, of matter and energy, of living organisms, and the nature and evolution of human consciousness. Prerequisite: fourth year standing in any faculty or written consent of department head.

PHIL 4610 Directed Reading in Philosophy 1 Cr.Hrs. 3
(Formerly 015.461) Subject matter will vary from year to year. Prerequisite: written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

PHIL 4630 Symbolic Logic 1 Cr.Hrs. 3
(Formerly 015.463) Selected topics in mathematical logic, including propositional and quantificational logic, number theory, and the major metatheoretical results. Prerequisite: written consent of department head.

PHIL 4640 Symbolic Logic 2 Cr.Hrs. 3
(Formerly 015.464) Selected topics in mathematical logic, including propositional and quantificational logic, number theory, and the major metatheoretical results. Prerequisite: written consent of department head.

8.24 Department of Political Studies

Head: Steven Lecce
Campus Address/General Office: 532 Fletcher Argue
Telephone: 204 474 9733
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8.24.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 a Single Advanced Major.

Minor (Concentration) Program

For entry to the Minor (Concentration), 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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.

8.24.2 Political Studies

YEAR 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	• 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		
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours in Political Studies courses numbered at or above the 1000 level	• 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 (CONCENTRATION) 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		
SINGLE HONOURS[1, 3, 4]			
6 credit hours in Political Studies courses numbered at or above the 1000 level	• 18 credit hours from POLS 2000, POLS 2040, POLS 2070, POLS 2510 • 12 credit hours in ancillary options	POLS 3950 • 15 credit hours in Political Studies courses numbered at the 3000 level[2] • 6 credit hours in ancillary options	• 18 credit hours in Political Studies Honours courses numbered at the 4000 level • 6 credit hours in ancillary options
DOUBLE HONOURS[1, 3, 4]			
6 credit hours in Political Studies courses numbered at or above the 1000 level	• 12 credit hours from POLS 2000, POLS 2040, POLS 2070, POLS 2510 • 12 credit hours in other Honours field • 6 credit hours in ancillary options	• 12 credit hours in Political Studies courses numbered at the 3000 level[2] • an additional 12 or 18 credit hours depending on other Honours field	• 12 credit hours in Political Studies Honours courses numbered at the 4000 level • 12 credit hours in other Honours field

NOTES:

[1] A student must include at least six credit hours in political theory (POLS 2510, POLS 3240, POLS 3510, POLS 3600, POLS 3710, POLS 3810, POLS 4510, POLS 4610, POLS 4710).

[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.

[4] Honours courses: all 4000 level courses

8.24.3 Political Studies Course Descriptions-1000 Level

POLS 1000 Democracy and Development Cr.Hrs. 3
An examination of development and democracy as desiderata of good societies and an examination of historical conditions in which individual and collective freedom on the one hand, and economic prosperity on the other, have been achieved in the various countries of the world.

POLS 1010 Political Ideas and Ideologies Cr.Hrs. 3
Lab required. An introduction to different philosophical systems of political beliefs and values that structure contemporary political discourse and practise.

POLS 1040 Global Political Issues Cr.Hrs. 3
Lab required. An investigation of the most pressing global issues facing the world today, including debates over globalization, the rise of trans-sovereign problems, and current theories about the future of the state.

POLS 1070 Law, Politics, and Power in Canada Cr.Hrs. 3
Lab required. An introduction to the basic structures and processes of politics, law and power in Canada with the aim of explaining and assessing contemporary issues and events.

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 POLS 1500 (019.150) and any of: POLS 1503 or POLS 1505 or the former POLS 1501 (019.150).

8.24.3 Political Studies Course Descriptions-2000 Level

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 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 2043 or POLS 2045 or the former POLS 2041 (019.204).

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 both POLS 2070 (019.207) and POLS 2071 (019.207).

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 POLS 2510 (019.251) and any of: POLS 2513 or POLS 2515 or the former POLS 2511 (019.251).

8.24.3 Political Studies Course Descriptions-3000 Level

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 POLS 2070 (019.207) or POLS 2071 (019.207)] 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. Prerequisite: [a grade of "C" or better in in one of: POLS 2510 (019.251) or POLS 2515 or the former 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. 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. Prerequisite: [a grade of "C" or better in POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] 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. Prerequisite: [a grade of "C" or better in POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] or written consent of instructor or department head.

POLS 3240 Feminist Political Theory Cr.Hrs. 3
(Formerly 019.324) An examination of feminist approaches to the status and participation of women in political life. The course also includes feminist discourse on ethical issues and state policy.

POLS 3250 International Political Economy Cr.Hrs. 3
(Formerly 019.325) A survey of the relationship between political authority and the production and distribution of global wealth. Emphasis is placed on the historical development of international political economy, its fundamentals, as well as major theoretical perspectives. Students may not hold credit for both POLS 3250 (019.325) and POLS 3251 (019.325). Prerequisite: [a grade of "C" or better in POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] or written consent of instructor or department head.

POLS 3270 Theories of the Capitalist World Order Cr.Hrs. 3
A critical survey of major theories that have successively dominated understandings of the modern capitalist world order including mercantilism, free trade, imperialism, hegemonic stability theory, globalizatiion, regionalism, empire and multipolarity, paying particular attention to the political economy underlying each. Prerequisite: [a grade of "C" or better in POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] or written consent of instructor or department head.

POLS 3330 Politics of the European Union Cr.Hrs. 3
A study of the creation and evolution of the "European movement" which began after World War II as well as the various stages of European integration to the present day. Topics include institutional development; economic, monetary, and political union; and the global relations of the modern EU. Students may not hold credit for both POLS 3330 and the former POLS 2430 (019.243). Prerequisite: [a grade of "C" or better in one of: POLS 2000 (019.200) or POLS 2040 (019.204) or POLS 2005 or POLS 2045 or the former POLS 2041 (019.204)] or written consent of instructor or department head.

POLS 3340 Middle East Politics Cr.Hrs. 3
An examination of the Middle East as a region of global strategic significance, with an emphasis on the major issues related to war and peace in selected Middle Eastern conflicts. Students may not hold credit for both POLS 3340 and POLS 3140 (019.314) when offered with the topic "Arab Israeli Conflict."

POLS 3470 Canadian Public Management Cr.Hrs. 3
An introduction to the internal and external factors affecting contemporary public sector management in Canada. The course will examine the primary values, policies, processes, and structures within the civil service. Prerequisite: [a grade of "C" or better in one of: POLS 2070 (019.207) or POLS 2071 (019.207) or POLS 2571 (019.257) or the former POLS 2570 (019.257)] or written consent of instructor or department head.

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 3563 or the former POLS 3561 (019.356). Prerequisite: [a grade of "C" or better in POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] or written consent of instructor or department head.

POLS 3570 Administrative Theory in the Public Sector Cr.Hrs. 3
A study of the fundamental principles with which to understand human behaviour inside public organizations. The course addresses a diverse but comprehensive set of historical and current theories, concepts and approaches in the field of public administration. Prerequisite: [a grade of "C" or better in one of: POLS 2000 (019.200) or POLS 2070 (019.207) or POLS 3470 or POLS 2005 or POLS 2571 (019.257) or the former POLS 2570 (019.257)] or written consent of instructor or department head.

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 POLS 2510 (019.251) or POLS 2515 or the former POLS 2511 (019.251)] or written consent of instructor or department head.

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 POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] 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. 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 3710 Distributive Justice Cr.Hrs. 3
A study of the question of whether, and to what extent, inequalities of various kinds are compatible with the demands of both justice and community. This course examines contending answers to the question by investigating classical and/or contemporary theories of distributive justice. Prerequisite: a grade of "C" or better in POLS 2510 (019.251) or POLS 2515 or the former POLS 2511 (019.251).

POLS 3720 Politics, Government and Society in Ukraine Cr.Hrs. 3
An analysis of political transition and development in Ukraine. Ukraine's international relations will also be examined. Students may not hold credit for both POLS 3720 and POLS 3140 (019.314) when offered with the topic "Government Politics in Ukraine" or the former POLS 2920 (019.292). Prerequisite: [a grade of "C" or better in one of: POLS 2000 (019.200) or POLS 2040 (019.204) or POLS 2005 or POLS 2045 or the former POLS 2041 (019.204)] or written consent of instructor or department head.

POLS 3810 Introduction to Marxism Cr.Hrs. 3
An overview of the thought of Karl Marx and Fredrick Engels, focusing on its philosophical origins, key concepts and ideas of their historical materialism, critique of political economy, political theory and philosophy. The development of Marxism after Marx and Engels, particularly in the tradition of Western Marxism, will be traced in the case of each concept and idea. Students may not hold credit for both POLS 3810 and the former POLS 4810 (019.481).

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 POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] or written consent of instructor or department head.

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 POLS 2040 (019.204) or POLS 2045 or the former POLS 2041 (019.204)] 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 POLS 2005] 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 the former POLS 3931 (019.393).

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 POLS 3950 (or 019.395) and any of: POLS 3951 or 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 POLS 2070 (019.207) or POLS 2071 (019.207)] or written consent of instructor or department head.

8.24.3 Political Studies Course Descriptions-4000 Level

POLS 4140 Canadian Political Ideas Cr.Hrs. 3
An examination of the ideas that underlie Canadian politics. What are the values at the centre of political movements in Canada and where do they come from? How have these values changed over time and why? We will attempt to answer these questions by exploring the development of Canadian political ideas as well as our current ideological context in Canada. Effort will be made to reflect on ideological debate on contemporary issues of the day. Prerequisite: written consent of instructor or department head.

POLS 4150 Indigenous Governance Cr.Hrs. 3
An examination of Indigenous governance before and since the 'European invasion' which introduces key themes, debates and controversies pertaining to Indigenous governance and its study. Students may not hold credit for both POLS 4150 and POLS 4160 (019.416) when offered with the topic "Indigenous Governance." Prerequisite: 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. Prerequisite: written consent of instructor or department head.

POLS 4200 Politics of Development Cr.Hrs. 3
A survey of the problems and prospects facing developing countries with a particular focus on the changes in international economic governance in the aftermath of the financial crisis and the Great Recession, the role of the state in development and the political economy of emerging economies. Students may not hold credit for both POLS 4200 and POLS 4160 when titled "Politics of Development." Prerequisite: written consent of instructor or department head.

POLS 4370 Comparative Public Administration Cr.Hrs. 3
A study of the systems, processes, and values of public administration in an international comparative context. Topics include public sector organization and reform, international standards of policy and practice, and the role of international institutions in promoting public sector modernization. The course covers countries from several geographic zones and places domestic issues in the larger, global political economy. Prerequisite: written consent of instructor or department head.

POLS 4470 Managing Modern Government Cr.Hrs. 3
A study of the skills required to effectively manage in the public sector. Topics covered include: managerial effectiveness, written and interpersonal communication, gaining power and influence, working with political staff and politicians, conflict management, risk management, performance management, creating and working through teams, decision-making, motivation, and empowerment. Students may not hold credit for both POLS 4470 and the former POLS 4570 (019.457). 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. 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 4610 Contemporary Political Theory Cr.Hrs. 3
(Formerly 019.461) An examination of recent developments in the analysis of political ideas, institutions, and behaviour. 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 4710 Political Theory and the Family Cr.Hrs. 3
An examination of the normative aspects of the relations between children, families and the state. 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 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 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. Prerequisite: written consent of instructor or department head.

8.25 Department of Psychology

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8.25.1 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 and animal 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

8.25.2 Psychology

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
PSYC 1200 or PSYC 1211 and PSYC 1221	• 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	
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
PSYC 1200 or PSYC 1211 and PSYC 1221	• 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 (CONCENTRATION) 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	
SINGLE HONOURS[4]			
PSYC 1200 or PSYC 1211 and PSYC 1221	• PSYC 2250 and PSYC 2260 • 6 credit hours in Psychology courses numbered at the 2000 or 3000 level: (3 hours from each of two different lettered menu categories)[1] • 15 credit hours in ancillary options[2] • 3 credit hours in free options[3]	• PSYC 3200 and PSYC 3340 and PSYC 3630 • 9 credit hours in Psychology courses numbered at the 2000 or 3000 level (3 hours each of at least two different lettered menu courses not taken in Year 2) • 3 credit hours in Psychology courses numbered at the 4000 level or one of: PSYC 3520, PSYC 3560 or PSYC 3590 • 9 credit hours in ancillary options[2]	• PSYC 4520 • 6 credit hours in Psychology courses numbered at the 4000 level • 9 credit hours in Psychology courses numbered at the 2000 or 3000 level, including any remaining menu category • 3 credit hours in free options[3] • 6 credit hours in ancillary options[2]
DOUBLE HONOURS[4]			
PSYC 1200 or PSYC 1211 and PSYC 1221	• PSYC 2250 and PSYC 2260 • 6 credit hours in Psychology courses numbered at the 2000 or 3000 level: (3 hours from each of two different lettered menu categories)[1] • 12 credit hours in other Honours field • 6 credit hours in an ancillary option[2]	• 3 credit hours from PSYC 3340 or PSYC 3630 • PSYC 3200 • 6 credit hours in Psychology courses: (3 hours from each of two different lettered menu categories not already taken in Year 2) • 12 credit hours in other Honours field	• PSYC 4520 • 6 credit hours in Psychology courses numbered at the 4000 level • 12 credit hours in other Honours field

NOTES:
[1] 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

[2] Ancillary options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding Psychology courses).
[3] Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including Psychology courses).
[4] Honours courses: PSYC 3340 and all 4000 level courses.

8.25.3 Psychology Course Descriptions-1000 Level

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 1211 (017.121) or PSYC 1221 (017.122) or the former PSYC 1201 (017.120). Prerequisite for all other courses in Psychology.

8.25.3 Psychology Course Descriptions-2000 Level

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 the former 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 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 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 the former 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 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 the former 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 the former PSYC 3541 (017.354). Prerequisite: [a grade of "C" or better in PSYC 1200 (017.120) or the former 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 the former 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 the former 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 the former 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 the former 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 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. Students may not hold credit for both PSYC 2420 (017.242) and PSYC 2421. Prerequisite: [a grade of "C" or better in PSYC 1200 (017.120) or the former 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 the former 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 the former 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 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 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 the former 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 the former 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 the former 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 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 the former 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 the former 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 the former 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 2860 Language Acquisition Cr.Hrs. 3
The study of first language acquisition from infancy through childhood. Aspects of phonology, morphology, pragmatics and syntax acquisition are discussed, as well as formal theories of acquisition, second language and bilingual acquisition, atypical development and the relationship of language acquisition with literacy. Also offered as Linguistics LING 2860. Students may not hold credit for both PSYC 2860 and LING 2860 (126.286). Prerequisite: [a grade of "C" or better in PSYC 1200 (017.120) or LING 1200 (126.120) or the former 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 instructor.

8.25.3 Psychology Course Descriptions-3000 Level

PSYC 3110 Research in Social Psychology Cr.Hrs. 3
This course will provide an introduction to conducting research in social psychology. Students will gain experience in all facets of the research process including experimental design and preparation, human ethical review, data collection and analysis, and report writing. Activities may include research critiques, research proposals, individual and/or group research projects and presentations, and research reports. Prerequisite: [a grade of "C" or better in PSYC 2260 (017.226) or PSYC 2261 (017.226)] and [a grade of "C" or better in one of: PSYC 2410 (017.241) or PSYC 2411 (017.241) or PSYC 2420 (017.242) or PSYC 2421 (017.242)].

PSYC 3130 Introduction to Health Psychology Cr.Hrs. 3
This course offers a survey of psychological issues in health and illness. Major topics will include the biopsychosocial approach, mental models of illness, pain, stress and coping, health-damaging and health-promoting behaviours, and psychological issues in medical care. Students may not hold credit for PSYC 3130 and any of: PSYC 3131 or PSYC 3530 when titled "Health Psychology." 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 [a grade of "C" or better in three credit hours of 2000 level Psychology courses].

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 the former 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 the former 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 3200 Thinking Critically About Psychological Research Cr.Hrs. 3
This course will teach students to apply critical thinking skills in the evaluation of psychological research. Core components will include the logic of research design, analysis and interpretation, the description of psychological studies, and the critical reading of published research. Activities will include the preparation of critiques of research claims published in both academic journals and in the main-stream press, sample research proposals, individual and/or group projects, and individual and/or group presentations. Prerequisite: [a grade of "C" or better in both of 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 [a grade of "C" or better in the former PSYC 2300 (017.230)].

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 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 [a grade of "C" or better in the former PSYC 2300 (017.230)], 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 the former 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 3360 Experimental Child Psychology Cr.Hrs. 3
(Formerly 017.336) Research methods for developmental psychology are reviewed: ethics, conducting experiments with child participants in a group project, research design, data analysis, writing research papers in APA format, and creating a poster presentation. Prerequisite: a grade of "C" or better in PSYC 2290 (017.229) or PSYC 2291 (017.229).

PSYC 3390 Thinking Cr.Hrs. 3
(Formerly 017.339) The class surveys work in cognitive science. Topics include probabilistic reasoning, heuristics and biases, artificial neural networks, mental representation of number, and the cognitive unconscious. Prerequisite: [a grade of "C" or better in PSYC 1200 (017.120) or the former 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 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 the former 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 BIOL 2410, or the former ZOOL 2530 (022.253), or the former PSYC 3330 (017.333), or the former PSYC 3331 (017.333).

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 the former 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 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 the former 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 the former 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: both PSYC 2250 (017.225) and PSYC 2260 (017.226), or both PSYC 2251 (017.225) and PSYC 2261 (017.226), or the former PSYC 2300 (017.230). 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 the former 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. As the course content will vary from year to year, students may take this course more than once for credit.

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 the former PSYC 3541 (017.354). Prerequisite: [a grade of "C" or better in PSYC 1200 (017.120) or the former 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. As the course content will vary from year to year, students may take this course more than once for credit.

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 the former 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: both PSYC 2250 (017.225) and PSYC 2260 (017.226), or both PSYC 2251 (017.225) and PSYC 2261 (017.226), or the former PSYC 2300 (017.230). 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 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 the former 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 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 both of 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 [a grade of "C" or better in the former PSYC 2300 (017.230)] or written consent of department head.

PSYC 3650 Introduction to Clinical Psychology Cr.Hrs. 3
(Formerly 017.365) Clinical psychology is presented as both a scientific and an applied discipline. Such topics as assessment, intervention, research, and professional issues are covered. Prerequisite: [a grade of "C" or better in one of: PSYC 3450 (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 the former 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.

8.25.3 Psychology Course Descriptions-4000 Level

PSYC 4400 Theories of Close Relationships Cr.Hrs. 3
Students will be exposed to theories that apply to the initiation, development, maintenance, and dissolution of relationships. The primary focus will be on evolutionary theory, attachment styles, communal and exchange relationships, equity theory, interdependence theory and the investment model, attributional theories, and theories of love. Students may not hold credit for both PSYC 4400 and PSYC 4540 (017.454) with the topic "Theories of Close Relationships." Prerequisite: written consent of department head.

PSYC 4410 Cross-cultural Social Psychology Cr.Hrs. 3
Cross-cultural psychology is the critical and comparative study of the linkages between cultural norms and thoughts, feeling and behaviour. This course focuses on Cross-cultural Social Psychology. Therefore the assigned readings deal with topics that Social Psychology, in general, examines. Students may not hold credit for both PSYC 4410 and PSYC 4540 (017.454) with the topic "Cross-cultural Social Psychology." Prerequisite: written consent of department head.

PSYC 4420 Neuroimaging: Imaging Thoughts Cr.Hrs. 3
This course will explore how neuroimaging can illuminate our models of various aspects of cognition, including attention, vision, language, memory and learning, executive functions, emotion and various neuropathologies. Students may not hold credit for both PSYC 4420 and PSYC 4540 (017.454) with the topic "Imaging Thoughts." Prerequisite: written consent of department head.

PSYC 4430 Vision: Perception and Action Cr.Hrs. 3
An intensive review of current research and theories in visual processes. Both behavioural and physiological aspects of vision will be considered. Course goals are directed at offering a better understanding of visual perception and the visual control of action. Students may not hold credit for both PSYC 4430 and PSYC 4540 (017.454) with the topic "Vision Science." Prerequisite: written consent of department head.

PSYC 4440 Readings in Autism Spectrum Disorders Cr.Hrs. 3
Students will read recent research in Autism Spectrum Disorders, acquire skills to critically evaluate empirical evidence, and examine implications for practice. Among the topics covered will be assessment, diagnosis, epidemiology, and applied behaviour analysis early intervention. Students may not hold credit for both PSYC 4440 and PSYC 4540 (017.454) with the topic "Autism Spectrum Disorders." Prerequisite: written consent of department head.

PSYC 4450 Animal Behaviour 1 Cr.Hrs. 3
(Formerly 017.445) The nature-nurture controversy will be discussed, followed by a survey of the diverse behaviours relating to the physical environment (e.g., food storage); predation (e.g. trapping); defence (e.g., camouflage); and migration. Prerequisite: written consent of department head.

PSYC 4460 Animal Behaviour 2 Cr.Hrs. 3
(Formerly 017.446) A more detailed analysis of selected topics including communication, animal populations, and the social use of space in humans and infrahumans. Prerequisite: written consent of department head.

PSYC 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 4492 Psychology of Addiction Cr.Hrs. 3
This course will introduce the psychology of addictive disorders, including their history, prevalence and incidence, and basic drug actions. It will also survey research on biological, psychological, and social factors that contribute to the development and maintenance of addictive disorders. Students may not hold credit for both PSYC 4492 and PSYC 4540 (017.454) when titled "Introduction to the Psychology of Addiction." Prerequisite: written consent of department head.

PSYC 4510 Applied Behaviour Analysis in Developmental Disabilities Cr.Hrs. 3

Students will read recent applied behaviour analytic research in behavioural assessments and interventions for people with developmental disabilities, acquire skills to critically evaluate empirical evidence, and examine implications for practice. Students may not hold credit for both PSYC 4510 and PSYC 4540 (017.454) with the topic "Research in Developmental Disabilities." 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 PSYC 3200, and three credit hours in PSYC 3340 or the former PSYC 4570 (017.457), and three credit hours in PSYC 3630 (017.363) or PSYC 3631 (017.363) or the former PSYC 4500 (017.450)], and 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. As the course content will vary from year to year, students may take this course more than once for credit.

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 4562 Social Psychology and Health Cr.Hrs. 3
This course uses theories and concepts from social/personality psychology to gain a better appreciation of what health is and how to achieve it, at the individual and population levels. Students may not hold credit for both PSYC 4562 and PSYC 4540 (017.454) with the topic "Social Psychology and Health." Prerequisite: [a grade of "C" or better in one of: PSYC 2410 (017.241) or PSYC 2411 (017.241) or PSYC 2420 (017.242) of PSYC 2421 (017.242) or PSYC 3130 or PSYC 3131 or PSYC 3450 (017.345) or PSYC 3451 (017.345)] and written consent of department head.

PSYC 4564 Self-regulation and Health Cr.Hrs. 3
This course examines how self-regulatory processes such as goal-setting and self-awareness can affect behaviours that promote or undermine human health. A wide range of health-related behaviours is considered such as smoking, exercise, safe-sex practices, and eating. Students may not hold credit for both PSYC 4564 and PSYC 4540 (017.454) with the topic "Self-regulation and Health." Prerequisite: written consent of department head.

PSYC 4566 Psychology of Health and Aging Cr.Hrs. 3
This course considers how adults adapt to the challenges of aging and the accompanying health problems. Seminar discussions will focus on selected psychological theories and related empirical literature regarding belief systems that operate in the face of health- and age-related challenges. Students may not hold credit for both PSYC 4566 and PSYC 4540 (017.454) with the topic "Health and Aging." 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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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 department head.

PSYC 4630 Behavioural Endocrinology Cr.Hrs. 3
(Formerly 017.463) A comparative approach is adopted to examine how hormones influence a diversity of behaviours through their actions on brain function, the physiological substrates of the behaviours, and their development as evolutionary adaptations. Techniques used by behavioural neuroscientists to study the behavioural and neuroendocrine interactions are surveyed. Prerequisite: [a grade of "C" or better in PSYC 3350 or PSYC 3351 or the former PSYC 3330 (017.333) or the former PSYC 3331 (017.333)] and written consent of department head.

PSYC 4640 Person X Situation Interactionism Cr.Hrs. 3
We will first explore research demonstrating the impact of personality and situations, separately, on behaviour. We then examine the debate that arose about whether understanding the person or situation would have the most scientific merit. We spend the remainder (and the majority) of the course discussing the theories and research that arose from that debate. The majority of this research has an interactionist perspective, taking both the person and his/her situation into account. Students may not hold credit for both PSYC 4640 and PSYC 4540 (017.454) with the topic "Person X Situation Interactionism." Prerequisite: written consent of department head.

PSYC 4650 The Self and Social Perception Cr.Hrs. 3
This course examines: 1) bases of self-knowledge such as social comparison, feedback from others, and introspection, 2) recent perspectives on the nature of the self-concept and self-presentation, and 3) motivational and cognitive mechanisms guiding self-relevant information processing. Activities may include participating in class discussions, giving presentations, writing several short papers and a research proposal. Students may not hold credit for both PSYC 4650 and PSYC 4590 (017.459) when titled "Self and Social Perception." Prerequisite: [a grade of "C" or better in PSYC 2410 (017.241) or PSYC 2411 (017.241)] and written consent of department head.

PSYC 4660 Intergroup Relations Cr.Hrs. 3
This course examines intergroup relations from a social psychological perspective. Key topics include sources of prejudice and discrimination, the "target's" perspective, and strategies for reducing prejudice and discrimination. Activities may include participating in class discussions, giving presentations, and writing several short papers and a research proposal. Students may not hold credit for both PSYC 4660 and PSYC 4540 (017.454) when titled "Intergroup Relations." Prerequisite: [a grade of "C" or better in PSYC 2420 (017.242) or PSYC 2421 (017.242)] and written consent of department head.

8.26 Department of Religion

Head: (Acting Head) Ian Whicher
Campus Address/General Office: 328 Fletcher Argue Building
Telephone: 204 474 9516
Email Address: religion@umanitoba.ca

Website: umanitoba.ca/religion

8.26.1 Program Information

We are a world religions department. Our approach is interdisciplinary and engages a wide 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 languages, ethical systems, practices, organizations, and institutions within which such religions are defined, refined, rejected, or renewed. Given the diversity of this study, such theoretical and methodological questions are viewed 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 General 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 (Concentration) Program

For entry to the Minor (Concentration), 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Other

For the purpose of the Honours and the Major programs, the three areas of study are identified in the course listing with the following letters in brackets after the course title:

A: Western Religious Traditions

B: World Religions

C: Religion and Culture

In addition to courses numbered at the 1000-level, the Department of Religion offers a number of upper-level courses for which there are prerequisites; see course descriptions.

It is not necessary for students to enter the offerings in Religion by way of courses numbered at the 1000-level. Students in any year or program may register for any course in Religion provided they satisfy course and program prerequisites. With written permission of the department head students may take courses numbered at the 4000-level.

In cooperation with St. Paul's College, the Department of Religion offers an arrangement of courses with special emphasis in Catholic studies as an option for students intending to Major or Minor in Religion. This special emphasis involves completing course RLGN 2850 Contemporary Issues in Roman Catholicism and selecting relevant courses offered in the Faculty of Arts and the School of Art. Contact the Department of Religion prior to registration in order to select appropriate courses.

8.26.2 Religion

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours in Religion courses	• 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)		

YEAR 1	YEAR 2	YEAR 3	YEAR 4
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours in Religion courses	• 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 (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours in Religion courses	6 credit hours in Religion courses	6 credit hours in Religion courses	
SINGLE HONOURS[1, 2, 3]			
6 credit hours in Religion courses	• 18 credit hours in Religion courses numbered at the 2000 level • 12 credit hours in ancillary options	• 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	• 18 credit hours in Religion courses numbered at the 4000 level • 6 credit hours in ancillary options
DOUBLE HONOURS[1, 2, 3]			
6 credit hours in Religion courses	• 12 credit hours in Religion courses numbered at the 2000 level • 12 credit hours in other Honours field 6 credit hours in ancillary options	• 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	• 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.

The following courses satisfy Western Religious Traditions (A - Bible): RLGN 1120, RLGN 1390, RLGN 1400, RLGN 2150, RLGN 2160, RLGN 2170, RLGN 2760, RLGN 3200, RLGN 3240, RLGN 3780, RLGN 3800, RLGN 3824, RLGN 3830.

The following courses satisfy Western Religious Traditions (A – History of Western Religion): RLGN 1350, RLGN 2036, RLGN 2040, RLGN 2050, RLGN 2140, RLGN 2520, RLGN 2530, RLGN 2550, RLGN 2560, RLGN 2730, RLGN 2770, RLGN 2840, RLGN 2850, RLGN 3280, RLGN 3640, RLGN 3870, RLGN 4200, RLGN 4280.

[2] Ancillary options are courses taken from outside the Honours field of study.

[3] Honours courses: all 4000 level courses.

8.26.3 Religion Course Descriptions-1000 Level

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 RLGN 1120 (020.112) and any of: HEB 1120 or the former SEM 1120 (055.112).

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 any of: RLGN 1323 or RLGN 1325 or the former RLGN 1321 (020.132).

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 HEB 1120 or the former 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.

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 both RLGN 1420 (020.142) and RLGN 1421 (020.142).

RLGN 1424 Religion and Sexuality (B) Cr.Hrs. 3
An introduction to world religions through the lens of sexuality, exploring how sexual desires and practices are celebrated, regulated, imagined and constructed in different religions. Topics may include pleasure, procreation, sexual and gender identities, marriage, asceticism, erotic imagery of divine beings and divine-human relations.

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 proscripton and endorsments ("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."

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.

RLGN 1450 Religion and the Media (C) Cr.Hrs. 3
(Formerly 020.145) This couse 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.

8.26.3 Religion Course Descriptions-2000 Level

RLGN 2010 Introduction to Hinduism (B) Cr.Hrs. 3
An overview of the rich and multi-faceted tradition of Hinduism, dealing with its history and development from ancient to modern times. Students may not hold credit for both RLGN 2010 and the former RLGN 2860 (020.286).

RLGN 2020 Introduction to Buddhism (B) Cr.Hrs. 3
A general introduction to the beliefs, practices, and history of the main forms of Buddhism, including Indian Buddhism, Tibetan Buddhism, and Zen. Students may not hold credit for both RLGN 2020 and the former RLGN 2830 (020.283).

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 the former RLGN 2211 (020.221).

RLGN 2036 Introduction to Christianity (A) Cr.Hrs. 3
This course provides an introduction to the history of Christianity from its earliest beginnings to the present. It will also focus on Christianity's main ideas and practices. Students will also be introduced to key concepts and debates in the study of religion using Christianity as a test case.

RLGN 2040 Early Modern/Modern Christianity (A) Cr.Hrs. 3
(Formerly 020.204) A chronological survey of Christian practices and teachings from 1500-1900. This course examines dimensions of the "modernization" of Western Christianity, giving particular emphasis to the Protestant and Catholic Reformations, including changes in ritual practice, major theological and other doctrinal disputes, social formations, "elite" and "popular" religion, institutional developments, artistic and literary production. These will be considered in the larger context of the development of "national" churches and the complicated role of Christian ideas and institutions in colonial enterprises, with attention given both to propagation of Western Christianity and its establishment as a "world religion", and to particular local varieties and conditions of Western Christianity.

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 RLGN 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 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.

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 2120 Problems of Faith and Reason (C) Cr.Hrs. 3
An historical and critical study of selected attempts to solve problems concerning the relationship between religious faith and natural reason. Students may not hold credit for both RLGN 2120 and the former RLGN 2630 (020.263).

RLGN 2130 Religion and Dance (C) Cr.Hrs. 3
An examination of the role of movement and dance in world religions and of attempts to establish a theoretical framework for the study of movement within the discipline.

RLGN 2140 Introduction to Judaism (A) Cr.Hrs. 3
An exploration of Jewish religious experience: the rhythms of time, the sensory life, sacred texts, collective memory, rules and resistance to rules. The course will introduce Jewish ways of learning, and consider Judaism as a test case for concepts in religious studies, including "religion" itself.

RLGN 2150 The Talmud (A) Cr.Hrs. 3
The Babylonian Talmud rivals the Bible in its importance for Jewish life and thought. It is not a book which can simply be read but one which must be studied with others. Students will learn how to study this multifaceted text which encompasses law, folklore, gender politics, and theology.

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 RLGN 2160 and RLGN 2161.

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 RLGN 2170 and RLGN 2171.

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 2222 The Supernatural in Popular Culture (C) Cr.Hrs. 3
This course provides a survey of the supernatural, superhuman, and paranormal in popular culture, focusing on non-institutionalized forms of religious thought and practice as well as in the popular media (comic books, movies, music, fantasy and science fiction novels, television). Topics may include phenomena such as divination, ghosts, and speaking with the dead as well as fascination with apocalypses, superheroes, time travel, vampires, and zombies. Emphasis will be given to religious expressions not usually recognized as "religious."

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 RLGN 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 RLGN 1350 (020.135)] or written consent of department head.

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 RLGN 2590 (020.259) and RLGN 2591 (020.259).

RLGN 2600 Critical Animal Studies: An Introduction (B) Cr.Hrs. 3
This course will introduce students to "the animal" question that has emerged with such significance in recent decades, surveying some key theoretical and ethical issues under debate around the meaning of animality and the difference between human and animal life, and pointing to future challenges posed by "Critical Animal Studies" for the discipline of Religion.

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. Students may not hold credit for both RLGN 2680 (020.268) and RLGN 2681.

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 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 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 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.

8.26.3 Religion Course Descriptions-3000 Level

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.

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 RLGN 3130 (020.313) and any of: RLGN 3131 or RLGN 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.

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 RLGN 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 RLGN 3170 (020.317) and the former 020.374.

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 3194 Islamic Philosophy (B) Cr.Hrs. 3
This course explores the history of Islamic philosophy (falsafa) from the translation movement of Greek philosophical, scientific and medical texts under the Abbasid dynasty (8-9th Centuries), until the golden age of interdisciplinary intellectual, scientific and theological debates in the post-classical period of Islamic intellectual history.

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 deutero-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 RLGN 3200 and the former RLGN 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 3260 Indian Buddhism (B) Cr.Hrs. 3
A thematic and historical study of Indian Buddhism from its origin to its disappearance. Topics covered include early Buddhism, Buddhist doctrine and philosophy, and the development of Mahāyāna and Vajrayāna.

RLGN 3266 Readings in Buddhist Texts (B) Cr.Hrs. 3
This is a course intended for students who have completed RLGN 2020 Introduction to Buddhism, and are interested in pursuing a more in-depth study of Buddhism. Following a discussion format, we will investigate Buddhist tests and ethnographic case studies and material from a range of traditions and historical periods. Prerequisite: [a grade of "C" or better in RLGN 2020] or written consent of instructor.

RLGN 3270 Guru and Disciple (B) Cr.Hrs. 3
A study of the role of the guru in India, and of the dynamic of guru and disciple, utilizing traditional Hindu sources as well as contemporary writings.

RLGN 3280 Hasidism (A) Cr.Hrs. 3
Hasidic Jews, known for their tales, melodies, distinctive garb and strict traditionalism, belong to one of the most successful modern Jewish religious movements. This course explores Hasidism, from its origins in eighteenth-century Ukraine to the present, through its own stories and spiritual teachings as well as scholarly perspectives.

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 RLGN 3530 (020.353) and RLGN 3531 (020.353). Prerequisite: written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

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 RLGN 3540 (020.354) and RLGN 3541 (020.354). Prerequisite: written consent of department head. As the course content will vary from year to year, students may take this course more than once for credit.

RLGN 3560 Texts in Original Languages Cr.Hrs. 3
The subject matter of this course will vary from year to year. It will give students the opportunity to study texts in languages other than English and to develop reading skills in those languages. The emphasis may be on language learning or on working with texts in a language already studied. As the course content will vary from year to year, students may take this course more than once for credit.

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 RLGN 2160 (020.216) or RLGN 2161] and [a grade of "C" or better in RLGN 2170 (020.217) or RLGN 2171] 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 RLGN 2160 (020.216) or RLGN 2161] and [a grade of "C" or better in RLGN 2170 (020.217) or RLGN 2171] or written consent of instructor or department head.

RLGN 3824 Kabbalah (A) Cr.Hrs. 3
Kabbalah is a centuries-old stream of Jewish thought and practice which encompasses mysticism, ethics, spiritual practice and magic. Students will come away from this course with a working knowledge of the Zohar, the central text of Kabbalah, its radical theology and its mythical-symbolic mode of expression. The course also explores the influence of the Zohar within Judaism and beyond and related scholarly debates. Students may not hold credit for both RLGN 3824 and the former JUD 3390 (055.339).

RLGN 3830 The Bible as Story (A) Cr.Hrs. 3
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 retelling of biblical tales. Students may not hold credit for both RLGN 3830 and the former RLGN 3840 (020.384). Prerequisite: written consent of instructor or department head.

RLGN 3850 Story and Storytelling: Religious Narratives in Context and Performance (C) Cr.Hrs. 3
(Formerly 020.385) An investigation of the importance of narrative in selected religious traditions. The course will survey a variety of stories in their religious contexts, giving particular attention to the following issues: orality and textual authority, transmission and transformation, interpretation and power. The course will involve study of various approaches to myth and narrative analysis, both of textual sources and of performative traditions.

RLGN 3870 The Thought of Bernard Lonergan (A) Cr.Hrs. 3
(Formerly 020.387) A study of the thought of the twentieth-century Canadian Jesuit, Bernard Lonergan, including his work on method in theology, on ways of knowing and on ethics.

8.26.3 Religion Course Descriptions-4000 Level

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 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 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 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. 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 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. 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. 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. 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 saint-hood. 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 4300 Advanced Topics in Judaism Cr.Hrs. 3
An in-depth study of selected Jewish texts from the fields of halakhah, aggadah or spirituality, drawing on various theoretical perspectives. Prerequisite: written consent of department head. As the course content will vary from term to term, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

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. As the course content will vary from year to year, students may take this course more than once for credit.

8.27 Department of Sociology

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8.27.1 Sociology 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.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 1211 and SOC 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in SOC 1200 or a grade of "C" or better in both SOC 1211 and SOC 1221.

Honours Program

For entry to the Honours program, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

8.27.2 Sociology

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR SOCIOLOGY TOTAL: 30 CREDIT HOURS			
SOC 1200 or SOC 1211 and SOC 1221	• SOC 2220 • SOC 2290 • one of SOC 3310, SOC 3330, SOC 3350, SOC 3360, SOC 3380, SOC 3390, SOC 3700 • 12 credit hours in Sociology courses numbered at the 2000 or 3000 level		
SINGLE ADVANCED MAJOR SOCIOLOGY (NOT CURRENTLY OFFERED) TOTAL: 48 CREDIT HOURS			
SOC 1200 or SOC 1211 and SOC 1221	• SOC 2220, SOC 2290, SOC 2330 • one of SOC 2390, SOC 3370, SOC 3810, SOC 3890 • one of SOC 3310, SOC 3330, SOC 3350, SOC 3360, SOC 3380, SOC 3390, SOC 3700 • 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
YEAR 1	YEAR 2	YEAR 3	YEAR 4
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
SOC 1200 or SOC 1211 and SOC 1221	12 credit hours in Sociology courses numbered at the 2000 or 3000 level		
SINGLE HONOURS[1, 2]			
SOC 1200 or SOC 1211 and SOC 1221	• SOC 2010, SOC 2220 and SOC 2290 • 6 credit hours in Sociology • 12 credit hours in ancillary options	• 6 credit hours from SOC 3310, SOC 3330, SOC 3350, SOC 3360, SOC 3380, SOC 3390, SOC 3700 • 12 credit hours in Sociology courses numbered at the 2000 or 3000 level • 12 credit hours in ancillary options	• SOC 4450, SOC 4460, SOC 4560, SOC 4570 • 3 credit hours from SOC 3820, SOC 4580 • 12 credit hours in ancillary options
DOUBLE HONOURS[1, 2]			
SOC 1200 or SOC 1211 and SOC 1221	• SOC 2010, SOC 2220 and SOC 2290 • At least 36 credit hours in other Honours field • At least 6 credit hours in ancillary options	• 6 credit hours from SOC 3310, SOC 3330, SOC 3350, SOC 3360, SOC 3380, SOC 3390, SOC 3700 • 3 credit hours in Sociology courses numbered at the 2000 or 3000 level	• SOC 4450, SOC 4460, SOC 4560, SOC 4570 • 3 credit hours from SOC 3820, SOC 4580
NOTES: [1] Ancillary options are courses taken from outside the Honours field of study. [2] Honours courses: SOC 2010 and all 4000 level courses.			

8.27.3 Criminology Program Information

Criminology is concerned with the complex social phenomena of crime and criminalization. The criminology program engages students in a systematic study of the nature and extent of crime and criminalization along with the array of agencies and programs designed to prevent, control, and respond to criminal activity over time and place. Attention is given to specific issues related to gender, race, class and crime, youth and crime, violence and victimization, criminal law and procedure, policing and crime prevention, restorative justice, and global criminology. Courses in the criminology program are taught primarily from a sociological perspective, with emphasis placed on research, program development, and policy analysis.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 1211 and SOC 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.

It is not possible to have a Major in Criminology and a Minor in Sociology.

Honours Program

For entry to the Honours program, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

8.27.4 Criminology

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR CRIMINOLOGY TOTAL: 30 CREDIT HOURS			
SOC 1200 or SOC 1211 and SOC 1221	SOC 2290, SOC 2510, SOC 2610	12 credit hours from SOC 3100, SOC 3310, SOC 3400, SOC 3410, SOC 3700, SOC 3710, SOC 3720, SOC 3740, SOC 3750, SOC 3790, SOC 3830, SOC 3850, SOC 3860, SOC 3880	
SINGLE HONOURS CRIMINOLOGY[1]			
SOC 1200 or SOC 1211 and SOC 1221	• SOC 2010, SOC 2220, SOC 2290, SOC 2510, SOC 2610 • 12 credit hours in ancillary options	• 3 credit hours of criminology-related theory courses from SOC 3310 or SOC 3700 • 3 credit hours[2] of criminology or sociology-related theory courses from SOC 3310, SOC 3330, SOC 3350, SOC 3360, SOC 3380, SOC 3390, SOC 3700 • 12 credit hours[2] from SOC 3100, SOC 3310, SOC 3400, SOC 3410, SOC 3700, SOC 3710, SOC 3720, SOC 3740, SOC 3750, SOC 3790, SOC 3830, SOC 3850, SOC 3860, SOC 3880 • 12 credit hours in ancillary options	• SOC 4450, SOC 4490, SOC 4570 • 3 credit hours of research methods courses from SOC 3820 or SOC 4580 • 3 credit hours of advanced theory courses from SOC 4460 or SOC 4560 • 12 credit hours in ancillary options

NOTES:

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

[2] These courses can include SOC 3310 or SOC 3700 if not already completed as a criminology or sociology-related theory requirement.

8.27.5 Sociology Course Descriptions-1000 Level

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 1211 (077.121) or SOC 1221 (077.122) or the former SOC 1201 (077.120).

8.27.5 Sociology Course Descriptions-2000 Level

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 2200 Sociology Through Film Cr.Hrs. 3
Using film as a method, this course will be organized around the broad themes of social inequality and social justice. It will engage in a critical sociological analysis of issues such as health and well-being, poverty, genocide and violence, globalization and consumer culture.

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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

SOC 2260 Cities and Urban Life Cr.Hrs. 3
A consideration of the social, cultural and urban processes and their relationship to urban life, with an emphasis on urban experience, sociality, and social inequality. Students may not hold credit for SOC 2260 and any of: SOC 2261 or the former SOC 2270 (077.227) or the former SOC 2271 (077.227). Prerequisite: [a grade of "C" or better in SOC 1200 (077.120) or the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. As the course content will vary from year to year, students may take this course more than once for credit.

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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former 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 the former 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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former 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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

SOC 2450 Sociology of the Body Cr.Hrs. 3
Despite its centrality in social life, the human body is too often taken-for-granted. This course explores a variety of sociological perspectives on the socially constructed nature of bodies to understand how society and social relations both shape and are shaped by the human body. 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 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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former SOC 2471 (077.247). Prerequisite: [a grade of "C" or better in SOC 1200 (077.120) or the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 societes. Prerequisite: [a grade of "C" or better in SOC 1200 (077.120) or the former 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 the former 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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former 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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

8.27.5 Sociology Course Descriptions-3000 Level

SOC 3100 Practicum in Criminological/Sociological Research Cr.Hrs. 6
This course is designed to develop students' research skills and experience through placement in a criminal justice or other social service agency having a mandate relevant to the study of sociology. The course consists of supervised work within the agency and classroom instruction, culminating in the production of a research report. Enrolment is competitive and special advance permission is required to register. To be considered for admission, students must complete an application form (available from the Department of Sociology website) by the last day of May preceding the Fall term in which the student intends to take the course. Students may not hold credit for both SOC 3100 and the former SOC 3760 (077.376). Prerequisite: written consent of department head.

SOC 3310 Theorizing Crime, Law, and Social Justice Cr.Hrs. 3
Through investigation of a variety of theoretical approaches, this course fosters an appreciation of the relevance of theorizing for addressing contemporary issues related to crime, law, and social 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 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 2220 (077.222) or SOC 2221 (077.222)] or written consent of department head.

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 2220 (077.222) or SOC 2221 (077.222)] or written consent of department head.

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 2220 (077.222) or SOC 2221 (077.222)] or written consent of department head.

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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

SOC 3380 Power, Politics and the Welfare State Cr.Hrs. 3
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 SOC 3380 and any of: SOC 3471 (077.347) or the former SOC 3470 (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)] or written consent of department head.

SOC 3390 Contemporary Sociological Theory Cr.Hrs. 3
(Formerly 077.339) A critical examination of contemporary theoretical perspectives and developments in sociology, highlighting the contributions of some major theorists. Course content may vary from year to year depending upon the instructor's interest. 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 2220 (077.222) or SOC 2221 (077.222)] or written consent of department head.

SOC 3400 Policing and Crime Prevention Cr.Hrs. 3
The sociological study of the organization and operation of the police and the evidence-based prevention of crime. Topics include the history and role and functions of the police, police culture and socialization, strategies and tactics, police deviance and ethics, future policing trends, and methods of crime prevention. Students may not hold credit for both SOC 3400 and SOC 3740 (077.374) with topic "Policing and Crime Prevention." Prerequisite: [a grade of "C" or better in SOC 2510 (077.251) or SOC 2511 (077.251)] or written consent of department head.

SOC 3410 Critical Victimology Cr.Hrs. 3
Through investigating a variety of theoretical perspectives, this course fosters an appreciation of forms of and factors leading to victimization and the experiences of victims in the criminal justice system. Students may not hold credit for both SOC 3410 and SOC 3740 when titled "Victims and 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 3450 Sociological Perspectives on the Social Determinants of Health Cr.Hrs. 3
This course will apply a sociological perspective to a critical and theoretically informed study of the social structures influencing personal and population health, including intersections of class, gender, ethnicity, and aging as sources of health inequities. Prerequisite: [a grade of "C" or better in SOC 1200 (077.120) or the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)]. As the course content will vary from year to year, students may take this course more than once for credit.

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 the former 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 3580 Media, Culture and Society Cr.Hrs. 3
A consideration of the influence of media on contemporary society, analyzing the production, circulation and consumption of various media forms and their relationship to social life. Students may not hold credit for SOC 3580 and any of: SOC 3581 or the former SOC 3590 (077.359) or the former SOC 3591 (077.359). Prerequisite: [a grade of "C" or better in SOC 1200 (077.120) or the former 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 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 the former 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 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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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. As the course content will vary from year to year, students may take this course more than once for credit.

SOC 3750 Institutional Responses to Violence in Family and Intimate Relationships Cr.Hrs. 3
This course will focus on the growing public awareness of the prevalence of interpersonal violence in Canada, examining studies of prevalence from victimization surveys and criminal justice statistics. We examine various criminological and sociological theories of the causes, dynamics and interventions in family and interpersonal violence, legislation and policy and assess these changes from the perspective of victims and accusers. Students may not hold credit for both SOC 3750 and SOC 3460 (077.346) when titled "Interpersonal Violence and Institutional Responses." Prerequisite: a grade of "C" or better in SOC 2510 (077.251) or SOC 2511 (077.251).

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 the former 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 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 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 the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

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 the former 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 the former 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 the former 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 3860 Genocide, Crime and Society Cr.Hrs. 3
A critical sociological and criminological examination of comparative genocide studies. Emphasis is placed on the utility of sociological and criminological theoretical frameworks for understanding and explaining genocide, as well as the conceptual and moral failings of criminology and sociology in the face of genocide. Students may not hold credit for both SOC 3860 and SOC 3740 (077.374) when titled "Genocide." Prerequisite: [a grade of "C" or better in SOC 1200 (077.120) or the former SOC 1201 (077.120)] or [a grade of "C" or better in both SOC 1211 (077.121) and SOC 1221 (077.122)].

SOC 3880 Global Criminology and Criminal Justice Cr.Hrs. 3
This course examines current developments and issues in the field of global criminology and criminal justice. Topics include: crime and globalization; transnational policing and security; world criminal justice systems; global criminal justice policy transfer; and international criminal justice. Students may not hold credit for both SOC 3880 and the former SOC 3780 (077.378). 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 3890 Power and Inequality in Comparative Perspective Cr.Hrs. 3

Engaging in a cross-temporal and cross-national investigation, this course critically surveys classical and contemporary debates around the inevitability of social inequality, and explores the ways that inequalities have been reproduced and rationalized, or attenuated and challenged, throughout human history. Key facets and indicators of inequality (such as poverty, homelessness, social exclusion and the distribution of income and wealth) and their relation to central axes of social inequality (class, gender, race/ethnicity and age) are considered. Put simply, this course is concerned with 'who gets what and why?' Students may not hold credit for SOC 3890 and any of: SOC 3871 (077.387) or the former SOC 3870 (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)].

8.27.5 Sociology Course Descriptions-4000 Level

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 4490 Advanced Seminar in Criminology Cr.Hrs. 3
A critical examination of the field of criminology and the work of criminologists in shaping modern sensibilities about crime, law, and social justice. Topics include the origins of modern criminology, the development of competing knowledge frameworks in criminology (including the impact of feminist, post-modern, and post-colonial criminologies), and trajectories of 21st century criminology (including scientific, global, and public criminology. 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 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.

8.28 Ukrainian Canadian Heritage Studies Program

Program Director: (Acting) Roman Yereniuk
Campus Address/General Office: 207 St. Andrew's College
Telephone: 204 474 8907
Email Address: cucs@cc.umanitoba.ca

Website: http://umanitoba.ca/ukrainian_canadian_studies/

8.28.1 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 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in six credit hours from List A below.

8.28.2 Ukrainian Canadian Heritage Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
6 credit hours from List A	• 12 credit hours from List B taken from each of 3 different departments • 12 credit hours from List C taken from each of 2 different departments		
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
6 credit hours from List A	• 15 credit hours from List B • 27 credit hours from List C		
MINOR (CONCENTRATION) 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		

Course	Course Name	Credit Hours
List A		
Faculty of Arts		
Economics		
ECON 1200*	Principles of Economics	6
German and Slavic Studies		
UKRN 1270*	Conversational Ukrainian	6
Course	**Course Name**	**Credit Hours**
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

Course	Course Name	Credit Hours
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

* Indicates course 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

* Indicates course no longer offered.

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
POLS 3720	Politics, Government and Society in Ukraine	3
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.

8.28.3 Ukrainian Canadian Heritage Studies Course Descriptions

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.

8.29 Women's and Gender Studies Program

Program Coordinator: Susan Frohlick
Program Office: 114 Isbister Building
Telephone: 204 474 6984
E-mail: womens_gender_studies@umanitoba.ca
Website: umanitoba.ca/womens_gender_studies

8.29.1 Program Information

Fundamental questions of equality and social justice are still very much with us, and as a dynamic interdisciplinary program, we explore both current and historical debates about women's experiences, gender relations, and feminism. Courses take diverse theoretical and practical approaches, including feminist cultural studies and studies of popular culture, violence against women, lesbian and queer studies, women in science and technology, gendered violence in urban spaces, sex work and sex workers, feminist geography, indigenous feminisms, masculinity studies, and reconstructing indigenous art histories that recontextualize museum collections and reclaim women's voices and lives.

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

The following entries contain information which is not contained in Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

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 and Gender Studies. It is suggested that students wishing to Major in Women's and Gender Studies take both WOMN 1500 and WOMN 1600. 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 (Concentration) Program

For entry to the Minor (Concentration), the prerequisite is a grade of "C" or better in each of two 3 credit hour courses in Women's and Gender Studies.

Honours Program

For entry to the Honours program, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs.

Coordinated Programs in Women's and Gender Studies

Students may take courses in the Women's and Gender 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 and Gender Studies program.

Students are advised to consult with the Women's and Gender Studies coordinator for information on courses available for credit in Women's and Gender 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 and Gender Studies credit in any given academic term.

8.29.2 Women's and Gender Studies

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
WOMN 1500 or WOMN 1600	• WOMN 2000 and WOMN 3000 • 21 credit hours from Women's and Gender Studies courses and/or List A		
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
WOMN 1500 or WOMN 1600	• WOMN 2000 and WOMN 3000 • 9 credit hours from Women's and Gender Studies courses • 9 credit hours from courses numbered at or above the 3000 level from Women's and Gender Studies courses and/or List A • 21 credit hours from Women's and Gender Studies courses and/or List A		
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
WOMN 1500 or WOMN 1600	• 6 credit hours from Women's and Gender Studies courses • 9 credit hours from Women's and Gender Studies courses and/or List A		
SINGLE HONOURS[1, 2]			
WOMN 1500 and WOMN 1600	• WOMN 2000, WOMN 3000, WOMN 4100, WOMN 4200 • 15 credit hours from Women's and Gender Studies courses • 12 credit hours from courses numbered at or above the 3000 level from Women's and Gender Studies courses and/or List A • 12 credit hours from Women's and Gender Studies courses and/or List A • 24 credit hours in ancillary options		
DOUBLE HONOURS[1, 2]			
WOMN 1500 and WOMN 1600	• WOMN 2000, WOMN 3000, WOMN 4100, WOMN 4200 • 9 credit hours from Women's and Gender Studies courses • 12 credit hours from courses numbered at or above the 3000 level from Women's and Gender 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.

[2] Honours courses: all 4000 level courses.

Course	Course Name	Credit Hours
List A		
Faculty of Arts		
Anthropology		
ANTH 3320	Women in Cross-Cultural Perspective	3
ANTH 3321	Femmes, société et cultures (USB)	3
ANTH 3330	Sex and Sexualities	3
ANTH 3350*	Anthropology of Sex and Sexualities (B)	3
Economics		
ECON 2360*	Women in the Canadian Economy	6
ECON 2362	Economics of Gender	3
French, Spanish and Italian		
FREN 2680	Littérature feminine française (B)	3
FREN 3860	Études sur Beauvoir (B)	3
German		
GRMN 1310	Love in German Culture in English Translation	3
GRMN 3280	Sex, Gender and Cultural Politics in the German-Speaking World	3
GRMN 3282	Sex, Gender and Cultural Politics in the German-Speaking World in English Translation	3
History		
HIST 2400	History of Human Rights and Social Justice in the Modern World (G,M)	3
HIST 2710*	Women in History (G)	6
HIST 3570*	History of Women in Canada (C)	6
HIST 3572	The History of Women, Gender, and Sexuality in Canada (C)	6
HIST 3760	Problems in American History 1	3
	Acceptable for credit only when the topic is "Gender and Sexuality in 20th Century America."	
HIST 3810*	The Family, Love and Marriage in Western Society, 1500-1800 (E)	6
HIST 3811	Famille, amour et marriage 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 2430	Indigenous Women's Stories	3
NATV 3360	Aboriginal Women of Canada	3
NATV 3380	Cultural Constructions of Gender in Canadian Aboriginal Societies	3
Philosophy		
PHIL 3220	Feminist Philosophy	3
Political Studies		
POLS 3100	Gender and Politics in Canada	3
POLS 3240	Feminist Political Theory	3
Psychology		
PSYC 2390	Psychology of Women	3
PSYC 2400	The Psychology of Sex Differences	3
Religion		
RLGN 2680	Women and Religion 1	3
RLGN 2690	Women and Religion 2	3
Slavic Studies		
RUSN 2350*	Russian Women's Writing from the 1950s to the Present Day	3
RUSN 3980	Women and Russian Literature	3
UKRN 3970	Women and Ukrainian Literature	3
Sociology		
SOC 2460	The Family	3
SOC 2461	La famille (USB)	3
SOC 2470	Courtship and Marriage	3
SOC 2471*	Les fréquentations et le mariage (USB)	3
SOC 3770	Women, Health and Medicine	3
SOC 3790	Women, Crime and Social Justice	3
SOC 3810	Sociological Perspectives on Gender and Sexuality	3
SOC 3811	Sociologie de la sexualité et des rôles sexuels (USB)	3
School of Art		
FAAH 2110	Women and Art	3
FAAH 4090	Seminar on Contemporary Issues in Art	3
	Acceptable for credit only when the topic is "Women Artists."	
Clayton H. Riddell Faculty of Environment, Earth, and Resources		
GEOG 4280	Gender and the Human Environment	3
Marcel A. Desautels Faculty of Music		
MUSC 4130	History of Women in Music	3
Faculty of Nursing		
NURS 3330	Women and Health	3

* Indicates course no longer offered.

For course descriptions, see departmental listings.

NOTE: List A courses are identified in Aurora Student with the course attribute of "Women's Studies Requirement."

8.29.3 Women's and Gender Studies Course Descriptions-1000 Level

WOMN 1500 Introduction to Women's and Gender Studies in the Humanities Cr.Hrs. 3
Examination of the central concerns of women and gender in the Humanities. A focus on representation, voice, knowledge, and subjectivity. Students may not hold credit for both WOMN 1500 and the former WOMN 1530 (156.153).

WOMN 1600 Introduction to Women's and Gender Studies in the Social Sciences Cr.Hrs. 3
Examination of women's historical and contemporary roles in the economy, family, and society from the perspective of the social sciences. Introduction of feminist theories, with emphasis on the role of gender. Topics covered focus on the social conditions of women's lives: work, health, violence and organizing for change. Students may not hold credit for both WOMN 1600 and the former WOMN 1540 (156.154).

8.29.3 Women's and Gender Studies Course Descriptions-2000 Level

WOMN 2000 Feminist Thought Cr.Hrs. 3
Survey of the varieties of historical and contemporary feminist ideas. Students may not hold credit for both WOMN 2000 and the former WOMN 2520 (156.252). Prerequisite: [a grade of "C" or better in a minimum of three credit hours of Women's and Gender Studies courses] or written consent of the Women's and Gender Studies coordinator.

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 and Gender Studies courses] or written consent of the Women's and Gender 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 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 and Gender Studies Program office for information as to specific topics offered. As the course content will vary from year to year, students may take this course more than once for credit.

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 2600 Sex, Gender, Space and Place Cr.Hrs. 3
An examination of how we use places and spaces in our everyday lives to produce and maintain social differences of gender, sexuality, race, class, and citizenship. Drawing on perspectives from feminist geography and history, this course explores ideas about places (for example, homes) and spaces (for example, regions), as well as historical claims that women belong in place but men should control space. Students may not hold credit for both WOMN 2600 and WOMN 2540 (156.254) with the topic "Sex, Gender, Space and Place."

8.29.3 Women's and Gender Studies Course Descriptions-3000 Level

WOMN 3000 Interdisciplinary Research in Women's and Gender Studies Cr.Hrs. 3
An introduction to the approaches scholars use to challenge the dominant theories of knowledge and the major methodologies used to produce it. The course examines the influence of gender theory and feminism on the research questions we ask, the types of materials we use, and the methods we employ. Students may not hold credit for both WOMN 3000 and the former WOMN 3580 (156.358). Prerequisite: [a grade of "C" or better in a minimum of three credit hours of Women's and Gender Studies courses] or written consent of the Women's and Gender Studies coordinator.

WOMN 3100 Sex Work in Contemporary Canadian Culture Cr.Hrs. 3
This course examines cultural linkages between femininity and prostitution in the context of contemporary Canadian culture. The course begins by considering historical cultural and feminist discourses about sex work and sex workers. Keeping in mind that the actual exchange of sexual services for money is currently legal in Canada, course discussions will interrogate enduring representations of sex work/ers. The course also examines some prostitution-related legislation, ideological and "real world" linkages between violence and prostitution, and ongoing activisms that reinforce or resist negative representations and the violent realities of sex work/ers in Canada today. Students may not hold credit for both WOMN 3100 and WOMN 2540 with the topic "Sex Work in Contemporary Canadian Culture." Prerequisite: [a grade of "C" or better in a minimum of three credit hours of Women's and Gender Studies courses] or written consent of the Women's and Gender Studies coordinator.

WOMN 3330 Sex and Sexualities Cr.Hrs. 3
Comparative approaches to the study of human sexuality and the diversity of sexual expression and identification from a feminist and cross-cultural ethnographic perspective. Sex and sexualities are examined as social and cultural constructions, experiences, discourses, identities, and practices located in specific local contexts and shaped by wider social processes including colonialism and globalization. This course is also offered as ANTH 3330. Students may not hold credit for WOMN 3330 and any of: ANTH 3330 or the former ANTH 3350 or WOMN 3500 (156.350) with the topic "Anthropology of Sex and Sexualities." Prerequisite: [a grade of "C" or better in a minimum of three credit hours of Women's and Gender Studies or Anthropology courses] or written permission of instructor.

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 and Gender Studies courses] or written consent of the Women's and Gender Studies coordinator. As the course content will vary from year to year, students may take this course more than once for credit.

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 and Gender Studies courses] or written consent of the Women's and Gender 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 and Gender Studies coordinator. As the course content will vary from year to year, students may take this course more than once for credit.

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 and Gender Studies coordinator. As the course content will vary from year to year, students may take this course more than once for credit.

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 and Gender Studies courses] or written consent of the Women's and Gender 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 and Gender Studies courses] or written consent of the Women's and Gender 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 and Gender Studies courses] or written consent of the Women's and Gender Studies coordinator.

WOMN 3620 Masculinities Cr.Hrs. 3
An introduction to the key debates in masculinity studies from a feminist perspective. Considering the idea of "hegemonic masculinity" and the practice of creating a typology of masculinity, this course examines the changing forms of masculinity as a political and cultural category, using historical examples from the 19th century and the 1970s and considers the influence of feminist theories on men's engagement with masculinity in North America. Students may not hold credit for both WOMN 3620 and WOMN 3500 (156.350) with the topic "Masculinities." Prerequisite: [a grade of "C" or better in a minimum of three credit hours of Women's and Gender Studies courses] or written consent of the Women's and Gender Studies coordinator.

8.29.3 Women's and Gender Studies Course Descriptions-4000 Level

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 and Gender 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 and Gender Studies courses] and written consent of the Women's and Gender Studies coordinator.

WOMN 4200 Seminar in Women's and Gender Studies Cr.Hrs. 3
An advanced seminar on a contemporary theme in Women's and Gender Studies. The theme will vary from year to year in accordance with the research interests of the instructor and new developments in the field. Student presentations and discussions will be emphasized. Students may not hold credit for both WOMN 4200 and the former WOMN 4110 (156.411). Prerequisite: [a grade of "C" or better in WOMN 2000 or the former WOMN 2520 (156.252)] and written consent of the Women's and Gender Studies coordinator.

SECTION 9: COURSES AND PROGRAMS OFFERED BY OTHER FACULTIES AND SCHOOLS FOR CREDIT IN ARTS

Courses

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 departmental listing 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
History of Art Minor
Minor in Management
Mathematics General Major
Mathematics Advanced Major
Mathematics Minor

Effective September 2009 Arts students may complete Minor programs offered by other Faculties/Schools not listed above providing the Minor program consists of a minimum of 18 credit hours and all other degree requirements are satisfied.

9.1 School of Art: History of Art

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

9.1.1 Program Information

For entry, continuation and graduation requirements for the General Degree, Advanced Degree and Honours Degree, see Section 3: Basic Faculty Regulations for the B.A. General, Advanced and Honours Degree Programs. NOTE: It is strongly recommended that students majoring in Art History have competence in a second language.

9.1.2 History of Art

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
FAAH 1030, FAAH 1040	• FA 1990 • 12 credit hours from List A • FAAH 3260 or FAAH 3270 • FA 3440 • 9 credit hours from either List A or List B		
MINOR TOTAL: 18 CREDIT HOURS			
FAAH 1030, FAAH 1040	• FA 1990 • 12 credit hours from either List A or List B		

Course	Course Name	Credit Hours
Introductory Courses		
FAAH 1030	Introduction to Art 1A	3
FAAH 1040	Introduction to Art 2A	3
FAAH 1050*	Introduction to Art 1B	3
FAAH 1060*	Introduction to Art 2B	3
FA 1990	First Year Field Trip	0
FA 3440	Field Trip	0
List A		
Faculty of Arts		
Classics		
CLAS 2670	Greek Art and Archaeology	3
CLAS 2680	Roman Art and Archaeology	3
School of Art		
Art History		
FAAH 1100	Survey of Asian Art	3
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 2930	Writing about Art	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 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 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

* Indicates course no longer offered.

9.2 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. Management courses may be taken by Faculty of Arts students subject to availability of space and satisfaction of prerequisites.

Minor in Management

For entry to the Minor, the prerequisite is a grade of "C" or better in the first 6 hours of Management courses. The Management Minor will consist of any 18 credit hours in the Faculty of Management/Asper School of Business courses.

9.3 Faculty of Science

All Minors offered by the Faculty of Science can be used as satisfying the Faculty of Arts requirement of a Minor (Concentration); (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 Université de Saint-Boniface differs from the one offered at the Fort Garry campus. For a complete description, consult the Université de Saint-Boniface's Calendar.

9.4.1 Mathematics

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
• one of MATH 1500, MATH 1510, MATH 1520 • one of MATH 1700, MATH 1710; or MATH 1690 • MATH 1200 • one of MATH 1300, MATH 1310	MATH 2300, MATH 2720[2], MATH 2730[2]	9 credit hours from MATH 2400, MATH 2450, MATH 2500, MATH 2552, MATH 2600[1], MATH 2800, or any 3000 or 4000 level Mathematics course	

YEAR 1	YEAR 2	YEAR 3	YEAR 4
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
• one of MATH 1500, MATH 1510, MATH 1520 • one of MATH 1700, MATH 1710; or MATH 1690 • one of MATH 1300, MATH 1310	MATH 2300, MATH 2600[1] or MATH 2800, MATH 2720[2] and MATH 2730[2]	• MATH 3300, MATH 3740 • 18 credit hours from the following list of which at least 3 credit hours must be at the 3000 or 4000 level: MATH 2202, MATH 2400, MATH 2450, MATH 2500, MATH 2552, MATH 2600[1], MATH 2800, or any 3000 or 4000 level Mathematics course	
MINOR TOTAL: 18 CREDIT HOURS			
• one of MATH 1300, MATH 1310 • one of MATH 1500, MATH 1510, MATH 1520 • one of MATH 1690, MATH 1700, MATH 1710 • 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.			

9.4 Interfaculty Option in Aging

The Interfaculty Option in Aging Concentration is available to students in all B.A. degree programs.

This Concentration is offered by: Arts, Human Ecology, Nursing, Kinesiology and Recreation Management, and Social Work. To complete the Concentration, Arts students will need to complete each of the following: a) The Social Aspects of Aging, HMEC 2650 or REC 2650 or SWRK 2650; and b) Health and Physical Aspects of Aging, NURS 2610 or KIN 2610; and c) an additional twelve credit hours from the following courses:

Course	Course Name	Credit Hours
Faculty of Arts		
English, Film, and Theatre		
FILM 3420	Film Theory	3
Psychology		
PSYC 2360	Brain and Behaviour	3
PSYC 2370	Developmental Psychology from Adolescence to Old Age	3
PSYC 3350	Behaviour Neuroscience	3
PSYC 3460	Abnormal Psychology	3
PSYC 3490	Individual Differences	3
PSYC 3610	Memory	3
PSYC 4420	Neuroimaging: Imaging and Thoughts	3
PSYC 4430	Vision: Perception and Action	3
PSYC 4566	Psychology of Health and Aging	3
Religion		
RLGN 1410	Death and Concepts of the Future (C)	3
Sociology		
SOC 2490	Sociology of Health and Illness	3
SOC 2620	Sociology of Aging	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

* Indicates course no longer offered.

Upon completion of these requirements, the Option in Aging will be recorded as a concentration on the student's official transcript. For information concerning the option, interested students are directed to faculty general offices.

SCHOOL OF DENTAL HYGIENE

Program Director: Joanna Asadoorian
Campus Address/General Office: D212 Dental Building, Bannatyne Campus
Telephone: (204) 789 3683
Fax: (204) 789 3948
Email Address:
dent_hygiene@umanitoba.ca

umanitoba.ca/faculties/dentalhygiene

Academic Staff:
Please refer to the School website: umanitoba.ca/faculties/dentalhygiene

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

1.1 Programs

Program/Degree	Years to Complete	**Total Credit Hours**
Diploma in Dental Hygiene	Minimum time to graduation: Three years via Direct Entry or University 1 (or satisfaction of prerequisites), plus two years.	101
Bachelor of Science in Dental Hygiene, Degree Completion Program	Minimum time to graduation: Dependent upon prior education (i.e. completion of a pre-professional year [Univ 1] prior to entry into the Diploma in Dental Hygiene program). Upon admission to the B.Sc.D.H. program part-time students would be expected to complete the program within two to three (2-3) years.	120*

* See section 4.2 for details on how this credit hour requirement is satisfied.

1.2 The Profession of Dental Hygiene

Dental hygiene is a self regulated 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 five components: assessment, dental hygiene diagnosis, 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 School of Dental Hygiene Mission Statement: In a dynamic environment of excellence and progressive learning, the University of Manitoba, School of Dental Hygiene prepares future dental hygienists to enhance the health and well being of the public through oral health promotion, disease prevention and therapeutic means; and to be active members of the global health care community.

Practice Requirements

After successful completion of the National Dental Hygiene Certification Board Examination, in Manitoba, graduates must apply to the College of Dental Hygienists of Manitoba for a licence to practice as a dental hygienist. Dental hygienists must fulfil the requirements of the respective provincial regulatory authorities licensing bodies. The minimum educational credential for licensure in the province of Manitoba is the Diploma in Dental Hygiene. Licensed dental hygienists may continue their education by completing a Bachelor of Science Degree in Dental Hygiene.

SECTION 2: ADMISSION REQUIREMENTS

2.1 Diploma in Dental Hygiene

The following is a summary of 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.

2.1.a Direct Entry

General Direct Entry/University of Manitoba Admission Requirements

Manitoba high school graduation, with five full credits at the Grade 12 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.

Specific Requirements for the School of Dental Hygiene

General Requirements as above, plus a minimum 85% average over the following, with no less than 60% in each course:

a. English 40S

b. TWO of Mathematics 40S (either Pre-Calculus, recommended, or Applied), Biology 40S or Chemistry 40S*

- Although not required for admission, students must complete Mathematics 40S (Applied or Pre-Calculus), Biology 40S and Chemistry 40S in order to register for first year required courses for Dental Hygiene.

Notes: Candidates must meet the specific subject requirements, minimum grades, average or other requirements as listed for the program. Should demand exceed available positions, higher averages may be required to be competitive (higher than 85%). Only Canadian Citizens and Permanent Residents will be considered for admission.

Selection criteria: 100 per cent based on academic standing.

It is recommended that all applicants attend an orientation session. Orientation for dental hygiene takes place at the School of Dental Hygiene, Bannatyne Campus.

2.1. b Advanced Entry Applicants

The following is a summary of the admission requirements for Advanced Entry. Applicants to this category must successfully complete the following courses prior to application. Course are normally completed within University 1, however, equivalent academic courses completed at recognized universities elsewhere will be considered.

ENGL 1310 or 1340

CHEM 1300 and CHEM 1310 or CHEM 1320

PSYC 1200

BIOL 1410 and BIOL 1412

STAT 1000

6 credit hours of electives (Sociology is strongly recommended) for a total of 30 credit hours.

Other Requirements

Minimum GPA for consideration: 3.00 with no grade less than C, with the exception of English which requires the minimum grade of C+. Admission is competitive.

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, Bannatyne Campus.

2.2 Bachelor of Science in Dental Hygiene, Degree Completion Program

The program will be available to dental hygiene diploma graduates of the University of Manitoba or other accredited dental hygiene educational institutions wishing to complete requirements for the baccalaureate degree on a full-time or part-time basis. Transfer of credit for courses completed at other institutions will be possible through appropriate University procedures. The School will evaluate credits from other institutions on an individual basis. 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.

Admission to the degree completion program requires of students that:

- They must possess a Diploma in Dental Hygiene from either a university or community college program accredited by either the Commission on Dental Accreditation of Canada or the American Dental Association's Commission on Dental Accreditation.
- They must possess the National Dental Hygiene Certification Board (NDHCB) Certificate
- They must hold current licensure to practice dental hygiene in Canada and be eligible for licensure to practice in Manitoba.
- They must possess all the pre-requisite course requirements prior to admission (see prerequisite requirements, options A & B below)

Prerequisite Requirements		
Option A		
This option is for those graduate of accredited dental hygiene programs who completed a proscribed pre-professional year of university studies prior to entry into their dental hygiene program		
Required Prerequisites (minimum C grade in each course)	Research methods (REHB 2450; PSYC 2250) or equivalent	3 credit hours
	Basic Statistical Analysis (STAT 1000; PSYC 2260) or equivalent	3 credit hours
	Total	6 credit hours
Option B		
This option is for dental hygienists who are graduates of accredited two year programs which did not require a pre-professional year of university studies		
Required Prerequisites (minimum C grade in each course)	Research Methods (REHB 2450) or equivalent	3 credit hours
	Basic Statistical Analysis (STAT 1000) or equivalent	3 credit hours
	Free choice electives	15 credit hours
	TOTAL	21 credit hours

The required minimum grade for specified prerequisite courses including electives is a C. There is a required minimum overall grade point average of 3.0 (B) in the candidates Diploma in Dental Hygiene or Associated Degree Program.

Selection is competitive. In the event of a surplus number of applicants, selection will be based on the grade point average (GPA) over the most recently completed 60 credit hours of study completed at the accredited post secondary level.

SECTION 3: FACULTY 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 umanitoba.ca 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.

Direct Entry students are to be aware that as they will be registered in courses outside of the school of Dental Hygiene (non HYGN courses), they may be subject to the rules and regulations of the faculty/school in which those courses reside (primarily the Faculties of Arts and Science). Direct Entry students are encouraged to become familiar to the rules and regulations of these faculties/schools . Please contact the School of Dental Hygiene for further information.

3.1 Diploma in Dental Hygiene

3.1a Essential Skills and Abilities for Admission, Promotion and Graduation in Dental Hygiene Diploma Program

As an accredited Canadian dental hygiene program, the Faculty of Dentistry, School of Dental Hygiene at the University of Manitoba is responsible for providing a program of study that ensures graduates have the necessary qualifications (academic knowledge, clinical skills, and professional behaviors and attitudes) to enter the regulated profession of Dental Hygiene in Canada. Becoming and being a dental hygienist requires a wide range of highly specialized skills and abilities. Some of these are taught in dental hygiene school, while others must be brought by the individual as an innate set of essential skills and abilities. The criteria for becoming registered/ licensed as a dental hygienist in Canada requires a level of motor skills and other attributes that are not necessary in other professional occupations. Similarly, the ability to provide reasonable accommodation for special learning needs in dental hygiene may not be the same as it is for other academic programs.

It is important to note that an offer of admission to the Faculty of Dentistry, School of Dental Hygiene is not evidence that the dental hygiene program has verified that an applicant has the prerequisite skills and abilities for success in the program or future professional licensure. However, these skills and abilities are essential if students are to be successful in achieving the competency standards of the profession.

For progression in, and graduation, from the dental hygiene program, all students must conduct themselves in a professional manner, and must have the Essential Skills and Abilities (Technical Standards) discussed under the following five broad areas: Observation/perception; Communication; Motor/tactile function; Cognition; Emotional functioning.

All applicants to the dental hygiene diploma program of the Faculty of Dentistry School of Dental Hygiene are expected to review the Essential Skills and Abilities for Admission, Promotion and Graduation in Dental Hygiene Diploma Program document to assess their ability to meet these standards; all applicants offered admission will be required to acknowledge such review and assessment.

Any candidate for the diploma in dental hygiene program who cannot demonstrate the required skills and abilities throughout their course of study may be requested to withdraw from the program.

Detailed information for the above policy can be found at: http://umanitoba.ca/faculties/dentistry/student_resources/SRC_governanceAttendancePolicy.html

3.1.b Faculty Of Dentistry/School Of Dental Hygiene Professional Unsuitability By-Law

Students must at all times demonstrate suitability for the dental/dental hygiene profession. In this regard students are obligated to act with integrity and diligence in carrying out their professional responsibilities, and their behaviour and conduct in relation to others must be characterized by consideration, respect and good faith.

The Faculty of Dentistry may require a student to withdraw from the Faculty when the student has been found unsuited for the practices of dentistry or dental hygiene because the student has been found to have engaged in unprofessional behaviour. A student may be required to withdraw at any time throughout the academic year.

Grounds which may require withdrawal are: demonstrated behaviour which is exploitive, irresponsible, intentionally injurious or destructive to patients; and/or compromised professional judgment through self-interest and/or conflict of interest; and/or an acquired criminal conviction, either in Canada or any other jurisdiction, which is of such a nature as to place in question his/her fitness for the dental professions; and/or participation in any activity related to patient care or any activity related to the practice of the dental professions while under the influence of alcohol or drugs or while abusing prescription drugs; and/or engaging in behaviour or conduct that if engaged in by a practising dentist/dental hygienist would likely result in disciplinary action, including suspension or revocation of the license to practise, by the Manitoba Dental Association or the College of Dental Hygienists of Manitoba.

Detailed information for the above policy can be found at: http://umanitoba.ca/faculties/dentistry/student_resources/SRC_governanceAttendancePolicy.html

3.1.c Criminal Record/Child Abuse Registry

An adult criminal record and child abuse registry self-declaration will be required of all applicants at the time of application. A formal Adult Criminal Record Check (including vulnerable sector screening) and a formal Child Abuse Registry Check is required at the time of registration, and annually thereafter keeping in accordance with existing policies of other health, education and social service programs at the University of Manitoba.

Direct Entry students will be required to provide these documents upon admission to the program and prior to October 1 of that year.

Failure to provide these documents may impact on registration and a student's ability to progress in the Dental Hygiene program.

3.1.d Immunization and Bloodborne Diseases Policy

All Diploma students enrolled in dental hygiene must be immunized against the following diseases: diphtheria/tetanus, polio, rubella, measles, mumps, varicella (chicken pox), pertussis, 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.

Direct Entry students are responsible to have all immunization requirements in place prior to their entrance into their second year (first clinical year) of the program. Further information will be provided upon admission to the School.

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.

3.1.e 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: Health Career Provider (HCP CPR Level C). This certification must be maintained on a yearly basis up to the date of graduation.

Direct Entry students will not need to provide this certification in year 1 of their program; they will be expected to complete this requirement by October 15th of their first clinical year.

3.1.f Instruments, Computer, Textbooks and Uniforms

Students entering the School of Dental Hygiene will be expected to own or purchase a PC laptop computer (only PC is supported by the Faculty given the software that is used in our clinical facilities) that is compliant with University computer standards (see Bookstore - Computers on Campus for annual listing) and Vital Source Technologies software requirements. The expenditure of a computer may range approximately from $1000 to $4000 and the cost of Vital Source Technologies software over the two clinical years of the program is approximately $2000USD.* These costs replace former textbook expenditures and are included as part of the Dental Hygiene Clinical Instrument Fees (formerly called Dental Kit fee).

Students are responsible for Dental Hygiene Clinical Instrument Fees (formerly called Dental Kit fee), which includes the purchase of some instruments* and other sundry items as may be necessary or required. Students are responsible for any instruments or equipment that is assigned to them (School owned), and must return these instruments in good condition. Over the two clinical years of the program, the cost of such instruments/fees has been approximately $17,000. Specific listed items and instruments purchased by students are their property. The School is unable to accept returns of any student computer software, Dental Hygiene Clinical Instrument fees, instruments or other items should a student leave the school for whatever reason and upon graduation.

*Direct entry students will not be expected to purchase a laptop computer, Vital Source Software, or be charged Dental Hygiene Clinical Instrument (former Dental Kit) fees until the start of their second year of the program (first clinical year).

3.1.g Examinations and Promotions

The following may not apply to Direct Entry students during their first year of the program, but will come into effect once they are registered in years two and three of the program (once registered in HYGN courses as described in Section 4). Further clarification will be communicated to Direct Entry Students upon admission to the School of Dental Hygiene.

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 2.0 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 Requirements of this Calendar.

For appeals process, see the Chapter General Academic Regulations and Requirements.

For a description of the grading system, see the Chapter General Academic Regulations and Requirements.

3.1.h Supplemental Examinations

The following may not apply to Direct Entry students during their first year of the program, but will come into effect once they are registered in years two and three of the program (once registered in HYGN courses as described in Section 4). Further clarification will be communicated to Direct Entry Students upon admission to the School of Dental Hygiene.

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 2.0 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 Registrar's Office no later than those deadline dates listed in this Calendar.

3.1.i Challenge for Credit

The following may not apply to Direct Entry students during their first year of the program, but will come into effect once they are registered in years two and three of the program (once registered in HYGN courses as described in Section 4). Further clarification will be communicated to Direct Entry Students upon admission to the School of Dental Hygiene.

There are a limited 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. Requests for course challenge must be received prior to the commencement of the term in which the course will be offered.

3.1.j Honours and Awards

Dean's Honours: awarded to students in each year of the dental hygiene Diploma program who have achieved a minimum sessional (fall & winter term combined) G.P.A. of 3.8. In addition, 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 not 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.

3.1.k Voluntary Withdrawal

Students intending to withdraw from a portion or all of their courses must report immediately in person or in writing to the Director's Office. Please note: Computer Software, Dental Hygiene Clinical Instrument (former Dental Kit) fees and/or Clinical Instrument items are non-refundable. See also the chapter, on General Academic Regulations and Requirements.

Students who withdraw from the School of Dental Hygiene without notice will be considered to have terminated their connection with the school. 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 Director of the School.

3.1.l 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/School of Dental Hygiene (See item 3.1.b above).

Full policy information can be found at: http://umanitoba.ca/faculties/dentistry/student_resources/SRC_governanceAttendancePolicy.html

3.1.m E-Mail Accounts

All students are expected to have an e-mail account with the University of Manitoba and check it regularly. The School of Dental Hygiene does not support communications with its students through external e-mail addresses.

3.1.n Registration exceptions

Direct Entry students should contact the School of Dental Hygiene for information on registration.

Upon receipt of initial (in year two; and annually thereafter) Criminal Record (including Vulnerable Sector Screening) and Child Abuse Registry Checks, the School of Dental Hygiene registers all students in their courses (Years 2 and 3).Diploma 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 registered in the next ensuing academic session until all outstanding matters have been cleared . Students who fall into this category should contact the student advisor for further information. A student advisor is available in D028 Dental Building or by calling (204) 789-3484.

3.2 Bachelor of Science in Dental Hygiene, Degree Completion Program

3.2.a Academic Progress

A minimum Degree Grade Point Average of 2.0 must be maintained in the Bachelor of Science in Dental Hygiene for clear standing. A grade of C is considered a passing grade for all courses applied towards degree requirements. Students who do not maintain a minimum GPA of 2.0 may be required to withdraw from the program.

3.2.b Licensure

Students in the Bachelor of Science in Dental Hygiene program must maintain professional licensure during their registration at the School of Dental Hygiene. Students should also note that licensure with the College of Dental Hygienists' of Manitoba may be required for registration within certain core courses (example: teaching practicum) of the program. Students are responsible for all fees associated with the maintenance of current licensure as well as application for licensure within Manitoba as may be required.

3.2.c Criminal Record/Child Abuse Registry

An adult criminal record and child abuse registry self-declaration will be required of all applicants at the time of application. A formal Adult Criminal Record Check (including vulnerable sector screening) and a formal Child Abuse Registry Check is required at the time of registration, and annually thereafter keeping in accordance with existing policies of other health, education and social service programs at the University of Manitoba.

3.2.d Writing Skills

Once in the program, students who do not exhibit ability to communicate in writing may be required to seek remediation in writing skills.

3.2.e Transfer of Credit

The School may consider University credits earned outside of dental hygiene diploma programs or earned as part of an incomplete degree for transfer credit. If a student earned credit for a required course in the baccalaureate program as part of a diploma in dental hygiene or as part of another degree, an alternative course must be submitted for consideration.

3.2.f Residence Requirements

Baccalaureate Degree-Completion Program students are required to complete at least 30 credit hours of University of Manitoba courses of the total 120 credits for the degree, with the minimum grade of "C" in each course.

3.2.g Clinic Attire

Students in the B.Sc.Dental Hygiene program must maintain appropriate clinic attire when participating in clinical activities. Students will be required to purchase clinic uniforms as specified at the time of registration.

3.2.h Program Length/Registration

Students in the Bachelor of Science in Dental Hygiene, Degree Completion Program should note that after initial registration, the length of time to complete the B.Sc.D.H. program is variable dependent upon whether courses are taken full-time or part-time. Part-time students would be expected to complete the program within two to three (2-3) years. Students should be aware that the B.Sc.D.H. program tuition fee does not include tuition fees assessed against registration in courses administered outside of the Dental Hygiene Program (non HYGN courses). Further information on fees may be obtained from the University of Manitoba's web-site: umanitoba.ca

3.2.i Voluntary Withdrawal

Students intending to withdraw from a portion or all of their courses must report immediately in person or in writing to the Director's Office. Please note that all program tuition fees for the Bachelor of Science in Dental Hygiene program are non-refundable. See the chapter, on General Academic Regulations and Requirements for further information on voluntary withdrawal.

Students who withdraw from the School of Dental Hygiene without notice will be considered to have terminated their connection with the school. 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 Director of the School.

3.2.j E-Mail Accounts

All students are expected to have an e-mail account with the University of Manitoba and check it regularly. The School of Dental Hygiene does not support communications with its students through external e-mail addresses.

3.2.k Registration exceptions

Bachelor of Science Students who will be taking courses outside of the School of Dental Hygiene will be required to follow registration regulations/restrictions governed by the faculty in which those courses reside. Normal course repeat rules and restrictions will apply. Students in the B.Sc. program will also be responsible to ensure that they have verified their initial access time for registration; consulted with an advisor and/or obtained required program approval for outside courses as necessary; checked for timetable updates for all external courses; registered and assessed their fees after registration in all courses. A student advisor is available in D028 Dental Building or by calling (204) 789-3484.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 Diploma in Dental Hygiene

For students admitted as of Spring, 2012 and forward. Students admitted prior to 2012 should refer to the version of the University of Manitoba Undergraduate Calendar in effect on the date of their admission for clarification of program/graduation requirements. Further information may also be obtained from the School of Dental Hygiene.

Course No.	Course Title	Credit Hours
First Year (Direct Entry)		
ENGL 1310* *Or ENGL 1340	Literary Topics 1	3
PSYC 1200	Introduction to Psychology	6
BIOL 1410 and BIOL 1412	Anatomy of the Human Body Physiology of the Human Body	3 3
STAT 1000	Basic Statistical Analysis 1	3
	Electives (Sociology is strongly recommended)	6
CHEM 1300 and CHEM 1310 Or CHEM 1320	University 1 Chemistry: Structure and Modeling in Chemistry University 1 Chemistry: An Introduction to Physical Chemistry University 1 Chemistry: An Introduction to Organic Chemistry	3 3 6
Second Year/First Clinical Year (Year 1 Advanced Entry)		
HYGN 1232	Oral and Dental Anatomy	3
HYGN 1234	Preclinical Dental Hygiene	2
HYGN 1236	Dental Hygiene Theory and Practice I	4
HYGN 1238	Dental Hygiene Clinical Practice I	3
HYGN 1242	Dental Hygiene Theory and Practice II	4
HYGN 1262	Dental Radiology	3
HYGN 1270	Biology of the Head and Neck	3
HYGN 1280	Microbiology and Infectious Diseases	3
HYGN 1292	Dental Hygiene Preclinical Restorative Techniques	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**
Third Year/Second Clinical Year		
HYGN 2100	Dental Hygiene Portfolio*	2
HYGN 2280	Pharmacology	2
HYGN 2300	Pathology	3
HYGN 2312	Dental Hygiene Clinical Practice II	4
HYGN 2314	Dental Hygiene Theory and Practice III	4
HYGN 2316	Dental Hygiene Clinical Practice III	4
HYGN 2318	Dental Hygiene Theory and Practice IV	5
HYGN 2340	Periodontology II	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 clinical year of the Dental Hygiene program. However, no grade will be assigned and it will not be factored into GPA calculations.

4.2 Bachelor of Science in Dental Hygiene, Degree Completion Program

Accredited dental hygiene programs in Canada and the U.S. have been traditionally offered as either stand-alone two year programs with direct entry from high school, or as two-year programs requiring a pre-professional year of studies prior to admission into the professional program. In order to provide access to a broad range of potential degree completion students, two options have been developed.

Option A

This option is for those graduates of accredited 3 year dental hygiene programs, or equivalent, or those who have completed a proscribed pre-professional year prior to entry into their dental hygiene program.

Dental hygienists from the University of Manitoba who graduated between 1993 and 2007 must complete 21 credit hours

Dental hygienists from the University of Manitoba who graduated after 2007 must complete 19 credit hours

Graduates of other (non-University of Manitoba) dental hygiene programs who completed a pre-professional year prior to entry into their dental hygiene program, may be granted up to 15 credit hours from the pre-pro-

fessional year and 75 credit hours from the 2-year dental hygiene program towards their degree. These graduates will be required to complete 30 hours of University of Manitoba credits in order to complete the degree and satisfy the residency requirement.

Option B.

Dental hygienists who are graduates of accredited two year programs without the pre-professional year, must complete the 21 credit hours as described below plus 24 credit hours of free-choice electives. This requirement applies to graduates from the University of Manitoba (prior to 1993) as well as other accredited two-year dental hygiene programs in North America with no pre-professional year. As in Option A, the residency requirement of 30 credit hours for those non-University of Manitoba graduates will be upheld.

University of Manitoba Graduates

Students with diplomas in dental hygiene from the University of Manitoba will complete 19 credit hours if they graduated after 2007 and 21 credit hours if they graduated between 1993 and 2007. Dental hygienists who graduated from the University before 1993 will complete 24 credit hours of electives in addition to 21 dental hygiene baccalaureate credit hours (total 45).

Year of Graduation (U of M)	Pre-Professional Year	Total Dental Hygiene Program Credit Hours Granted	Option	Credit Hours for BScDH Completion	Total BSc-DH Credit Hours
After 2007	Yes	1 + 2 years or 3 years (30 + 71 = 101 Credit Hours)	Option A	1 year (19 Credit Hours)	120 credits hours
Between 1993 and 2007	Yes	1 + 2 Years (30 + 69 = 99 Credit Hours)	Option A	1 year (21 credit hours)	120 credit hours
Before 1993	No	2 Years 75 Credit Hours	Option B	2 years (45 credit hours)	120 credit hours

Graduates of Other Accredited North American Dental Hygiene Programs

** Residency Requirement*

Pre - Professional Year	Total Dental Hygiene Program Credit Hours Granted	Option	Credit Hours for BScDH Completion	TotalBSc-DH Credit Hours
Yes	Pre-Prof. Year (accept 15 credit hours) + 2 years DH (75 Credit Hours) = 90 Cr. Hrs.	Option A	1 year *(30 credit hours)	120 credits hours
No	2 Years 75 Credit Hours	Option B	2 years *(45 credit hours)	120 credit hours

Degree Completion Curriculum

Course No.	Course Title	Credit Hours
Dental Hygiene Core (Minimum 12)		
Mandatory Courses (2)		
HYGN 2380	Pain Management	(2)
Elective Courses		
HYGN 4410	Dental Hygiene Practice Management and Leadership	(3)
HYGN 4460	Community Health Independent Study	(3)
HYGN 4470	Community Health Independent Study 2	(3)
HYGN 4490	Current Issues in Dental Hygiene	(3)
HYGN 4520	Advanced Independent Study	(3)
HYGN 4530	Teaching Practicum	(3)
HYGN 4540	Advanced Teaching Practicum	(3)
HYGN 4550	Advanced Independent Study II	(3)
Potential Electives - Not part of the Core Program (up to 21 Cr. Hrs)		
HYGN 4500	Advanced Oral Pathology (UBC)	(3)
HYGN 4510	Microbiology & Immunology	(3)
HYGN 4472	Assessment & Treatment Planning for Advanced Periodontal Disease	(3)
Courses approved as Potential Electives outside of the School of Dental Hygiene		
NURS 1260	Human Growth & Development	(3)
PHIL 1290	Critical Thinking	(3)
SOC 2490	Sociology of health & Illness	(3)
SOC 3540	Sociology of Health Care Systems	(3)
HNSC 1210	Nutrition for Health & Changing Lifestyles	(3)
PHIL 2740	Ethics & Biomedicine	(3)

SECTION 5: COURSE DESCRIPTIONS

Direct Entry (Year 1)-Required Course Descriptions

ENGL 1310 Literary Topics 1 Cr.Hrs. 3
(Formerly 004.131) Topics relating to literature and culture will vary yearly. See the Class Schedule for a list of current topics. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted. As the course content will vary from year to year, students may take this course more than once for credit.

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 1211 (017.121) or PSYC 1221 (017.122) or the former PSYC 1201 (017.120). Prerequisite for all other courses in Psychology.

BIOL 1410 Anatomy of the Human Body Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 1320, 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.

BIOL 1412 Physiology of the Human Body Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 1330, 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 of BIOL 2410 (or equivalent - ZOOL 2530, BIOL 2411, ZOOL 2531, 022.253) and BIOL 2420 (or equivalent - ZOOL 2540, BIOL 2421, ZOOL 2541, 022.254). Prerequisite: BIOL 1410 (ZOOL 1320, 022.132) (C); or one of BIOL 1030, BIOL 1031, or the former 071.125 (C). This prerequisite is waived for students in the Baccalaureate Program for Registered Nurses.

STAT 1000 Basic Statistical Analysis 1 Cr.Hrs. 3
(Formerly 005.100) An introduction to the basic principles of statistics and procedures used for data analysis. Topics to be covered include: gathering data, displaying and summarizing data, examining relationships between variables, sampling distributions, estimation and significance tests, inference for means. Not to be held with STAT 1001, STAT 2220 (005.222). Prerequisite: Any grade 12 or 40S Mathematics, or equivalent.

CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry Cr.Hrs. 3
(Lab Required) (Formerly 002.130) Atomic and molecular models and their applications to chemistry, including a discussion of solid, liquid, and gaseous states, and of mixtures. Not to be held with CHEM 1301. Prerequisites: Applied Mathematics 40S or Pre-calculus Mathematics 40S, or the former Mathematics 40S (300); and Chemistry 40S (or equivalent) or CHEM 0900 (002.090) (P), or a minimum grade of "B" in CHEM 1000 or CHEM 1001 (002.100).

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 (002.130) (C).

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 (002.221) Prerequisite: CHEM 1300 or CHEM 1301 (002.130) (C).

Dental Hygiene Course Descriptions-1000 Level

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. 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. 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. 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. 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.

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.

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.

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.

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.

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 in included.

SECTION 5: Dental Hygiene Course Descriptions-2000 Level

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.

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.

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: HYGN 1238 and HYGN 1242. Corequisite: HYGN 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: HYGN 1238 and HYGN 1242. Corequisite: HYGN 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 courses is evaluated on a pass/fail basis. Prerequisites: HYGN 2312 and HYGN 2314. Corerequisite: HYGN 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: HYGN 2312 and HYGN 2314. Corequisite: HYGN 2316.

HYGN 2340 Periodontology II Cr.Hrs. 2
(Formerly 070.234) Continuation of the study of etiology, diagnosis and treatment of periodontal disease.

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.

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. Prerequisite: HYGN 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.

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.

Dental Hygiene Course Descriptions-4000 Level

HYGN 4460 Community Health Independent Study Cr.Hrs. 3
This course is a practicum and/or independent study course focusing on the design and/or implementation and evaluation of the health promotion program process in; the field. Students may choose to host an oral health awareness raising event for the public, provide community-based oral health promotion activity at a selected site, develop a small-scale oral health promotion program for an underserved population group or a similar community-based project.

HYGN 4470 Community Health Independent Study II Cr.Hrs. 3
This course is a continuation of HYGN 4460 (Community Health Independent Study) and provides a further opportunity for the student to build on the previous independent study course or focus on the design and/or implementation and evaluation of an additional health promotion program. In either case, students may choose from oral health awareness raising event for the public, community-based oral health promotion activity, small-scale oral health promotion programming or similar community oral health project.

HYGN 4500 Advanced Oral Pathology Cr.Hrs. 3
A web-based CD-ROM distance education course designed to present the clinical and pathobiologic aspects of diseases that affect oral and maxillofacial tissues or present with significant oral manifestations of systemic diseases. This course is presented in conjunction with the University of Manitoba and the University of British Columbia.

HYGN 4510 Microbiology and Immunology Cr.Hrs. 3
This Web CT course is offered in conjunction with the University of British Columbia. Microbiological and immunological concepts that are the scientific basis for understanding human response in health and disease will be explored. This course builds on knowledge acquired from dental hygiene entry-to-practice level education and dental hygiene practice.

HYGN 4520 Advanced Independent Study I Cr.Hrs. 3
This course will enable the degree-completion student to explore issues or areas of interest in dental hygiene with the mentorship of a dental hygiene faculty member. Dependent upon the extent of the project, students may enroll in either three or six hours of study.

HYGN 4530 Teaching Practicum Cr.Hrs. 3
This course provides students with a seminar course in clinical teaching methodologies and the opportunity to practice teach within an undergraduate dental hygiene program under the supervision and mentorship of dental hygiene faculty members.

HYGN 4540 Advanced Teaching Practicum Cr.Hrs. 3
This course is a continuation of HYGN 4530 (Teaching Practicum) and provides the opportunity to extend the practice teaching experience into a second term, thus strengthening the individual's skills as a dental hygiene educator. This experience will occur under the supervision and mentorship of dental hygiene faculty members.

HYGN 4550 Advanced Independent Study II Cr.Hrs. 3
This course is a continuation of HYGN 4520 (Advanced Independent Study) and provides the opportunity for the student to pursue a more complex project which cannot be completed within the first course. Students will have selected their project topic in HYGN 4520 and will continue their exploration and write-up of this topic with the guidance of a dental hygiene faculty mentor.

FACULTY OF DENTISTRY

Dean: Anthony M. Iacopino
Associate Dean(s): Associate Dean (Academic): Douglas Brothwell; Associate Dean (Research): Raj Bhullar; Associate Dean (Clinical): Mel Sawyer
Campus Address/General Office: D113 Dentistry Building, Bannatyne Campus
Telephone: (204) 789 3631
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umanitoba.ca/faculties/dentistry

Academic Staff:
Please refer to the Faculty website at umanitoba.ca/faculties/dentistry

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

1.1 Programs

Program/Degree	Years to Complete	Total Credit Hours (dental program only)
Doctor of Dental Medicine (D.M.D.) (4 year program)	Minimum time to graduation: Six years (University 1, plus one year or 2 years in either the Faculty of Science or Arts, plus four years in the Faculty of Dentistry).	217*
Doctor of Dental Medicine (D.M.D.) (International Dental Degree Program [IDDP] 2 year program)	After a 8 week summer orientation students in this program complete the 3rd and 4th year of the dental program.	128*
Bachelor of Science in Dentistry (note: only students enrolled in the D.M.D. program are eligible for admission)	This program is completed over two (2) summers, normally commencing after first year in the dental program.	N/A

- Course credit hour weightings are under revision. Changes will affect the program of students newly admitted in 2011-2012. Please see section #4 or contact the faculty for further information.

1.2 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 to apply to the Manitoba Dental Association to obtain a license to practice within the province of Manitoba. For information on licensing requirements and the application process please contact: The Registrar, Manitoba Dental Association, 202 - 1735 Corydon Avenue, Winnipeg, Manitoba R3N 0K4; telephone (204) 988 5300; e-mail: office@manitobadentist.ca

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, 80 Elgin Street, 2nd Floor, Ottawa, Ontario K1P 6R2; telephone (613) 236 5912; e-mail: director@ndeb.ca

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 2: ADMISSION REQUIREMENTS

2.1 Doctor of Dental Medicine

Minimum time to graduation: Six years (University 1, plus one year, or 2 years in the Faculty of Science or Arts, plus four years in the Faculty of Dentistry).

After University 1, most students choose the Faculty of Science because the pre-Dentistry requirements easily fit Science degree programs.

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 (umanitoba.ca/dentistry).

Minimum 60 credit hours of pre-Dentistry study including:

BIOL 1020 and 1030

CHEM 1300 and CHEM 1310

CHEM 2210 and 2220

CHEM 2360 and CHEM 2370 or MBIO 2360 and MBIO 2370

PHYS 1020 and 1030 or PHYS 1050 and 1070

6 credit hours of English (taught through the English Department)

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, Physics 40S and Biology 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 (PHYS 1020(M) meets the mathematics "M" requirement).

The English Canadian 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 (umanitoba.ca/dentistry) or by requesting an Information Application Bulletin from either the Faculty of Dentistry or the umanitoba.ca/admissions(Enrolment Services)

Selection criteria: Grades, interview and DAT score equally weighted.

Students should be aware that if admittted they must provide an official Adult Criminal Record Check (including Vulnerable Persons Screening) and an Adult Child Abuse Registry Check as well as sign in acknowledgement of the Essential Skills and Abilities for Admission, Promotion and Graduation in the DMD Program document prior to registration. See Section 3 for further information on these requirements.

2.2 Bachelor of Science in 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 (umanitoba.ca/dentistry).

2.3 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 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.

Requirement to the IDDP program can be found at the Faculty of Dentistry's website at: umanitoba.ca/dentistry/IDDP. Please note that there are two tracks which may be applied to.

Should you have specific questions that cannot be answered from the above website, please call the IDDP Coordinator at (204) 977-5611.

SECTION 3: FACULTY 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 umanitoba.ca 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.

The Faculty of Dentistry expects all students to participate fully in their educational experience. This means participation above and beyond the requirements of individual courses. For example, as a part of their clinical experiences, all students must learn skills of a clinical nature, such as local anesthesia, rubber dam placement, etc. Our teaching approach includes having students

practice these skills on each other. All students are expected to participate in these activities.

Further, the faculty has an expectation of all students that they are aware of and maintain attitudes and behaviours which exhibit a level of professionalism, empathy, and consideration of all members of their community, including faculty, staff, students or patients, similar to what is expected of an oral health practitioner.

The following policies have been adopted by the Faculty to aid students in understanding the value the Faculty places on these conducts/behaviours.

3.1 Essential Skills and Abilities for Admission, Promotion and Graduation in the DMD Program

As an accredited Canadian dental program, the Faculty of Dentistry at the University of Manitoba is responsible for providing a program of study that ensures graduates have the necessary qualifications (academic knowledge, clinical skills, and professional behaviors and attitudes) to enter the regulated profession of Dentistry in Canada. Becoming and being a dentist requires a wide range of highly specialized skills and abilities. Some of these are taught in dental school, while others must be brought by the individual as an innate set of essential skills and abilities. The criteria for becoming registered/licensed as a dentist in Canada requires a level of motor skills and other attributes that are not necessary in other professional occupations. Similarly, the ability to provide reasonable accommodation for special learning needs in dentistry may not be the same as it is for other academic programs.

It is important to note that an offer of admission to the Faculty of Dentistry is not evidence that the dental program has verified that an applicant has the prerequisite skills and abilities for success in the program or in obtaining future professional licensure. However, these skills and abilities are essential if students are to be successful in achieving the competency standards of the profession.

For progression in, and graduation, from the dental program, all students must conduct themselves in a professional manner, and must have the Essential Skills and Abilities (Technical Standards) discussed under the following five broad areas: Observation/perception; Communication; Motor/tactile function; Cognition; Emotional functioning

All applicants to the undergraduate program of the Faculty of Dentistry are expected to review The Essential Skills and Abilities for Admission, Promotion and Graduation in the DMD Program document to assess their ability to meet these standards; all applicants offered admission will be required to acknowledge such review and assessment. Any candidate for the DMD degree who cannot demonstrate the required skills and abilities throughout their course of study may be requested to withdraw from the program.

Detailed information for the above policy can be found at: http://umanitoba.ca/faculties/dentistry/student_resources/SRC_governanceAttendancePolicy.html

3.2 Policy on Student Attendance

The Faculty of Dentistry has a social mandate to ensure that graduating dentists are caring, skilled healthcare providers who are worthy of the public trust endowed upon them. In fulfilling this mandate, the Faculty of Dentistry has developed comprehensive programs of education and experience to ensure that graduates meet these high expectations. Unlike non-professional education programs, where students can pick and choose their education and experiences based on personal preferences, Dental School requires students to attend and participate actively in all components of the program.

While students are required to complete assignments and pass examinations, these are not considered to be equivalent to attending Dental School. When the University confers the DMD degree, it attests to society not only that the student has shown successful examination performance, but that the student has participated in the entire educational experience defined by the Faculty of Dentistry and has thereby demonstrated an appropriate level of professional learning and responsibility.

Students at the University of Manitoba, Faculty of Dentistry, are required to attend all scheduled classes, examinations, small group sessions, laboratories, pre-clinical labs, and clinics unless expressly indicated otherwise by the course coordinator in the course outline/syllabus.

Students are required to be on time for all scheduled classes, examinations, small group sessions, laboratories, and pre-clinical labs. Students arriving more than 10-minutes late will be recorded as absent.

Students who do not comply with the Student Attendance Policy will face academic consequences.

Detailed information for the above policy can be found at: http://umanitoba.ca/faculties/dentistry/student_resources/SRC_governanceAttendancePolicy.html

3.3 Faculty of Dentistry/School of Dental Hygiene Professional Unsuitability By-Law

Students must at all times demonstrate suitability for the dental profession. In this regard students are obligated to act with integrity and diligence in carrying out their professional responsibilities, and their behaviour and conduct in relation to others must be characterized by consideration, respect and good faith.

The Faculty of Dentistry may require a student to withdraw from the Faculty when the student has been found unsuited for the practices of dentistry or dental hygiene because the student has been found to have engaged in unprofessional behaviour. A student may be required to withdraw at any time throughout the academic year.

Grounds which may require withdrawal are: demonstrated behaviour which is exploitive, irresponsible, intentionally injurious or destructive to patients; and/or compromised professional judgment through self-interest and/or conflict of interest; and/or an acquired criminal conviction, either in Canada or any other jurisdiction, which is of such a nature as to place in question his/her fitness for the dental professions; and/or participation in any activity related to patient care or any activity related to the practice of the dental professions while under the influence of alcohol or drugs or while abusing prescription drugs; and/or engaging in behaviour or conduct that if engaged in by a practising dentist/dental hygienist would likely result in disciplinary action, including suspension or revocation of the license to practise, by the Manitoba Dental Association or the College of Dental Hygienists of Manitoba.

Detailed information for the above policy can be found at: http://umanitoba.ca/faculties/dentistry/student_resources/SRC_governanceAttendancePolicy.html

3.4 Criminal Record/Child Abuse Registry

An adult criminal record and child abuse registry self-declaration will be required of all applicants at the time of application. A formal Adult Criminal Record Check (including vulnerable sector screening) and a formal Child Abuse Registry Check is required at the time of registration, and annually thereafter keeping in accordance with existing policies of other health, education and social service programs at the University of Manitoba.

Failure to provide these documents may impact on registration and a student's ability to progress in the Dental program.

3.5 Immunization and Blood Borne Diseases Policy

All students enrolled in the Faculty of Dentistry must be immunized against the following diseases: diphtheria/tetanus, polio, rubella, measles, mumps,

varicella (chicken pox) pertussis 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 Dentistry Student Services 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

3.6 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: Health Career Provider (HCP CPR Level C). This certification must be maintained on a yearly basis up to the date of graduation.

3.7 Instruments Computers and Textbooks

Students entering the Faculty of Dentistry will be expected to own or purchase a PC laptop computer (only PC is supported by the Faculty given the software that is used in our clinical facilities) that is compliant with University computer standards (see Bookstore - Computers on Campus for annual listing) and Vital Source Technology software requirements. The expenditure of a computer may range approximately from $1000 to $4000 within the first year of the program. The Vital Source Technologies cost over the four year program is approximately $4000 USD and depending on the Canadian exchange rate, students make four annual payments of approximately $1000/year to cover the full costs. These costs replace former textbook expenditures and are included as part of the Clinical Instrument Fees (formerly called Dental Kit fee).

Students are responsible for Clinical Instrument Fees (formerly called Dental Kit fee), which includes the purchase of some instruments and other sundry items as may be necessary or required. Students are responsible for any instruments or equipment that is assigned to them (Faculty owned), and must return these instruments in good condition. Over the four years of dentistry, the costs of such instruments/fees has been approximately $46,000; the bulk of the expenditure is incurred in the first two years. "Specific listed items and instruments purchased by students are their property. The faculty is unable to accept returns of any student computer software, clinical Instrument (former Dental Kit) fees, instruments or other items should a student leave the faculty for whatever reason and upon graduation.

3.8 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. Please Note: Computer Software, Clinical Instrument (former Dental Kit) fees and/or Clinical Instrument items are non-refundable. See also the 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.

3.9 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 (see item 3.3 above).

Full policy information can be found at: http://umanitoba.ca/faculties/dentistry/student_resources/SRC_governanceAttendancePolicy.html

3.10 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.

3.11 Incomplete Standing in the Faculty of Dentistry

The incomplete "I(F)" designation is restricted to clinical courses.

Successful completion of clinical 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 obtained from the Faculty.

3.12 Supplemental Examinations

A "Supplemental Examination" is an examination which may be offered as a privilege to a student who has failed a course or failed to achieve a satisfactory result. Such examinations are offered in order to grant the student an opportunity to rectify the inadequacy without repeating the course.

Information on Supplemental Examinations can be found in the chapter, General Academic Regulations and Requirements at the beginning of this Calendar. Specific information on The Faculty of Dentistry's supplemental privileges can be obtained from the Faculty.

3.13 Honours and Awards

Dean's Honour List: awarded to students in each year of the dental program who have achieved a minimum sessional (fall & winter term combined) G.P.A. of 3.8.

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.

3.14 E-Mail Accounts

All students are expected to have an e-mail account with the University of Manitoba and check it regularly. The Faculty of Dentistry does not support communications with its students through external e-mail addresses.

3.15 Financial Aid

A number of loan and bursary funds are available to dental students. Applications and further information are available through the University of Manitoba's Financial Aid and Awards Office.

3.16 Registration Exceptions

Upon receipt of initial (and annually thereafter) Criminal Record (including Vulnerable Sector Screening) and Child Abuse Registry Checks, the Faculty of Dentistry registers all students in their courses.

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 registered in the next ensuing academic session until all outstanding matters have been cleared. Students who fall into this category should contact the student advisor for further information.

A student advisor is available in D028 Dental Building or by calling (204) 789-3484.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 First Year

Newly Admitted in 2011-2012 and Forward

Course No.	Course Title	Credit Hours
DDSS 1100	Periodontology 1	1
DDSS 1110	Radiology 1	1
DENT 1202	Early Clinical Experience	3
DENT 1210	Dental Practice Management	1
ORLB 1302	Cell and Tissue Biology	4
ORLB 1310	Head, Neck and Nervous System Part 1	4
ORLB 1320	Head, Neck and Nervous System Part 2	3
ORLB 1330	Human Growth and Development	3
ORLB 1340	Oral Tissues Structure and Function	3
PDSD 1400	0rthodontics 1	2
RSTD 1500	Dental Materials 1	2
RSTD 1512	Operative Dentistry 1	6
RSTD 1520	Dental Anatomy	3
RSTD 1530	Occlusion	2
RSTD 1550	Introduction to Dentistry	2

Admitted Prior to 2011

Course No.	Course Title	Credit Hours
DDSS 1020	Periodontology 1	6
DDSS 1140	Radiology - 1	6
DENT 1202	Early Clinical Experience	6
ORLB 1050	Cell & Tissue Biology	6
ORLB 1060	Head, Neck & Nervous System, Part 1	6
ORLB 1070	Head, Neck & Nervous System, Part 2	6
ORLB 1080	Human Growth & Development	6
ORLB 1090	Development, Structure & Function of Oral Tissues	6
PDSD 1020	Orthodontics - 1	6
RSTD 1070	Dental Materials - 1	6
RSTD 1100	Operative Dentistry - 1	6
RSTD 1110	Dental Anatomy & Occlusion	6
RSTD 1120	Introduction to Dentistry	6

4.2 Second Year

Newly Admitted in 2011-2012 & Forward

Course No.	Course Title	Credit Hours
DDSS 2122	Oral Pathology	5
DDSS 2130	Pain and Anxiety Control 1	1
DDSS 2100	Periodontology 2	2
DDSS 2110	Radiology 2	1
DENT 2202	Introduction to Comprehensive Care	4
ORLB 2312	Structure and Function of Major Organ Systems	4
ORLB 2320	Cariology and Plaque Associated Diseases	3
ORLB 2300	Pathology and Microbiology 1	1
ORLB 2330	Nutrition in Dentistry	2
PDSD 2400	Orthodontics 2	2
PDSD 2410	Pediatric Dentistry 1	3
PDSD 2420	Dental Public Health	1
RSTD 2502	Dental Materials 2	2
RSTD 2510	0perative Dentistry 2	3
RSTD 2520	Endodontology 1	2
RSTD 2532	Fixed Prosthodontics 1	6
RSTD 2540	Removable Partial Denture Prosthodontics	3
RSTD 2552	Complete Denture Prosthodontics	4

Admitted prior to 2011

Course No.	Course Title	Credit Hours
DDSS 2010	Oral Pathology	6
DDSS 2020	Pain and Anxiety Control 1	6
DDSS 2120	Periodontology 2	6
DDSS 2180	Radiology 2	6
DENT 2430	Introduction to Comprehensive Care	6
ORLB 2070	Structure and Function of Major Organ Systems	6
ORLB 2090	Cariology and Plaque Associated Diseases	6
ORLB 2100	Pathology and Microbiology 1	6
ORLB 2150	Nutrition in Dentistry	6
PDSD 2020	Orthodontics 2	6
PDSD 2070	Pediatric Dentistry 1	6
PDSD 2130	Dental Public Health	6

Course No.	Course Title	Credit Hours
RSTD 2020	Dental Materials 2	6
RSTD 2050	0perative Dentistry 2	6
RSTD 2060	Endodontology 1	6
RSTD 2140	Fixed Partial Denture Prosthesis 1	6
RSTD 2220	Removable Partial Dentuer Prosthodontics	6
RSTD 2230	Complete Denture Prosthodontics	6

4.3 Third Year *,

Newly Admitted 2011-2012 & Forward*

DDSS 3142	Medicine	2
DDSS 3152	Temporomandibular Disorder & Orofacial Pain	2
DDSS 3112	0ral Diagnosis and Radiology 1	2
DDSS 3132	0ral and Maxillofacial Surgery 1	2
DDSS 3102	Periodontology 3	3
DDSS 3120	Pain and Anxiety Control 2	1

Course No.	Course Title	Credit Hours
ORLB 3300	Pathology and Microbiology 2	1
ORLB 3310	Pharmacology and Dental Therapeutics	2
PDSD 3402	Orthodontics 3	2
PDSD 3412	Pediatric Dentistry 2	3
PDSD 3422	Dental Public Health/ Preventive Dental Science	2
RSTD 3512	Operative Dentistry 3	5
RSTD 3532	Fixed Prosthodontics 2	5
RSTD 3522	Endodontology 2	3
RSTD 3542	Complete and Removable Partial Dental Prosthodontics	3

Admitted Prior to 2011

DDSS 3030	Medicine	6
DDSS 3200	0ral Diagnosis and Radiology 1	6
DDSS 3210	0ral and Maxillofacial Surgery 1	6
DDSS 3220	Periodontology 3	6
DDSS 3230	Pain and Anxiety Control 2	6
ORLB 3020	Pathology and Microbiology 2	6
ORLB 3060	Pharmacology and Dental Therapeutics	6
PDSD 3040	Orthodontics 3	6
PDSD 3050	Pediatric Dentistry 2	6
PDSD 3140	Dental Public Health/ Preventive Dental Science	6
RSTD 3020	Operative Dentistry 3	6
RSTD 3040	Fixed Partial Denture Prosthesis 2	6
RSTD 3050	Endodontology 2	6
RSTD 3090	Complete and RemovablePartial Dental Prosthesis	6

- IDDP Students must also complete an 8 week Orientation prior to commencing the 3rd year of the program (DENT 2440, IDDP Orientation – 6 credit hours)

4.4 Fourth Year

Course No.	Course Title	Credit Hours
DDSS 4130	Hospital Dentistry	6
DDSS 4200	0ral Diagnosis and Radiology 2	6
DDSS 4210	0ral and Maxillofacial Surgery 2	6
DENT 4020	Interdisciplinary Case Studies	6
DENT 4030	General Practice Clinic	30
PDSD 4050	Pediatric Dentistry 3	6
PDSD 4060	Orthodontics 4	6
PDSD 4080	Community Dentistry Externship	6
RSTD 4060	Endodontic Seminars	6
RSTD 4160	Dental Jurisprudence	6
RSTD 4170	Practice Management	6

SECTION 5 - COURSE DESCRIPTIONS

First Year Courses Prior to 2011

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.

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, and radiation protection.

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. Course evaluated on a pass/fail basis.

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.

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.

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.

ORLB 1080 Human Growth and Development Cr.Hrs. 6
(Formerly 100.108) Human development from the origin of the reproductive cells through fertilization, conception, embryonic/fetal development, birth, growth and aging. Particular emphasis is given to development and growth of structures of the head and neck.

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.

PDSD 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.

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.

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.

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.

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. As well, communication skills and professional ethics will be introduced. Students will also experience the practice of dentistry through field trips and student presentations. Course evaluated on a pass/fail basis.

First Year Courses as of 2011-2012

DDSS 1100 Periodontology 1 Cr.Hrs. 1
Predominately a pre-clinical laboratory course designed to introduce students to periodontal examination procedures and to basic non-surgical periodontal therapy. May not be held with DDSS 1020.

DDSS 1110 Radiology 1 Cr.Hrs. 1
A series of lectures which introduces the student to: the elementary principles of dental radiology; radiation physics, radiation biology, imaging techniques, x-ray equipment and radiation protection. May not be held with DDSS 1140.

DENT 1202 Early Clinical Experience Cr.Hrs. 3
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. May not be held with DENT 1010. Course evaluated on a pass/fail basis.

DENT 1210 Dental Practice Management 1 Cr.Hrs. 1
This course is an introduction to the Dental Practice Management curriculum which is distributed throughout the four year program. It comprises the modules on the Essentials of Effective Leadership and Strategic Leadership; Managing the Workplace and Conflict Resolution; Essentials of Interpersonal Communication Skills; and Team Building.

ORLB 1302 Cell and Tissue Biology Cr.Hrs. 4
Structure, function and chemical composition of eucaryotic cells and oral bacteria will be studied. Taste signaling, diseases, and molecular interactions within and between cells and the immune system will be described in detail. May not be held with ORLB 1050.

ORLB 1310 Head, Neck and Nervous System, Part 1 Cr.Hrs. 4
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. May not be held with ORLB 1060.

ORLB 1330 Human Growth and Development Cr.Hrs. 3
Human development from the origin of the reproductive cells through fertilization, conception, embryonic/fetal development, birth, growth and aging. Particular emphasis is given to development and growth of structures of the head and neck. May not be held with ORLB 1080.

ORLB 1340 Oral Tissues, Structure and Function Cr.Hrs. 3
This course is designed to present the normal morphology, developmental biology, biochemical structure, metabolism and functions of the dentition and para oral tissues, cartilage, bone and exocrine glands of the head and neck. Structural functional aspects of oral anatomy, biochemistry/molecular biology and physiology will be included. May not be held with ORLB 1090.

PDSD 1400 Orthodontics 1 Cr.Hrs. 2
A series of lectures, workshops and practica designed to introduce the student to the orthodontic perspectives of applied: 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, basic biomechanics and preliminary orthodontic wire bending and manipulation in orthodontics. May not be held with PDSD 1020.

RSTD 1500 Dental Materials 1 Cr.Hrs. 2
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. May not be held with RSTD 1070.

RSTD 1512 Operative Dentistry 1 Cr.Hrs. 6
A lecture and laboratory course introducing the fundamentals of operative dentistry. Lectures and laboratory exercises in the principles of cavity preparation, utilization of rotary and hand instruments and manipulation, placement and finishing of restorative materials are presented. May not be held with RSTD 1100.

RSTD 1520 Dental Anatomy Cr.Hrs. 3
A lecture and laboratory/seminar couirse introducing dental terminology, tooth identification, dental morphology and concepts of dental anatomy as it relates to the intraoral functional relationship. May not be held with RSTD 1110.

RSTD 1530 Occlusion Cr.Hrs. 2
A lecture and laboratory course designed to introduce the student to the concepts of dental occlusion and the relationship between the anatomy of the teeth and the TMJ. May not be held with RSTD 1110.

RSTD 1540 Introduction to Dentistry Cr.Hrs. 3
A series of lectures and seminars which introduce the student to the profession, its structure and governance. Professionalism, dental ethics and communication skills are also introduced. May not be held with RSTD 1120. Course evaluated on a pass/fail basis.

RSTD 1550 Introduction to Dentistry Cr.Hrs. 2
A series of lectures and seminars which introduce the student to the profession, its structure and governance. Professionalism, dental ethics and communication skills are also introduced. May not be held with RSTD 1120 or RSTD 1540. Course evaluated on a pass/fail basis.

Second Year Courses Prior to 2011

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.

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.

DDSS 2120 Periodontology 2 Cr.Hrs. 6
(Formerly 103.212) An introductory course with emphasis on periodontal structures in heath and disease, the etiology and diagnosis of periodontal disease, as well as the role of occlusion.

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.

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. Course evaluated on a pass/fail basis.

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.

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.

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.

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.

PDSD 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.

PDSD 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.

PDSD 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.

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.

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 priorities.

RSTD 2060 Endodontology - 1 Cr.Hrs. 6
(Formerly 102.206) Introduction to root canal therapy as a clinical practice, pulp and periapical pathology. The majority of the teaching is directed at the understanding and actual performance of practical endodontic techniques, performed in the laboratory setting on mannequins using extracted human teeth.

RSTD 2140 Fixed Partial Denture Prosthesis - 1 Cr.Hrs. 6
(Formerly 102.214) This course consists of lecture and laboratory instruction introducing basic fixed prosthodontic techniques.

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.

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.

Second Year Courses as of 2011-2012

DDSS 2122 Oral Pathology Cr.Hrs. 5
A series of lectures emphasizing recognition, description, etiopathogenesis, clinical and/ or radiographic features, biologic behaviour, treatment and/or management of oral and paraoral conditions. May not be held with DDSS 2010.

DDSS 2130 Pain and Anxiety Control 1 Cr.Hrs. 1
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. May not be held with DDSS 2020.

DDSS 2100 Periodontology2 Cr.Hrs. 2
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. May not be held with DDSS 2120.

DDSS 2110 Radiology 2 Cr.Hrs. 1
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. May not be held with DDSS 2180.

DENT 2202 Introduction to Comprehensive Care Cr.Hrs. 4
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. Course evaluated on a pass/fail basis. May not be held with DENT 2430.

ORLB 2312 Structure and Function of Major Organ Systems Cr.Hrs. 4
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. May not be held with ORLB 2070.

ORLB 2320 Cariology and Plaque Associated Diseases Cr.Hrs. 3
A study of the various dietary, host and microbial facotrs in the etiology of dental caries and periodontal disease, and a discussion of the various methods of plaque control. May not be held with ORLB 2090.

ORLB 2300 Pathology and Microbiology 1 Cr.Hrs. 1
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. May not be held with ORLB 2100.

ORLB 2330 Nutrition in Dentistry Cr.Hrs. 2
The course covers the role of nutrition in general health and disease with emphasis on the prevention and management of oral problems in Dentistry. May not be held with ORLB 2150.

PDSD 2400 Orthodontics-2 Cr.Hrs. 2
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. May not be held with PDSD 2020.

PDSD 2410 Pediatric Dentistry- 1 Cr.Hrs. 3
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 preventative techniques commonly used in dentistry for children. May not be held with PDSD 2070.

PDSD 2420 Dental Public Health Cr.Hrs. 1
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. May not be held with PDSD 2130.

RSTD 2502 Dental Materials-2 Cr.Hrs. 2
This course develops a scientific basis for the selection, application, manipulation and clinical performance of dental materials. The relationship betwen the properties of a material and its manipulation, application and clinical behaviour is developed. May not be held with RSTD 2020.

RSTD 2510 Operative Dentistry-2 Cr.Hrs. 3
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 priorities. May not be held with RSTD 2050.

RSTD 2520 Endodontolgy-1 Cr.Hrs. 2
Introduction to root canal therapy as a clinical practice, pulp and perapical pathology. The majority of the teaching is directed at the understanding and actual performance of practical endodontic techniques, performed in the laboratory setting on mannequins using extracted human teeth. May not be held with RSTD 2060.

RSTD 2532 Fixed Prosthodontics 1 Cr.Hrs. 6
This course consists of lecture and laboratory instruction introducing basic fixed prosthodontic techniques. May not be held with RSTD 2140.

RSTD 2540 Removable Partial Denture Prosthodontics Cr.Hrs. 3
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. May not be held with RSTD 2220.

RSTD 2552 Complete Denture Prosthodontics Cr.Hrs. 4
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. May not be held with RSTD 2230.

Oral Biology Course Descriptions

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.

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.

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.

ORLB 1080 Human Growth and Development Cr.Hrs. 6
(Formerly 100.108) Human development from the origin of the reproductive cells through fertilization, conception, embryonic/fetal development, birth, growth and aging. Particular emphasis is given to development and growth of structures of the head and neck.

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.

ORLB 1302 Cell and Tissue Biology Cr.Hrs. 4
Structure, function and chemical composition of eucaryotic cells and oral bacteria will be studied. Taste signaling, diseases, and molecular interactions within and between cells and the immune system will be described in detail. May not be held with ORLB 1050.

ORLB 1310 Head, Neck and Nervous System, Part 1 Cr.Hrs. 4
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. May not be held with ORLB 1060.

ORLB 1320 Head, Neck and Nervous System, Part 2 Cr.Hrs. 3
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. May not be held with ORLB 1070.

ORLB 1330 Human Growth and Development Cr.Hrs. 3
Human development from the origin of the reproductive cells through fertilization, conception, embryonic/fetal development, birth, growth and aging. Particular emphasis is given to development and growth of structures of the head and neck. May not be held with ORLB 1080.

ORLB 1340 Oral Tissues, Structure and Function Cr.Hrs. 3
This course is designed to present the normal morphology, developmental biology, biochemical structure, metabolism and functions of the dentition and para oral tissues, cartilage, bone and exocrine glands of the head and neck. Structural functional aspects of oral anatomy, biochemistry/molecular biology and physiology will be included. May not be held with ORLB 1090.

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.

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.

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.

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.

ORLB 2300 Pathology and Microbiology 1 Cr.Hrs. 1
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. May not be held with ORLB 2100.

ORLB 2312 Structure and Function of Major Organ Systems Cr.Hrs. 4
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. May not be held with ORLB 2070.

ORLB 2320 Cariology and Plaque Associated Diseases Cr.Hrs. 3
A study of the various dietary, host and microbial facotrs in the etiology of dental caries and periodontal disease, and a discussion of the various methods of plaque control. May not be held with ORLB 2090.

ORLB 2330 Nutrition in Dentistry Cr.Hrs. 2
The course covers the role of nutrition in general health and disease with emphasis on the prevention and management of oral problems in Dentistry. May not be held with ORLB 2150.

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.

ORLB 3060 Pharmacology and Dental Therapeutics Cr.Hrs. 6
(Formerly 100.306) A discussion of the basic pharmacology of dental and medical therapeutic agents, their therapeutic uses and adverse effects and potential impact on the treatment of dental patients.

ORLB 3300 Pathology and Microbiology 2 Cr.Hrs. 1
A study of selected infectious diseases and the application of general diagnostic pathology in dental practice. May not be held with ORLB 3020.

ORLB 3310 Pharmacology and Dental Therapeutics Cr.Hrs. 2
A discussion of the basic pharmacology of dental and medical therapeautic agents, their therapeutic uses and adverse effects and potential impact on the treatment of dental patients. May not be held with ORLB 3060.

General Dentistry Course Descriptions

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.

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.

Dental Diagnostic and Surgical Sciences Course Descriptions

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.

DDSS 3102 Periodontology 3 Cr.Hrs. 3
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. May not be held with DDSS 3220.

DDSS 3112 Oral Diagnosis and Radiology 1 Cr.Hrs. 2
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. May not be held with DDSS 3200.

DDSS 3120 Pain and Anxiety Control 2 Cr.Hrs. 1
This course consists of lectures/seminars and clinical experience in: physiology of pain psychology of anxiety, management of medical emergencies, parenteral injections, and therapeutics of the various modalities of pain and anxiety control. May not be held with DDSS 3230.

DDSS 3132 ORAL AND MAXILL SURGERY 1 Cr.Hrs. 2
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. May not be held with DDSS 3210.

DDSS 3142 Medicine Cr.Hrs. 2
Lectures or seminars describing the basic mechanisms, symptoms, diangnosis and management of various disease proceese included in internal medicine and their dental correlations. May not be held with DDSS 3030.

DDSS 3152 Temporomandibular Disorders and Orofacial Pain Cr.Hrs. 2
The course reviews the foundational clinical sciences in pain biology, and function of the masticatory muscles and TMJ. It dicusses the contemporary classification, diagnosis and management of Temporomandibular disorders and related orofacial pain disorders. May not be held with DDSS 3190.

DDSS 3190 Temporomandibular Disorders and Orofacial Pain Cr.Hrs. 6
The course reviews the foundational clinical sciences in pain biology, and function ofthe masticatory muscles and TMJ. It discusses the contemporary classification, diagnosis and management of Temporomandibular disorders and related orofacial pain disorders.

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.

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.

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.

DDSS 3230 Pain and Anxiety Control 2 Cr.Hrs. 6
(Formerly 103.323) This course consists of lectures/seminars and clinical experience in: physiology of pain and psychology of anxiety, management of medical emergencies, parenteral injections, and therapeutics of the various modalities of pain and anxiety control.

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. 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.

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.

Preventive Dental Science Course Descriptions

PDSD 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.

PDSD 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.

PDSD 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.

PDSD 3402 Orthodontics 3 Cr.Hrs. 2
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 mechanotherapy, screening of patients seeking orthodontic care and follow-up of retention of comleted cases. May not be held with PDSD 3040.

PDSD 3412 Pediatric Dentistry 2 Cr.Hrs. 3
A series of seminars and clinics to give the student a basic understanding and some clinical experience with: clinical procedures, emergency treatment, psychological management, preventative medical considerations and the provision of total dental care to pediatric patients. May not be held with PDSD 3050.

PDSD 3422 Dental Public Health/ Preventative Dental Science Cr.Hrs. 2
(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 organizationare reviewed. (b) Preventative Dental Science Techniques and therapy used to prevent dental diseases are covered. The application of these modalities to specific patient categories follows. May not be held with PDSD 3140.

PDSD 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.

PDSD 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 PDSD 3040 (or 101.304). Clinical seminars cover the analysis, diagnosis, treatment planning, mechanotherapy and post-treatment evaluation of previously treated cases.

PDSD 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. Course evaluated on a pass/fail basis.

Restorative Dentistry Course Descriptions

RSTD 3020 Operative Dentistry - 3 Cr.Hrs. 6
(Formerly 102.302) A lecture and clinical course emphasizing diagnosis, treatment planning and the application of fundamental principles of operative and esthetic dentistry. Lectures and clinical treatments dealing with current restorative materials and techniques.

RSTD 3040 Fixed Partial Denture Prosthesis - 2 Cr.Hrs. 6
(Formerly 102.304) An introduction to the clinical practice of fixed prosthodontic techniques. An emphasis is placed on diagnosis and treatment-planning. Clinical exposure is supplemented by lecture materials.

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 and periapical pathology 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.

RSTD 3090 Complete and Removable Partial Denture Prosthesis Cr.Hrs. 6
(Formerly 102.309) This course consists of a series of lectures and clinics. Theories of applied prosthodontics are discussed and applications of this knowledge are made concurrently through the clinical treatment of patients.

RSTD 3512 Operative Dentistry 3 Cr.Hrs. 5
A lecture and clinical course emphasizing diagnosis, treatment planning and the application of fundamental principles of operative and esthetic dentistry. Lectures and clinical treatments dealing with current restorative materials and techniques. My not be held with RSTD 3020.

RSTD 3522 Endodontology 2 Cr.Hrs. 3
This course emphasizes the rationale and biologic basis for the practical technique 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 and periapical pathology 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. May not be held with RSTD 3050.

RSTD 3532 Fixed Prosthodontics 2 Cr.Hrs. 5

An introduction to the clinical practice of fixed prosthdontic techniques. An emphasis is placed on diagnosis and treatment-planning. Clinical exposure is supplemented by lecture materials. May not be held with RSTD 3040.

RSTD 3542 Complete and Removable Partial Denture Prosthodontics Cr.Hrs. 3
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. May not be held with RSTD 3090.

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.

RSTD 4160 Dental Jurisprudence Cr.Hrs. 6
(Formerly 102.416) This course provides an overview of the Canadian legal system. It defines and discusses legal concepts relevant to dentistry including issues in negligence, contracts, confidentiality, business and human rights. Identifying a dentist's legal responsibilities to patients, peers, employees, profession and society will underlie the entire course.

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.

FACULTY OF EDUCATION

Dean: David Mandzuk
Associate Dean(s): Jerome Cranston (Acting Associate Dean-Undergraduate); Zana Lutfiyya (Graduate & Professional Programs, and Research)
Campus Address/General Office: 203 Education Building
Telephone: (204) 474-9004
Fax: (204) 474-7551
umanitoba.ca/education

Academic Staff:
Please refer to the Faculty website at umanitoba.ca/faculties/education/directory/faculty-directory-index.html

Student Services:

B. Ed. Programs (including Integrated Music/Education)

Telephone: (204) 474-9004
Fax: (204) 474-7551
E-mail: bachofed@umanitoba.ca
Website: umanitoba.ca/education

Post Baccalaureate Diploma in Education (PBDE)

Telephone: (204) 474-7886
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Internationally Educated Teachers

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Website: umanitoba.ca/education

Graduate Studies in Education

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E-mail: edgradpr@umanitoba.ca
Website: umanitoba.ca/education

Chapter Contents

SECTION 1: PROGRAMS

1.1 Department of Education

Program/Degree	Years to Complete	Total Credit Hours
Bachelor of Education	* 2	60
Bachelor of Music/Bachelor of Education	** 5	174-177
Post Baccalaureate Diploma in Education	*1	30

* Requires previous degree for entry. ** This includes two years (67 credit hours) of study in the Marcel A. Desautels Faculty of Music.

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 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.).

1.1.1 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 three years (subject to enrolment). The next proposed intake will be September 2014. 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.

1.1.2 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.

1.1.3 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.

1.1.4 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

1.1.5 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 1604** Academic and Professional English for Multilingual Teachers (3), **EDUB 1606** Teaching ESL Foundational Literacy, Academics & Language (LAL) Students (3), **EDUB 1608** Assessment & Testing of EAL/ESL Learners (3), **EDUB 1612** Adult ESL and the Canadian Language Benchmarks (3), **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 1820** Language and Content Instruction of ESL/ Bilingual Students (3), & **EDUB 1860** Practicum in Teaching English as a Second Language (TESL) (3) and additional Special Topics courses as approved. For further information, contact Heather McIntosh, (204) 474-9861, heather.mcintosh@umanitoba.ca.

1.1.6 Internationally Educated Teachers

See PBDE (see 1.1.3 above).

1.1.7 Special Students

The Faculty of Education does not normally admit students to this category.

1.1.8 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 7). Students who hold a recognized degree from an accredited institution may also take 5000-level courses, however, students must obtain permission by completing the form 'PBDE & Graduate Permission Slip' available at website umanitoba.ca/education/current/ or from Room 227 Education Building. 5000-level courses cannot be applied towards a B.Ed. degree or Integrated B.Mus./B.Ed. degrees.

1.2 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 Unit, Manitoba Education and make a recommendation that they be granted the Professional Certificate which is permanent and entitles the holder to teach any subject at any level (K-12) in Manitoba. Students are required to apply for certification. The application form and specific requirements for certification can be found online at www.edu.gov.mb.ca/k12/profcert/bedgradap.html.

SECTION 2: FACULTY OF EDUCATION PROGRAMS

2.1 After Degree Bachelor of Education

The Bachelor of Education program is a two year program following the completion of a first bachelor's degree of at least 90 credit hours (three years in duration). See admission requirements for detailed information.

2.2 Integrated Degrees: Bachelor of Music/Bachelor of Education

The Marcel A. Desautels Faculty of Music offers a degree program that integrates the requirements of its degree program with those of the Faculty of Education. See sections 1 and 4 of the chapter for the Marcel A. Desautels Faculty of Music for information. The integrated programs are five years in length. Students are awarded both degrees upon completion.

2.3 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.

2.4 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: AFTER-DEGREE BACHELOR OF EDUCATION

3.1 Admission Requirements

Early and Middle Years

A recognized bachelor's degree of a minimum of 90 credit hours and the requirements for two different teachable subjects plus a breadth component as follows:

- 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

A recognized bachelor's degree of a minimum of 90 credit hours and the requirements for two different teachable subjects:

- 30 credit hours in a teachable major,
- 18 credit hours in a teachable minor,

Other requirements (currently under review)

Minimum admission GPA for consideration: 2.50 on university coursework with a minimum grade of C in each teachable major/minor course and in breadth component coursework, if required. The admission GPA is calculated on the most recent 30 credit hours of university coursework available at February 1 of admission year.

- Writing skills exercise.
- References.

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

To be eligible for this program, applicants must have a conferred bachelor's degree and teachable courses at the 1000 level or higher completed from a recognized institution by May 1 of the year of application.

The Weekend College Middle Years scheduling option may not admit students each year; the next intake of students is anticipated for September, 2014.

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 Indigenous/Aboriginal Peoples – An Indigenous/Aboriginal person is a member of a Canadian First Nation, Métis, or Inuit Community.

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, 225 Education Building, or Enrolment Services, 424 University Centre or their website at: umanitoba.ca/student/admissions/application/deadlines/education/.

The detailed admission information is also posted on the university website. The criteria outlined in this section are applicable for 2013-2014 session only. Please refer to the Faculty website for updates to the admission criteria for subsequent sessions.

Early Years (Kindergarten - Grade 4) and Middle Years (Grades 5 – 8)

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

In addition to a bachelor's degree and two different teachable subject areas, 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	Early Years: no specific course requirements Middle Years: 12 credit hours of studio courses for a major or 9 credit hours of studio courses for a minor
Classics		X	
Computer Science (Middle Years only)	X	X	Note: This teachable area is available to Middle Years applicants only
Dance		X	
Developmental Studies (Family Studies and Developmental Psychology)		X	Note: A list of applicable University of Manitoba courses can be found on the Faculty website under Future Students.
Earth Science (Geological Science)		X	
Economics		X	
English (Language Arts)	X	X	
Environmental Science (Environmental Studies)		X	
French	X	X	

Teachable Subject	Major (18 credit hours)	Minor (12 credit hours)	Major/Minor Notes
General Science	X		Must include 3 (only) 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) **(Middle Years only)**	X	X	Note: This teachable area is available to Middle Years applicants only
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 at the 2000-level or above)
Native Studies	X	X	May include 6 credit hours of a Native Language course
Music	X	X	Early Years: no specific course requirements Middle Years: (Choral) or Music (Early/Middle) or Music (Instrumental) see specialization under Section 4.3 for specific course requirements
Philosophy		X	
Physical Education	X	X	Physical Education courses at the University of Manitoba identified with department designation PHED are acceptable for this teachable area (including former Department 057 or equivalent courses). In addition PERS 1200, PERS 1500, PERS 2200, PERS 3100 & PERS 3460 will meet the teachable requirements.
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	

Senior Years (Grades 9 – 12)

Applicants must have two different 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 (only) 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 (only) 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	
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 at the 2000-level or above)
Music (Choral) or Music (Instrumental)	X	X	see specialization under Section 4.3 for specific course requirements
Native Studies	X	X	May include 6 credit hours of a Native Language course
Physical Education	X		Physical Education courses at the University of Manitoba identified with department designation PHED are acceptable for this teachable area (including former Department 057 or equivalent courses). In addition PERS 1200, 1500, 2200, 3100 & 3460 will meet the teachable requirements.
Physics	X	X	
Second Language	X	X	Major or minor in languages other than English or French
Drama/Theatre	X	X	

3.1.1 Criminal Records and Child Abuse Registry

The Minister of Education 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 "Self-Declaration form for Newly Admitted Students: Child Abuse Registry and Statement of Criminal Records" form as a condition of final acceptance to the program. Only adult convictions must be disclosed, and the existence of such a record will not automatically exclude applicants.

In addition to the above self-declaration all successful applicants will be conditionally admitted pending clearance of an official Criminal Record Search (including Vulnerable Sector search) and clearance from the Child Abuse Registry. Registration will not be permitted until these clearances are received. Failure to clear or failure to provide these documents by the stated deadline will result in admission offer being revoked.

Applicants should also be aware that the Professional Certification 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 "Self-Declaration form for Newly Admitted Students: Child Abuse Registry and Statement of Criminal Records" is included in the admission bulletin available from the Enrolment Services/Admissions, 424 University Centre and the website: umanitoba.ca/student/admissions/application/education/.

3.2 Admission Procedure,

Application forms are available online at umanitoba.ca/student/admissions/application/education. Completed applications with supporting documentation must be submitted by February 1.

3.3 Program Requirements,

REMINDER: While Education academic 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.

All continuing students are required to complete and submit a "Self-Declaration form for Continuing Students: Child Abuse Registry and Statement of Criminal Records" prior to registration for every year they are enrolled in the Bachelor of Education program.

Actively registered students will be contacted regarding their intentions for the upcoming session via their UofM email addresses in February, and must reply by the date specified in the email. Part time students or students not currently in attendance should contact Student Services no later than February 1 to make their intentions known. Failure to reply by the specified dates may result in students being denied a school placement.

Early Years: Year 1

Course No.	Course Title	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
EDUA/EDUB	Aboriginal Education or Special Education/Diversity*	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
EDUA/EDUB	Aboriginal Education or Special Education/Diversity*	3
Total credit hours		**30**

* 3 credit hours Aboriginal Education (EDUA 1500 Aboriginal Education or EDUB 1602 Aboriginal Perspectives and the Curriculum) and 3 credit hours Special Education/Diversity (EDUA 1540 Cross Cultural Education, EDUB 1620 Principles and Procedures of Second Language Teaching, EDUB 1820 Language and Content Instruction of ESL/Bilingual Students or EDUB 1830 - La pédagogie du français de base aux niveaux intermédiare et de la jeune enfance) must be completed within the B.Ed. Program.

Middle Years: Year

Course No.	Course Title	Credit Hours
EDUB 1100	Introduction to Teaching Language Arts in the Middle Years	3
EDUB 1110	Introduction to Teaching Social Studies in the Middle Years	1

Course No.	Course Title	Credit Hours
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
EDUA/EDUB	Aboriginal Education or Special Education/Diversity*	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
EDUA/EDUB	Aboriginal Education or Special Education/Diversity*	3
Total credit hours		**30**

* 3 credit hours Aboriginal Education (EDUA 1500 Aboriginal Education or EDUB 1602 Aboriginal Perspectives and the Curriculum) and 3 credit hours Special Education/Diversity (EDUA 1540 Cross Cultural Education, EDUB 1620 Principles and Procedures of Second Language Teaching, EDUB 1820 Language and Content Instruction of ESL/Bilingual Students or EDUB 1830 - La pédagogie du français de base aux niveaux intermédiare et de la jeune enfance) must be completed within the B.Ed. Program.

Weekend College Middle Years Scheduling Option

Classes are held on Saturdays (9:00am-4:00pm) and Wednesday evening (5:30pm-8:30pm). Over the three years of the program, students must spend a total of 24 weeks in schools during regularly scheduled school hours to complete their School Experience requirements. Scheduling and sequence of course offerings are subject to change.

Course No.	Course Title	Credit Hours
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 1110	Introduction to Teaching Social Studies in the Middle Years	1
EDUB 1120	Teaching Drama in the Middle Years	
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
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 2800	Psychology of Learning and Instruction 2: Inclusive Special Education	3
EDUA/EDUB	Aboriginal Education or Special Education/Diversity*	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)	
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)	
EDUA 2810	School and Society 2: The Administrative Foundations of Education	3
EDUA/EDUB	Aboriginal Education or Special Education/Diversity*	3
Total Credit Hours		**13**

* 3 credit hours Aboriginal Education (EDUA 1500 Aboriginal Education or EDUB 1602 Aboriginal Perspectives and the Curriculum) and 3 credit hours Special Education/Diversity (EDUA 1540 Cross Cultural Education, EDUB 1620 Principles and Procedures of Second Language Teaching, EDUB 1820 Language and Content Instruction of ESL/Bilingual Students or EDUB 1830 - La pédagogie du français de base aux niveaux intermédiare et de la jeune enfance) must be completed within the B.Ed. Program.

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.

- 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.

Course No.	Course Title	Credit Hours
EDUB 1200	Teaching the Arts in Senior Years for (Art, Music and Theatre teachable majors and minors)	3
EDUB 1210	Teaching English Language Arts in Senior Years 1	3
EDUB 1230	Teaching Social Studies in Senior Years (for History, Geography and Native Studies teachable majors and teachable minors)	3
EDUB 1240	Teaching Human Ecology in Senior Years 1	3
EDUB 1250	Teaching Mathematics in Senior Years 1	3
EDUB 1260	Teaching Physical Education/Health Education in Senior Years 1	3
EDUB 1270	Teaching Senior Years Science (for Biology, Chemistry, Computer Science, General Science and Physics teachable majors and teachable minors)	3
EDUB 1280	L'Enseignement du Français de Base au Niveau Secondaire 1	3
EDUB 1350	Teaching a Heritage, Aboriginal or International Language 1	3
and all of the following:		
EDUB 1500	Education in the Senior Years	3
EDUB 1510	Principles and Processes of Teaching	3
EDUB 1980	Senior Years School Experience 1	6
EDUB 1990	Teacher and Technology	3
EDUA 1800	Psychology of Learning and Instruction 1: Theory and Practice	3
EDUA 1810	School and Society 1: The Social Foundations of Education	3
	Complementary Course * (see note at end of Year 2 regarding Aboriginal Education or Special Education/Diversity)	3
Total credit hours		**30**

Senior Years: Year 2

Curriculum and Instruction (select two from the following: one for the teachable Major and one for the teachable Minor) 6

Courses EDUB 2250 Teaching Drama and Theatre in Senior Years, EDUB 2270 Teaching Chemistry in Senior Years, EDUB 2320 Teaching Physics in Senior Years, EDUB 2330 Teaching Computer Science in Senior Years, EDUB 1240 and 2290 Teaching Human Ecology in Senior Year I and II, and 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.

Course No.	Course Title	Credit Hours
EDUB 1602	Aboriginal Perspectives and the 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 Fran ais de Base au Niveau Secondaire 2	3
EDUB 2350	Teaching a Heritage, Aboriginal or International Language 2	3
and all the following:		
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	3
	Complementary Course * (see note at end of Year 2 regarding Aboriginal Education or Special Education/Diversity)	6
Total credit hours		**30**

* 3 credit hours Aboriginal Education (EDUA 1500 Aboriginal Education or EDUB 1602 Aboriginal Perspectives and the Curriculum) and 3 credit hours Special Education/Diversity (EDUA 1540 Cross Cultural Education, EDUB 1620 Principles and Procedures of Second Language Teaching, EDUB 1820 Language and Content Instruction of ESL/Bilingual Students or EDUB 1830 - La pédagogie du français de base aux niveaux intermédiare et de la jeune enfance) must be completed within the B.Ed. Program.

SECTION 4: BACHELOR OF MUSIC/BACHELOR OF EDUCATION INTEGRATED

4.1 Admission Requirements

Successful completion of second year in the Marcel A. Desautels Faculty of Music with a minimum Degree Grade Point Average of 2.50 and be in good academic standing in the Faculty by May 1st of year of application is required for admission. Successful applicants are required to complete a "Self-Declaration form for Newly Admitted Students: Child Abuse Registry and Statement of Criminal Records" (see Section 3.1.1. Criminal Records and Child Abuse Registry).

In addition to the above self-declaration all successful applicants will be conditionally admitted pending clearance of an official Criminal Record Search (including Vulnerable Sector search) and clearance from the Child Abuse Registry. Failure to clear or failure to provide these documents by the stated deadline will result in admission offer being revoked.

Other Requirements

- Writing skills exercise.
- References.

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

4.2 Admission Procedure

Application forms are available from the Admissions Office, Enrolment Services, 424 University Centre, Faculty of Education Student Services Office, Room 225, Education Building or Marcel A. Desautels Faculty of Music General Office. The completed application must be returned to Enrolment Services by February 1.

4.3 Program Requirements

REMINDER: While Education academic 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.

All continuing students will be required to complete and submit a "Self-Declaration form for Continuing Students: Child Abuse Registry and Statement of Criminal Records" prior to registration for every year they are enrolled in the Bachelor of Education program.

Students choose a specialization in Music (Choral, Early/Middle, or Instrumental) for their teachable major and a subject other than Music from the Senior Years selection for their teachable minor (See Senior Years teachable major/minor chart in section 3 of this Calendar).

Actively registered Year 3 & 4 students will be contacted mid-October regarding their intentions for the upcoming Summer Session via their UofM email addresses in February, and must reply by the date specified in the email. Part time students or students not currently in attendance should contact Student Services no later than November 1 to make their intentions know. Failure to reply by the specified dates may result in students being denied a school placement.

Actively registered Year 4 students will be contacted regarding their intentions for the upcoming fall/winter session via their UofM email addresses in February, and must reply by the date specified in the email. Part time students or students not currently in attendance should contact Student Services no later than February 1 to make their intentions known. Failure to reply by the specified dates may result in students being denied a school placement.

Course No.	Course Title	Credit Hours
Year 1: Marcel A. Desautels 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
ENGL 1XXX	English (Any Course Meeting Written English Requirement)	3
MUSC 3230	Acoustics of Music (Meets Mathematics Requirement)	3
Total credit hours		**32**
Year 2: Marcel A. Desautels 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*	6
Total credit hours		**35**

NOTE: Apply to Faculty of Education, 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
MUSC XXXX	Music Specialization	6
EDUB 1200	Teaching the Arts in Senior Years	3
EDUB 1600	Teaching General Music	3
	Teachable Minor*	6
Total credit hours		**31**
Summer Session **		
EDUB 1940	Integrated Programs School Experience 1	3

Course No.	Course Title	Credit Hours
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 or [1] EDUB 2160	Teaching Music in Senior Years Teaching Music in Early/Middle Years [1]Students with Instrumental & Choral Specializations will take EDUB 2240 and students with Early/Middle Specialization will take EDUB 2160	3 3
MUSC XXXX	Music Specialization	12
	Teachable Minor*	6
Total credit hours		**34**
Summer Session **		
EDUB 1950	Integrated Programs School Experience 2	3

** Prior to beginning Year 5 all students must have completed the Aboriginal Education Requirement and the Special Education/Diversity Requirement which is defined as 3 credit hours Aboriginal Education (EDUA 1500 Aboriginal Education or EDUB 1602 Aboriginal Perspectives and the Curriculum) and 3 credit hours Special Education/Diversity (EDUA 1540 Cross Cultural Education, EDUB 1620 Principles and Procedures of Second Language Teaching, EDUB 1820 Language and Content Instruction of ESL/Bilingual Students or EDUB 1830 La pédagogie du français de base aux niveaux intermédiare et de la jeune enfance). 6

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 take a 3 credit hour Education complementary course)	3
EDUB 2510	Language and Literacy Across the Curriculum (for Early/ Middle Years specialization, students take a 3 credit hour Education complementary course)	3
EDUB 1XXX	Choral or Instrumental Specialization: Year 1 Curriculum & Instruction course for minor (see Senior Years: Year 1 - section 3.3)	3
or	Early/Middle Specialization: EDUB 1614	
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 3.

Course No.	Course Title	Credit Hours
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
Total credit hours		**18**
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 Music Education Elective	3 3
Total credit hours		**18**
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	6
Total credit hours		**18**
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 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

Course No.	Course Title	Credit Hours
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

SECTION 5: INTERNATIONALLY EDUCATED TEACHERS

The Academic and Professional Bridging Program Content

Internationally educated teachers who have applied to the Manitoba Education Professional Cerfication Unit and have received official notification that they require additional university coursework to be certified to teach in Manitoba are referred to Post Baccalaureate Diploma in Education (Section 8).

SECTION 6: 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.

6.1 Academic Regulations for All Bachelor of Education Programs

(See also sections 6.2, 6.3)

Academic Requirement for Graduation

A Degree Grade Point Average (DGPA) of 2.50 is required for graduation in the Bachelor of Education.

Academic Standing

A minimum DGPA of 2.50 must be maintained in the Bachelor of Education for clear standing. A grade of "C" 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. See Professional Unsuitability By-Law in this section.

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

Part-time students: 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, will be contacted by the School Experiences Office (SEO) via email in February so that they can complete an online Request for School Placement. The SEO deadline for part-time students to complete the Request for School Placement is March 1.

Full-time, Weekend College, and Integrated Music/B.Ed Students: Students will be contacted in February via email requesting that they complete an online Request for School Placement. The SEO deadline to complete the Request for School Placement for full-time, Weekend College and Integrated Music/B.Ed Year 5 students is February 15 and for Integrated Music /B.Ed students (Year 3 and 4) is November 1. Failure to apply for School Placement by the deadline may result in students being denied a placement.

Students who anticipate needing special accommodations are required to register with Student Accessibility Services and to speak with an Academic Advisor about the kinds of supports they may need. Once students have registered with Student Accessibility Services, reasonable accommodations for practicum can be made in consultation with the Director of the SEO.

Assessment of Student Academic Performance

Academic performance is assessed at the end of each regular term in which the student is registered on all courses that are used for credit towards the B.Ed. degree. Decisions concerning academic standing are normally made upon initial completion of 15 credit hours.

Based on the Degree 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 2.50 is eligible to proceed;
- The student who passes all courses, but whose DGPA is a 1.99 to 2.49 is placed on academic probation; and
- The student whose DGPA is less than 1.99 is required to withdraw on academic grounds (suspension).

Academic Probation

Students placed on academic probation may continue on probation until he or she has completed an additional 15 credit hours of required degree coursework. To clear probation, a student must raise his/her DGPA to 2.50 by the end of the probationary period. Normally, students on probation who fail to raise the DGPA to at least 2.50 will be required to withdraw on academic grounds (suspension) for a period of two years.

Academic Suspension

Students who have been required to withdraw on academic grounds will be informed via registered mail. These students may not register at the university for two academic years. Following this period, students wishing to pursue a Bachelor of Education degree, must make a written request for reinstatement. The following will apply in such cases:

- No application for reinstatement will be considered before a minimum period of two academic years has lapsed from the effective date of the required withdrawal to the effective date of the requested reinstatement.
- The applicant will be expected to demonstrate that he or she will now be able to meet the academic requirements of the program
- The Associate Dean (Undergraduate) will take into consideration:
    - performance in pass/fail courses;
    - use of academic and personal supports in the program; and
    - life circumstances affecting academic performance
- If the student is reinstated after the time limit for program completion has expired (see Statute of Limitation), the Associate Dean (Undergraduate) shall determine which, if any, courses previously successfully completed shall be repeated or replaced.

Attendance at Class/Debarment

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 in a single course exceed three hours of scheduled classes.

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

Continuing Students

See the chapter, Admissions, Section 5: Other Admisison Categories.

Dean's Honour List

Students registered in a minimum of 12 credit hours within a single term and who achieve a Term Grade Point Average of 3.90 or better will be included in the Dean's Honour List. 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.

Eligible students must be enrolled in either the After Degree Bachelor of Education program or the Integrated Bachelor of Music/Bachelor of Education program.

Degree with Distinction

A student graduating from the Bachelor of Education program will have the degree granted "With Distinction" if a minimum DGPA of 4.20 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 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

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	Unacceptable	60-69
F	0.00	Failure	Below 60

Incompletes

See the chapter, General Academic Regulations and Requirements, Academic Evaluation.

5000-level courses

Students enrolled in the B.Ed. and the Integrated B.Mus./B.Ed. programs are not permitted to take 5000-level courses.

Leave of Absence

Although most students will complete the B.Ed. program in 2 years, the Faculty recognizes that individual circumstances may arise that require a student to take one or more full years away from study. In such cases a student should meet with a Faculty of Education Academic Advisor as early as possible to discuss their particular situation and to map out plans for completing their program. It is important to note that in such cases the following applies:

- Newly admitted students must complete a minimum of three credit hours of required education coursework in the Fall or Winter term of the year of admission. That is, a leave of absence is not permitted in the first year.
- The normal maximum time allowed for completion of the B.Ed. degree is six years from the date of admission.
- Application to return for a School Placement following a leave must be made by the deadline stated under "Application Deadline for School Placement" in this section of the Calendar.
- Any student returning to resume studies after a Leave of Absence is expected to conform to any new requirements that have been approved during their absence.
- A student who is on a Leave of Absence is still considered to be within the B.Ed. program and therefore, cannot take courses at another post-secondary institution unless approved on a Letter of Permission. (see 5.3.1 Letter of Permission for Transfer of Credit under the General Academic Regulations and Requirements in the Undergraduate Calendar).
- Weekend College Middle Years students who take a Leave of Absence may not be able to complete the program through this scheduling option as the new intake is every three years.

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. All Year 1 course requirements must be completed before proceeding to Year 2. Integrated B.Mus./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. Part time students should note that not all curriculum and instruction courses are offered every year.

- Students can begin part-time studies in the first year provided they successfully complete 3 credit hours of Education coursework from the Year 1 program requirements. Failure to do so will result in ineligibility to continue in program and require re-application and re-admission.
- Part-time study is not available in Weekend College given that a new intake is every three years. Students unable to complete the courses as scheduled in Weekend College, should consider a request to transfer to Middle Years Day program. Please contact an Academic Advisor.

Professional Unsuitability By-Law

The Senate of the University has approved a by-law granting authority to the Faculty of Education to require a student to withdraw from the Faculty for reasons of professional unsuitability. A student may be required to withdraw from the Faculty when, at any time, the Professional Unsuitability Committee has determined that the student is unsuited, on consideration of competence or professional fitness, for the practice of teaching.
Copies of this by-law may be obtained from the Faculty of Education website.

Repeating a Course

Required courses which receive a grade of "D" must be repeated. Complementary courses which receive a grade of "D" must be repeated or replaced with other complementary courses. Courses which receive a "C" grade or higher grade may be repeated; but, only 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.

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 once every three years.

Senior Years and Integrated B.Mus./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.

Supplemental Examinations

Supplemental examinations are not permitted in education courses.

Voluntary Withdrawals

See the chapter, General Academic Regulations and Requirements.

Voluntary Withdrawal from Practicum Limit

All students admitted effective Sept. 2010 are permitted one voluntary withdrawal from each of the School Experience courses currently numbered as:

- 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; and EDUB 2980 Senior Years School Experience 2.

Authorized Withdrawals (AWs) may be permitted on medical or compassionate grounds, subject to satisfactory documentation. Students must contact an Education AcademicAdvisor to initiate an authorized withdrawal.

6.2 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 6.1)

Transfer of Credit

Students may transfer a maximum of five full courses (30 credit hours) from another recognized university or college Professional Education program toward the After-Degree B.Ed. provided the courses are acceptable to the Bachelor of Education program, and they have not been applied to another degree program.

Students will 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 8.5 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.

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). The following requests for exception will apply:

- Requests to register for 33 credit hours, from students who are in good standing, do not need approval but the student must contact an Acadmic Advisor for assistance.
- Requests to register for 36 credit hours are approved by an Academic Advisor provided the student's minimum Degree Grade Point average is 3.50.
- Requests to register for 3 credit horus above the maximum load but where the student's Degree Grade Point average is below 3.50 must be submitted in writing to the Associate Dean, Undergraduate Programs.
- Requests to register for more than 36 credit hours must be submitted 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.

6.3 Academic Regulations for the Integrated B.Mus./B.Ed. (see also 6.1)

In addition to 6.1 & 6.2, the following regulations apply to the Integrated B.Mus./B.Ed. program.

Major/Minor Academic Requirements

In addition to Education courses, students must achieve a grade of C or greater in courses which apply to the major and minor.

Maximum Course Load

The maximum credit hour load for B.Mus/B.Ed. students is as follows in the regular session (September-April): 34 credit hours (Year 3); 37 credit hours (Year 4); 30 credit hours (Year 5). The following requests for exception will apply:

- Requests to register for an additional 3 credit hours above the maximum load from students who are in good standing do not need approval but the student must contact an Academic Advisor for assistance.
- Requests to register for 6 credit hours above the maximum load are approved by an Academic Advisor provided the student's minimum Degree Grade Point average is 3.50.

- Requests to register for 3 credit hours above the maximum load where the student's Degree Grade Point average is below 3.50 must be submitted in writing to the Associate Dean, Undergraduate Programs (Education).
- Requests to register for 6 credit hours above the maximum load must be submitted in writing to the Associate Dean, Undergraduate Programs (Education).

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. 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.

University Written English and Mathematics Requirement for Students in the Integrated B.Mus./B.Ed.

All students are required to complete the university written English and Mathematics requirement. This requirement is described in the chapter, General Academic Regulations and Requirements.

SECTION 7: COMPLEMENTARY COURSES

Not all courses are offered every year.

All students admitted to the Bachelor of Education degree programs for September 2008 and beyond are required to complete six (6) credit hours of specific Content Area comprised of three (3) credit hours of coursework in Aboriginal Education and three (3) credit hours of coursework in Special Education/Diversity as two of their complementary courses. The three (3) credit hours required for Aboriginal Education will be completed by taking one of EDUA 1500 Aboriginal Education or EDUB 1602 Aboriginal Perspectives and the Curriculum, and the three (3) credit hours of coursework in Special Education/Diversity will be completed by taking one of EDUA 1540 Cross Cultural Education, EDUB 1620 Principles and Procedures of Second Language Teaching, EDUB 1820 Language and Content Instruction of ESL/Bilingual Students or EDUB 1830 La pédagogie du français de base aux niveaux intermédiare et de la jeune enfance.

For any remaining complementary courses students can choose from the following list:

Course Number	Course Name
EDUA 1500	Aboriginal Education
EDUA 1502	Measurement and Evaluation
EDUA 1510	Foundations of Moral and Religious Education
EDUA 1520	Recent Developments in Educational Administration and Foundations
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 1602 *	Aboriginal Perspectives and the Curriculum (Not open to students outside the B.Ed. or B.Mus/B.Ed. Programs)
EDUB 1604	Academic and Professional English for Multilingual Teachers
EDUB 1606	Teaching ESL Foundational Literacy, Academics and Language (LAL) Students
EDUB 1608	Assessment and Testing of EAL/ESL Learners
EDUB 1614	K-8 General Curriculum
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 1680	Media Literacy
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 1780	Integration of Technological Literacy Across the K-12 Curriculum
EDUB 1800	Recent Developments in Learning and Teaching Senior Years Mathematics
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

* Note: Senior Years (Year 1) students with a major or minor in Native Students may be removed from EDUB 1602 as this course is required in Year 2.

SECTION 8: POST BACCALAUREATE DIPLOMA IN EDUCATION

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. A wide selection of courses is available through Summer Session, distance education, via the internet and summer institutes.

This program is also used for Internationally Educated Teachers who require additional coursework to meet Manitoba Teacher Certification requirements.

The PBDE is recognized by Manitoba Education for salary classification purposes. Further, the PBDE program provides the opportunity for teachers to follow courses of study leading to the school counsellor, 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. For information regarding specialist certificates, contact: Professional Certification Unit, Manitoba Education, 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/k12/profcert/.

8.1 Admission Requirements

Applicants for Admission must possess

- A Bachelor of Education degree and one of the following types of certificates granted by Manitoba Education: Permanent Professional Certificate, Provisional Professional 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 and is based on a recognized program of teacher education. Individuals wishing to apply for such certification should contact the Professional Certification Unit, Manitoba Education.

Note 2:

Individuals must also complete a Supplementary Application and include a brief statement as to educational plans and a resume showing evidence of two years of appropriate full-time teaching or work experience.

8.2 Admission Procedure

Applications may be obtained from the Office of Graduate & Professional, and Research, Faculty of Education, or Enrolment Services, 424 University Centre. Applications can also be found at http://umanitoba.ca/faculties/education/future/index.html. Completed applications must be returned to Enrolment Services/Admissions Office, 424 University Centre by:

Canadian/US Applicants

April 1 for classes beginning in May

June 1 for classes beginning in July

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)

8.3 Program Requirements

REMINDER: While Education academic 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) PBDE students are not permitted to take graduate courses.

8.4 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. Effective September 2011, a student must maintain a minimum Degree Grade Point Average of 2.50 to continue in the program. A student whose Degree Grade Point Average falls below 2.50 will be placed on academic suspension for two years. Reapplication is required for readmission to the program.

Attendance at Class

Regular attendance is expected of all students in all courses. An instructor can initiate procedures to debar a student from attending classes and from final examinations where unexcused absences exceed three hours of scheduled classes in any one term.

Continuing Students

See the chapter, University of Manitoba Admissions.

Debarment

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

Grading Scale

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 Good85-89	
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. Students will be permitted to retake and use as PBDE credit Education courses beyond the nine years provided they have not been previously used elsewhere for credit toward a degree or diploma program. Courses from other faculties will need to be dealt with on an individual basis.

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 Associate Dean, PBDE Program. Courses may be repeated once. 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.

8.5 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.

- a maximum of 15 credit hours completed through the Certificate in Teaching English as a Second Language (CTESL), University of Manitoba from the following:

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); 39304 Practicum in Teaching English as a Second Language (TESL) as EDUB 1860 Practicum in Teaching English as a Second Language (TESL) (3); 39305 Content-based Second Language Instruction as EDUB 1820 Language and Content Instruction of ESL/Bilingual Students (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 1604 Academic and Professional English for Multilingual Teachers; 39308 Teaching ESL Literacy as EDUB 1606 Teaching ESL Foundational Literacy, Academics & Language (3); 39592 Adult ESL & the Canadian Language Benchmarks as EDUB 1612 Adult ESL and the Canadian Language Benchmarks (3); EDUB 1608 Assessment and Testing of EAL/ESL Learners;98592 Special Topics as parallel courses offered as EDUB 1840 Recent Developments in Curriculum, Teaching and Learning 1 or additional approved topics courses.

Completion of the CTESL certificate is not required to receive individual credit.

A maximum of 12 credit hours may be transferred 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.

8.6 Courses Grouped by Subject

Course No.	Course Title	Credit Hours
Ungrouped courses		
EDUB 5870	Mentoring for Teachers	3
EDUB 5940	Instructional Product Development	3
Early Years Education		
EDUA 5930	Observing Child Behaviour	3
EDUA 5940	Language and Symbolic Process	3
Educational Administration		
EDUA 5010	Introduction to Educational Administration	3
EDUA 5020	Principles of Curriculum Development	3
EDUA 5030	Management of Educational Institutions	3
EDUA 5040	Personnel Administration in Education	3
EDUA 5060	Principles of Instructional Supervision	3
EDUA 5070	Organizational Behaviour in Educational Institutions	3
EDUA 5080	Recent Developments in Educational Administration 1	3
EDUA 5090	Recent Developments in Educational Administration 2	3
EDUA 5100	Issues in the Administration of Education	3

Course No.	Course Title	Credit Hours
Educational Psychology		
EDUA 5710	Readings in Educational Psychology 1	3
EDUA 5730	Recent Developments in Educational Psychology 1	3
EDUA 5740	Recent Developments in Educational Psychology 2	3
EDUA 5760	Psychology of Instruction in Educational Contexts	3
Educational Technology		
EDUB 5840	Internet Pedagogy	3
EDUB 5850	Theory and Practice of Designing and Developing Web-based Courses	3
EDUB 5860	Project Management in Education and Training	3
Expressive Arts		
EDUB 5012	Video Art, Culture and Education	3
EDUB 5040	Theory and Practice of Teaching Art (Elementary)	6
EDUB 5060	Theory and Practice of Teaching Art in the Senior Years 1	3
EDUB 5120	Music in the Early Years/Middle Years School 1	3
EDUB 5130	Music in the Early Years/Middle Years School 2	3
EDUB 5140	Special Methods in Music 1	3
EDUB 5150	Special Methods in Music 2	3
EDUB 5160	School Band	3
EDUB 5190	School Music Productions	3
EDUB 5250	Music: Advanced Choral Methods	3
Guidance and Counselling		
EDUA 5480	Counselling Skills	3
EDUA 5490	Field Placement in Counselling	3
EDUA 5500	Theories and Issues in School Counselling	3
EDUA 5510	Elementary School Counselling	3
EDUA 5520	Ethics in Counselling	3
EDUA 5530	Secondary School Counselling	3
EDUA 5540	Groups in Guidance	3
EDUA 5550	Psychology of Human Relationships	3
EDUA 5570	Family Life Education	3
EDUA 5580	Career Development	3
EDUA 5590	Career Information	3
Inclusive Special Education		
EDUA 5600	Introduction to Inclusive Special Education	6
EDUA 5610	Field Experience in Inclusive Special Education	6
EDUA 5620	Teaching Children Through Alternative and Augmented Communication	3
EDUA 5630	Assessment and Instruction in Inclusive Special Education	6
EDUA 5640	Inclusive Special Education: Early and Middle Years	3
EDUA 5650	Inclusive Special Education: High School and Transition to Adult Life	3
EDUA 5660	Organization and Delivery of Resource Program and Support Services	3
EDUA 5670	Strategies for Organizing Inclusive Classrooms and Schools	3
EDUA 5680	Promoting Responsible Behaviour in Educational Settings	3
EDUA 5690	Focus on Exceptionality: Gifted and Talented	3
EDUA 5770	Focus on Exceptionality: An Ecological Approach to FAS/E	3
Instructional Design and Evaluation		
EDUA 5800	Introduction to Educational Research	3
EDUA 5810	Theory of Test Construction	3
Language Arts		
EDUB 5330	Teaching Language and Literacy in the Content Areas	3
EDUB 5350	Current Issues in Language and Literacy	3
EDUB 5360	Children's Literature	3
EDUB 5370	Adolescent Literature	3
EDUB 5380	Theory and Practice in Written Composition	3
EDUB 5390	The Teaching of Written Composition	3
EDUB 5400	Diagnostic and Remedial Techniques in Language Arts	6
Library Science		
EDUB 5550	Library Reference and Informational Materials	6
Mathematics		
EDUB 5760	Recent Developments in Mathematics Education	3
EDUB 5770	Diagnosis and Remediation in Elementary School Mathematics	3
Readings in Curriculum		
EDUB 5200	Readings in Curriculum, Teaching and Learning 1	3
EDUB 5210	Readings in Curriculum, Teaching and Learning 2	3
EDUB 5220	Recent Developments in Curriculum, Teaching and Learning 1	3
EDUB 5230	Recent Developments in Curriculum, Teaching and Learning 2	3
EDUB 5470	Recent Developments in Curriculum: Mathematics and Natural Sciences 1	3
EDUB 5480	Recent Developments in Curriculum: Mathematics and Natural Sciences 2	3
Second Language Education		
EDUB 5510	ESL Materials Development and Practicum	3
EDUB 5520	Grammar in ESL Learning and Instruction	3
EDUB 5530	ESL and Content Instruction	3

Course No.	Course Title	Credit Hours
EDUB 5540	Vocabulary and Pronunciation Instruction	3
EDUB 5580	Fundamentals of ESL (English Second Language) Instruction	3

Social Foundations of Education

EDUA 5200	Readings in Educational Foundations	3
EDUA 5210	Recent Developments in Educational Foundations 1	3
EDUA 5230	Studies in International Education	3

Social Studies

EDUB 5600	The Teaching of Social Studies in the Early and Middle Years	3
EDUB 5660	Theoretical Foundations of Social Studies	3

Technical/Vocational

EDUB 5100	Developing Competency Skills in Enterprise Education 1	3
EDUB 5110	Developing Competency Skills in Enterprise Education 2	3
EDUB 5690	Seminar in Business Education	6

SECTION 9: ADDITIONAL INFORMATION

Visiting Students

Students who are enrolled in a Faculty or School of Education at another institution and receive an appropriate Letter of Permission may seek permission to be a Visiting Student.

Students Registered in Other Faculties or Schools

Undergraduate students currently registered in other faculties/schools may take education complementary courses from 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 'Registration Permission' available at website umanitoba.ca/education/current under PBDE or from Room 227 Education Building.

Information Updates

Scheduling changes to courses and practicum will be updated to Aurora Student. Students are expected to check their Week-At-A-Glance on Aurora Student to confirm location, time, and instructor changes. Cohort meetings and faculty events will be posted on the faculty website. Students are encouraged to regularly refer to the website.

Registration, Voluntary Withdrawal and Fee Refund Deadlines

Education courses may have unique start and end dates. Students are referred to Aurora Student Class Schedule to view VW and fee refund dates.

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.

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: umanitoba.ca/education.

SECTION 10: COURSE DESCRIPTIONS

10.1 Department of Curriculum, Teaching and Learning

Department of Curriculum,Teaching and Learning Course Descriptions-1000 Level

EDUB 1000 Early Years Philosophy and Practice 1 Cr.Hrs. 1

(Formerly 132.100) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.105. Corequisite: EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1010 Early Years Curriculum and Instruction in Language and Literacy 1 Cr.Hrs. 3
(Formerly 132.101) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.106. Corequisite: EDUB 1000 (or 132.100), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1020 Early Years Curriculum and Instruction in Music and Movement 1 Cr.Hrs. 1
(Formerly 132.102) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.107. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1030 Early Years Curriculum and Instruction in Art and Drama 1 Cr.Hrs. 2
(Formerly 132.103) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.108. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1040 Early Years Curriculum and Instruction in Social Studies 1 Cr.Hrs. 1
(Formerly 132.104) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 063.109. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1050 (or 132.105), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1050 Early Years Curriculum and Instruction in Mathematics 1 Cr.Hrs. 2
(Formerly 132.105) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 081.105. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1060 (or 132.106), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1060 Early Years Curriculum and Instruction in Science and Health 1 Cr.Hrs. 2
(Formerly 132.106) An introductory, interdisciplinary study of Curriculum and Instruction in Early Years education (Kindergarten to Grade 4). Not to be held with the former 081.106. Corequisite: EDUB 1000 (or 132.100), EDUB 1010 (or 132.101), EDUB 1020 (or 132.102), EDUB 1030 (or 132.103), EDUB 1040 (or 132.104), EDUB 1050 (or 132.105), EDUB 1960 (or 132.196); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1990 (or 132.199).

EDUB 1100 Introduction to Teaching Language Arts in the Middle Years Cr.Hrs. 3
(Formerly 132.110) An overview of curriculum, instructional approaches, and techniques relevant to language literacy education at the Middle Years level, with emphasis on oracy and reading instruction. Not to be held with the former 063.120. Corequisite: EDUB 1110 (or 132.111), EDUB 1120 (or 132.112), EDUB 1130 (or 132.113), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1110 Introduction to Teaching Social Studies in the Middle Years Cr.Hrs. 1
(Formerly 132.111) A study of the fundamentals of social studies education in the Middle Years, with particular emphasis on the goals, curriculum approaches, content, and initial planning issues. Not to be held with the former 063.121. Corequisite: EDUB 1100 (or 132.110), EDUB 1120 (or 132.112), EDUB 1130 (or 132.113), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1120 Teaching Drama in the Middle Years Cr.Hrs. 1
(Formerly 132.112) An overview of the teaching strategies appropriate to teaching drama in the Middle Years. Not to be held with the former 063.122. Corequisite: EDUB 1100 (or 132.110), EDUB 1110 (or 132.111), EDUB 1130 (or 132.113), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1130 Introduction to Teaching Science in the Middle Years Cr.Hrs. 1
(Formerly 132.113) This course will explore Middle Years science curricular content and issues. It will also provide teaching and learning models and tools for structuring science knowledge and drawing relationships among theory, evidence, and values in Science. Not to be held with the former 081.120. Corequisite: EDUB 1100 (or 132.110), EDUB 1110 (or 132.111), EDUB 1120 (or 132.112), EDUB 1140 (or 132.114), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1140 Introduction to Teaching Mathematics in the Middle Years Cr.Hrs. 3
(Formerly 132.114) An overview of Middle Years mathematics curricula. Not to be held with the former 081.121. Corequisite: EDUB 1100 (or 132.110), EDUB 1110 (or 132.111), EDUB 1120 (or 132.112), EDUB 1130 (or 132.113), EDUB 1970 (or 132.197); pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 1990 (or 132.199).

EDUB 1200 Teaching the Arts in Senior Years Cr.Hrs. 3
(Formerly 132.120) For specialists in art, drama and music and those without a specialist background, the course will address common elements and issues in arts education at the Senior Years level. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.H.Ecol./B.Ed.: prerequisite: Year 1-4 inclusive.

EDUB 1210 Teaching English Language Arts in Senior Years 1 Cr.Hrs. 3
(Formerly 132.121) The course will introduce students to the history, theories, principles, and practices of teaching English language arts at the Senior Years level. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: prerequisite: Year 1-4 inclusive.

EDUB 1230 Teaching Social Studies in Senior Years Cr.Hrs. 3
(Formerly 132.123) A study of theoretical and practical issues relating to the curriculum, resources, instructional approaches and evaluation processes relevant to the teaching of social studies at the Senior Years level. Includes the exploration of current issues and trends in Canadian social studies. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: prerequisite: Year 1-4 inclusive.

EDUB 1240 Teaching Human Ecology in Senior Years 1 Cr.Hrs. 3
(Formerly 132.124) The study of curriculum and instructional approaches relevant to the teaching of human ecology at the Senior Years level. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199).

EDUB 1250 Teaching Mathematics in Senior Years 1 Cr.Hrs. 3
(Formerly 132.125) A study of curriculum and instructional approaches relevant to teaching mathematics at the Senior Years level. Senior Years: corequisite: EDUB 1500, EDUB 1800, EDUB 1980), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); 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.

EDUB1280 L'enseignement du français de base au Niveau Secondaire1 Cr.Hrs..3
(Formerly 132.128) Ce cours examine les principes fondamentaux et la mise en pratique de l'enseignement et l'apprentissage du français langue seconde au niveau secondaire. L'accent est mis sur les pratiques pédagogiques de l'approche communicative expérientielle. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: prerequisite: Year 1-4 inclusive.

EDUB 1350 Teaching a Heritage, Aboriginal, or International Language 1 Cr.Hrs. 3
(Formerly 132.135) Curriculum principles and procedures in teaching a language other than English or French. Senior Years: corequisite: EDUB 1500 (or 132.150), EDUB 1980 (or 132.198), Curriculum and Instruction for major/minor; pre- or corequisite EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed. prerequisite: Year 1-4 inclusive. Early/Middle Years: Complementary course; prerequisite: 18 credits in a language other than English or French. Not to be held with the former courses 132.122, 063.409, or 063.323.

EDUB 1500 Education in the Senior Years Cr.Hrs. 3
(Formerly 132.150) An examination of the assumptions about and goals of Senior Years education, the role of the Senior Years teacher, and the Senior Years curriculum in the schools. Corequisite: EDUB 1980 (or 132.198), curriculum and instruction for major and minor; pre- or corequisite: EDUA 1800 (or 129.180), EDUA 1810 (or 129.181), EDUB 1510 (or 132.151), EDUB 1990 (or 132.199).

EDUB 1510 Principles and Processes of Teaching Cr.Hrs. 3
(Formerly 132.151) This foundational course is required for all Senior Years students. In it, students will develop richer orientations to the teaching processes of organizing and leading learning in Senior Years classrooms. Not to be held with the former 081.317.

EDUB 1520 Education in the Senior Years Integrated Programs 1 Cr.Hrs. 2
(Formerly 132.152) An examination of the assumptions about and goals of Senior Years education, the role of the Senior Years teacher, and the Senior Years curriculum in the schools. For students in the integrated B.Ed. programs. Not to be held with EDUB 1500 (or 132.150). Corequisite: EDUB 1940 (or 132.194).

EDUB 1530 Education in the Senior Years Integrated Programs 2 Cr.Hrs. 1
(Formerly 132.153) An examination of the assumptions about and goals of Senior Years education, the role of the Senior Years teacher, and the Senior Years curriculum in the schools. For students in the integrated B.Ed. programs. Not to be held with EDUB 1500 (or 132.150). Prerequisite: EDUB 1520 (or 132.152). Corequisite: EDUB 1950 (or 132.195).

EDUB 1600 Teaching General Music Cr.Hrs. 3
(Formerly 132.160) A study of teaching music in Early and Middle Years schools. For both classroom teachers and Music specialists, the course covers all traditional areas of music instruction as well as music's role across the curriculum.

EDUB 1602 Aboriginal Perspectives and the Curriculum Cr.Hrs. 3
The course will focus on fostering teacher candidate pedagogical knowledge, orientations and capabilities for developing and implementing curricula for kindergarten through to Grade 12 that reflect Aboriginal perspectives. May not be held with EDUB 1840 Recent Developments in CTL where the course section taken was "Integrating Aboriginal Perspectives into the Manitoba Curriculum."

EDUB 1604 Academic and Professional English for Multilingual Teachers Cr.Hrs. 3
This course provides English language development for multilingual teachers of English as a second/additional language and other subject areas. The focus is on teacher, classroom, and professional English that can be applied in various contexts. Not to be held with the former EDUB 1670.

EDUB 1606 Teaching ESL Foundational Literacy, Academics and LAnguage (LAL) Students Cr.Hrs. 3
This course focuses on the theoretical and practical aspects of teaching foundational English Literacy, numeracy, academics, oral language and schooling routines to English language learners. Definitions, assessment, and instructional strategies will be examined with a view to meeting the diverse needs of EAL/bilingual literacy learners.

EDUB 1608 Assessment and Testing of EAL/ESL Learners Cr.Hrs. 3
Assessment and Testing of ESL/EAL Learners. This course will examine various methods in assessment and testing of English language learners, including formative, summative and alternative assessment strategies. Attention will be paid to the following areas: initial and ongoing needs assessment, evaluating without tests, evaluating with tests, and questioning the educative value of assessment and testing. Not to be held with EDUB 1840 where the course taken was "Assessment & Testing of ESL Learners".

EDUB 1610 CyberPedagogy: Technology Production in Education Cr.Hrs. 3
An examination of technologies in education focusing on the production, and creation of educational computer-based new media.

EDUB 1612 Adult ESL Curriculum and the Canadian Language Benchmarks Cr.Hrs. 3
This course will examine the Canadian Language Benchmarks and its use in Adult EAL programs. Attention will be paid to the following areas: format, features, and key principles of the CLB, communicative competence, language tasks and task-based instruction, thematic mdule planning, language assessment and evaluation.

EDUB 1614 K-8 Curriculum Studies Cr.Hrs. 3
A focused study of the philosophy, purposes and content of K-8 provincial curriculum documents; current learning theorries, teaching approaches and instructional planning in both discipline-based and interdisciplinary contexts; and assessment and evaluation of student learning. Not to be held with EDUB 1840 where the course section taken was "General 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 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 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 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 be held with the former 081.302. Corequisites: EDUB 1250, EDUB 1500, and EDUB 1980.

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 intermédiare 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 intermédiare ainsi qu'au niveau de la jeune enfance. L'accent est mis sur les pratiques pédagogiques de l'approche communicative expérientielle. 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 or EDUB 5510. 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, assesment 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.

Department of Curriculum,Teaching and Learning Course Descriptions-2000 Level

EDUB 2000 Early Years Philosophy and Practice 2 Cr.Hrs. 1
(Formerly 132.200) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2010 Early Years Curriculum and Instruction in Language and Literacy 2 Cr.Hrs. 3
(Formerly 132.201) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281)

EDUB 2020 Early Years Curriculum and Instruction in Music and Movement 2 Cr.Hrs. 2
(Formerly 132.202) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2030 Early Years Curriculum and Instruction in Art and Drama 2 Cr.Hrs. 1
(Formerly 132.203) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2040 Early Years Curriculum and Instruction in Social Studies 2 Cr.Hrs. 2
(Formerly 132.204) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2050 Early Years Curriculum and Instruction in Mathematics 2 Cr.Hrs. 2
(Formerly 132.205) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2060 Early Years Curriculum and Instruction in Science and Health 2 Cr.Hrs. 2
(Formerly 132.206) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2070 (or 132.207), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2070 Early Years Curriculum and Instruction Children's Literature Cr.Hrs. 1
(Formerly 132.207) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2080 (or 132.208), EDUB 2960 (or 132.296), pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2080 Early Years Multi-Language Development Cr.Hrs. 1
(Formerly 132.208) An advanced interdisciplinary study and application of curriculum, instructional approaches and techniques relevant to Early Years education (Kindergarten to Grade 4). Prerequisite: successful completion of year one; corequisite: EDUB 2000 (or 132.200), EDUB 2010 (or 132.201), EDUB 2020 (or 132.202), EDUB 2030 (or 132.203), EDUB 2040 (or 132.204), EDUB 2050 (or 132.205), EDUB 2060 (or 132.206), EDUB 2070 (or 132.207), EDUB 2960 (or 132.296); pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281).

EDUB 2100 Teaching Language Arts in the Middle Years Cr.Hrs. 3
(Formerly 132.210) A study of curriculum, instructional approaches, and techniques relevant to language and literacy at the Middle Years level, with emphasis on writing instruction, the teaching of literature, and writing across the curriculum. Prerequisite: successful completion of year one; corequisite: EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2110 Teaching Social Studies in the Middle Years Cr.Hrs. 3
(Formerly 132.211) A study of curriculum and instruction in Middle Years social studies education, with particular emphasis on its theories, developments, instructional approaches, evaluation, and contemporary issues. Prerequisite: successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2120 Teaching Art in the Middle Years Cr.Hrs. 2
(Formerly 132.212) An overview of art processes and teaching strategies appropriate for Middle Years students, with an emphasis on general visual awareness, art appreciation and art production. Prerequisite: successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2130 Teaching Science in the Middle Years Cr.Hrs. 3
(Formerly 132.213) This course will examine learning in Middle Years science from multi-perspectives. Contemporary teaching and learning models will be assessed. Unit and lesson plans will be developed using multi-voices in science. Prerequisite: successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2140 (or 132.214), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2140 Teaching Mathematics in the Middle Years Cr.Hrs. 3
(Formerly 132.214) A study of instructional approaches needed to teach mathematics at the Middle Years level. Prerequisite: successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2150 (or 132.215), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2150 Teaching Physical Education in the Middle Years Cr.Hrs. 2
(Formerly 132.215) This course introduces students to the rationale for, and methods of, teaching of health and physical education in the Middle Years grades. Prerequisite: successful completion of year one; corequisite: EDUB 2100 (or 132.210), EDUB 2110 (or 132.211), EDUB 2120 (or 132.212), EDUB 2130 (or 132.213), EDUB 2140 (or 132.214), EDUB 2400 (or 132.240), EDUB 2970 (or 132.297).

EDUB 2160 Teaching Music in Early/Middle Years Cr.Hrs. 3
(Formerly 132.216) The specialized study and application of curriculum, instructional approaches and techniques relevant to music education at the early and middle years levels (K-8). This course is intended for music specialists (music majors/minors, or with permission or instructor). Prerequisite: EDUB 1200 (or 132.120) and EDUB 1940 (or 132.194) or permission of instructor.

EDUB 2200 Teaching Art in Senior Years Cr.Hrs. 3
(Formerly 132.220) A study of curriculum and instruction approaches relevant to teaching the visual arts at the Senior Years level. Prerequisite: successful completion of year one, EDUB 1200 (or 132.120); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2210 Teaching English Language Arts in Senior Years 2 Cr.Hrs. 3
(Formerly 132.221) The course will extend further the groundwork undertaken in the previous introductory course into the understanding and application of the principles and practices of teaching English language arts at the Senior Years level. Prerequisite: successful completion of year one; EDUB 1210 (or 132.121); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2220 Teaching Geography in Senior Years Cr.Hrs. 3
(Formerly 132.222) A study of curriculum and instructional approaches relevant to the teaching of geography at the Senior Years level. Prerequisite: successful completion of year one, EDUB 1230 (or 132.123); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2230 Teaching History in Senior Years Cr.Hrs. 3
(Formerly 132.223) A study of curriculum, instructional approaches relevant to the teaching of history at the Senior Years level. Prerequisite: successful completion of year one, EDUB 1230 (or 132.123); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2240 Teaching Music in Senior Years Cr.Hrs. 3
(Formerly 132.224) A study of curriculum, instructional approaches and techniques relevant to the teaching of music at the Senior Years level. Senior Years: Prerequisite: successful completion of year one, EDUB 1200 (or 132.120); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251); Integrated B.Mus./B.Ed.: prerequisite: EDUB 1200 (or 132.120), EDUB 1520 (or 132.152), EDUB 1940 (or 132.194).

EDUB 2250 Teaching Drama and Theatre in Senior Years Cr.Hrs. 3
(Formerly 132.225) A study of curriculum and instructional approaches relevant to the teaching of drama and theatre at the Senior Years level. Prerequisite: successful completion of year one, EDUB 1200 (or 132.120); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2260 Teaching Biology in Senior Years Cr.Hrs. 3
(Formerly 132.226) A study of curriculum and instructional approaches relevant to the teaching of biology at the Senior Years level. Prerequisite: successful completion of year one; EDUB 1270 (or 132.127); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298). Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2270 Teaching Chemistry in Senior Years Cr.Hrs. 3
(Formerly 132.227) A study of curriculum and instructional approaches relevant to the teaching of Chemistry at the Senior Years level. Prerequisite: successful completion of year one; EDUB 1270 (or 132.127), corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre-or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2280 Teaching General Science in Senior Years Cr.Hrs. 3
(Formerly 132.228) The study of curriculum and instructional approaches relevant to the teaching of general science at the Senior Years level. Prerequisite: successful completion of year one; EDUB 1270 (or 132.127); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2290 Teaching Human Ecology in Senior Years 2 Cr.Hrs. 3
(Formerly 132.229) A continuation of the study of curriculum and instructional approaches relevant to the teaching of human ecology at the Senior Years level. Senior Years: prerequisite: successful completion of year one; EDUB 1240 (or 132.124); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251); Integrated B.H.Ecol./B.Ed.: prerequisite: EDUB 1240 (or 132.124), EDUB 1520 (or 132.152), EDUB 1940 (or 132.194).

EDUB 2300 Teaching Mathematics in Senior Years 2 Cr.Hrs. 3
(Formerly 132.230) A continuation of the study of curriculum and instructional approaches relevant to teaching mathematics at the Senior Years level. Prerequisite: successful completion of year one, EDUB 1250 (or 132.125); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2310 Teaching Physical Education/Health Education in Senior Years 2 Cr.Hrs. 3
(Formerly 132.231) A continuation of the study of curriculum and instructional approaches relevant to the teaching of physical education and health education at the Senior Years level. Prerequisite: successful completion of year one, EDUB 1260 (or 132.126); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251).

EDUB 2320 Teaching Physics in Senior Years Cr.Hrs. 3
(Formerly 132.232) A study of curriculum and instructional approaches relevant to the teaching of physics at the Senior Years level. Prerequisite: successful completion of year one, EDUB 1270 (or 132.127); corequisite: EDUB 2500 (or 132.250), EDUB 2980 (or 132.298), Curriculum and Instruction for Year 2 major/minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251). Offered 2003-04 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 2510 Language and Literacy Across the Curriculum Cr.Hrs. 3
(Formerly 132.251) An introduction to language as a medium of teaching and learning and how teachers of all content areas can apply language to enhance students' understanding of subject area content. Prerequisite: Senior Years: successful completion of year one. Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: successful completion of years 1-4.

EDUB 2960 Early Years School Experience 2 Cr.Hrs. 6
(Formerly 132.296) A continuation of practical teaching experience in Early Years schools under the guidance and supervision of faculty members and collaborating teachers. The practicum will be closely integrated with the study of curriculum and instruction at the Early Years level. 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 instruction courses specific to major and minor; pre- or corequisite: EDUA 2800 (or 129.280), EDUA 2810 (or 129.281), EDUB 2510 (or 132.251); Integrated B.Mus./B.Ed. and B.H.Ecol./B.Ed.: prerequisite: successful completion of years 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).

Department of Curriculum,Teaching and Learning Course Descriptions-5000 Level

EDUB 5012 Video Art, Culture, and Education Cr.Hrs. 3
This course will focus on fostering students pedagogical, historical, theoretical, and sociological knowledge, as well as creative video skills. Students will learn about developing and implementing video across the curricula from grade 1 to grade 12 in order to incorporate video making and current viewing practices into classrooms. May not be held for credit with EDUB 1840 or EDUB 5220 where the title is 'Video Art, Culture, and Education.'

EDUB 5040 Theory and Practice of Teaching Art (Elementary) Cr.Hrs. 6
(Formerly 132.504) The theory and practice of teaching Art in the Elementary School will be examined through an inquiry into both the development of the child through his/her art expression and related curricular experiences. Not to be held with the former 063.518.

EDUB 5060 Theory and Practice of Teaching Art in the Senior Years 1 Cr.Hrs. 3
(Formerly 132.506) An overview of major aspects of Art Education in the context of Senior Years 1 curriculum through a study of current theory, a variety of studio areas and related aesthetic concepts. Not to be held with the former 063.546.

EDUB 5100 Developing Competency Skills in Enterprise Education 1 Cr.Hrs. 3
(Formerly 132.510) Promotes the development and integration of skills of creativity, innovation, self-reliance and responsibility in students, within the framework of an enterprise education/entrepreneurship paradigm. Participants develop teaching strategies and materials and learn to integrate these skills into current educational practices. Corequisite: EDUB 5110 (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 curriculur 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 curriculur study related to curriculum, teaching and learning.

EDUB 5220 Recent Developments in Curriculum, Teaching and Learning 1 Cr.Hrs. 3
(Formerly 132.522) An opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in the area.

EDUB 5230 Recent Developments in Curriculum, Teaching and Learning 2 Cr.Hrs. 3
(Formerly 132.523) A continuation of certain topics of EDUB 5220 (132.522) to extend and develop the study previously undertaken in these areas.

EDUB 5250 Music: Advanced Choral Methods Cr.Hrs. 3
(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 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 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 EDUB 5361 or the former 063.544.

EDUB 5370 Adolescent Literature Cr.Hrs. 3
(Formerly 132.537) The nature and psychology of literature for students in Grades 7-12. Areas for consideration include an examination of materials, use of evaluative criteria to assess the materials, and research findings concerning development, interest and use of the material. Not to be held with EDUB 5371 or the former 063.545.

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

(Formerly 132.538) A course designed to explore the nature of written composition and to provide practice in various types of writing. Not to be held with the former 063.584.

EDUB 5390 The Teaching of Written Composition Cr.Hrs. 3
(Formerly 132.539) A course designed to assist teachers in organizing and implementing writing programs. Consideration will be given to motivational strategies, useful writing activities and excercises, 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 5470 Recent Developments in Curriculum: Mathematics and Natural Sciences 1 Cr.Hrs. 3
(Formerly 132.547) This course will provide an opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in the area.

EDUB 5480 Recent Developments in Curriculum: Mathematics and Natural Sciences 2 Cr.Hrs. 3
(Formerly 132.548) A continuation of certain topics of EDUB 5470 to extend and develop the previous study undertaken in these areas.

EDUB 5510 ESL Materials Development and Practicum Cr.Hrs. 3
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 or EDUB 1860. Prerequisites or concurrent: EDUB 5580 (C) and instructor's permission.

EDUB 5512 Teacher Development and Leadership in Second Language Education Cr.Hrs. 3
This course explores current approaches in the development of second language teachers and initiatives to facilitate leadership in programs inclusive of language learners.

EDUB 5520 Grammar in ESL Learning and Instruction Cr.Hrs. 3
(Formerly 132.552) A survey of English grammar and its applications to teaching all levels of ESL, from beginning to very advanced. Lectures, readings, group discussions, and demonstrations are designed to develop knowledge and skills necessary to teach oral and written grammar in traditional and innovative ways. Not to be held with the former 063.596.

EDUB 5530 ESL and Content Instruction Cr.Hrs. 3
(Formerly 132.553) Principles and procedures of teaching ESL/bilingual students in subject-area classrooms, using content-based language instruction and language sensitive content instruction.

EDUB 5540 Vocabulary and Pronunciation Instruction Cr.Hrs. 3
(Formerly 132.554) Principles and procedures in teaching English vocabulary and pronunciation for effective communication (sounds, spellings, word and sentence stress, rhythm, intonation, connected speech, integration). Not to be held with EDUB 1640 (132.164).

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 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 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 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 5760 Recent Developments in Mathematics Education Cr.Hrs. 3
(Formerly 132.576) Reading and research in mathematics education (selected topics).

EDUB 5770 Diagnosis and Remediation in Elementary School Mathematics Cr.Hrs. 3
(Formerly 132.577) Diagnostic and remedial methods in elementary school mathematics. Not to be held with EDUB 5771 or the former 081.558.

EDUB 5840 Internet Pedagogy Cr.Hrs. 3
(Formerly 132.584) Theory and practice of teaching and learning with the Internet. Focus on instructional applications of the Internet, for all levels from K-12 as well as adult, post-secondary and training settings. Current research will be examined and monitored for its relevance to this fast-changing field.

EDUB 5850 Theory and Practice of Designing and Developing Web-based Courses Cr.Hrs. 3
(Formerly 132.585) Theory and practice of the design, development and evaluation of on-line web-based distance education courses for K-12 through adult/post-secondary programs.

EDUB 5860 Project Management in Education and Training Cr.Hrs. 3
(Formerly 132.586) Theory and practice of project management principles in education and training. Emphasis on application of concepts and procedures of educational project management including planning and proposal creation for developmental and/or research activities in educational agencies.

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.

10.2 Department of Education Administration, Foundations, and Psychology

Department of Educational Administration,Foundation and Psychology Course Descriptions-1000 Level

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 1502 Measurement and Evaluation Cr.Hrs. 3
Theory and practical application are stressed in the preparation, use and interpretation of various approaches to assessing student learning. May not hold with the former 043.301, and also may not be held with 129.153 or EDUA 1530, "Recent Developments in Educational Psychology" where the course section taken was "Measurement and Evaluation."

EDUA 1510 Foundations of Moral and Religious Education Cr.Hrs. 3
(Formerly 129.151) Examination of the theory and practice of moral and religious education, including curricular and pedagogical issues in both humanistic and religious perspectives.

EDUA 1520 Recent Developments in Educational Administration and Foundations Cr.Hrs. 3
(Formerly 129.152) Topics will vary depending on the needs and interests of students, and will include specialized topics in educational administration and foundations.

EDUA 1530 Recent Developments in Educational Psychology Cr.Hrs. 3
(Formerly 129.153) Topics will vary depending on the needs and interests of students, and will include specialized topics in educational psychology not studied in regular program courses.

EDUA 1540 Cross-Cultural Education Cr.Hrs. 3
(Formerly 129.154) An examination of teacher attitudes, teaching techniques and curricular modifications which will facilitate learning in cross-cultural situations. Studies will focus on accommodation among cultural groups in rural and urban centres. Not to be held with the former 116.303.

EDUA 1550 Communication and Interpersonal Relationships in Education Cr.Hrs. 3
(Formerly 129.155) The purpose of this course is to help teacher candidates increase their awareness, understanding, and proficiency in communication and interpersonal relationships. Emphasis in this course is on the integration of theory, research, and practice in the areas of communication and interpersonal relationships.

EDUA 1560 Adult Learning and Development Cr.Hrs. 3
(Formerly 129.156) A study of the extensive knowledge of lifespan development and its importance for adult education practitioners. With a focus on development, learning and change, emphasis is placed on the importance of context and individual differences in adult learning.

EDUA 1570 Foundations of Adult Education Cr.Hrs. 3
(Formerly 129.157) An introduction to the field of Education from a local and global perspective. Attention will be given to historical movements in adult education, philosophical perspectives, participation and motivation, transformative perspectives on adult learning, and current and future perspectives on adult education. Not to be held with EDUA 5300 (or 129.530) or former 116.532.

EDUA 1580 Program Planning in Adult Education Cr.Hrs. 3
(Formerly 129.158) An introduction to the theory and practice of program planning in adult education. Attention is given to the context in which learning is to take place, the structuring of adult learning opportunities, and the logistics of successful programming.

EDUA 1590 Facilitating Adult Education Cr.Hrs. 3
(Formerly 129.159) A study of theoretical and practical aspects of facilitation in adult education.

EDUA 1800 Psychology of Learning and Instruction 1: Theory and Practice Cr.Hrs. 3
(Formerly 129.180) An examination of theoretical concepts and practical issues related to the learning and development of learners as individuals in classrooms and other settings. Not to be held with the former 043.202.

EDUA 1810 School and Society 1: The Social Foundations of Education Cr.Hrs. 3
(Formerly 129.181) An examination of educational ideas and practices, especially schooling, in the context of a diverse society. The course focuses upon understanding schooling through historical, philosophical, sociological and cross-cultural perspectives. Not to be held with the former 116.101 or 037.101.

Department of Educational Administration, Foundations and Psychology Course Descriptions-2000 Level

EDUA 2800 Psychology of Learning and Instruction 2: Inclusive Special Education Cr.Hrs. 3
(Formerly 129.280) An examination of concepts and issues related to meeting the diverse needs of all students including methods and resources for accommodating student diversity in classrooms and schools. Not to be held with the former 043.305. Pre- or corequisite: EDUA 1800 (or 129.180).

EDUA 2810 School and Society 2: Administrative Foundations of Education Cr.Hrs. 3
(Formerly 129.281) An examination of the form, functioning, and organizational aspects of contemporary schooling in Canada in the context of legislation, policy and public expectations. Not to be held with the former 116.301 or 059.301. Pre- or corequisite: EDUA 1810 (or 129.181).

Department of Educational Administration,Foundations and Psychology Course Descriptions-5000 Level

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 EDUA 5011 or the former 116.501.

EDUA 5020 Principles of Curriculum Development Cr.Hrs. 3
(Formerly 129.502) An examination of approaches to curriculum design. Influences on the design process, and aspects of implementation. Emphasis is given to teacher participation in creating curriculum. Not to be held with EDUA 5021 or the former 116.502.

EDUA 5030 Management of Educational Institutions Cr.Hrs. 3
(Formerly 129.503) A study of basic patterns of organization and the administrator's role in educational institutions. The focus is on decision making, communicating, planning and evaluating in educational institutions. Not to be held with EDUA 5031 or the former 116.503.

EDUA 5040 Personnel Administration in Education Cr.Hrs. 3
(Formerly 129.504) An examination of the administrator's relationships with other personnel in education, with emphasis on personnel policy, staff development and motivation. Not to be held with EDUA 5041 or the former 116.504.

EDUA 5060 Principles of Instructional Supervision Cr.Hrs. 3
(Formerly 129.506) An analysis of theoretical models of instruction and supervision and their application in education. Not to be held with EDUA 5061 or the former 116.506.

EDUA 5080 Recent Developments in Educational Administration 1 Cr.Hrs. 3
(Formerly 129.508) An opportunity to examine the theoretical bases for, and application of, recent or emerging developments in educational administration.

EDUA 5090 Recent Developments in Educational Administration 2 Cr.Hrs. 3
(Formerly 129.509) A continuation of certain topics of EDUA 5080 to extend and develop studies previously undertaken in these areas.

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

(Formerly 129.510) An analysis of issues in the administration of educational organizations. Not to be held with EDUA 5101 or the former 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 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 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 EDUA 5481 or the former 129.556 or 043.516. Prerequisite or concurrent: EDUA 5500 or EDUA 5501(129.550)(C). Course evaluated on a pass/fail basis. Enrolment limited.

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 EDUA 5491 or the former 129.556 or 043.516. Prerequisite or concurrent: [EDUA 5500 or EDUA 5501 (129.550)(C)] and [EDUA 5480 or EDUA 5481 (129.548)(P)]. Course evaluated on a pass/fail basis. Enrolment limited.

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 EDUA 5501 or the former 043.509.

EDUA 5510 Elementary School Counselling Cr.Hrs. 3
(Formerly 129.551) An examination of the role and functions of the counsellor in the elementary school. Not to be held with EDUA 5511 or the former 043.510. Prerequisite or concurrent: EDUA 5500 or EDUA 5501 (129.550)(C).

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 EDUA 5531 or the former 043.511. Prerequisite or concurrent: EDUA 5500 or EDUA 5501 (129.550)(C).

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 EDUA 5541 the former 043.512. Prerequisite or concurrent: EDUA 5500 or EDUA 5501 (129.550)(C).

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 EDUA 5551 or the former 043.515.

EDUA 5570 Family Life Education Cr.Hrs. 3
(Formerly 129.557) A study of human sexuality and family relationships. Consideration is given to research findings, teaching resources and the methods, development, and cooperation with home and community. Not to be held with EDUA 5571 or the former 043.517.

EDUA 5580 Career Development Cr.Hrs. 3
(Formerly 129.558) Study and application of theories of career development, occupational choice, and decision making; evaluation and design or self-knowledge programs in counselling for decision. Not to be held with EDUA 5581 or 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 EDUA 5601 or the former 043.518.

EDUA 5610 Field Experience in Inclusive Special Education Cr.Hrs. 6
(Formerly 129.561) A field-based situation for full and part-time students to apply inclusive special education skills under the supervision of qualified school staff and supported by professional peer mentors and university instructors. Approximately 160 hours of field-based service required. Not to be held with the former 043.523. Prerequisite or concurrent: [EDUA 5600 or EDUA 5601(129.560)(C) or equivalent] and [EDUA 5630 or EDUA 5631 (129.563)(C) or equivalent] and [EDUA 5660 or EDUA 5661 (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 EDUA 5631 orthe former 043.536. Prerequisite or concurrent: EDUA 5600 or 5601 (129.560)(C) or equivalent.

EDUA 5640 Inclusive Special Education: Early and Middle Years Cr.Hrs. 3
(Formerly 129.564) This course is designed for educators responsible for the integration of students with special learning needs into the early and/or middle years classroom. Not to be held with the former 043.537.

EDUA 5650 Inclusive Special Education: High School and Transition to Adult Life Cr.Hrs. 3
(Formerly 129.565) This course is designed for those responsible for the education of students with special learning needs into high school. Not to be held with the former 043.538.

EDUA 5660 Organization and Delivery of Resource Program and Support Services Cr.Hrs. 3
(Formerly 129.566) A critical study of the nature of resource teacher programs and an analysis of factors influencing program development and effectiveness. Not to be held with EDUA 5661 or the former 043.539. Prerequisite or concurrent: EDUA 5600 (129.560)(C).

EDUA5670 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 EDUA 5671 or the former 043.540. Prerequisite or concurrent: [EDUA 5600 or EDUA 5601 (129.560)(C) or equivalent].

EDUA 5680 Promoting Responsible Behaviour in Educational Settings Cr.Hrs. 3
(Formerly 129.568) The course is designed to provide teachers with an understanding of the needs of children who display maladaptive behaviours in a school setting. Conceptualization of behaviour disorders, identification/assessment procedures, and intervention strategies will be studied. The purpose of the course is to enable teachers to generate intervention strategies which are appropriate in an educational setting. Not to be held with EDUA 5681 or the former 043.542.

EDUA 5690 Focus on Exceptionality: Gifted and Talented Cr.Hrs. 3
(Formerly 129.569) Students will be introduced to various topics and issues in the realm of gifted education, including theoretical models; relevant research, and appropriate teaching and assessment practices.

EDUA 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 5730 Recent Developments in Educational Psychology 1 Cr.Hrs. 3
(Formerly 129.573) An opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in this area.

EDUA 5740 Recent Developments in Educational Psychology 2 Cr.Hrs. 3
(Formerly 129.574) An opportunity to examine the theoretical bases for, and practical application of, recent or emerging developments in this area.

EDUA 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 5770 Focus on Exceptionality: An Ecological Approach to FAS/E Cr.Hrs. 3
(Formerly 129.577) Students will be introduced to an ecological or multidisciplinary approach regarding children with FAS/E. Theoretical frameworks and evidence based assessment and instructional practices will be covered.

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 EDUA 5801 or the former 043.503.

EDUA 5810 Theory of Test Construction Cr.Hrs. 3
(Formerly 129.581) Particular attention is given to problems of item analysis, validity, reliability, and test evaluation in the educational setting. Norm and criterion referenced tests are considered. Not to be held with EDUA 5811 or the former 043.504.

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 EDUA 5930 or the former 043.530.

EDUA 5940 Language and Symbolic Process Cr.Hrs. 3
(Formerly 129.594) The focus in this course is on the role of symbolic learning in the development of the young child. A study of theories on symbol formation is intended to serve as a framework for examining the emergence of representational capacities in movement, gesture, play, drawing and three dimensional media. Not to be held with the former 043.541. Prerequisite: former 043.307.

FACULTY OF ENGINEERING

Dean: Dr. Jonathan Beddoes, Ph.D., P.Eng.
Associate Dean(s): Nariman Sepehri, Ph.D., P.Eng. (Undergraduate); Dr. Douglas Thomson, Ph.D.,P.Eng (Research and Graduate Programs)
Campus Address/General Office: E2-290 EITC (Engineering Information and Technology Complex)
Telephone: (204) 474 9809
Fax: (204) 275-3773
eng_info@umanitoba.ca

Website: umanitoba.ca/faculties/engineering

Student Advising Office:

E1-284 EITC
Telephone: (204) 474-9807

Academic Staff:

Biosystems Engineering:

For a complete listing of academic staff, please refer to the following website:

http://umanitoba.ca/faculties/engineering/departments/biosystems/facstaff/acadstatic.html

Civil Engineering

Academic Staff: Please refer to the Civil Engineering department website at:

http://umanitoba.ca/faculties/engineering/departments/civil/staff/acadstatic.html

Electrical and Computer Engineering

For a complete listing of academic staff, please refer to the following website:

http://umanitoba.ca/faculties/engineering/departments/ece/staff/index.html

Mechanical and Manufacturing Engineering:

For a complete listing of academic staff, please refer to the following website:

http://umanitoba.ca/faculties/engineering/departments/mechanical/staff/index.html

Chapter Contents

SECTION 1: DEGREES OFFERED

Degree Offered	Years to Complete	Total Credit Hours
Bachelor of Science in Engineering (Biosystems)	*4	153
Bachelor of Science in Engineering (Civil)	*4	164
Bachelor of Science in Engineering (Computer)	*4	155-158
Bachelor of Science in Engineering (Electrical)	*4	159-163
Bachelor of Science in Engineering (Manufacturing)	*4	162-167
Bachelor of Science in Engineering (Mechanical)	*4	159
Post-Baccalaureate Diploma in Engineering	1-2	Minimum of 24

*One year in Preliminary Program (36 credit hours) 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.

Please note: As of September 2009, the Department of Mechanical & Manufacturing Engineering is no longer accepting new Manufacturing Engineering students.

1.1 Available Majors

Biosystems Engineering

Civil Engineering

Computer Engineering

Electrical Engineering

Manufacturing Engineering

Mechanical Engineering

1.2 Available Minors

Arts

Computer Science

Geological Sciences

Management

Mathematics

Music

1.3 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 2: ADMISSION TO THE FACULTY OF ENGINEERING

Direct admission into the Faculty of Engineering from high school

Applicants who have completed Chemistry 40S, Precalculus Mathematics 40S, and Physics 40S with a minimum overall average of 85 per cent, and no grade lower than 60 per cent in any one of these courses, may be admitted to Engineering directly from high school.

All other admissions

A minimum of 8 of the 12 courses in the Preliminary Engineering Program, section 4.2, each with a minimum grade of "C", and a minimum Adjusted Grade Point Average (AGPA) of 2.0. In addition, if the total number of credit hours attempted by the student in all courses that apply in the Faculty of Engineering meets or exceeds 72, then the ratio of those credit hours passed to hours attempted must be greater than or equal to 75%.

Acceptance to Engineering programs is competitive. Courses must be completed within ten years of the application date in order to be considered for transfer credit.

English and mathematics requirements:

The university written English and mathematics requirements are satisfied by the English (ENGL 1310) and mathematics (MATH 1510, MATH 1710 and MATH 1210) 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 3: ACADEMIC REGULATIONS

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of 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.

3.1 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 and subsequently the Associate Dean (Undergraduate Programs).

A student's academic status is based on academic performance. Students who feel that there are circumstances that affected their academic performance should write to the Associate Dean (Undergraduate Programs), Chair of the Committee on Standing and Appeals, E1-284 EITC. Information regarding this process is available from the Undergraduate Student Services Office, E1-284 EITC.

3.2 Attendance

When the number of unexcused 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.

3.3 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 Programs).

Full-Time Student: Full-time students are those who are registered in at least 15 credit hours (considered 100 per cent) for each regular academic term of their specific programs. 80 per cent of a full course load is 12 credit hours; 60 per cent is 9 credit hours.

Part-Time Student: Part-time students are those who are registered for less than 15 credit hours for the regular academic term.

3.4 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 complementary studies elective requirements may vary from one department to another. Course numbers beginning with a 0 (i.e. ENGL 0930) are not allowed as complementary studies electives and ARTS 1110 Introduction to University cannot not be used for credit in the Faculty of Engineering.

Procedure Regarding the Inclusion of Elective Courses Taken Towards a Student's Degree Requirements

Upon Admission Into Engineering

At the time of admission, students may choose to apply (transfer) some or all eligible non-Engineering elective courses (i.e., complementary studies electives, science electives, free electives) taken prior to their admission to the Faculty towards their current Engineering degree program.

After Admission Into Engineering

Grades for all eligible courses (i.e., technical electives, complementary studies electives, science electives, free electives) attempted following admission to Engineering shall be included in)applied to) a student's current degree program.

Special cases for either circumstance may be considered at the discretion of the Faculty of Engineering Associate Dean, Undergraduate Programs.

3.5 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, or for students in the Preliminary Engineering Program, of the Associate Dean (Undergraduate Programs).
- 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.

3.6 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 Sept 15 and in consultation with the instructor.

Supplemental (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.

Challenge for Credit

Courses offered in Engineering may not be challenged for credit.

3.7 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 at end of each of the terms (Fall, Winter, and Summer):

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, including courses transferred from other faculties and other institutions, as part of a student's current degree program. Where a course has been repeated or replaced by an approved equivalent course only the last grade shall be included in the computation.

Cumulative Grade Point Average (CGPA)

The CGPA is computed from the 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. 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. For information concerning awards (prizes, scholarships, and bursaries), please visit the Faculty website. umanitoba.ca/faculties/engineering

3.8 Minors in Engineering

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.

Computer Science Minor

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 1012, 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.

Geological Sciences Minor

The Minor in Geological Sciences includes the following set of courses: (1) GEOL 1340 or GEOL 2250; (2) One of the following three courses: GEOL 1400, GEOL 1410 or GEOL 1420; (3) GEOL 2540; (4) Nine (9) credit hours of 2000-level or above courses in Geological Sciences

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 fulfill 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.

Mathematics Minor

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.

Music Minor

The Minor in Music requires 18 credit hours of MUSC courses and students are subject to the regulations set by the Marcel A. Desautels Faculty of Music. Please see Section 7.2 Music Minor for students in the Faculty of Engineering, Faculty of Arts and Faculty of Science under the Marcel A. Desautels Faculty of Music section.

3.9 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, these programs are also recognized as satisfying accreditation requirements in many other countries such as 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.

3.10 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 courses in the student's program. All students are governed by the rules in effect at the time of their first registration in Engineering.

A student 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) (minimum of 3.80) with no distinction as to full- or part-time status. The program Medal will be awarded at spring Convocation to the student who has completed that program in the past academic year (including October and February graduands).

The University Gold Medal for the Faculty of Engineering shall be awarded to the graduating student in the Faculty of Engineering who has achieved the highest Degree Grade Point Average (DPGA) (minimum of 3.80) for the entire program with no distinction as to full- or part-time status.

3.11 Student Progress and Academic Status

Students shall be evaluated at the conclusion of each academic term in which they receive a final grade in a minimum of 6 credit hours of course material (excluding Special Student credit hours), with the assessment being based on the resulting Term Grade Point Average (TGPA) in those courses. This assessment shall be based on only those courses which form part of the student's Engineering Program. 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 Engineering Program, from the Dean's Office.

Academic Probation

The second time that a student's TGPA drops below 2.00, the student will be placed on Academic Probation.

Required to Withdraw

The third time that a student's TGPA drops below 2.00, the student will be Required to Withdraw. 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 Programs). Applications must be received between 30-60 days in advance of the effective date of reinstatement; requests made earlier than 60 days in advance will not be accepted.

Ineligible to Proceed in Engineering

A student shall be Ineligible to Proceed in Engineering under either of the following conditions:

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

b) The ratio of credit hours passed to credit hours attempted for that student drops below 75%, and the student has attempted a minimum of 72 credit hours.

Starting Afresh

Students who have become Ineligible to Proceed in Engineering may apply to the Dean for permission to start their degree afresh, should they wish to return to the Faculty of Engineering.

At the discretion of the Dean, a student may start afresh in an engineering program after a minimum period of two years from their last academic assessment by the Faculty of Engineering, and may request to transfer up to 40 credit hours in which a minimum grade of "C+" was achieved. All previous courses will remain on the student's academic transcript, but will not be applied to their new program.

3.12 Limit on Time in the Preliminary Engineering Program

Students admitted to the Faculty of Engineering shall have two years to complete the minimum course requirements and submit a program declaration form for transit into an Engineering department. In the case of students admitted to the faculty through the Engineering Access Program the limit shall be three years.

Students who fail to meet this criterion shall be required to withdraw from Engineering. Such students may subsequently apply to an engineering program after successfully completing all courses forming the Preliminary Engineering Program.

3.13 Students Transiting to Departments

Students will be accepted into department programs based on the following criteria. Students who have completed 8-12 Preliminary Engineering Program courses by May 1st of each academic year will be ranked and admitted on a competitive basis based on the average of the best eight marks in courses in the Preliminary Engineering Program.

Students transferring in from programs, faculties, colleges, or other institutions 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. In addition, if the total number of credit hours attempted by the student in all courses that apply in the Faculty of Engineering meets or exceeds 72, then the ratio of those credit hours passed to hours attempted must be greater than or equal to 75%. Students are advised to consult with the Undergraduate Student Services Office (Engineering) if there is concern as to their standing under this rule.

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 April 1st through the Admissions Office.

3.14 Use of Calculating Devices

For courses offered by the Faculty of Engineering in which the use of devices capable of calculations is permitted in tests or examinations, such devices must be incapable of receiving and/or transmitting signals. Instructors wishing to restrict devices to certain capabilities must inform students, in writing, within the first week of term. Questions concerning the suitability of any given device should be directed to the course instructor(s).

3.15 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.

SECTION 4: PROGRAM REQUIREMENTS

4.1 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: geddest@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 meet the regular requirements may still wish to join the program to benefit from these supports.

4.2 Preliminary Engineering Program

Student Advising Office: E1-284 EITC
Telephone: 204 474 9807
E-mail: eng_info@umanitoba.ca

Website: 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 a minimum of 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.	Course Name	Credit Hours
CHEM 1300	Structure and Modellingin Chemistry	3
COMP 1012	Computer Programming for Science & Engineers	3
ENG 1430	Design in Engineering	3
ENG 1440	Introduction to Statics	3
ENG 1450	Introduction to Electrical and Computer Engineering	3
ENG 1460	Introduction to Thermal Sciences	3
ENGL 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
PHYS 1050	Physics 1: Mechanics	3

*PHIL 1290 Critical Thinking is the recommended complementary studies elective. However, students may select any course from the Faculty of Arts or the Faculty of Mangagement at the 1000 level or above, with the exception of ARTS 1110 Introduction to the University which may not be held for credit within the Faculty of Engineering.

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.

4.3 Common Courses Taught by the Faculty of Engineering

ENG 1000 Level

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 couse 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: A minimum grade of 60% in pre-calculus mathematics 40S, physics 40S, and chemistry 40S, or their equivalents.

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 1900 Occupational Health and Safety Awareness Cr.Hrs. 3
Occupational health and safety will be discussed from the perspectives of various professions to understand 1) the issues relevant to individual professions and 2) how these individual perspectives may conflict. The overall goal for the course is to ensure that the student gains an appreciation for the importance of occupational health and safety to society.

ENG 2000 Level

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 equivalent), and ENG 1430

ENG 2020 Engineering CAD Technology for Biosystems Cr.Hrs. 2

Instruction in the use of current CAD technology for conveying design through the use of graphics. Students will gain knowledge in technical drawing, 3D modelling techniques, production technology, and visual communication. Prerequisite: BIOE 2580.

4.4 Biosystems Engineering

General Office: E2-376 EITC
Telephone: 204 474 6033
Fax: 204 474 7512
Website: umanitoba.ca/faculties/engineering/departments/biosystems/

Head: Dr. D. Mann, P.Eng.
Associate Head: Dr. N. Cicek, P.Eng.
Admin. Assistant: Ms. D. (Debby) Watson
Office Assistant: Ms. E. (Evelyn) Fehr
For a complete listing of academic staff, please refer to the following website:
umanitoba.ca/faculties/engineering/departments/biosystems/facstaff/acadstatic.html

The Department of Biosystems Engineering offers an accredited degree program in Biosystems Engineering. Biosystems Engineering emphasizes the application of engineering principles to biologically-based systems (plants, animals, humans, and microorganisms). The program is designed to give students knowledge of the fundamental principles of engineering and to introduce biological concepts to enable these engineers to successfully interact with relevant professionals when solving engineering problems involving biological systems. The program is offered in both a traditional and a co-operative education format. The department offers five Specializations (Agricultural, Biomedical, Bioprocessing, Environmental, and Sustainable Building Systems) and one Minor (Agribusiness). With the appropriate selection of elective courses, the bachelor's degree in Biosystems Engineering meets the requirements for admission to the Faculty of Medicine.

The undergraduate curriculum in Biosystems Engineering is an academic program in the Faculty of Engineering. Students wishing to study 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.

4.4.1 Biosystems Engineering Degree Program

Preliminary Engineering Program

Common to all engineering programs (see Section 4.2 for details).

Program Core Courses

Note: 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.

Course No.	Course Name	Credit Hours
BIOE 2110	Transport Phenomenon	3
BIOE 2580	Biosystems Engineering Design Trilogy 1	4
Course No.	**Course Name**	**Credit Hours**
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 4530	Analysis and Design of Biomachinery	4
BIOE 4580	Biosystems Engineering Design Trilogy 3	4
CHEM 1310	University Chemistry 1	3
CIVL 2790 or MECH 2262	Fluid Mechanics Fundamentals of Fluid Mechanics	4 4
CIVL 2800 or MECH 2222	Solid Mechanics 1 Mechanics of Materials	4 4
CIVL 3710	Finite Element Analysis	4
CIVL 4050	Engineering Economics	3
ENG 2020	Engineering CAD Technologies for Biosystems	2
MATH 2120	Introduction to Numerical Methods for Engineers	4
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MBIO 1220 or MBIO 1010	Essentials of Microbiology Microbiology 1	3 3
MECH 3482	Kinematics and Dynamics	4
STAT 2220	Contemporary Statistics for Engineers	3
BIOL 1410 or SOIL 4060	Anatomy of the Human Body Physical Properties of Soil	3 3
BIOL 1412 or AGRI 2200	Physiology of the Human Body Principles of Plant and Animal Physiology	3 4
	One course in Technology and Society (CIVL 4600, ANTH 2430 or ANTH 2500)	3
	Two Complementary Studies Electives	6
	Four Biosystems Engineering Design Electives (see list below)	16
	Two Free Electives	6-8
Total credit hours for graduation		**150 to 153**

Course No.	Course Name	Credit Hours

4.4.2 Biosystems Engineering Design Electives

BIOE 4390	Unit Operations 1	4
BIOE 4412	Design of Light-Frame Building Systems	4
BIOE 4414	Imaging and Spectroscopy for Biosystems	4
BIOE 4420	Crop Preservation	4
BIOE 4440	Bioprocessing for Biorefining	4
BIOE 4460	Air Pollution Assessment and Management	4
BIOE 4480	Environmental Impact Assessment	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	Remediation Engineering	4
BIOE 4630	Pollution Prevention Practices	4
BIOE 4640	Bioengineering Applications in Medicine	4
BIOE 4700	Alternative Building Design	4

4.4.3 Complementary Studies Electives

Complementary studies electives are required to give the engineering student exposure to topics outside the fields of science and engineering. There are many university courses that fulfill this requirement. Any course at the 1000-level or above from the faculties of Arts or Management, or the Department of Agribusiness and Agricultural Economics can be used as a complementary studies elective. However, ARTS 1100 Introduction to University may not be used for credit in the Faculty of Engineering. Other university courses which do not cover topics of science or engineering may also be acceptable. Please consult with the department head (or his/her designate) for approval of such courses.

Free Electives

Any university course at the 1000-level or above can be used as a free elective. However, ARTS 1100 Introduction to University may not be used for credit in the Faculty of Engineering.

4.4.4 Agricultural Specialization

Agricultural Specialization

Students who obtain a grade of "C" or better in the courses listed below will receive a notation of "agricultural specialization" on their transcript at the time of graduation.

Group A: Science Electives

Within the two science slots in the core program, choose:

SOIL 4060 Physical Properties of Soil

AGRI 2200 Principles of Plant and Animal Physiology

Group B: Biosystems Engineering Design Electives

Choose at least three of the following courses from the list of available design electives:

BIOE 4412 Design of Light-Frame Building Systems

BIOE 4420 Crop Preservation

BIOE 4590 Management of By-Products from Animal Production

BIOE 4600 Design of Water Management Systems

Group C: Complementary Studies & Free Electives

Choose 9 credit hours (minimum of 3 credit hours of complementary studies marked by*) from the following list of courses:

ABIZ 1000 Introduction to Agribusiness Management*

ABIZ 3530 Farm Management*

AGRI 1500 Natural Resources and Primary Agricultural Production

AGRI 1510 Production, Distribution and Utilization of Agricultural Products

BIOE 2090 Machinery for Agricultural Production

BIOE 2222 Precision Agriculture Concepts and Applications

ENTM 3170 Crop Protection Entomology

PLNT 2500 Crop Production

PLNT 2510 Fundamentals of Horticulture

SOIL 3520 Pesticides: Environment, Economics and Ethics

Biomedical Specialization

Students who obtain a grade of "C" or better in the courses listed below will receive a notation of "biomedical specialization" on their transcript at the time of graduation.

Group A: Science Electives

Within the two science elective slots in the core program, choose:

BIOL 1410 Human Anatomy (rather than SOIL 4060) BIOL 1412 Physiology of the Human Body (rather than AGRI 2200)

Group B: Biosystems Engineering Design Electives

Choose the following three courses from the list of available design electives: BIOE 4414 Imaging and Spectroscopy for Biosystems BIOE 4610 Design of Assistive Technology Devices BIOE 4640 Bioengineering Applications in Medicine

Group C: Complementary Studies & Free Electives

Choose 9 credit hours (minimum of 3 credit hours of complementary studies marked by *) from the following list of courses: BIOL 2410 Human Physiology 1 BIOL 2420 Human Physiology 2 BIOL 4470 Sensory-Motor Physiology

ECE 4610 Biomedical Instrumentation and Signal Processing ENG 1900 Occupational Health and Safety Awareness* HIST 4660 History of Health and Disease (6)* HIST 4680 History of Health and Disease in Modern Canada (6)* KIN 2330 Biomechanics KIN 4330 Advanced Biomechanics NATV 3240 Native Medicine and Health* PHIL 2740 Ethics and Biomedicine*

Bioprocessing Specialization

Students who obtain a grade of "C" or better in the courses listed below will receive a notation of "bioprocessing specialization" on their transcript at the time of graduation.

Group A: Science Electives

Within the two science slots in the core program, choose: SOIL 4060 Physical Properties of Soil AGRI 2200 Principles of Plant and Animal Physiology

Group B: Biosystems Engineering Design Electives

Choose at least three courses from the list of available design electives: BIOE 4420 Crop Preservation BIOE 4390 Unit Operations 1 BIOE 4440 Bioprocessing for Biorefining BIOE 4590 Management of By-Products from Animal Production BIOE 4630 Pollution Prevention Practices

Group C: Complementary Studies & Free Electives

Choose 9 credit hours (minimum of 3 credit hours of complementary studies marked by*) from the following list of courses: ABIZ 1010 Economics of World Food Issues and Policies* ENG 1900 Occupational Health and Safety Awareness*

FOOD 1000 Food Safety Today and Tomorrow FOOD 3010 Food Process 1 FOOD 4260 Water Management in Food Processing HNSC 1200 Food: Facts and Fallacies HNSC 2160 Principles of Food Preparation and Preservation

Environmental Specialization

Students who obtain a grade of "C" or better in the courses listed below will receive a notation of "environmental specialization" on their transcript at the time of graduation.

Group A: Science Electives

Within the two science slots in the core program, choose:

SOIL 4060 Physical Properties of Soil

AGRI 2200 Principles of Plant and Animal Physiology

Group B: Biosystems Engineering Design Electives

Choose at least three of the following courses from the list of available design electives:

BIOE 4460 Air Pollution Assessment and Management

BIOE 4480 Environmental Impact Assessment

BIOE 4590 Management of By-Products from Animal Production

BIOE 4600 Design of Water Management Systems

BIOE 4620 Remediation Engineering

BIOE 4630 Pollution Prevention Practices

Group C: Complementary Studies & Free Electives

Choose 9 credit hours (minimum of 3 credit hours of complementary studies marked by *) from the following list of courses:

ABIZ 2390 Introduction to Environmental Economics*
(or equivalent)

AGEC 2370 Principles of Ecology (or equivalent)

CIVL 3690 Environmental Engineering Analysis

CIVL 3700 Environmental Engineering Design

CIVL 4350 Hazardous Waste Treatment

GEOG 2250 Introduction to Geographic Information Systems

GEOG 2520 Geography of Natural Resources*

PHIL 2750 Environmental Ethics*

Sustainable Building Systems Specialization

Students who obtain a grade of "C" or better in the courses listed below will receive a notation of "sustainable building systems specialization" on their transcript at the time of graduation.

Group A: Science Electives

Within the two science slots in the core program, choose:

SOIL 4060 Physical Properties of Soil

AGRI 2200 Principles of Plant and Animal Physiology OR BIOL 1412 Physiology of the Human Body

Group B: Biosystems Engineering Design Electives

Choose the following three courses from the list of available design electives:

BIOE 4412 Design of Light-Frame Building Systems

BIOE 4560 Structural Design in Wood

BIOE 4700 Alternative Building Design

Group C: Complementary Studies & Free Electives

Choose 9 credit hours (minimum of 3 credit hours of complementary studies marked by *) from the following list of courses:

CIVL 2770 Civil Engineering Materials

CIVL 3760 Structural Analysis

ENVR 3750 Green Building and Planning

EVDS 1600 Introduction to Environmental Design*

EVDS 1660 History of Culture, Ideas and Environment*

Agribusiness Minor

A minor in agribusiness is available to Biosystems Engineering students. The minimum requirement is 18 credit hours consisting of ECON 1010 Introduction to Microeconomic Principles (3 credit hours), ECON 1020 Introduction to Macroeconomic Principles (3 credit hours), ABIZ 1000 Introduction to Agribusiness (3 credit hours), ABIZ 2510 Introduction to Agricultural and Food Marketing (3 credit hours), ABIZ 2520 Introduction to Management Sciences (3 credit hours) and at least three additional credit hours from the Department of Agribusiness and Agricultural Economics (students must meet all prerequisite requirements). A maximum of 2 courses (6 credit hours) of courses used for the minor may also be used to fulfill course requirements in Biosystems Engineering.

Admission 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 PHIL 2740 Ethics and Biomedicine as one complemenatry studies elective, CHEM 2210 Organic Chemistry 1 and CHEM 2360 Biochemistry 1 as their two free electives.

Co-operative Education Program in Biosystems Engineering

Please refer to SECTION 5: Co-operative Education and Industrial Internship Programs

4.5 Biosystems Engineering Course Descriptions

4.5.1 Biosystems Engineering Course Descriptions-2000 Level

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 1460 (or 130.112).

BIOE 2222 Precision Agriculture Concepts and Applications Cr.Hrs. 4
Precision agriculture is a philosophy of agricultural management that has been enabled by modern technology. This course examines the technology and the techniques of precision agriculture including GPS, GIS, variagle rate technologies, and yield monitoring that can be used to improve the efficiency of agricultural operations by decreasing costs, increasing profits, and decreasing hazards to the environment.

BIOE 2580 Biosystems Engineering Design Trilogy 1 Cr.Hrs. 4
(Formerly 034.258) Biosystems Engineering and its place in the professions of engineering and agrology. Design concepts, with an emphasis on team building and technical communication skills. Philosophy of project planning. Preparation of a conceptual design by teams in response to design assignment submitted by industry. Written report presented orally. Prerequisite: ENG 1430 OR THE FORMER ENG 1400 (OR 130.140).

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).

4.5.2 Biosystems Engineering Course Descriptions-3000 Level

BIOE 3270 Instrumentation and Measurement for Biosystems Cr.Hrs. 4
(Formerly 034.327) Basic instrumentation for measuring electrical and non-electrical quantities associated with biosystems engineering and industry; transducers for automatic control. Prerequisites: [MATH 2132 (or the former MATH 2110 (or 136.211)] and [ENG 1450 or the former ENG 1180 (130.118)].

BIOE 3320 Engineering Properties of Biological Materials Cr.Hrs. 4
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 2130 (or Math 2100 or 136.210), CIVL 2800 (or 23.280) or MECH 2222 (or Mech 2220 or 025.222) BIOE 2580 (or 034.258). 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 1300 or equivalent] and [MATH 1500 or equivalent] or the former MATH 1680 (136.168).

BIOE 3580 Biosystems Engineering Design Trilogy 2 Cr.Hrs. 4
(Formerly 034.358) Advanced design concepts associated with Biosystems Engineering, with emphasis on the principles of safety and human factors engineering. Theory of project planning. Preparation of a preliminary design by design teams in response to a design assignment submitted by industry. Written report with engineering drawings presented orally. Prerequisites: BIOE 2580 (or 034.258 or 034.214). Not to be held with the former 034.326.

BIOE 3590 Mechanics of Materials in Biosystems Cr.Hrs. 4
(Formerly 034.359) In this course students will be exposed to both the theory and physical behaviour of materials when subjected to loads. The course will be delivered using a combination of lectures and hands-on labs. The materials presented include a wide range of design biosystems engineers may be involved with, including plastics, bone, wood, concrete, steel, other biological materials and composites. Prerequisite: CIVL 2800 (or 023.280), or consent of instructor. Not to be with the former 034.324

4.5.3 Biosystems Engineering Course Descriptions-4000 Level

BIOE 4240 Graduation Project Cr.Hrs. 3
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 3270 (034.327) or approval of department.

BIOE 4390 Unit Operations 1 Cr.Hrs. 4
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 2262 (or 025.226). Corequisites: BIOE 3320 (or 034.332 or 034.323), BIOE 3270 (or 034.327).

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 ((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 4416 Topics in Biosystems Engineering Cr.Hrs. 3
This course will cover contemporary topics in Biosystems Engineering. The specific topics and a detailed outline will be available at the time of registration. Prerequisite: Permission of the department.

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).

BIOE 4440 Bioprocessing for Biorefining Cr.Hrs. 4

This course will provide students with an understanding of the principles involved in the design of proper conditions for processing of biomaterials for production of high-quality biofuels and bioproducts. The content of this course is built on the principles of physics, transport phenomena, thermodynamics, reaction, kinetics, fermentation, and industrial unit operations. Prerequiste:BIOE 2110 (or 034.211). Pre-or corequiste: BIOE 3320 (or 034.332 or 034.323)

BIOE 4460 Air Pollution Assessment and Management Cr.Hrs. 4
Air pollutant sources and characteristics, their impact on the environment, their behaviour in the atmosphere. Methods of sampling and measurement and the basic technological alternatives available for separation/removal and control. Particular problems of regional interest are discussed. Corequisites: CIVL 2790 (or 023.279) or MECH 2262 (or MECH 2260 or 025.226).

BIOE 4480 Environmental Impact Assessment Cr.Hrs. 4
(Formerly 034.448) Basic methodologies for conducting impact assessments, including physical, chemical and ecological impacts. Prerequisite: BIOE 2590 or CIVL 3690.

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. Offered alternate years.

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. Offered alternate years.

BIOE 4530 Analysis and Design of Biomachinery Cr.Hrs. 4
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 2580 (or 034.258).

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
Topics covered include solid and liquid manure, manure characteristics, manure collection, storage, land application and utilization, biological treatment, design of equipment and facilities for manure handling. Environment issues, such as odour and water pollution associated with manure management will also be discussed. Prerequisites: CIVL 2790 (or 023.279) or MECH 2262 (or MECH 2260 or 025.226).

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.

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: BIOL 1412 (or ZOOL 1330 or 022.133).

BIOE 4620 Remediation Engineering Cr.Hrs. 4
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 2262 (or MECH 2260 or 025.226).

BIOE 4630 Pollution Prevention Practices Cr.Hrs. 4
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 2262 (or MECH 2260 or 025.226).

BIOE 4640 Bioengineering Applications in Medicine Cr.Hrs. 4
This course surveys bioengineering applications and medicine from a clinical engineering perspective. Topics include: clinical engineering practice; device development legislation; biomedical sensors; biosensors; biomaterials and biocompatibility; as well as the principles of and design for medical imaging equipment. Prerequisites: BIOL 1410 (or ZOOL 1320 or 022.132) and BIOL 1412 (or ZOOL 1330 or 022.133) and BIOE 3320 (0343.332).

BIOE 4700 Alternative Building Design Cr.Hrs. 4
This course will provide students with experience in the design of structures that utilize natural and green building materials and techniques. Students will get hands-on lab experience with various natural building materials such as straw, straw light clay, cob and stackwall. Prerequisites: BIOE 3590 (or 034.359) or CIVL 3770 (or 023.377).

4.6 Civil Engineering

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The Department of Civil Engineering offers a fully accredited degree program in Civil Engineering. Graduates of the Civil Engineering program are academically qualified to register as Engineers-in-Training in engineering licensing bodies in Canada. The Civil Engineering program is designed to give students a broad knowledge of engineering principles and professional practice. The program has a strong core component that provides exposure to a range of areas in Civil Engineering, including – but not limited to – the design of building and bridges, the design of facilities and methods for treatment of water, waste water and solid waste, the design of foundations and earthworks such as dams and river bank protection, transportation planning, the design of roads and pavement, the design of hydraulic structures such as sewers, canals, and spillways, and the management of surface and ground water. In the last years of the program, there are some opportunities for specialization through selection of technical elective courses. A cooperative education option allows students to include practical work experience in their program.

Course No.	Course Name	Credit Hours
Civil Engineering Common Core Program		
CHEM 1310	Introduction to Physical Chemistry	3
GEOL 2250	Geology for Engineers	4
STAT 2220	Introduction to Probability and Statistics	3
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	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	3
MATH 2132	Engineering Mathematical Analysis 2	3
	Complementary Studies Elective (see Note 1)	3
Environmental Option:		
PHIL 2750	Environmental Ethics	3
Civil Engineering Technical Electives: (3 courses)		
CIVL 4020	Masonry Design and Construction	4
CIVL 4030	Structural Design 3	4
CIVL 4040	Structural Dynamics	4
CIVL 4100 Or BIOE 4480	Engineering Management and the Environment / Environmental Impact Assessment	4
CIVL 4120	Water Treatment Plant Design	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 4412	Design of Light Frame Bldg.	4
BIOE 4560	Structural Design in Wood	4
Environmental Option Technical Electives: (3 courses)		
CIVL 4100 Or BIOE 4480	Engineering Management and the Environment / Environmental Impact Assessment	4
CIVL 4120	Water Treatment Plant Design	4
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
SOIL 4090	Chemical Analysis of Soils	3
SOIL 4500	Remediation of Contaminated Land	3

Notes:

1) 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.

2) Students may take one technical elective course with a significant engineering science and/or design component from another department, subject to the approval by the head (or designate) of Civil Engineering.

Co-operative Education Option in Civil Engineering

Please refer to SECTION 5: Co-operative Education and Industrial Internship Programs

4.7 Civil Engineering Course Descriptions

4.7.1 Civil Engineering Course Descriptions-2000 Level

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 1440 (or 130.144). 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. Prerequisites: (MATH 1710 (or 136.171) or MATH 1700 (or 136.170)) (C).

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 1440 (or 130.144), MATH 1710 (or 136.171) or MATH 1700 (or 136.170).

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 1440 (or 130.135), MATH 1710 (or 136.171) or MATH 1700 (or 136.170).

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.

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 or CIVL 2820. Pre or Co-requisite: MATH 1210 (C), Co-requisite: CIVL 2830.

4.7.2 Civil Engineering Course Descriptions-3000 Level

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: COMP 1010 (or 074.101) or COMP 1012 (C). Pre or Co-requisite: MATH 2132, MATH 2100 (or 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, rection 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: (CHEM 1310 orCHEM 2560) , 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 3590 (or 23.359) or MATH 2120.].

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 (or 023.277), 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 or corequisite: STAT 2220 (or 005.222) or (STAT 1000 and STAT 2000).

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) (C), CIVL 3760 (or 023.376) (C).

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 2840, CIVL 2770 (or 023.277), CIVL 2780 (or 023.278) or(STAT 2220 (or 005.222)or (STAT 1000 and STAT 2000)).

4.7.3 Civil Engineering Course Descriptions-4000 Level

CIVL 4020 Masonry Design and Construction Cr.Hrs. 4
Introduction to the building codes that govern masonry design. Advanced design procedures for masonry members and structures. Single-story and multi-story building design. Prerequisite: CIVL 3760.

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. Prerequisite: CIVL 2770 (or 23.277), CIVL 2800 (or 23.280), CIVL 3760 (or 23.376), CIVL 3770 (23.377), 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: STAT 2220 (or 005.222) or (STAT 1000 and STAT 2000).

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 4120 Water Treatment Plant Design Cr.Hrs. 4
Design of unit processes used in potable water treatment plants: solid/liquid separation, oxidation, coagulation, filtration, adsorption and disinfection. Determination of design parameters through laboratory studies. Water treatment plants design standards and guidelines. Prerequisite: CIVL 3690.

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), GEOL 2250 (or 007.225).

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: GEOL 2250 (or 007.225), CIVL 2790 (or 023.279), MATH 2130 (or MATH 2110), MATH 2132 (or MATH 2100).

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
(Formerly 023.438) Infrastructure engineering; drainage systems, maintenance engineering and management. Construction and project management; workplace health and safety, construction site field trips, construction equipment, temporary facilities, project management. Elements of law for civil engineers. Prerequisite: CIVL 4050 (or 023.405).

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. Prerequisites: CIVL 2770 (or 023.277), CIVL 2800 (or 023.280), 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. Prerequisite: CIVL 3750 (or 023.375). Pre or co-requisite: CIVL 3740 (or 023.374).

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: ENG 2010 (or 130.201), CIVL 2840 (or CIVL 2820 or 23.282), CIVL 3700 (or 23.370), CIVL 3740 (or 23.374), CIVL 3750 (or 23.375). CIVL 3770 (or 23.377), CIVL 3790 (or 23.379).

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.

4.8 Electrical and Computer Engineering

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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)

Please refer to SECTION 5: Co-operative Education and Industrial Internship Programs

Second Degree in Electrical or Computer Engineering

Requirements include:

1. The completion of all deficient third and lower year courses required for the second degree. If a student has already taken any of these courses as fourth year electives towards the first degree, then they will not have to repeat or replace the courses already taken.

2. The equivalent of a full fourth year program required for the second degree, i.e., twelve half courses. This must include:

i) A second thesis on a different topic relating to the field of the second degree

ii) All the fourth year course requirements of the second degree. If a student has already taken one or more of the required fourth year courses during their first degree, then they must replace these courses by other appropriate fourth year courses as approved by the Department Head. For example, core courses common to both programs must be replaced by fourth year electives from the Department.

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 4.2 for details.)

Electrical Engineering Departmental Program

Course No.	Course Name	Credit Hours
ANTH 2430	Ecology, Technology and Society	3
CIVL 4050	Engineering Economics	3
ECE 2160	Electronics 2E	5
ECE 2220	Digital Logic Systems	5
ECE 2240	Numerical Methods for Electrical Engineers	4
ECE 2262	Electric Circuits	4
ECE 3540	Advanced Circuit Analysis and Design	4
ECE 3580	Foundations of Electromagnetics	4
ECE 3590	Electromagnetic Theory	4
ECE 3600	Physical Electronics	4
ECE 3610	Microprocessing Systems	4
ECE 3670	Electronics 3E	4
ECE 3720	Electric Power and Machines	4
ECE 3730	Principles of Embedded System Design (See Note 8)	4
ECE 3780	Signal Processing 1	4
ECE 4150	Control Systems	4
ECE 4260	Communications Systems	4
ECE 4600	Group Design Project (see Note 1)	6
ENG 2010	Technical Communications	3
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 3132	Engineering Mathematical Analysis 3	3
PHYS 2152	Modern Physics for Engineers	3
STAT 2220	Contemporary Statistics for Engineers	3
	Complementary Studies Elective (2 required) (see Note 2)	3
	Science Elective (1 required) (see Note 6)	
	Technical Electives (7 required) (see Notes 3, 4)	
Total credits for Graduation		**159-163**

Technical Electives (7 required) (see Notes 3, 4)

Course No.	Course Name	Credit Hours
Group A		
ECE 3650	Electric Machines	5
ECE 4100	Microelectronic Fabrication	4
ECE 4140	Power Transmission Lines	4
ECE 4160	Control Engineering	4
ECE 4200	Electric Filter Design	4
ECE 4250	Digital Communications	4
ECE 4270	Antennas	4
ECE 4280	Engineering Electromagnetics	4
ECE 4290	Microwave Engineering	4
ECE 4300	Electrical Energy Systems 1	4
ECE 4310	Electrical Energy Systems 2	4
ECE 4360	High Voltage Engineering	4
ECE 4370	Power Electronics	4
ECE 4390	Engineering Computations 4E	4
ECE 4420	Digital Control	4
ECE 4580	Optoelectronics	4
ECE 4610	Biomedical Instrumentation And Signal Processing	4
ECE 4830	Signal Processing 2	4
ECE 4850	Contemporary Topics in Electrical and Computer Engineering 1 (see Note 7)	4
ECE 4860	Contemporary Topics in Electrical and Computer Engineering 2 (see Note 7)	4
ECE 4870	Contemporary Topics in Electrical and Computer Engineering 3 (see Note 7)	3
ECE 4880	Contemporary Topics in Electrical and Computer Engineering 4 (see note 7)	3
Group B		
COMP 2140	Data Structures and Algorithms	3
COMP 3190	Introduction to Artificial Intelligence	3
COMP 4180	Intelligent Mobile Robotics	3
COMP 4360	Machine Learning	3
ECE 3700	Telecom Networking	4
ECE 3760	Digital Systems Design 1	4
ECE 3770	Digital Systems Design 2	4
ECE 4240	Microprocessor Interfacing	4
ECE 4440	Computer Vision	4
ECE 4520	Simulation and Modeling	4
ECE 4530	Parallel Processing	4
ECE 4540	Wireless Networks	4
ECE 4740	Digital Systems Implementation	4
MATH 3120	Applied Discrete Mathematics	3
MATH 3700	Applied Complex Analysis	3
MATH 3810	Partial Differential Equations	3
PHYS 2260	Optics	3
PHYS 3220	Medical Physics and Physiological Measurements	3
PHYS 3640	Electro- and Magnetodynamics and Special Relativity	3
PHYS 4590	Advanced Optics	3

Natural Science Electives see list:

http://umanitoba.ca/faculties/engineering/departments/ece/curr_students/undergraduate.html

NOTES:

1. Course continuing through both terms; credit given on completion of course.

2. The complementary studies electives can be any course at the 1000 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. A minimum of 4 electives are required from Group A; the other 3 electives may be taken from either Group A or B unless the student completes a Focus Area.

4. 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 online timetables on the Department website. 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. The natural science elective course is to be chosen from a list of courses approved by the department.

7. Requires permission of the Department.

8. Students who do not complete ECE 3730 are required to have taken both ECE 3710 and ECE 4240.

9. Students must complete one Qualified Engineering Design technical elective. Please see:

http://umanitoba.ca/faculties/engineering/departments/ece/pdf/EE_elective_summary.pdf

Focus Areas in Electrical Engineering

Students wishing to pursue more focused studies in an Electrical Engineering subject/research area have the choice of doing so through a Focus Area. Courses taken towards an Area take the place of some or all of the 7 Technical Electives required in Electrical Engineering. See

http://umanitoba.ca/faculties/engineering/departments/ece/curr_students/undergrad/ee-focus-areas.html for a detailed description of each area and the courses required.

Power and Energy Systems (5 courses)

ECE 3650 Electric Machines

4 PES Technical Electives (3 from Group 1; 1 from Group 1 or 2)

Wireless Communication Devices (5 courses)

5 WCD Technical Electives (3 from Group 1; 2 from Group 1 or 2)

Engineering Physics** (7 courses; 1 counts as Science Elective)

ECE 4580 Optoelectronics

PHYS 2380 Quantum Physics 1

PHYS 2650 Classical Mechanics 1

PHYS 3670 Classical Thermodynamics

PHYS 3680 Statistical Mechanics

2 Eng Physics Technical Electives (1 from Group 1; 1 from Group 1 or 2)

Biomedical (6 courses; 1 counts as Science Elective)**

ECE 4610 Biomedical Instrumentation and Signal Processing

BIOL 1410 Anatomy of the Human Body

BIOL 1412 Physiology of the Human Body OR MBIO 1220 Essentials of Microbiology

BIOE 2590 Biology for Engineers OR BIOL 1030 Biology 2: Biological Diversity, Function and Interactions

2 Biomed Technical Electives (1 from Group 1; 1 from Group 1 or 2)

**The Physics and Biomedical Focus Areas require students to complete 1 extra course in addition to the 45 courses needed to fulfill regular program requirements. Talk to the Department for more details.

Admissions to Medicine

The Biomedical Focus Area provides the background to meet eligibility requirements for admission into the Faculty of Medicine when specific Biomedical Technical Electives are completed. Please see the website for details:

http://umanitoba.ca/faculties/engineering/departments/ece/curr_students/undergrad/biomed-focus-area.html

(Computer Engineering

Preliminary Engineering Program

Common to all Engineering Programs. (See Section 4.2 for details.)

Computer Engineering Departmental Program

Course No.	Course Name	Credit Hours
ANTH 2430	Ecology, Technology and Society	3
CIVL 4050	Engineering Economics	3
COMP 1020	Computer Science 2	3
COMP 2140	Data Structures and Algorithms	3
COMP 3430	Operating Systems	3
ECE 2160	Electronics 2E	5
ECE 2220	Digital Logic Systems	5
ECE 2262	Electric Circuits	4
ECE 3610	Microprocessing Systems	4
ECE 3670	Electronics 3E	4
ECE 3700	Telecommunication Network Engineering	4
ECE 3740	System Engineering Principles 1	4
ECE 3760	Digital Systems Design 1	4
ECE 3780	Signal Processing 1	4
ECE 3790	Engineering Algorithms	4
ECE 4150	Control Systems or ECE 4260 (4)	4
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
ENG 2010	Technical Communications	3
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 3120	Applied Discrete Mathematics	3
MATH 3132	Engineering Mathematical Analysis 3	3
PHYS 2152	Modern Physics for Engineers	3
STAT 2220	Contemporary Statistics for Engineers	3
	Complementary Studies Elective (2 required) (see Note 2)	3
	Natural Science Electives for Computer Engineering - See web site as follows: http://umanitoba.ca/faculties/engineering/departments/ece/pdf/TE_elective_summary.pdf	
	Science Elective (2 required) (see Note 5)	
	Technical Electives (3 required) (see Note 3)	
Total credits for Graduation		**155-158**

Technical Electives (3 required) (see Note 3)

Computer Engineering Electives (1 required)

ECE 3750	Systems Engineering Principles 2	4
ECE 3770	Digital Systems Design 2	4
ECE 4250	Digital Communications	4
ECE 4420	Digital Control	4
ECE 4440	Computer Vision	4
ECE 4520	Simulation and Modeling	4
ECE 4530	Parallel Processing	4
ECE 4540	Wireless Networks	4
ECE 4850	Contemporary Topics in Electrical and Computer Engineering 1 (see Note 6)	4
ECE 4860	Contemporary Topics in Electrical and Computer Engineering 2 (see Note 6)	4
ECE 4870	Contemporary Topics in Electrical and Computer Engineering 3 (see Note 6)	3
ECE 4880	Contemporary Topics in Electrical and Computer Engineering 4 (see Note 6)	3

Course No.	Course Name	Credit Hours
Computer Science Electives (1 required)		
COMP 2150	Object Orientation	3
COMP 2160	Programming Practices	3
COMP 3010	Distributed Computing	3
COMP 3020	Human-Computer Interaction	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 4020	Human-Computer Interaction 2	3
COMP 4140	Introduction to Cryptography and Cryptosystems	3
COMP 4360	Machine Learning	3
COMP 4490	Computer Graphics 2	3
COMP 4580	Computer Security	3
COMP 4720	Computer Networks 2	3
Electrical Engineering Electives (1 required)		
ECE 3540	Advanced Circuit Analysis and Design	4
ECE 3580	Foundations of Electromagetics	4
ECE 3600	Physical Electronics	4
ECE 3720	Electric Power and Machines	4
ECE 4150	Control Systems	4
ECE 4160	Control Engineering	4
ECE 4260	Communication Systems	4
ECE 4390	Engineering Computations 4E	4
ECE 4610	Biomedical Instrumentation and Signal Processing	4

Natural Science Electives - see web page as follows:

http://umanitoba.ca/faculties/engineering/departments/ece/pdf/EE_elective_summary.pdf

NOTES:

1. Course continuing through both terms. Credit on completion of course.

2. The complementary studies elective can be any course at the 1000 level or above from either the faculties of Arts or Management. However, ARTS 1110 (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 online timetables on the Department website. 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.

4. 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. The science elective course is to be chosen from a list of courses approved by the department.

6. Requires permission of the department.

Focus Areas in Computer Engineering

Students wishing to pursue more focused studies in a Computer Engineering subject/research area have the choice of doing so through a Focus Area. Courses taken towards an Area take the place of some or all of the 3 Technical Electives required in Computer Engineering. See http://

www.ece.umanitoba.ca/undergraduate for a detailed description of each area and the courses required.

Communications Networks (6 courses)

ECE 3700	Telecommunications Network Engineering*
ECE 3790	Engineering Algorithms*
ECE 4240	Microprocessor Interfacing*
ECE 4260	Communications Systems*

2 Electives (as specified in this Focus Area)

Embedded Systems (6 courses)

COMP 3430	Operating Systems*
ECE 3740	Systems Engineering Principles 1*
ECE 3760	Digital System Design 1*
ECE 4240	Microprocessor Interfacing*
ECE 4740	Digital System Implementation*

1 Elective (as specified in this Focus Area)

Machine Vision (6 courses)

COMP 3490	Computer Graphics 1
ECE 3790	Engineering Algorithms*
ECE 4440	Computer Vision
ECE 4830	Signal Processing 2*

2 Electives (as specified in this Focus Area)

*This course is already required as part of the regular program requirements for Computer Engineering.

4.9 Electrical and Computer Engineering Course Descriptions

4.9.1 Electrical and Computer Engineering Course Descriptions-2000 Level

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: ECE 2262.

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. Prerequisite ENG 1450

ECE 2240 Numerical Methods for Electrical Engineers Cr.Hrs. 4
Numerical methods applied to Electrical Engineering problems; mathematical models of physical systems, solutions of linear and non-linear equations, numerical differentiation and integration methods and associated errors, introduction to solution analysis. May not be held with MATH 2120. Prerequisites ECE 2262, COMP 1010, MATH 2132

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). Pre- or corequisite: MATH 2132 or [MATH 2100 or 136.210 and MATH 2110 or 136.211].

4.9.2 Electrical and Computer Engineering Course Descriptions-3000 Level

ECE 3010 Elements of Electric Machines and Digital Systems Cr.Hrs. 4
Introduction to elementary concepts in ac circuits, electric machines, and digital sub-systems. Topics include electrical impedance, capacitors, inductors, electric motors, logic gates, decoders, multiplexing, flip flops, registers, microprocessor structures, I/O and data acquisition. Not available to students in Electrical or Computer Engineering. Prerequisite ENG 1450, MATH 2132, and a year class designation of Year 3 or Year 4.

ECE 3540 Advanced Circuit Analysis and Design Cr.Hrs. 4
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; transmission lines; time and frequency domain. Prerequisite: ECE 2262 (or ECE 2260) and MATH 3132 (or MATH 3100 or 136.310).

ECE 3580 Foundations of Electromagnetics Cr.Hrs. 4
(Formerly ECE 2130) Fundamental laws of field theory; Maxwell's equations in integral and point form. Prerequisite: PHYS 2152, MATH 3132 (or MATH 3100)

ECE 3590 Electromagnetic Theory Cr.Hrs. 4
Electrostatics; magnetostatics, Maxwell's equations and time-varying electromagnetic fields; polarization, boundary value problems; reflection and refraction; Poynting vector. Prerequisite: ECE 3580 (or the former ECE 2130).

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 junctions and transistors; optoelectronic processes. Prerequisites: PHYS 2152 or (PHYS 1070 or 016.107) and MATH 3132 or (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/0, and interrupts; interfacing fundamentals; designing with microprocessors. Prerequisite: ECE 2220 (or 024.222).

ECE 3650 Electric Machines Cr.Hrs. 5
Continuation of ECE 3720 , including steady state and transient performance and introductory power systems theory. Prerequisite: ECE 3720

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 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: ECE 2262 or ENG 1180 (or 130.118).

ECE 3730 Principles of Embedded System Design Cr.Hrs. 4
This course will introduce students to the design and implementation of embedded systems. Topics include introduction to UML and data structures, A-to-D, D-to-A, serial bus architectures, embedded computing, bus-based computer systems, program design and analysis, networks, and hardware-software co-design. Prerequisites: ECE 2160, ECE 3610 and (COMP 1010 or COMP 1012).

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) Design methodologies for the development of digital hardware, including system specification, componet allocation, functional partitioning, specification refinement, implementation, verification, and testing. Hardware-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 sued to give students hands-on experience in programming many of the techniques covered in the theoretical parts of the course. Prerequisites: ECE 2262 or ECE 2260 (or 024.226) and MATH 3132 or 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). Pre- or Corequisite: MATH 3132 or MATH 3100 (or 136.310). May not be held with the former 24.451.

4.9.3 Electrical and Computer Engineering Course Descriptions-4000 Level

ECE 4100 Introduction to Microelectronic Fabrication Cr.Hrs. 4
Introduction to the fabrication of integrated circuits (ICs). Emphasis is on silicon based devices. Topics include water preparation, oxidation, thin film deposition, diffusion and ion implantation, lithography, wet and dry etching and metallization. An introduction to MEMS and micromachining technology is given. Prerequisite: ECE 3670 (or 24.367).

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 2160 and ECE 3540and ECE 3780 (or 024.378).

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 4180 Introduction to Robotics Cr.Hrs. 4
This course provides fundamental concepts of robotics, including robot classification and applications, robot kinematics, sensor and actuators, sensor interfacing, motor control, trajectory planning, and robot programming. Prerequisites: ECE 4150 and ECE 4240.

ECE 4200 Electric Filter Design Cr.Hrs. 4
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 3540 (or ECE 3530).

ECE 4240 Microprocessor Interfacing Cr.Hrs. 4
(Formerly 024.424) Interfacing of microcomputers to the external world: interfacing of I/0 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 4360 High Voltage Engineering Cr.Hrs. 4
The course serves as an introduction to high voltage engineering, including basics of electrical breakdown, high voltage generation, high voltage test systems, measurement and analysis techniques as applied to power system apparatus, such as cables, insulators, transformers, and generators. Prerequisite: ECE 3580, ECE 3720.

ECE 4370 Power Electronics Cr.Hrs. 4
Thyristor device theory and operation, controlled rectifiers and line-commuted inverters, and forced commutation as applied to d/c choppers and a/c variable frequency and voltage inverters. Prerequisites: ECE 3720 and ECE 2160.

ECE 4390 Engineering Computations 4E Cr.Hrs. 4
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 3132, ECE 2240.

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 4540 Wireless Networks Cr.Hrs. 4
Introduction to wireless communications systems, network architectures, protocols and applications. Topics include mobile compution systems, signals propagation, channel modelling, modulation, and networking standards. Prerequisite: ECE 3700 (or 24.370) (or 24.370), ECE 3780 (or 24.378)

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 and ECE 3780; and either the four courses ECE 3580, ECE 3720, ECE 3670 and ECE 3610; or the four courses ECE 3670, ECE 3700, ECE 3760 and ECE 3740.

ECE 4610 Biomedical Instrumentation and Signal Processing Cr.Hrs. 4
Introduction to biological systems and the application of engineering principles to medical problems. Students design systems to aquire and analyze biological signals in the laboratory. Content includes introduction to relevant physiology and anatomy of cells, skeletal muscles, heart and cardiovascular systems, human balance and biomechanics, recording and analyzing biological signals (ECG, EMG,respiratory sounds), design of instrumentation amplifiers for signal conditioning, medical instrumentation safety and health hazards. Prerequisites: ECE 2160 and ECE 3780.

ECE 4740 Digital Systems Implementation Cr.Hrs. 4
(Formerly 024.474) Implementation methodologies and technologies for digital systems, including VLSI implementations, PCB implementations, and rapid prototyping (FPGA). Prerequisite: ECE 4240 (or 024.424). Not to be held with ECE 4500 (or 024.450).

ECE 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 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).

ECE 4850 Topics in Electircal and Computer Engineering 1 Cr.Hrs. 4
This course will cover contemporary topics in Electrical and Computer Engineering via lextures and laboratory sessions. The specific topics and a detailed course outline will be available at the time or registration. Prerequisite: Permission of the Department.

ECE 4860 Topics in Electrical and Computer Engineering 2 Cr.Hrs. 4
This course will cover contemporary topics in Electrical and Computer Engineering via lectures and laboratory sessions. The specific topics and a detailed course outline will be available at the time or registration. Prerequisite: Permission of the Department.

ECE 4870 Topics in Electrical and Computer Engineering 3 Cr.Hrs. 3
This lecture based course will cover contemporary topics in Electrical and Computer Engineering. The specific topics and a detailed course outline will be available at the time of registration. Prerequisite: Permission of the Department.

ECE 4880 Topics in Electrical and Computer Engineering 4 Cr.Hrs. 3
This lecture based course will cover contemporar topics in Electrical and Computer Engineering . The Specific topics and a detailed course outline will be available at the time of registration. Prerequisite: Permission of the Department.

4.10 Mechanical and Manufacturing Engineering

Head: Dr. D. Kuhn, P.Eng.
Associate Heads: Dr. M. Birouk, P.Eng. and Dr. M. Tachie, P.Eng.
General Office: E2 -327 EITC
Telephone: 204 474 9804 / 6630
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The Department of Mechanical and Manufacturing Engineering offers fully accredited degree programs in Mechanical Engineering and Manufacturing Engineering. Students entering the Mechanical Engineering program in September 2009 for the 2009/2010 regular session and thereafter may specialize with an option in Aerospace or Manufacturing, or a stream in Materials, Solid Mechanics, or Thermofluids. No new students will be accepted into the Manufacturing Engineering program as of September 2009. Students are urged to consult appropriate program requirements shown for each program/option.

The Mechanical Engineering program 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 Manufacturing Engineering program is comprised of 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.

Both programs offer basic training in the sciences, mathematics and fundamental engineering subjects followed by more specialized discipline-related subjects. During the programs, arrangements are made for conducted visits to local power and industrial plants. Students are allowed to choose technical electives to suit their career objectives and are also required to take complementary studies electives related to social issues.

Co-operative Education Programs

Please refer to SECTION 5: Co-operative Education and Industrial Internship Programs.

4.10.1 Mechanical Engineering Program - NEW

for students entering Mechanical Engineering as of September 2009

Preliminary Engineering Program

Common to all Engineering Programs. (See Section 4.2 for details.)

Program Core Courses:

Course No.	Course Nmae	Credit Hours
CHEM 2240 Or CHEM 1310	Applied Chemistry for Engineers An Introduction to Physical Chemistry	3 3
CIVL 4050	Engineering Economics	3
CIVL 4460 T OR ANTH 2430	echnology, Society, and the Future Ecology, Technology and Society (B)	3 3
ECE 3010	Elements of Electric Machines and Digital Systems	4
ENG 2010	Technical Communications	3
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 3132	Engineering Mathematical Analysis 3	3
MECH 2012	Computer Aided Design and Manufacturing Processes	4
MECH 2202	Thermodynamics	4
MECH 2222	Mechanics of Materials	4

Course No.	Course Nmae	Credit Hours
MECH 2262	Fundamentals of Fluid Mechanics	4
MECH 2272	Engineering Materials 1	4
MECH 3170	Project Management	4
MECH 3420	Vibrations and Acoustics	4
MECH 3430	Measurements and Control	4
MECH 3460	Heat Transfer	4
MECH 3482	Kinematics and Dynamics	4
MECH 3492	Fluid Mechanics and Applications	4
MECH 3502	Stress Analysis and Design	4
MECH 3542	Engineering Materials 2	4
MECH 3980	Mechanical Engineering Laboratory (full year)	4
MECH 4650	Machine Design 4M	4
MECH 4860	Engineering Design	5
PHYS 1070	Physics 2: Waves and Modern Physics	3
STAT 2220	Contemporary Statistics for Engineers	3
	5 Technical Electives (TE)	4
	1 Complimentary Studies Elective (CE)	3

NOTES:
1. A student's selection and timetabling of electives are subject to the following conditions:

- Only one complementary elective is required upon completion of Critical Thinking (PHIL 1290), which is recommended but not required; students may choose an alternate course from the Faculties of Arts or Management at the 1000 level or above, and English (ENGL 1310) in the preliminary program.

- The complementary studies elective 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.

2. For courses continuing through both terms, credit is given on completion of course.

3. A minimum of 20 credit hours of technical electives is required.

4.10.2 Aerospace Option

new as of September 2009

Choose all 5 courses.

MECH 3520	Aerodynamics	4
MECH 4182	Aerospace Structures: Analysis and Design	4
MECH 4192	Aerospace Materials and Manufacturing Processes	4
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4452	Aircraft Performance, Dynamics, and Design	4

4.10.3 Manufacturing Option

new as of September 2009

Choose 5 from the following 10 courses. Some courses will be offered in alternating years.

MECH 3550	Robotics and Computer Numerical Control	4
MECH 3562	Introduction to Optimization	4
MECH 3570	Manufacturing Automation	4
MECH 3582	Manufacturing Planning and Quality Control	4
MECH 3592	Simulation Modelling and Facilities Planning	4
MECH 3602	Manufacturing Process Fundamentals	4
MECH 4330	Contemporary Topics in Manufacturing Engineering 1	4
MECH 4342	Comtemporary Topics in Manufacturing Engineering 2	4
MECH 4960	Mechatronics Systems Design	4
MECH 4960	Manufacturing Processes 1	4
MECH 4970	Manufacturing Processes 2	4

4.10.4 Materials Stream

new as of September 2009

Choose 3 from the following 5 courses. Choose the remaining two TEs from the same stream, other TEs, or thesis. Some courses will be offered in alternating years.

MECH 4192	Aerospace Materials and Manufacturing Processes	4
MECH 4350	Topics in Materials 1	4
MECH 4360	Topics in Materials 2	4
MECH 4620	Corrosion of Metals and Alloys	4
MECH 4870	Fracture and Failure of Engineering Materials	4

4.10.5 Solid Mechanics Stream

new as of September 2009

Choose 3 from the following 6 courses. Choose the remaining two TEs from the same stream, other TEs, or thesis. Some courses will be offered in alternating years.

MECH 4182	Aerospace Structures: Analysis and Design	4
MECH 4472	Mechanical Vibration	4
MECH 4510	Fundamentals of Finite Element Analysis	4
MECH 4532	Advanced Strength of Materials	4
MECH 4550	Noise Control	4
MECH 4672	Advanced Mechanical Design	4

4.10.6 Thermofluids Stream

new as of September 2009

Choose 3 from the following 8 courses. Choose the remaining two TEs from the same stream, other TEs, or thesis. Some courses will be offered in alternating years.

MECH 4292	IC Engines	4
MECH 4412	Heating, Venting, and Air Conditioning	4
MECH 4560	Selected Topics in Fluid Mechanics 4M	4
MECH 4680	Energy Conversion Utilization	4
MECH 4692	Renewable Energy	4
MECH 4694	Advanced Topics in Heat Transfer	4
MECH 4702	Design of Thermal Systems	4
MECH 4822	Numerical Heat Transfer in Fluid Flow	4

4.10.7 Technical Electives in Mechanical Engineering

(new as of September 2009)

MECH 3520	Aerodynamics	4
MECH 3550	Robotics and Computer Numerical Control	4

Course No.	Course Nmae	Credit Hours
MECH 3562	Introduction to Optimization	4
MECH 3570	Manufacturing Automation	4
MECH 3582	Manufacturing Planning and Quality Control	4
MECH 3592	Simulation Modelling and Facilities Planning	4
MECH 3602	Manufacturing Processes Fundamentals	4
MECH 4900	Mechatronics Systems Design	4
MECH 4162	Thesis (full year course) (See Note 2)	6
MECH 4182	Aerospace Structures: Analysis and Design	4
MECH 4192	Aerospace Materials and Manufacturing Processes	4
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4240	Design for Manufacturing	4
MECH 4292	IC Engines	4
MECH 4310	Contemporary Topics in Mechanical Engineering 1	4
MECH 4322	Contemporary Topics in Mechanical Engineering 2	4
MECH 4330	Contemporary Topics in Manufacturing Engineering 1	4
MECH 4342	Contemporary Topics in Manufacturing Engineering 2	4
MECH 4350	Topics in Materials 1	4
MECH 4360	Topics in Materials 2	4
MECH 4412	Heating, Venting, and Air Conditioning	4
MECH 4452	Aircraft Performance, Dynamics, and Design	4
MECH 4472	Mechanical Vibration	4
MECH 4510	Fundamentals of Finite Element Analysis	4
MECH 4532	Advanced Strength of Materials	4
MECH 4550	Noise Control	4
MECH 4560	Selected Topics in Fluid Mechanics 4M	4
MECH 4620	Corrosion of Metals and Alloys	4
MECH 4672	Advanced Mechanical Design	4
MECH 4680	Energy Conversion Utilization	4
MECH 4692	Renewable Energy	4
MECH 4694	Advanced Topics in Heat Transfer	4
MECH 4702	Design of Thermal Systems	4
MECH 4812	Automotive Engineering	4
MECH 4822	Numerical Heat Transfer in Fluid Flow	4
MECH 4870	Fracture and Failure of Engineering Materials	4
MECH 4900	Mechatronics System Design	4
MECH 4960	Manufacturing Processes 1	4
MECH 4970	Manufacturing Processes 2	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. Students must be in their graduating year to register for MECH 4162 Thesis.

4.10.8 Mechanical Engineering Program (pre-2009)

Prior to September 2009

For students that entered Mechanical Engineering prior to 2009/2010

Preliminary Engineering Program

Common to all Engineering Programs. (See Section 4.2 for details.)

Mechanical Program Core Courses:

Course No.	Course Name	Credit Hours
CHEM 2240 or	Applied Chemistry for Engineers	3
CHEM 1310	An Introduction to Physical Chemistry	3
CIVL 4050	Engineering Economics (former 23.483)	3
CIVL 4460 OR	Technology, Society, and the Future	3
ANTH 2430	Ecology, Technology and Society (B)	3
ECE 3010	Elements of Electric Machines and Digital Systems (formerly ECE 3720 or ECE 3680)	4
ENG 2010	Technical Communications	3
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 3132	Engineering Mathematical Analysis 3	3
MECH 2012	Computer Aided Design and Manufacturing Processes (replaces MECH 2010)	4
MECH 2120	Mechanics of Machines	4
MECH 2202	Thermodynamics (formerly MECH 2200)	4
MECH 2222	Mechanics of Materials (formerly MECH 2220)	4
MECH 2262	Fundamentals of Fluid Mechanics (formerly MECH 2260)	4
MECH 2270	Principles of Engineering Materials	4
MECH 2290	Manufacturing Engineering	3
MECH 3170	Project Management (replaces MECH 2300)	4
MECH 3420	Vibrations and Acoustics	4
MECH 3430	Measurements and Control	4
MECH 3460	Heat Transfer	4
MECH 3480	Dynamics	3
MECH 3492	Fluid Mechanics and Applications (formerly MECH 3490)	4
MECH 3502	Stress Analysis and Design (formerly MECH 3500)	4
MECH 3540	Modern Engineering Materials	4
MECH 3980	Mechanical Engineering Laboratory (replaces MECH 4980 and MECH 4990)	4
MECH 4160	Graduation Thesis (See Note 3)	3
MECH 4650	Machine Design 4M	4
MECH 4680 OR	Energy Conversion and Utilization	4
MECH 4692	Renewable Energy	4

Course No.	Course Name	Credit Hours
MECH 4822	Numerical Heat Transfer in Fluid Flow (formerly MECH 4820)	4
MECH 4860	Engineering Design	5
PHYS 1070	Physics 2: Waves and Modern Physics	3
STAT 2220	Contemporary Statistics for Engineers	3
	3 Technical Electives (TE)	3/4
	1 Complimentary Studies Elective (CE)	3

NOTES:
1. A student's selection and timetabling of electives are subject to the following conditions:

- Only one complementary elective is required upon completion of Critical Thinking (PHIL 1290) and English (ENGL 1310) in the preliminary program.

- The complementary studies elective 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.

2. For courses continuing through both terms, credit is given on completion of course.

3. Students must be in their graduating year to register for MECH 4160 Graduation Thesis. 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.

4. A minimum of 9 credit hours of technical electives is required.

4.10.9 Aerospace Engineering Option Courses

For students that entered Mechanical Engineering prior to 2009/2010

The Department of Mechanical and Manufacturing Engineering Aerospace option 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 five courses. These courses replace an equivalent number of courses in the Mechanical Engineering curriculum.

Preliminary Engineering Program

Common to all Engineering Programs. (See Section 4.2 for details.)

Aerospace Program Core Courses:

Course No.	Course Name	Credit Hours
CHEM 2240	Applied Chemistry for Engineers	3
CIVL 4050	Engineering Economics (former 23.483)	3
CIVL 4460	Technology, Society, and the Future	3
OR		
ANTH 2430	Ecology, Technology and Society (B)	3
ENG 2010	Technical Communications	3
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 3132	Engineering Mathematical Analysis 3	3
MECH 2012	Computer Aided Design and Manufacturing Processes (replaces MECH 2010)	4
MECH 2120	Mechanics of Machines	4
MECH 2202	Thermodynamics (formerly MECH 2200)	4
MECH 2222	Mechanics of Materials (formerly MECH 2220)	4
MECH 2262	Fundamentals of Fluid Mechanics (formerly MECH 2260)	4
MECH 2270	Principles of Engineering Materials	4
MECH 2290	Manufacturing Engineering	3
MECH 3170	Project Management (replaces MECH 2300)	4
MECH 3420	Vibrations and Acoustics	4
MECH 3430	Measurements and Control	4
MECH 3460	Heat Transfer	4
MECH 3480	Dynamics	3
MECH 3492	Fluid Mechanics and Applications (formerly MECH 3490)	4
MECH 3502	Stress Analysis and Design (formerly MECH 3500)	4
MECH 3520	Aerodynamics	4
MECH 3540	Modern Engineering Materials	4
MECH 3980	Mechanical Engineering Laboratory (replaces MECH 4980 and MECH 4990)	4
MECH 4160	Graduation Thesis (See Note 3)	3
MECH 4170	Program Management and Systems Engineering (See Note 4)	3
MECH 4182	Aerospace Structures: Analysis and Design	4
MECH 4192	Aerospace Materials and Manufacturing Processes	4
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4452	Aircraft Performance, Dynamics, and Design	4
MECH 4860	Engineering Design	5
PHYS 1070	Physics 2: Waves and Modern Physics	3
STAT 2220	Contemporary Statistics for Engineers	3
	2 Technical Electives (TE) (See Note 4)	6
	1 Complimentary Studies Elective (CE)	3

NOTES:
1. A student's selection and timetabling of electives are subject to the following conditions:
- Only one complementary elective is required upon completion of Critical Thinking (PHIL 1290) and English (ENGL 1310) in the preliminary program.
- The complementary studies elective 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.

2. For courses continuing through both terms, credit is given on completion of course.

3. Students must be in their graduating year to register for MECH 4160 Graduation Thesis. 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.

4. A minimum of 3 credit hours of technical electives is required. If students have not completed required course MECH 4170 prior to September 2009, another Technical Elective must be taken in its place.

4.10.10 Technical Electives in Mechanical Engineering

For students who entered the Mechanical Engineering program prior to September 2009.

Course No.	Course Name	Credit Hours
MECH 3520	Aerodynamics	4
MECH 3550	Robotics and Computer Numerical Control	4
MECH 3562	Introduction to Optimization (formerly MECH 3560)	4
MECH 3570	Manufacturing Automation	4
MECH 3582	Manufacturing Planning and Quality Control	4
MECH 3592	Simulation Modelling and Facilities Planning	4
MECH 3602	Manufacturing Processes Fundamentals (See Note 5)	4
MECH 4182	Aerospace Structures: Analysis and Design	4
MECH 4192	Aerospace Materials and Manufacturing Processes	4
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4240	Design for Manufacturing	4
MECH 4292	IC Engines	4
MECH 4310	Contemporary Topics in Mechanical Engineering 1	4
MECH 4322	Contemporary Topics in Mechanical Engineering 2	4
MECH 4330	Contemporary Topics in Manufacturing Engineering 1	4
MECH 4342	Contemporary Topics in Manufacturing Engineering 2	4
MECH 4412	Heating, Ventilation, and Air Conditioning	4
MECH 4452	Aircraft Performance, Dynamics, and Design	4
MECH 4472	Mechanical Vibration	4
MECH 4532	Advanced Strength of Materials	4
MECH 4550	Noise Control	4
MECH 4560	Selected Topics in Fluid Mechanics 4M	4
MECH 4620	Corrosion of Metals and Alloys	4
MECH 4672	Advanced Mechanism Design	4
MECH 4692	Renewable Energy	4
MECH 4694	Advanced Topics in Heat Transfer	4
MECH 4702	Thermal Systems Design	4
MECH 4812	Automotive Engineering and Design	4
MECH 4870	Fracture and Failure of Engineering Materials	4
MECH 4900	Mechatronics Systems Design	4
MECH 4960	Manufacturing Process 1	4
MECH 4970	Manufacturing Process 2	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 3602 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.

4.10.11 Manufacturing Engineering Degree

For students that entered Manufacturing Engineering prior to 2009/2010

Preliminary Engineering Program

Common to all Engineering Programs. (See Section 4.2 for details.)

Manufacturing Program Core Courses:

Course No.	Course Name	Credit Hours
CHEM 2240	Applied Chemistry for Engineers	3
CIVL 4050	Engineering Economics (former 23.483)	3
CIVL 4460 OR ANTH 2430	Technology, Society, and the Future Ecology, Technology and Society (B)	3 3
ECE 3010	Elements of Electric Machines and Digital Systems (formerly ECE 3720 or ECE 3680)	4
ENG 2010	Technical Communications	3
MATH 2120	Introductory Numerical Methods for Engineers	4
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 3132	Engineering Mathematical Analysis 3	3
MECH 2012	Computer Aided Design and Manufacturing Processes (replaces MECH 2010)	4
MECH 2120	Mechanics of Machines	4
MECH 2202	Thermodynamics (formerly MECH 2200)	4
MECH 2222	Mechanics of Materials (formerly MECH 2220)	4
MECH 2262	Fundamentals of Fluid Mechanics (formerly MECH 2260)	4
MECH 2270	Principles of Engineering Materials	4
MECH 2290	Manufacturing Engineering	3
MECH 3170	Project Management (replaces MECH 2300)	4
MECH 3420	Vibrations and Acoustics	4
MECH 3430	Measurements and Control	4
MECH 3480	Dynamics	3
MECH 3502	Stress Analysis and Design (formerly MECH 3500)	4

Course No.	Course Name	Credit Hours
MECH 3540	Modern Engineering Materials	4
MECH 3550	Robotics and Computer Numerical Control	4
MECH 3562	Introduction to Optimization (formerly MECH 3560)	4
MECH 3570	Manufacturing Automation	4
MECH 3582	Manufacturing Planning and Quality Control	4
MECH 3592	Simulation Modelling and Facilities Planning	4
MECH 4160	Graduation Thesis (or TE#3; see Notes 3 & 4)	3
MECH 4650	Machine Design 4M	4
MECH 4680	Energy Conversion and Utilization	4
OR		
MECH 4692	Renewable Energy	4
MECH 4860	Engineering Design	5
MECH 4900	Mechatronics System Design	4
MECH 4960	Manufacturing Process I	4
MECH 4970	Manufacturing Process II	4
PHYS 1070	Physics 2: Waves and Modern Physics	3
STAT 2220	Contemporary Statistics for Engineers	3
	2 Technical Electives (TE) (See Note 5)	3/4
	1 Complimentary Studies Elective (CE)	3

NOTES:

1. A student's selection and timetabling of electives are subject to the following conditions:
- Only one complementary elective is required upon completion of Critical Thinking (PHIL 1290) and English (ENGL 1310) in the preliminary program.
- The complementary studies elective 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.

2. For courses continuing through both terms, credit is given on completion of course.

3. Students must be in their graduating year to register for MECH 4160 Graduation Thesis. 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.

4. For students in Manufacturing Engineering, there is a choice between graduation thesis and a technical elective from List B (see below).

5. 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 graduation thesis (MECH 4160), then only one technical elective (List A) is required.

4.10.12 Technical Electives in Manufacturing Engineering

Choose one from List A and one from List B OR one from List A and a graduation thesis project (MECH 4160).

Course No.	Course Name	Credit Hours
LIST A		
ECE 3010	Elements of Electric Machines and Digital Systems	4
ECE 4240	Microprocessor Interfacing	4
MECH 3460	Heat Transfer	4
MECH 3492	Advanced Fluid Mechanics and Design	4
MECH 3520	Aerodynamics	4
MECH 3602	Manufacturing Processes Fundamentals (see note 4.)	4
MECH 4182	Aerospace Structures: Analysis and Design	4
MECH 4192	Aerospace Materials and Manufacturing Processes	4
MECH 4200	Gas Turbine Propulsion Systems	4
MECH 4240	Design for Manufacturing	4
MECH 4292	IC Engines	3
MECH 4310	Contemporary Topics in Mechanical Engineering 1	4
MECH 4322	Contemporary Topics in Mechanical Engineering 2	4
MECH 4330	Contemporary Topics in Manufacturing Engineering 1	4
MECH 4342	Contemporary Topics in Manufacturing Engineering 2	4
MECH 4412	Heating, Ventilation, and Air Conditioning	4
MECH 4452	Aircraft Performance, Dynamics, and Design	4
MECH 4472	Mechanical Vibration	4
MECH 4550	Noise Control	4
MECH 4620	Corrosion of Metals and Alloys	4
MECH 4672	Advanced Mechanism Design	4
MECH 4692	Renewable Energy	4
MECH 4694	Advanced Topics in Heat Transfer	4
MECH 4702	Design of Thermal Systems	4
MECH 4812	Automotive Engineering and Design	4
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:

1. Core or technical elective courses in Mechanical Engineering that are not part of the core program in Manufacturing Engineering will be accepted as technical electives in Manufacturing Engineering.

2. The Department of Mechanical and Manufacturing Engineering may not be able to offer all of the technical electives that are shown. Students are urged to consult the Mechanical and Manufacturing Engineering office for a list of technical electives that will be offered in that year.

3. There will normally be a minimum registration limit of six students for each technical elective. If registration is below the minimum, the elective will be cancelled for the session, and those registered will be required to transfer to another course before the final date for registration revisions.

4. MECH 3602 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.

5. Courses from the Faculty of Management that do not appear in the list above may be used as a technical elective for List B subject to approval by the Department of Mechanical and Manufacturing Engineering.

4.11 Mechanical and Manufacturing Engineering Course Descriptions

4.11.1 Mechanical and Manufacturing Engineering Course Descriptions-2000 Level

MECH 2012 Computer Aided Design and Manufacturing Processes Cr.Hrs. 4
Provide instruction on the application of computer aided design software packages. The students will work in groups in the design and development of a product using CAD packages. The course will be delivered through a combination of lectures and tutorials. ENG 1430 (formerly 130.113 or 130.140). Not to be held with MECH 2010 or CIVL 2830.

MECH 2202 Thermodynamics Cr.Hrs. 4
Cycles, transient flow processes, entropy, gas mixtures, psychrometry combustion. Prerequisites: ENG 1460 (or 130.112), (MATH 1500 (or 136.150) or MATH 1510 (or 136.151) and MATH 1700 (or 136.170) or MATH 1710 (or 136.171) Not to be held for credit with MECH 2200 or 025.220

MECH 2222 Mechanics of Materials Cr.Hrs. 4
Topics covered in this course include: axial and torsional loading, stress-strain and deformation in statically determinate/indeterminate systems, thermally induces stress, and stresses in beams (including reinforced beams) under pure bending and bending with shear. The mechanical properties of materials under various loading modes will be addressed. Prerequisites: [PHYS 1050 (or 016.105)] and [ENG 1440 (ENG 1350 or 130.135)] and COMP 1010 or COMP 1012 (074.101) and [MATH 1710 (136.171) or MATH 1700 (136.170)].

MECH 2262 Fundamentals of Fluid Mechanics Cr.Hrs. 4
Fundamental concepts used in the analysis of fluid behaviour, pressure in stationary fluids, forces on submerged surfaces, buoyancy, integral methods, Bernoulli equation, pipeline analysis. Prerequisites: MATH 2130 or MATH 2110 (formerly 136.211). Pre or Co requisite: MATH 2132 or MATH 2100 (formerly 136.210). Not to be held for credit with MECH 2260 (or 025.226)

MECH 2272 Engineering Materials 1 Cr.Hrs. 4
Introduction to engineering materials; defects, strengthening mechanisms, and plasticity in engineering metals and alloys; fundamentals and application of heat treatment of metallic materials including topics such as diffusion, phase diagram, phase transformation, and thermal processing; mechanical properties of engineering metallic materials and their relationship to structure, defects, various strengthening mechanisms, and processing; structure of non-metallic polymers and ceramics. Prerequisites; [CHEM 2240 (002.224) or CHEM 1310 (002.131)] and [MECH 2222 (or MECH 2220 or 025.222)]. Not to be held for credit with MECH 2270 (or 025.227), MECH 2290 (or 025.229) or MECH 3540 (or 025.354)

4.11.2 Mechanical and Manufacturing Engineering Course Descriptions-3000 Level

MECH 3170 Project Management Cr.Hrs. 4
Topics covered in this course will include project planning, scheduling, resource allocation, process analysis, layout and control. The course will make use of industrial projects for developing a strong design and analytical approach pertinent to project management. Prerequisites: MECH 2012 (or MECH 2010) or CIVL 2830. Not to be held for credit with MECH 4170 (or 025.417).

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 3482 (formerly MECH 2120 (or 025.212) and MECH 3480 (or 025.348)), and MATH 3132 (formerly MATH 3100) (or 136.310). Not to be held for credit with the former 025.342.

MECH 3430 Measurements and Control Cr.Hrs. 4
Mathematical modelling of mechanical systems. Feedback systems and stability. Digital control; analog to digital and digital to analog control systems. Prerequisites: MATH 3132 (or MATH 3100) (or 136.310) and ENG 1450 (or 130.118). Not to be held for credit with the former 025.343.

MECH 3460 Heat Transfer Cr.Hrs. 4
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 1460 (or 130.112). May not be held with MECH 3470 or the former 025.347.

MECH 3482 Kinematics and Dynamics Cr.Hrs. 4
Fundamentals of 2D and 3D rigid body motions (kinematics) and the forces/moments (kinetics) needed to produce such motions. Applications will emphasize elements of machine design. Prerequisites: PHYS 1050 (016.105) and ENG 1440 [COMP 1010 (074.101) or COMP 1012] and [MATH 1710 (136.171) or MATH 1700 (136.170)]. Not to be held for credit with MECH 2120 (or 025.212) or MECH 3480 (or 025.348).

MECH 3492 Fluid Mechanics and Applications Cr.Hrs. 4
The angular momentum principle, introduction to differential analysis of fluid motion, internal and external incompressible viscous flow, fluid machinery and multiple-path systems, fluid coupling and torque couplings and torque converters. Prerequisite: PHYS 1050 (016.105), ENG 1440, [COMP 1010 (074.101) or COMP 1012], and [(MATH 1710 or 136.171) or MATH 1700 (136.170)] and [MECH 2262 (MECH 2260 or 025.226)]. Not to be held for credit with MECH 3490 (or 025.349).

MECH 3502 Stress Analysis and Design Cr.Hrs. 4
Strength and stability of columns, torsion of thin-walled members, unsymmetric loading and shear centres, beam deflection and energy methods. Prerequisites: MECH 2222 (formerly MECH 2220 or 025.222), and MATH 2130 (formerly MATH 2110 or 136.211). Not to be held for credit with MECH 2220 (or 025.222) or MECH 3500 (or 025.350)

MECH 3520 Aerodynamics Cr.Hrs. 4
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. Not to be held for credit with the former 025.352. Prerequisite: MECH 3492 (MECH 3490 or 025.349).

MECH 3542 Engineering Materials 2 Cr.Hrs. 4
Mechanical properties of engineering non-metallic materials such as polymers, ceramics and composites, and their relationship to structure and processing; introduction to various shaping and joining processes used in manufacturing, their advantages and limitations; selection and application of engineering materials. Prerequisites: MECH 2272 (formerly MECH 2270 or 025.270). Not to be held for credit with MECH 2270 (or 025.227), MECH 2290 (or 025.229) or MECH 3540 (or 025.354)

MECH 3550 Robotics and Computer Numerical Control Cr.Hrs. 4
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 manufacturing applications will be discussed. Not to be held with the former 025.484 or 025.355. Prerequisite: MECH 2012 (or MECH 2010 or CIVL 2830).

MECH 3562 Introduction to Optimization Cr.Hrs. 4
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 2012 (MECH 2010 or CIVL 2830), and STAT 2220 (005.222)., and STAT 2220 (formerly 005.222). Not to be held with the former MECH 3560 (025.356 or 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 or 025.357).

MECH 3582 Manufacturing Planning and Quality Control Cr.Hrs. 4
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. Prerequisites: MECH 2012 (or MECH 2010 or CIVL 2830). Not to be held for credit with MECH 3580 (025.358 or 025.485).

MECH 3592 Simulation Modeling and Facility Planning Cr.Hrs. 4
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 for credit with MECH 3590 (or 025.359 or 025.471). Prerequisite: MECH 2012 (or MECH 2010 or CIVL 2830).

MECH 3602 Manufacturing Process Fundamentals Cr.Hrs. 4
This couirse will give students hands on experience with numerous manufacturing processes, machines and systems, by having them build a miniature Stirling engine, for example. Using CNC mills, lathes, conventional machine shope 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 hands-on exposure to the application of basic manufacturing process tools. The course will be offered in collaboration with the Mechanical and Manufacturing and Communication department, Red River College. Not to be held for credit with MECH 3600 (or 025.360). Prerequisite: MECH 2012 (or MECH 2010 or CIVL 2830).

MECH 3910 Manufacturing Cooperative Education Assignment 1 Cr.Hrs. 1
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. Not to be held for credit with 025.391. (Pass/Fail grade only).

MECH 3920 Manufacturing Cooperative Education Assignment 2 Cr.Hrs. 1
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. Not to be held for credit with the former 025.392. (Pass/Fail grade only). Prerequisite: MECH 3910 (or 025.391).

MECH 3980 Mechanical Laboratory Cr.Hrs. 4
Laboratory course on topics that compliment and reinforce concepts developed in second and third year mechanical engineering courses. Comprehensive experiments followed by submission of laboratory reports will be required. Prerequisites: ENG 2010 (or 130.201), and MECH 2262 (or MECH 2260 or 025.260), MECH 2202 (or MECH 2200 or 025.220) and MECH 2222 (or MECH 2220 or 025.222). Pre- or Co requisites: MECH 3420 (or 025.342) and MECH 3502(or MECH 3500 or 025.350), and MECH 3542 (or MECH 3540 or 025.345). Not to be held for credit with MECH 4980 (or 025.498) and MECH 4990 (or 025.499

4.11.3 Mechanical and Manufacturing Engineering Course Descriptions-4000 Level

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. Theses are to be handed in to the Department of MEchanical and Industrial Engineering office by the designated deadline. RESTRICTION: Only students with a year class distinction of 4 or higher in Mechanical or Maufacturing Engineering may register for this course. Not to be held for credit with the former 025.416. Prerequisite: ENG 2010 (or 130.201) and eligible to graduate.

MECH 4162 Thesis Cr.Hrs. 6
Each graduating student must submit a satisfactory thesis on a subject which will be designated or approved by the head of the department. Theses are to be handed in to the Department of Mechanical and Manufacturing Engineering office by the designated deadline. RESTRICTION: Only students with a year class distinction of 4 or higher in Mechanical or Manufacturing Engineering may register for this course. Prerequisites: ENG 2010 (or 130.201) and eligible to graduate. Not to be held for credit with MECH 4160 (formerly 025.416)

MECH 4180 Analysis and Design of Aerospace Structures Cr.Hrs. 3
Methodology and techniques for design of aerospace structures and components to preclude failure with minimum weight, cost and resource consumption. Analysis of structural, air, gust and manoeuvre loads. Not to be held with the former 025.418. Prerequisite: MECH 3500 (or 025.350).

MECH 4182 Aerospace Structures: Analysis and Design Cr.Hrs. 4
Methodology and techniques for design of aerospace structures and components to preclude failure with minimum weight, cost and resource consumption. Analysis of structural, air, gust and manoeuvre loads. Prerequisites: MECH 3502 (or MECH 3500 or 025.350). Not to be held for credit with MECH 4180 (or 025.418).

MECH 4190 Aerospace Materials and Advanced Manufacturing Processes Cr.Hrs. 3
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. Not to be held for credit with the former 025.419. Prerequisite: MECH 3540 (or 025.354).

MECH 4192 Aerospace Materials and Manufacturing Processes Cr.Hrs. 4
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. Prerequisites: MECH 3542 (formerly MECH 3540 or 025.354). Not to be held for credit with MECH 4190 or the former 025.419.

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. Not to be held for credit with the former 025.420. Prerequisites: MECH 2202 (or MECH 2200 or 025.220) and MECH 3520 (or 025.352)

MECH 4290 Internal Combustion Engines Cr.Hrs. 3
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. Not to be held for credit with the former 025.429. Prerequisite: MECH 2200 (or 025.220).

MECH 4292 IC Engines Cr.Hrs. 4
(Formerly MECH 4290 or 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 2202 (formerly MECH 2200 or 025.220). Not to be held for credit with MECH 4290 or 025.429

MECH 4310 Contemporary Topics in Mechanical Engineering 1 Cr.Hrs. 4
This course will cover contemporary topics in Mechanical Engineering. The specific topics and a detailed outline will be available at the time of registration prior to the start of the registration prior to the start of the registration period for the session in which the course will be offered. Prerequisite: Permission of the department.

MECH 4322 Contemporary Topics in Mechanical Engineering II Cr.Hrs. 4
This course will cover contemporary topics in Mechanical Engineering. The specific topics and a detailed outline will be available at the time of registration prior to the start of the registration period for the session in which the course will be offered. Prerequisite: Departmental Permission. Not to be held for credit with MECH 4320

MECH 4330 Contemporary Topics in Manufacturing Engineering 1 Cr.Hrs. 4
This course will cover contemporary topics in Manufacturing Engineering. The specific topics and a detailed outline will be available at the time of registration prior to the start of the registration period for the session in which the course will be offered. Prerequisite: Permission of the department.

MECH 4342 Contemporary Topics in Manufacturing Engineering II Cr.Hrs. 4
This course will cover contemporary topics in Manufacturing Engineering. The specific topics and a detailed outline will be available at the time of registration prior to the start of the registration period for the session in which the course will be offered. Prerequisite: Departmental Permission. Not to be held for credit with MECH 4340

MECH 4350 Topics in Engineering Material 1 Cr.Hrs. 4
This course will cover contemporary topics in engineering materials. The specific topics and a detailed outline will be available prior to the start of registration period for the session in which the course will be offered. Prerequisite: Departmental Permission.

MECH 4360 Topics in Engineering Materials 2 Cr.Hrs. 4
This course will cover contemporary topics in engineering materials. The specific topics and a detailed outline will be available prior to the start of registration period for the session in which the course will be offered. Prerequisite: Departmental Permission.

MECH 4410 Air Conditioning Cr.Hrs. 3
Psychometric processes, equipment selection, and the design of heating and cooling systems for typical buildings. Prerequisite: MECH 2200.

MECH 4412 Heating, Ventilation and Air Conditioning Cr.Hrs. 4
Psychometric processes, equipment selection, and the design of heating and cooling systems for typical buildings. Prerequisite: MECH 2202 (formerly MECH 2200 or 025.220). Not to be held for credit with MECH 4410 or the former 025.441.

MECH 4452 Aircraft Performance, Dynamics and Design Cr.Hrs. 4
A study of the morphology of aerospace vehicles; basic components and their functions, Aircraft performance; drag, thrust, lift, basics of orbital mechanics. Prerequisites: MECH 3520 (or 025.352). Not to be held for credit with MECH 4450 or the former 025.445.

MECH 4472 Mechanical Vibration Cr.Hrs. 4
Nonlinear Vibrations: mathematical theory for lumped vibratory systems; response of systems to nonharmonic excitation; solutions by Laplace transforms and Fourier analysis; introduction to the matrix formulation of vibration problems and vibration of distributed systems. Prerequisite: MECH 3420. May not be held for credit with 025.447.

MECH 4510 Fundamentals of Finite Element Analysis Cr.Hrs. 4
Fundamentals of the Finite Element Method, basic components in a Finite Element procedure, application of FEM to solve engineering problems and use of commercial software. Prerequisites: MATH 2120 (formerly 136.212) and (MATH 3132 or MATH 3100 (formerly 136.310) and MECH 2222(formerly MECH 2220 or 025.222).

MECH 4532 Advanced Strength of Materials Cr.Hrs. 4
Stress and strain in three dimensions; thick walled cylinders, beams of elastic foundations, unsymmetrical bending and sheet-stringer construction, curved beams. Additional topics such as the analysis of fibre-composite material, techniques in experimental stress analysis and studies in metallics fatigue may be presented prerequisite: MECH 3502 (formerly MECH 3500 or 025.350). Not to be held for credit with MECH 4530 or 025.453.

MECH 4550 Noise Control Cr.Hrs. 4
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. Not to be held for credit with the former 025.455.

MECH 4560 Selected Topics in Fluid Mechanics 4M Cr.Hrs. 4
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 (or MATH 3100 or 136.310), and MECH 3490 (025.349). Not to be held with the former 006.360.

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. Not to be held for credit with the former 025.462. Prerequisite: MECH 3542 (or 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. Not to be held for credit with the former 025.465. Prerequisites: MECH 3482 (orMECH 212 or 025.212) and MECH 3502 (or MECH 3500 or 025.350).

MECH 4672 Advanced Mechanism Design Cr.Hrs. 4
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 mechanism; cognate linkages. Kinetic synthesis tasks function generation, path generation and motion generation. Prerequisite: MECH 3482 (formerly MECH 2120 or 025.212). Not to be held for credit with MECH 4670 or the former 025.467.

MECH 4680 Energy Conservation and Utilization Cr.Hrs. 4
Energy supply and demand, advanced thermodynamic cycles, conventional energy sources, alternative energy, conservation of energy, environmental considerations. Not to be held for credit with the former 025.468. Prerequisite: MECH 2202 (formerly MECH 2200 pr 025.220)

MECH 4690 Topics in Heat Transfer and Energy Cr.Hrs. 3
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. Not to be held for credit with the former 025.469. Prerequisite: MECH 3460 (or MECH 3470) (or 025.347).

MECH 4692 Renewable Energy Cr.Hrs. 4
Introduction to renewable energy systems, current and future global energy issues and the need for renewable energy applications, and distributed renewable energy generation. Renewable energy systems that will be considered are; solar heat, solar PV, biomass heat and power, hydro power, and wind power. Students will develop simple numerical models of renewable energy systems. Prerequisites MECH 2202 (formerly MECH 2200 or 025.220) and MECH 2262 (formerly MECH 2260 or 025.226). Pre- or Co requisite; MECH 3460 (formerly MECH 3470 or 025.347)

MECH 4694 Advanced Topics in Heat Transfer Cr.Hrs. 4
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 3460 (or MECH 3470 or 025.347). Not to be held for credit with MECH 4690 or the former 025.469.

MECH 4702 Design of Thermal Systems Cr.Hrs. 4
Modeling of thermal systems; system simulation; design applications of optimization methods: Lagrange multipliers, search methods, and dynamic geometric and linear programming. Prerequisite: MECH 2202 (or MECH 2200 or 025.220). Not to be held for credit with MECH 4700 or the former 025.470.

MECH 4812 Automotive Engineering Cr.Hrs. 4
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 3502 (formerly MECH 3500 or 025.350). Pre or Corequisite: MECH 3420 (or 025.342). Not to be held for credit with MECH 4810 or the former 025.481.

MECH 4822 Numerical Heat Transfer in Fluid Flow Cr.Hrs. 4
General conservation equations; specific forms of the conservation equations and energy equations; finite difference methods; one dimensional steady problems' one dimensional unsteady problems' two dimensional steady problems; two dimensional; unsteady problems; convection, solution for the flow field. Prerequisite: MATH 3132 (or MATH 3100) (or 136.310), MATH 2120 (or 136.212), MECH 3460 (or MECH 3470 or 025.347) and MECH 3492 (or MECH 3490 or 025.349). Not to be held for credit with MECH 4820 or the former 025.482.

MECH 4860 Engineering Design Cr.Hrs. 5
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. Not to be held with the former 024.101 or 025.486. Prerequisite: ENG 2010 (or 130.201).

MECH 4870 Fracture and Failure of Engineering Materials Cr.Hrs. 4
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. Not to be held with the former 025.487. Prerequisite: MECH 3542 (or MECH 3540 or 025.354).

MECH 4900 Mechatronics System Design Cr.Hrs. 4
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. Not to be held for credit with the former 025.490. Prerequisite: MECH 3430 (or 025.343)

MECH 4910 Manufacturing Co-operative Education Assignment 3 Cr.Hrs. 1
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. Not to be held for credit with the former 025.491. (Pass/Fail grade only.) Prerequisite: MECH 3920 (or 025.392).

MECH 4920 Manufacturing Co-operative Education Assignment 4 Cr.Hrs. 1

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. Not to be held for credit with the former 025.492. (Pass/Fail grade only.) Prerequisite: MECH 4910 (or 025.491)

MECH 4930 Mechanical Engineering Industry Internship (IIP) Cr.Hrs. 0
Supervised work experience normally of 12-16 months duration, concluded by a work report. Not to be held for credit with the former 025.493. (Pass/Fail grade only.)

MECH 4960 Manufacturing Process 1 Cr.Hrs. 4
This course will introduce additional or expanded versions of topics introduced in MECH 2290 (or 025.229), "Manufacturing Engineering". Topics will be selected from relationship of maufacturing, material selection to design, process improvement techniques; casting of metals and plymers; machining and cutting; polymers and composites; processing of powders, ceramics and glasses. Not to be held for credit with the former 025.496. Prerequisite: MECH 3542 (or MECH 2290 or 025.229).

MECH 4970 Manufacturing Process 2 Cr.Hrs. 4
This course will introduce additional or expanded versions of topics introduced in MECH 4960 (or 025.496), "Manufacturing Process 1", and building on course material form MECH 2290 (or 025.229). Topics will be selected from forming or metals; joining processes; rapid manufacturing; micro-electronics processing; surface engineering and fishing systems. Laboratory experience will be obtained on casting and rolling of metals and comparison of mechanical properties of the two routes. Not to be held for credit with the former 025.497. Prerquisite: 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. Comprensive experiments followed by submission of laboratory reports will be required. One lecture/week will be provided on issues related to experimental techniques. Prerequisites: MECH 3502 (or MECH 3500 or 025.350) and MECH 3420 (or 025.342). Not to be held with the former 024.101 or 025.498.

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 2202 (or MECH 2200 or 025.220). Pre or Corequisite: MECH 3460 (or MECH 3470 or 025.347)

4.12 Internationally Educated Engineers Qualification Program (IEEQ) – Post-Baccalaureate Diploma in Engineering

General Office: E3-573 EITC
Telephone: (204) 474 8961
Fax: (204) 474 7312
E-mail: ieeq@umanitoba.ca

Web: umanitoba.ca/engineering/ieeq

4.12.1 Introduction

The Faculty of Engineering offers the IEEQ Program, designed for international engineering graduates (IEGs) pursuing foreign credentials recognition with the Association of Professional Engineers and Geoscientists of Manitoba (APEGM, www.apegm.mb.ca), the regulatory body for engineering in Manitoba. Through the IEEQ Program, IEGs

- Meet requirements for academic qualification with APEGM and, upon successful completion of IEEQ program requirements, become registered with APEGM as a Member-in-Training; and,
- May earn a Post-Baccalaureate Diploma in Engineering from the University of Manitoba.

The provisions of Section 3: Academic Regulations apply to all students. In addition, the IEEQ Program has regulations and requirements that apply specifically to its students that may differ from the academic regulations in Section 3. Details on regulations and requirements not included below are provided to students upon their admission into the IEEQ program, and can be found on-line at umanitoba.ca/engineering/ieeq

4.12.2 Admission Requirements and Application Procedures

The IEEQ Program can accept applicants whose Confirmatory Exam assignments by APEGM correspond to one of the five accredited undergraduate engineering programs offered in the Faculty of Engineering.

Program entrance is normally in September of any given year. In order to be admitted to the IEEQ Program, the student must:

- Be an IEG with an earned undergraduate engineering degree obtained from a university outside of Canada;

- Have obtained the results of an Assessment of Academic Credentials from APEGM, with a result of five or fewer Confirmatory Exams assigned by APEGM in order to be considered academically qualified;

- Be a Permanent Resident or Canadian Citizen; and,

- Demonstrate English language proficiency at benchmark level 8 on the Canadian Language Benchmarks.

Application forms are available through the IEEQ office (telephone 204.474.8961 or email ieeq@UManitoba.ca) or on-line at umanitoba.ca/engineering/ieeq.

4.12.3 Program Requirements

The Post-Baccalaureate Diploma in Engineering consists of a minimum of 24 hours of coursework, subject to the following regulations:

CIVL 4050 Engineering Economics; and

ENG 4020 Professional Engineering Practice in Manitoba; and

ENG 4012 IEEQ Co-op Assignment; and

Technical courses are taken from the 3000 and 4000 level of the student's engineering discipline, and corresponding to the topic areas of Confirmatory Exams assigned by APEGM.

The total number of courses required in the IEEQ Program is generally as shown in the table below:

Number of Technical Confirmatory

Exams1 Assigned by APEGM	**Number of courses in IEEQ2**
One (1) or two (2)	5
Three (3)	7
Four (4)	9
Five (5)	11

Notes

1 Technical exams refer to exams assigned from Group A or Group B of the Discipline Examinations (see http://engineerscanada.ca/e/pu_syllabus_1.cfm). Technical Exams do not include exams assigned from the Basic Studies (BS) or Complementary Studies (CS) syllabi, such as 98-CS-1 Engineering Economics.

2 Including CIVL 4050 Engineering Economics, ENG 4010 Practicing Professional Engineering in Manitoba, and ENG 4012 IEEQ Co-op Assignment

If the courses required in IEEQ total less than 24 credit hours, the student may apply for a transfer of credit from the original earned undergraduate engineering degree (obtained outside of Canada).

All courses must be completed with a grade of C or better. Failed courses may only be repeated once, and are subject to the limits outlined in the IEEQ Student Handbook and on the IEEQ website.

4.12.4 Maximum Time Limits

Students can choose a full-time or part-time option in the IEEQ Program. Students will be asked to declare their status upon their acceptance to the IEEQ Program.

Number of courses in IEEQ	**Full-time**	**Part-time**
Seven (7) or fewer	1 yrs	2 yrs
More than seven (7)	2 yrs	3 yrs

SECTION 5: CO-OPERATIVE EDUCATION AND INDUSTRIAL INTERNSHIP PROGRAMS

Director: Carolyn Geddert, P.Eng., Engineer-in-Residence
Tel. 204 474 8948
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Email carolyn_geddert@umanitoba.ca

Cooperative Education Administrator: Megan Johnson
Office: E1-376 ETIC
Tel. 204 480 1069
Fax. 204 474 7676

The Faculty of Engineering offers a Co-operative education and Industry Internship Program (Co-op/IIP) designed to complement and enrich the academic program with work experience. The work terms provide students with practical experience, assistance in financing their education, and guidance for future career specialization.

A student in good academic standing, who will have successfully completed 58 credit hours of their academic program of study by the end of the session, may apply to participate in the Co-operative and Industry Internship Program. Applicants will be interviewed and approved by the Co-op/IIP staff and faculty advisors. Final acceptance into the program will be confirmed in writing by the Co-op/IIP office.

In addition to students following regular departmental programs, Internationally Educated Engineers Qualification (IEEQ) Program participants may also be approved for participation in Co-op/IIP upon written approval of the IEEQ Director.

Progress of all students through Co-op/IIP the program is dependent upon the student obtaining a job placement confirmed as appropriate by the Co-op/IIP office.

Upon acceptance, Engineering students enrol in the course ENG 4800, Engineering Cooperative Education Work Term 1 (and subsequently, ENG 4810, ENG 4820, ENG 4830, ENG 4840) for the specific work term of employment.

Students who are unable to maintain the standards of the Co-op/IIP will be transferred back into the regular program.

The course and grade requirements for completion of the Co-op/IIP 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/IIP students are evaluated in the same manner as regular students and all rules and regulations of the Faculty of Engineering apply.

Written reports must be completed at the end of each work term. Each successfully completed work term and its corresponding work term report receives a Pass/Fail grade and is rated at one credit hour. Graduates who successfully complete at least three work terms and the required work term reports will have the Co-operative Education Option acknowledged on their B.Sc. graduation parchment.

For more information regarding the Co-op/IIP requirements, please see the Co-op/IIP office.

CLAYTON H. RIDDELL FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES

Dean: Norman Halden
Associate Dean(s): Mary Benbow (Academic), David Barber (Research)
Campus Address/General Office: 440 Wallace Building
Telephone: (204) 474-7252
Fax: (204) 275-3147
Email Address: Faculty_Environment@umanitoba.ca

Website: umanitoba.ca/environment

Academic Staff:
Please refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources Academic Staff Academic Staff website

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

The Clayton H. Riddell Faculty of Environment, Earth, and Resources offers degree programs in Environmental Science, Environmental Studies, Geography, Physical Geography, Geological Sciences, Geology and Geophysics. All students are advised to examine their interests and future goals carefully to make appropriate program choices. Consultation with Riddell Faculty student advisors and/or department representatives is strongly encouraged.

1.1 Programs

Degree	Years to complete[3]	Total Credit Hours[3]
Geography		
Bachelor of Arts in Geography (General)[1]	3	90
Bachelor of Arts in Geography (Advanced)[1]	4	120
Bachelor of Arts in Geography (Honours)[1]	4	120
Physical Geography		
Bachelor of Science in Physical Geography (Major, Major Co-op)[1]	4	120
Bachelor of Science in Physical Geography (Honours, Honours Co-op)[1]	4	120
Environmental Science		
Bachelor of Environmental Science (General)[1]	3	90
Bachelor of Environmental Science (Major, Major Co-op)[1]	4	120
Bachelor of Environmental Science (Honours, Honours Co-op)[1]	4	120
Environmental Studies		
Bachelor of Environmental Studies (General)[1]	3	90
Bachelor of Environmental Studies (Major, Major Co-op)[1]	4	120
Bachelor of Environmental Studies (Honours, Honours Co-op)[1]	4	120
Geological Sciences		
Bachelor of Science in Geological Sciences (General)[1]	3	90
Geology		
Bachelor of Science in Geological Sciences – Geology (Major)[1]	4	120
Bachelor of Science in Geological Sciences – Geology (Honours)[2]	4	120
Geophysics		
Bachelor of Science in Geological Sciences – Geophysics (Major)[1]	4	121
Bachelor of Science in Geological Sciences – Geophysics (Honours)[2]	4	121

Footnotes:

[1]There is no time limit to complete the degree.

[2] There is an eight-year time limit to complete the degree.

[3] This includes one year (30 credit hours) of study in University 1.

1.2 Available Majors, Minors, Focus Areas, Streams and Option

Available Majors: Environmental Science, Environmental Studies, Geography, Geological Sciences, Geology, Geophysics, and Physical Geography.

Available Minors: Environmental Science, Environmental Studies, Geography, Geological Sciences and Physical Geography.

Focus Areas (Environmental Studies and Environmental Science): Conservation & Biodiversity, Environmental Assessment, Environmental Chemistry & Biogeochemistry, Environmental Health, Environmental Toxicology, Land Systems, Natural Resource Management, Northern Studies, Policy & Law, Stewardship, Sustainable Building, Sustainable Development, Water Resources, Wildlife Management, and Individualized Study.

Streams (Physical Geography): Atmosphere and Hydrological Sciences, General Physical Geography and Geomatics.

Canadian Studies GEOG 2900, GEOG 2570, GEOG 3480 and GEOG 3900 may be used in combination with the BA Honours, BA Advanced, and Minor programs.

SECTION 2: ADMISSION TO THE CLAYTON H. RIDDELL FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES

2.1 Admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources

The following is a summary of the admission requirements. All admission requirements, as well as application deadline dates and forms, are included in the Clayton H. Riddell Faculty of Environment, Earth, and Resources 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 (umanitoba.ca/admissions).

Other than Direct Entry students, completion of a minimum of 24 credit hours of university level courses is required.

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.

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: Department of Geological Sciences: Bachelor of Science in Geological Sciences - Geology, Geophysics, and General Degree Regulations and Program Descriptions.

Students must apply to be considered eligible for admission to the Riddell Faculty. Application information is available from the Admissions Office, Enrolment Services, 424 University Centre. This information is also available in the Riddell Faculty Dean's Office, 440 Wallace Building, and is posted on the University's website (umanitoba.ca/admissions). Click to apply for Admission.

2.2 Direct Entry from Highschool

Eligible students may apply to enter the Clayton H. Riddell Faculty of Environment, Earth, and Resources upon completion of a high school diploma. Eligible students must meet the criteria listed below:

- Manitoba high school graduation, with five full credits at the Grade 12 level, in courses designated S (Specialized), G (General), or U (Dual-Credit University), or the equivalent standard from other provinces or countries will be considered.
- Must have a minimum 85% average over the following, with no less than a 60% in each course:
    - English 40S,
    - Mathematics 40S (Pre-calculus or Applied),
    - And one of Social Studies 40S, Biology 40S, Chemistry 40S, Physics 40S or one "Designated Course 40S' including Economics, Law, Psychology and Current Topics in First Nations, Métis and Inuit (FNMI) Studies.

Students admitted to the Faculty via the Direct Entry route will select a degree program after meeting with a Student Advisor. Students who have neglected to identify a program of choice by the end of the Fall term will be registered in the B.A. Geography (General) degree program.

2.3 Admission from University 1

Most students 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.

2.4 Transfer Students

Students applying for admission from other recognized universities or colleges are called 'transfer students'. For the University of Manitoba's general policy on transfer of credit and advanced standing, refer to the Admissions website: umanitoba.ca/admissions.

To be eligible for admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources, transfer students must have completed no fewer than 24 credit hours of university level course work and satisfied the minimum performance requirements of the intended degree program. 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 the Riddell Faculty should consider applying to Extended Education as their alternative choice.

Students on academic suspension as a result of work completed at another post-secondary institution or another Faculty 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

The University of Manitoba assesses transfer credit as a part of the application process. Assessment of prior course work for admissions or transfer credit will only take place after your application has been submitted. The University of Manitoba transfer credit equivalencies database is now available as a

reference tool to look up current course assessments. Please take note of the guidelines outlined on the database access page as these course assessments are subject to change.

See the Admissions section of this 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 of credit. Students should contact a Riddell Faculty student advisor regarding transfer credit.

University College of the North and the University of Manitoba Articulation Agreement NRM Technology Diploma (UCN)/ Bachelor of Environmental Science (U of M)

Graduates of the 2 Year Natural Resource Management Technology Diploma from University College of the North may apply for admission into the Bachelor of Environmental Science program in the Clayton H. Riddell Faculty of Environment, Earth, and Resources at the University of Manitoba. Successful applicants will be granted 60 credit hours on admission towards the completion of the 120 credit hour Bachelor of Environmental Science degree.

Students should contact a Riddell Faculty student advisor regarding more information.

2.5 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 Registrar or appropriate Dean of her/his home institution. Certain restrictions may be placed on the kind and number of courses in which a student will be allowed to register. Visiting students may wish to contact a Riddell Faculty student advisor in the Faculty Dean's Office for further information.

2.6 Second Degree Students

Students possessing a first degree from a recognized university program with a minimum Cumulative Grade Point Average of 2.00 on their first degree may be eligible for admission as a Second Degree student provided they have completed the minimum coursework entrance requirements for their intended degree program.

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 University Written English and Mathematics requirement. See a Riddell Faculty student advisor for specific information on degree requirements following completion of the first degree.

2.7 Special Students

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.

2.8 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 Riddell Faculty Dean's 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 AND SERVICES APPLICABLE TO ALL PROGRAMS IN THE CLAYTON H. RIDDELL FACULTY OF ENVIRONMENT, EARTH, AND RESOURCES

3.1 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 a Riddell Faculty student advisor.

3.2 Available Minors in Departments and Faculties

Students in the Bachelor of Environmental Science, Bachelor of Environmental Studies, Bachelor of Science in Geological Sciences (Geology and Geophysics) and Bachelor of Science in Physical Geography degree programs 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. For example: a student in B.A. Geography program may not declare a minor in physical geography; a student in Environmental Science program may not declare a minor in Environmental Studies, etc.. Students can declare only one minor. For specific requirements to complete a Minor, please refer to the relevant Faculty/School's chapter in the Academic Calendar & Catalog.

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. Students in the B.A. Geography (Honours) may not declare a Minor.

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.

Students planning to enrol in the I.H. Asper School of Business [Management Minor] must consult a Riddell Faculty student advisor as enrolment in this minor program is limited. The Management minor consists of any 18 credit hours in courses offered by the Asper School of Business.

3.3 University Written English and Mathematics Requirement

Students are required to complete the University Written English and Mathematics requirement as outlined in the General Academic Regulations, Residence and Written English and Mathematics Requirements in this Calendar. It is recommended that students complete these requirements while in Year 1 of their program.

A list of all courses that satisfy the Written English and Mathematics requirements can be found in 3. Approved English and Mathematics Courses of this Calendar. Course numbers of designated written English courses are marked with a 'W' and designated Mathematics courses are marked with an 'M'.

Students may wish to consider GEOL 1410W Natural Disasters and Global Change (3), GEOG 2900W Geography of Canadian Prairie Landscapes (3), GEOL 3130W Communication Methods in the Geological Sciences (3), GEOG 3480W Canadian Problems (3), GEOG 3580W Landforms (6), GEOG 3900W Geography of Manitoba (3), and/or GEOG 3810M Quantitative Research Methods

in Geography (3) to satisfy these requirements. In addition, the Department of Environment and Geography offers several courses annually through Distance Education that satisfy the 'W' requirement.

3.4 Faculty of Arts and Faculty of Science Courses Requirements

Students are required to take 6 credit hours from the Faculty of Arts and 6 credit hours from the Faculty of Science.

For course subjects taught by the Faculty of Science refer to the Chapter Faculty of Science for a complete listing.

For course subjects taught by the Faculty of Arts refer to the Chapter Faculty of Arts for a complete listing.

3.5 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. Students are required to complete their program in its entirety as outlined in the Calendar effective upon the point of admission to the Faculty and program.

3.6 Prerequisite and Corequisite Courses

Definitions for prerequisite and corequisite courses are outlined in the Chapter, General Academic Regulations, Course Identification of this Calendar.

3.7 Course Availability

All courses listed in this Calendar are not offered every year. The course(s) offered for the current academic term are published in the Class Schedule.

The Department of Environment and Geography offers 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 2010 Field Topics in Environment (1.5), ENVR 2020 Extended Field Topics in Environment (3), ENVR 3000 Multidisciplinary Topics in Environmental Science (3), ENVR 3010 Field Topics in Environmental Science 1 (1.5), ENVR 3020 Extended Field Topics in Environmental Science 1 (3), ENVR 4000 Multidisciplinary Topics in Environmental Science (3), ENVR 4010 Field Topics in Environmental Science 2 (1.5), and ENVR 4020 Extended Field Topics in Environmental Science 2 (3).

The Department of Geological Sciences offers a course under the following course number: GEOL 4270 Advanced Studies in Earth Sciences (3). Students are referred to the Class Schedule 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 regulations (see General Academic Regulations, Academic Evaluation, 1.2 Repeating a Course as described in this Calendar) and the Riddell Faculty degree regulations regarding 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 calculation of the cumulative and degree Grade Point Average, unless otherwise stipulated by the degree program.

Students who wish to repeat a course must contact a Riddell Faculty student advisor for approval prior to registration and complete the Request to Repeat a Course form available on the Riddell Faculty web page (umanitoba.ca/environment/undergraduate).

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 courses stated for specific programs.

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. No withdrawals will be permitted after the deadlines posted in the Academic Schedule.

There is no limit on the number of Voluntary Withdrawal hours a student can accumulate.

3.10 Authorized Withdrawals

Students who have valid and documented reasons for withdrawal, such as medical illness or compassionate circumstances, may be authorized to withdraw without penalty. Requests for authorized withdrawals must be submitted in writing to a Riddell Faculty student advisor. The Office of Student Advocacy located at 519 University Centre (474-7423, student_advocacy@umanitoba.ca) is available to provide information and assistance.

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 for further information:

5: Bachelor of Arts in Geography Degree Regulations and Program Description and Courses Offered by

6: Bachelor of Science in Physical Geography Degree Regulations and Program Description and Courses Offered by

7: Bachelor of Environmental Science and Bachelor of Environmental Studies Degree Regulations and Program Descriptions and Courses Offered by

8: Department of Geological Sciences: Bachelor of Science in Geological Sciences - Geology, Geophysics, and General Degree Regulations and Program Descriptions and Courses Offered by

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 (Letter of 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

A student's eligibility for the Dean's Honour List designation is evaluated after each term.

Students enrolled in a minimum of 12 credit hours of course work 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. The Dean's Honour List designation will appear on the student's transcript.

3.14 Academic Warning, Probation and Academic Suspension (Academic Standing)

Students shall be evaluated after each academic term in which they receive a final grade in a minimum of 4 credit hours, with the assessment being based on the resulting Degree Grade Point Average (DGPA). This assessment will determine a student's academic standing to be: faculty minimum met, academic warning, on probation, suspension warning, or academic suspension.

Faculty Minimum Met

To be in good standing, a student must achieve a 2.00 Degree Grade Point Average at each point of assessment and the notation 'Faculty Minimum Met' will be recorded on the student's transcript. Note: For students completing the Bachelor of Arts in Geography, Faculty Minimum Met is based on a Degree Standards Table found in section 5.2.2.

Degree programs may define additional performance requirements for continuation and graduation. Students are referred to the appropriate section of this Chapter for further details as follows:

Section 5.3: Bachelor of Arts in Geography.

Section 6.3: Bachelor of Science in Physical Geography.

Section 7.3: Bachelor of Environmental Science and Bachelor of Environmental Studies.

Section 8.3.1: Bachelor of Science in Geological Sciences - Major.

Section 8.3.2: Bachelor of Science in Geological Sciences - Honours.

Section 8.3.3: Bachelor of Science in Geological Sciences - General.

Academic Warning

Students will receive an academic warning if, at the point of assessment following a term, s/he fails to achieve the required minimum performance level. The notation 'Academic Warning' will be recorded on the student's transcript.

On Probation

Those who fail to meet the required minimum performance level following an Academic Warning assessment will be placed on probation. The notation 'On Probation' will be recorded on the student's transcript.

Suspension Warning

Those who fail to meet the required minimum performance level following an On Probation assessment will be placed on Suspension Warning. The notation, 'Suspension Warning' will be recorded on the student's transcript.

Academic Suspension

Those who fail to meet the required minimum performance level following a Suspension Warning assessment will be placed on Academic Suspension for One Year. The notation, 'Academic Suspension for One Year' will be recorded on the student's transcript. 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 in the following two terms after the probationary assessment (see a Riddell 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 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 of credit up to 30 credit hours in courses in which a minimum grade of 'C' was achieved.

Students should consult with a Riddell Faculty student advisor for further assistance in clearing their academic warning, on probation, suspension warning, or academic suspension academic standing.

3.15 Academic Misconduct

Academic misconduct 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 misconduct should refer to the regulations in the ChapterGeneral Academic Regulations, Academic Integrity: Plagiarism and Cheating in this Calendar and consult with your professor or instructor.

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 incapacity or compassionate reasons should contact a student advisor in the Clayton H. Riddell Faculty of Environment, Earth, and Resources. The appropriate documentation (i.e. a medical certificate or otherwise appropriate documentation certifying the reason for the missed exam) will be required. Students are reminded to contact their home faculty (and not the faculty through which the course is offered). Please see the missed exam information on the faculty website. Refer to the Chapter General Academic Regulations, Academic Evaluation: Deferred and Supplemental Examinations in this Calendar for further information.

A complete copy of the Deferred and Supplemental Examinations Procedures is available at http://umanitoba.ca/admin/governance/governing_documents/academic/deferred_and_supplemental_examinations_procedures.html

3.18 Challenge for Credit

Some departments at the University of Manitoba offer courses by means of challenge of credit. Since the courses offered in this manner may vary from year to year, any student wishing to challenge a course for credit should contact a Riddell Faculty student advisor in the Clayton H. Riddell Faculty of

Environment, Earth, and Resources general office. The Academic Schedule of this Calendar contains the relevant registration deadlines dates appropriate to challenge for credit.

3.19 Appeals Involving Academic Regulations

The Student Appeals and Discipline Committee 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 Student Appeals and Discipline Committee, General Office, Clayton H. Riddell Faculty of Environment, Earth, and Resources, 440 Wallace Building.

3.20 Student Advisor Office Hours

Monday through Friday: 9:00 a.m. to 4:00 p.m.

Email: Faculty_Environment@umanitoba.ca

3.21 Student Responsibility

It is your responsibility to be familiar with the regulations, courses, 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 a Riddell Faculty student advisor. Since a complete graduation check is not done until you have declared your intention to graduate, you are encouraged to make an appointment with a Riddell 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.

Please contact a Riddell Faculty student advisor about declaring your graduation date.

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 Riddell Faculty academic regulations and registration procedures as they are described in this calendar.

3.22 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 wish to exceed the normal load you may apply in-person at the Faculty Dean's Office, or complete the Application to Exceed Credit Hours form available on the Riddell Faculty web page (umanitoba.ca/environment/undergraduate).

3.23 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 for Fall and Winter terms.

3.24 Registration

Student Responsibilities

Know your registration time. Registration information is available on the Registrar's website under Registration.

It is the students' responsibility to ensure that all pre-registration approvals are completed and that all pre-requisites and program approval hold have been removed prior to the registration access period. Most students who do not complete this requirement will experience a program approval hold when they access Aurora Student.

Steps to confirming your registration access:

1. Review your program requirements and if required, complete yourAdvance/Major/Honours Program Approval form. The Program Approval form is available at the Riddell Faculty webpage: umanitoba.ca/environment/undergraduate. The Program Approval Hold will only be removed when your course selection has been approved by the student advisor.

Students completing the Bachelor of Arts in Geography (General) or the Bachelor of Science in Geological Sciences (General) do NOT need program approval prior to registration.

2. Obtain all required departmental permission that pertain to waivers for pre-requisites, space, and timetable conflicts.

3. Complete your registration through Aurora Student.

4. Students interested in transferring between degree programs (i.e. switching from a Major to Honours, or from Major to Major Coop) must acquire the approval and submit to the student advisor in 440 Wallace Building.

5. Declaring a graduation date: Students are encouraged to declare a grad date as early as possible, and to come to the Dean's Office, 440 Wallace, to have a Riddell Faculty student advisor review your graduation requirements.

What Aurora Student cannot do:

Aurora Student will not check degree requirements. You are responsible for knowing the requirements of your degree. Consult a Riddell 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 an Auditor, or as Challenge for Credit, you must add this course in-person in the Riddell Faculty Dean's Office within the normal deadlines for such activity.

Aurora Student will not prevent a student from registering in two (or more) courses that are designated not to be held for credit with one another. It is the student's responsibility to ensure that they are not registered for courses that are ineligible to be held for credit with one another. Read the course descriptions carefully. If you are unsure about a course you have selected, check with a Riddell Faculty student advisor prior to the revision deadline. No academic concessions will be granted in this regard.

Have you been away for a While?

Students who have been away from the Riddell Faculty for more than a year cannot use Aurora Student until they have consulted a Riddell Faculty student advisor. Students who have attended another post-secondary institution since their last registration at the University of Manitoba must normally re-apply for admission.

SECTION 4: DEPARTMENT OF ENVIRONMENT AND GEOGRAPHY

Head: Michael Campbell
Campus Address/General Office: 220 Sinnott Building
Telephone: (204) 474-9451
Fax: (204) 474-7699
Email Address:
environment_geography@umanitoba.ca

Website: umanitoba.ca/environment/departments/geography

4.1 Academic Staff

Please refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources Academic Staff website.

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 systems. Environmental Studies applies the theory and practice of group and organizational communication, understanding public policies and programs that underscore environmental concerns, and the need to integrate diverse social, institutional, political and legal considerations inherent in attaining environmental objectives. (Students have the opportunity to focus advanced studies in one of several areas, defined through consultation with a Riddell 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, geomatics, 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.

4.3 Cooperative Education Option

A Cooperative Education Option is available to students registered in either the Major or Honours degree programs in Environmental Science, Environmental Studies, or 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 a Riddell 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 a Riddell Faculty student advisor.

Students are required to register in the appropriate Coop courses and pay course fees prior to beginning their placement.

For more information, please visit the Riddell Faculty Co-operative Education Program webpage.

SECTION 5: BACHELOR OF ARTS IN GEOGRAPHY DEGREE REGULATIONS, PROGRAM DESCRIPTION AND COURSES OFFERED BY

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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 the Faculty of Education chapter of this Calendar).** The General degree program may be completed entirely by Distance Education (see the Distance Education Guide for further details). The Advanced degree program in Geography provides opportunities for students who desire a broad geographical education along

with a reasonable degree of specialization in a particular field of Geography. Students planning a professional career or a high degree of specialization in Geography are strongly advised to enter the Honours degree program. The Honours degree demands the highest scholastic performance of all programs available. Students are strongly advised to enter an Honours degree program with their admission to the Bachelor of Arts in Geography. Consultation with the department head is also advised.

Structure of the B.A. Geography Degree Program

The structure of the B.A. Geography degree is summarized as follows:

A **Geography (Major**) component that varies in credit hour requirement depending on the degree program; 30 credit hours in the General; 51 credit hours in the Advanced; and 69 credit hours in the Honours. Students are not permitted to declare a second major.

Advanced and General degree students must complete a **Minor** in a subject field that is different than that of the declared major, and may be chosen from one of the other programs in the Clayton H. Riddell Faculty of Environment, Earth, and Resources. Students in the B.A. Geography are not permitted to complete a Minor in Physical Geography. The Minor requirements are described in section 3.2 of this Chapter. Contact a Riddell Faculty student advisor in the Faculty Dean's Office for further information about eligible Minors.

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 offered by the Faculty of Science.

Humanities

For course subjects taught by the Faculty of Arts that can be used towards the Humanities requirement, refer to the Chapter for the Faculty of Arts, Additional Faculty Regulations and Policies section. Music (i.e. all courses listed for Advanced Major and Minor programs except ensemble courses) and History of Art (i.e. all courses listed with course prefix FAAH) may also be eligible courses. Students should see a Riddell Faculty student advisor for further information.

Note: Students can satisfy the requirement for a Humanity, and/or Arts, or Science and at the same time satisfy the Written English or Mathematics requirement and one of the 5 subject fields required with the same 6 credit hours of courses.

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 Riddell 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 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 Riddell 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 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 Riddell 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 courses.

5.2 Advanced Entry 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 entrance requirements defined in 5.2.1. To enter the Advanced or Honours degree program, a student must consult with a Riddell Faculty student advisor in the Faculty Dean's Office.

5.2.1 Advanced Entry Entrance Requirements

B.A. Geography Degree Program	Minimim Number of Credit Hours	Minimum Degree GPA	Maximum Credit Hours of Failed Courses	Additional Entrance Requirements
General	24	2.001	48	grade of 'C' in each of GEOG 1280 and GEOG 1290[2]
Advanced	24	2.00	18	grade of 'C' in each of GEOG 1280 and GEOG 1290[2]
Honours	24	3.00	18	grade of 'B' in each of GEOG 1280 and GEOG 1290[2] or a GPA of 3.00 or better in all Geography courses

[1]Minimum Grade Point Average for entrance into the General degree program is determined using the Degree Standards Table in 5.2.2.

[2]GEOG 1281 and GEOG 1291 may be used in lieu of GEOG 1280 and GEOG 1290, respectively.

5.2.2 Grade Point Average Calculation for Entrance 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 Riddell Faculty as well as evaluate a student's performance after each term.

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 Riddell 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 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 failed courses. Prior to each registration, Advanced and Honours degree students must have their course selections approved by a Riddell Faculty student advisor. Students may not 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 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 Advanced and General degrees respectively. Students who do not meet the minimum performance requirements for the General degree program will receive an academic warning, be placed on probation or academic suspension as defined in section 3.14 Academic Warning, Probation and Academic Suspension (Academic Standing) 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 a Riddell 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. Similarly, students withdrawn from the Advanced program will have the notation, 'Required to Withdraw from the Advanced Program', recorded on their transcript.

5.3.1 Minimum Performance Requirements for Continuation and Graduation

	Minimum Performance Requirements		
Degree Program (Cr. Hrs.)	Minimum Degree Grade Point Average (GPA)	Maximum Cr. Hrs. Failed Courses	Minimum Degree GPA in Geography Courses[3]
General[2,3] (90)	2.00; see 5.2.2 for continuation	48	2.00
Advanced[1,2,3] (120)	2.00	18	2.00
Honours[2,1] (120)	3.00	18	3.00

	Additional Graduation Requirements	
Degree Program (Cr. Hrs.)	Geography Courses Cr. Hr. Requirement (see 5.5 also)	Residence Requirement (Cr. Hrs.) (see section 3.11 also)
General[2,3] (90)	30	48 cr. hrs. total or the final 30 cr. hrs.
Advanced[1,2,3] (120)	51	60
Honours[2,1] (120)	69	60

[1]The courses required in this program will satisfy the university mathematics requirement.

[2]Within the first 60 credit hours of courses, 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 Graduating with Distinction or First Class Honours

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 and provided a minimum of 60 credit hours of acceptable course work 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 and provided a minimum of 90 credit hours of acceptable course work 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 and provided a minimum of 90 credit hours of acceptable course work is completed at the University of Manitoba.

5.5 B.A. Geography Program Chart

5.5 B.A. Geography[6]			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS[1] 120 CREDIT HOURS (69 credit hours in Geography)			
GEOG 1280 and GEOG 1290 Plus 6 credit hours of Humanities[7] 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 3810 Plus 18 credit hours in Geography courses numbered at the 2000- or 3000-level[4] 9 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 within the first 60 credit hours of courses.			

ADVANCED[1] 120 CREDIT HOURS (51 credit hours in Geography)			
GEOG 1280 and GEOG 1290 Plus 6 credit hours of Humanities[7] 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 3810 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 within the first 60 credit hours of courses.			
GENERAL[2] 90 CREDIT HOURS (30 credit hours in Geography)			
GEOG 1280 and GEOG 1290 Plus 6 credit hours of Humanities[7] 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 within the first 60 credit hours of courses. 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 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]Entrance into the Honours and Advanced degree programs is summarized in 5.2.1. The courses required in this program will satisfy the University 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 Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number "1" (e.g. GEOG 1281).
[7]May also satisfy the Faculty of Arts requirement.

Notes:
To fulfil prerequisite requirements, a grade of "C" must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

Students should review the current course topics available through GEOG 3740 (6), GEOG 3750 (3), GEOG 3760 (6), GEOG 3770 (3) and GEOG 4670 (3). Also, all courses are not offered every year or every term. The course schedule for the current academic term is available from the Class Schedule.

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-level are arranged into Systematics (PS, HS and TS) and Area Studies (A). B.A. Geography students may specialize in the Physical Geography (PS); 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 a Riddell 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 2510, GEOG 2520, and GEOG 2530; and 3000-level courses from GEOG 3200, GEOG 3320, GEOG 3460, GEOG 3480W, GEOG 3520, GEOG 3540, GEOG 3580W, GEOG 3810M, GEOG 3710, GEOG 3720 and GEOG 3800.

Courses offered for the current academic term are published in the Class Schedule and can be searched by Attribute Type. To find Systematic (HS, PS, TS) courses search: 'Geography: Human', 'Geography: Physical' or 'Geography: Techniques'. To find Area Studies (A) courses search: 'Geography: Area Studies'.

5.7 Environment, Earth, and Resources Course Descriptions

EER 1000 Earth: A User's Guide Cr.Hrs. 3
This course will present a multi-disciplinary introduction to the Planet Earth as both the source of essential resources and as the site of resulting negative impacts. Focus in the course will be provided by addressing important and current topics, case studies, and concepts that the well-educated citizen of the Earth should understand and will include natural and human-induced processes within a broad range of spatial and temporal scales.

5.8 Geography Course Descriptions 1000 level

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 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 or GEOG 1200 or GEOG 1201.

5.8 Geography Course Descriptions-2000 Level

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 from 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 2250 Introduction to Geographic Information Systems (TS) Cr.Hrs. 3
(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 from Geography, Geology or Environment courses numbered at the 1000 level, or permission of department head.

GEOG 2272 Natural Hazards (PS) Cr.Hrs. 3
Environmental hazards to human settlement and economy are examined with particular attention to meteorological, soil erosion, mass wasting, earthquake and volcanic phenomena. Not to be held with GEOG 2440. Prerequisite: a grade of C or better in one of GEOG 1290, GEOL 1340, or GEOL 1410,GEOG 1291 (053.129), GEOG 1200, GEOG 1201 (053.120),(007.134) GEOL 1360 (007.136) 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 2330 Place, Populations and Mobility: Geographic Perspectives (HS) Cr.Hrs. 3
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. Not to be held with GEOG 2480 (053.248). 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 2372 Geography of Tourism (HS) Cr.Hrs. 3
This course examines the social, economic and environmental dimensions of tourism and recreation. Historical and contemporary experiences from around the world will be studied. Not to be held with GEOG 2410 (053.241). Prerequisite: a grade of C or better in (GEOG 1200) or GEOG 1280, 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. Not to be held with (053.247). 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 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 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 1290 or GEOG 1291 (053.129) (C), or permission of department head.

GEOG 2570 Geography of Canada (A) Cr.Hrs. 3
(Formerly 053.257) A regional study of Canada in which the major regions of Canada are studied with respect to geographical patterns of their physical environment, settlement, culture, economic activity, and land use. 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 in which the major regions of the United States are studied with respect to geographical patterns of their physical environment, settlement, culture, economic activity, and land use. 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 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 2900 Geography of Canadian Prairie Landscapes (A) Cr.Hrs. 3
This course introduces students to the various geographical themes, concepts and processes within the context of the natural and anthropogenic development of the Canadian prairie region. It traces the evolution of the prairie landscape. It will focus on academic writing in the discipline. Not to be held with GEOG 2450. 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.

5.8 Geography Course Descriptions-3000 Level

GEOG 3200 Introduction to Remote Sensing (TS) Cr.Hrs. 3
(Lab Required) (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 1050 or PHYS 1051 (016.105) (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 3330 Population Issues in the Developing World Cr.Hrs. 3
This course examines issues and trends in population growth, change, and movement in the global south dominated by developing countries. Prerequisites: a grade of C or better in GEOG 2330 or SOC 2480, or (GEOG 2480), or permission of department head.

GEOG 3340 Migration and Mobility in a Globalized World Cr.Hrs. 3
This course surveys the geographic dimensions of migration and mobility of populations, with emphasis of contemporary events. Prerequisites: a grade of C or better in GEOG 2330 or (GEOG 2480), or permission of department head.

GEOG 3390 Introduction to Climate Change and Its Causes (PS) Cr.Hrs. 3
The primary objective of this course is to provide students with a general understanding of the physical and astronomical factors that drive global climate change. Focus will be given to current and future climate change in the context of observations and modeling. Not to be held with GEOG 3610. Prerequisite: a minimum of three credit hours from Geography or Environment courses, or permission of department head.

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 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 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 3640 Social Geography of the Environment (HS) Cr.Hrs. 3
This course provides an intermediate-level assessment of current geographical approaches to society and environment. Students are exposed to critical realist, social constructionist, Marxist, feminist and post-Colonial traditions as they are applied to environmental and social justice, globalization and public health. It includes discussion and a community-based learning project. Prerequisite: a grade of C or better in (GEOG 1200) or GEOG 1280, 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 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 3810 Quantitative Research Methods in Geography (TS) Cr.Hrs. 3
This course focuses on the quantitative analytical methods available for the interpretation on physical and human geography applications. Not to be held with GEOG 3680 (053.368). Prerequisite: GEOG 2530 (053.253) or STAT 1000 or STAT 1001 (005.100), or permission of department head.

GEOG 3850 Sustainable Manitoba (A) Cr.Hrs. 3
This course approaches local sustainability issues from an interdisciplinary perspective. By looking at the ecological, social and economic aspects from a variety of discipline perspectives, a fuller understanding of sustainability is achieved. The broad range of perspectives is achieved through participation of guest speakers from other faculties and outside of the university as well as excursion outside the classroom. Not to be held with ENVR 3850. Prerequisite: 60 credit hours of course work, or permission of department head.

GEOG 3860 Animal Geographies (HS) Cr.Hrs. 3
This course presents a variety of topics concerning the interactions between humans and animals, how humans influence and use animals, and the many roles animals play in human lives and environments. Animal Geographies lies at a meeting point between physical and human geography, where we must consider the blurring boundaries between what it means to be animal/human, and the implications of how animals are used and represented. A wide variety of perspectives, beliefs, and points of view will be explored. Prerequisite: Permission of department head.

GEOG 3870 Food Geographies Cr.Hrs. 3
This course provides a critical examination of the geographies of food at a variety of scales, from the body to the global. The course focuses on themes in three interconnected areas: 1) food production and the global food system from farm to plate including agribusiness and alternative food production and distribution models; 2) food consumption habits and beliefs and foodways as geographically contingent material culture; and 3) food (in) security and its relationship to health and wellbeing. This course is cross-listed as HNSC 3630. Prerequisite: a grade of C or better in GEOG 1280 or GEOG 1281 or HNSC 1200 or (GEOG 1200), or permission of department head.

GEOG 3900 Geography of Manitoba (A) Cr.Hrs. 3
A regional study of Manitoba emphasizing the unique character and diversity of Manitoba's cultural landscapes. The historical, social, cultural, economic and political distinctiveness along with the impact of European settlement and aboriginal displacement will be discussed. Prerequisite: a grade of C or better in GEOG 2900, or permission of department head.

5.8 Geography Course Descriptions-4000 Level

GEOG 4050 Ecosystem Management Cr.Hrs. 3
This course will provide students with an understanding of the practical applications of ecological science, environmental policy, and resource management approaches in the large-scale planning of landscapes. The course will review ecological principles and trace the historical development of the ecosystem concept. Comparisons are made to other possible environmental management approaches. The synthesis of major elements and concepts will be reinforced through case studies on the Manitoba landscape, with an emphasis on practical learning by students through field seminars and group discussions. Not to be held with ENVR 4050. Prerequisite: Permission of department head.

GEOG 4060 Biogeography Cr.Hrs. 3
This course will provide students with a general understanding of the historical, ecological, analytical, and conservation aspects of biogeography. The course will also have a dual focus on the principles and concepts of reasons for the distribution of plants and animals worldwide, as well as incorporating discussion on as many local (Manitoba, Canada, North America) examples as possible. Not to be held with ENVR 4060. Prerequisite: Permission of department head.

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 department head.

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 4280 Gender and the Human Environment Cr.Hrs. 3
This upper-level seminar course will develop in students a depth and breadth of understanding appropriate to the honours undergraduate/graduate level in the area of gender geography scholarship. From critical social science theoretical positions, this course asks students to examine what we can learn about how humans live on the earth if we see them as gendered. Just as we may also understand humans and their interactions in and with spaces, places and environments through the lenses of race, ethnicity, class, age and/or combinations of these categories with gender. Prerequisite: a grade of C or better in a minimum of six credit hours in Geography, or 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 4330 Concepts in Atmospheric Modeling Cr.Hrs. 3
This course will primarily focus on numerical modeling applications and techniques of the Earth's atmosphere with an emphasis on weather prediction. This includes understanding basic modeling terminology, numerical schemes, structure of models, types of models, what is required to run a model, and an introduction to data assimilation and ensemble techniques to weather prediction. Not to be held with GEOG 4320. Prerequisite: GEOG 3310 (C) or GEOG 3320 (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 Kinesiology and Recreation Management as REC 4350. Prerequisite: Permission of department head.

GEOG 4390 Global Climate Change Cr.Hrs. 3
Students will be introduced to the complexities of climate changes through a series of introductory lectures and reading assignments that focus on recent scientific publications and review articles (mathematical skills are not required). Both sides of the climate change debate will be addressed in weekly assignments, and students will defend their conclusions in classroom discussion. Each student will take on a project in some aspect of climate change -- glaciers, sea ice, temperature trends, precipitation, agriculture, animal migration, aerosols, or a regional impact. Prerequisite: a grade of C or better in GEOG 3390 (or GEOG 3610 or 053.361), or 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.

GEOG4550 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 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:[GEOG 3810 (GEOG 3680 or 053.368) (C)], and [MATH 1300 or MATH 1301 (136.130) or MATH 1500 or MATH 1501 (136.150) (C)], or 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 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.

SECTION 6: BACHELOR OF SCIENCE IN PHYSICAL GEOGRAPHY DEGREE REGULATIONS, PROGRAM DESCRIPTION AND COURSES OFFERED BY

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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 in a subject field that is different than that of the declared Major, and which normally consist of 18 credit hours from a department offering this option at the University of Manitoba. Students in the B.Sc. Physical Geography are not permitted to complete a Minor in the B.A. Geography. Students can declare only one Minor. The Minor requirements are described in section 3.2 of this Chapter. Contact a Riddell Faculty student advisor in the Faculty Dean's Office for further information about eligible Minors.

Streams

Students are required to complete a stream approved by a Riddell 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 a Riddell 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 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 courses.

6.2 Advanced Entry 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 from 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 a Riddell Faculty student advisor.

6.2.1 Advanced Entry Entrance Requirements

Degree Program in Physical Geography	Minimum Number of Credit Hours	Minimum Degree Grade Point Average	Additional Entrance Requirements
Honours	48	3.00	A grade of 'B' or better in GEOG 1290[3]; a grade of 'C+' or better in 12 credit hours from PHYS 1020[3] (or PHYS 1050), MATH 1500[2,3], 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 Entrance/continuation in the regular program and (normally) have completed GEOG 2200, GEOG 2250, GEOG 2300, GEOG 2310, GEOG 2550, PHYS 1020[3] (or PHYS 1050), and MATH 1500[2,3]
Major	24	2.00	A grade of 'C' or better in GEOG 1290[3]; a grade of 'C+' or better in 6 credit hours from PHYS 1020[3] (or PHYS 1050) and MATH 1500[2,3]
Major (Coop)[1]	60	2.50	ENVR 2900; students must satisfy the requirements for Entrance/continuation in the regular program and (normally) have completed GEOG 2200, GEOG 2250, GEOG 2300, GEOG 2310, 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]

[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]MATH 1510 or MATH 1520 or MATH 1690 may be used in lieu of MATH 1500.

[3]Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number 1.

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. A Riddell Faculty student advisor must approve a student's registration each Fall/Winter and Summer 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 1291), GEOG 2200, GEOG 2250 (or GEOG 2251), GEOG 2300, GEOG 2310, GEOG 2550, GEOG 3810; and the number of failed courses after admission to the Clayton H. Riddell Faculty of Environment, Earth, and Resources.

6.3.1 Minimum Performance Requirements

Minimum Performance Requirements			
Degree Program (Credit Hours)	**Minimum Degree Grade Point Average (DGPA)**	**Maximum Credit Hours of Failed Courses**	**Physical Geography Core: Minimum Grade Requirements in GEOG 1290[2], GEOG 2200[2], GEOG 2250[2], GEOG 2300, GEOG 2310, GEOG 2272, GEOG 2550, GEOG 3810**
Major (120)	2.00	18	'C'
Major Coop (120)	2.50	18	'C'
Honours (120)	3.00	18	'B' in GEOG 1290; 'C+' grades in others
Honours Coop (120)	3.00	18	'B' in GEOG 1290; 'C+' grades in others

Graduation Requirements[1]		
Degree Program (Credit Hours)	**Stream (2000-Level or Higher)**	**Coop Option Courses**
Major (120)	30 credit hours of which at least 18 credit hours must be at the 3000-level or higher; minimum Degree GPA of 2.00.	
Major Coop (120)	30 credit hours of which at least 18 credit hours must be at the 3000-level or higher; 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)
Honours (120)	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.	
Honours Coop (120)	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)

[1]B.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.

[2]Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number 1.

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 academic warning, probation or academic suspension as defined in section 3.14 Academic 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. Similarly, students withdrawn from the Major program will have the notation, 'Required to Withdraw from the Major Program,' recorded on their transcript.

6.4 Graduating with Distinction or First Class Honours

With Distinction

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 course work.

The term 'Degree with Distinction' will appear both on the parchment and on the student's transcript.

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 3.50 based on all acceptable course work. The term First Class Honours will appear both on the parchment and on the student's transcript.

6.5.a B.Sc. Physical Geography Honours Program Chart

HONOURS 120 CREDIT HOURS			
GEOG 1290[7] 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] Plus 6 credit hours from the Faculty of Arts	GEOG 2200, GEOG 2250, GEOG 2300, GEOG 2310, GEOG 2530, GEOG 2540, 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] not yet taken	GEOG 2272[8], GEOG 3810[9] 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] not yet taken	GEOG 4660
It is recommended that students complete the W course within the first 60 credit hours of courses.			
Plus a **Stream** approved by a Riddell Faculty student advisor. Honours Stream requirements are as follows: 33 credit hours of 2000- (or higher) level courses, of which 18 credit hours must be at the 3000- or 4000-level.			

HONOURS COOPERATIVE OPTION 120 CREDIT HOURS			
GEOG 1290[7] 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] Plus 6 credit hours from the Faculty of Arts	GEOG 2200, GEOG 2250, GEOG 2300, GEOG 2310, GEOG 2530, GEOG 2540, GEOG 2550, ENVR 2900 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] not yet taken	GEOG 2272[8], GEOG 3810[9], ENVR 3900, ENVR 3980, ENVR 3910 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] not yet taken	GEOG 4660 ENVR 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
It is recommended that students complete the W course within the first 60 credit hours of courses.			
Plus a **Stream** approved by a Riddell Faculty student advisor. Honours Stream requirements are as follows: 33 credit hours of 2000- (or higher) level courses, of which 18 credit hours must be at the 3000- or 4000-level.			

NOTES:

[1]Entrance into the degree programs is summarized in 6.2.1 in this ***Chapter***.

[2]The courses required in this program will satisfy the University Mathematics requirement.

[3]PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030, respectively.

[4]MATH 1510 or MATH 1520 may be used in lieu of MATH 1500; or MATH 1690 may be used in place of MATH 1500 (or equivalent) and MATH 1700; or MATH 1310 may be used in lieu of MATH 1300.

[5]GEOL 1440 may be used in lieu of GEOL 1340.

[6]BIOL 1000 and BIOL 1010 may be used in lieu of BIOL 1020 and BIOL 1030.

[7]Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number 1 (e.g. GEOG 1281).

[8]GEOG 2440 may be used in lieu of GEOG 2272.

[9]GEOG 3680 may be used in lieu of GEOG 3810.

Note:

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 3740 (6), GEOG 3750 (3), GEOG 3760 (6), GEOG 3770 (3) ***and GEOG 4670*** (3). Also, all courses are not offered every year. The course schedule for the current academic term is available from the Class Schedule.

Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.

IMPORTANT: The Honours and Major programs need not be completed in the course order described in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

6.5.b B.Sc. Physical Geography Major Program Chart

MAJOR 120 Credit Hours			
GEOG 1290[7] 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] Plus 6 credit hours from the Faculty of Arts	GEOG 2200, GEOG 2250, GEOG 2300, GEOG 2310, GEOG 2530, GEOG 2540, GEOG 2550 Whichever of, PHYS 1030[3], MATH 1300[4], or 6 credit hours from GEOL 1340[5], COMP1010, CHEM 1300, CHEM 1310, STAT 1000, STAT 2000, BIOL 1020[6], BIOL 1030[6], MATH 1700[4] not yet taken	GEOG 2272, GEOG 3810 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] not yet taken	
It is recommended that students complete the W course within the first 60 credit hours of courses. Plus a **Stream** approved by a Riddell 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[7] 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] Plus 6 credit hours from the Faculty of Arts	GEOG 2200, GEOG 2250, GEOG 2300, GEOG 2310, GEOG 2530, GEOG 2540, GEOG 2550, ENVR 2900 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] not yet taken	GEOG 2272, GEOG 3810, ENVR 3900, ENVR 3980, ENVR 3910 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 3990, ENVR 3920 (ENVR 4980 and ENVR 4910 are optional)
It is recommended that students complete the W course within the first 60 credit hours of courses.			
Plus a **Stream** approved by a Riddell 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. **NOTE**: Students in the Major Coop are required to maintain an overall degree Grade Point Average of 2.50.			

MINOR 18 CREDIT HOURS	
GEOG 1290[7]	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:
[1]Entrance into the degree programs is summarized in 6.2.1 in this *Chapter*.
[2]The courses required in this program will satisfy the University Mathematics requirement.
[3]PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030, respectively.
[4]MATH 1510 or MATH 1520 may be used in lieu of MATH 1500; or MATH 1690 may be used in place of MATH 1500 (or equivalent) and MATH 1700.
[5]GEOL 1440 may be used in lieu of GEOL 1340.
[6]BIOL 1000 and BIOL 1010 may be used in lieu of BIOL 1020 and BIOL 1030.
[7]Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number 1 (e.g. GEOG 1281).

Note:
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 3740 (6), GEOG 3750 (3), GEOG 3760 (6), GEOG 3770 (3) ***and GEOG 4670*** (3). Also, all courses are not offered every year. The course schedule for the current academic term is available from the Class Schedule.

Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.

IMPORTANT: The Honours and Major programs need not be completed in the course order described in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

6.6 Environment, Earth, and Resources Course Descriptions- 1000 Level

EER 1000 Earth: A User's Guide Cr.Hrs. 3
This course will present a multi-disciplinary introduction to the Planet Earth as both the source of essential resources and as the site of resulting negative impacts. Focus in the course will be provided by addressing important and current topics, case studies, and concepts that the well-educated citizen of the Earth should understand and will include natural and human-induced processes within a broad range of spatial and temporal scales.

6.7 Geography Course Descriptions

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 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 or GEOG 1200 or GEOG 1201.

6.7 Geography Course Descriptions-2000 Level

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 from 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 2250 Introduction to Geographic Information Systems (TS) Cr.Hrs. 3
(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 from Geography, Geology or Environment courses numbered at the 1000 level, or permission of department head.

GEOG 2272 Natural Hazards (PS) Cr.Hrs. 3
Environmental hazards to human settlement and economy are examined with particular attention to meteorological, soil erosion, mass wasting, earthquake and volcanic phenomena. Not to be held with GEOG 2440. Prerequisite: a grade of C or better in one of GEOG 1290, GEOL 1340, or GEOL 1410,GEOG 1291 (053.129), GEOG 1200, GEOG 1201 (053.120),(007.134) GEOL 1360 (007.136) 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 2330 Place, Populations and Mobility: Geographic Perspectives (HS) Cr.Hrs. 3
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. Not to be held with GEOG 2480 (053.248). 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 2372 Geography of Tourism (HS) Cr.Hrs. 3
This course examines the social, economic and environmental dimensions of tourism and recreation. Historical and contemporary experiences from around the world will be studied. Not to be held with GEOG 2410 (053.241). Prerequisite: a grade of C or better in (GEOG 1200) or GEOG 1280, 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. Not to be held with (053.247). 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 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 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 1290 or GEOG 1291 (053.129) (C), or permission of department head.

GEOG 2570 Geography of Canada (A) Cr.Hrs. 3
(Formerly 053.257) A regional study of Canada in which the major regions of Canada are studied with respect to geographical patterns of their physical environment, settlement, culture, economic activity, and land use. 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 in which the major regions of the United States are studied with respect to geographical patterns of their physical environment, settlement, culture, economic activity, and land use. 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 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 2900 Geography of Canadian Prairie Landscapes (A) Cr.Hrs. 3
This course introduces students to the various geographical themes, concepts and processes within the context of the natural and anthropogenic development of the Canadian prairie region. It traces the evolution of the prairie landscape. It will focus on academic writing in the discipline. Not to be held with GEOG 2450. 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.

6.7 Geography Course Descriptions-3000 Level

GEOG 3200 Introduction to Remote Sensing (TS) Cr.Hrs. 3
(Lab Required) (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 1050 or PHYS 1051 (016.105) (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 3330 Population Issues in the Developing World Cr.Hrs. 3
This course examines issues and trends in population growth, change, and movement in the global south dominated by developing countries. Prerequisites: a grade of C or better in GEOG 2330 or SOC 2480, or (GEOG 2480), or permission of department head.

GEOG 3340 Migration and Mobility in a Globalized World Cr.Hrs. 3
This course surveys the geographic dimensions of migration and mobility of populations, with emphasis of contemporary events. Prerequisites: a grade of C or better in GEOG 2330 or (GEOG 2480), or permission of department head.

GEOG 3390 Introduction to Climate Change and Its Causes (PS) Cr.Hrs. 3
The primary objective of this course is to provide students with a general understanding of the physical and astronomical factors that drive global climate change. Focus will be given to current and future climate change in the context of observations and modeling. Not to be held with GEOG 3610. Prerequisite: a minimum of three credit hours from Geography or Environment courses, or permission of department head.

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 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 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 3640 Social Geography of the Environment (HS) Cr.Hrs. 3
This course provides an intermediate-level assessment of current geographical approaches to society and environment. Students are exposed to critical realist, social constructionist, Marxist, feminist and post-Colonial traditions as they are applied to environmental and social justice, globalization and public health. It includes discussion and a community-based learning project. Prerequisite: a grade of C or better in (GEOG 1200) or GEOG 1280, 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 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 3810 Quantitative Research Methods in Geography (TS) Cr.Hrs. 3
This course focuses on the quantitative analytical methods available for the interpretation on physical and human geography applications. Not to be held with GEOG 3680 (053.368). Prerequisite: GEOG 2530 (053.253) or STAT 1000 or STAT 1001 (005.100), or permission of department head.

GEOG 3850 Sustainable Manitoba (A) Cr.Hrs. 3
This course approaches local sustainability issues from an interdisciplinary perspective. By looking at the ecological, social and economic aspects from a variety of discipline perspectives, a fuller understanding of sustainability is achieved. The broad range of perspectives is achieved through participation of guest speakers from other faculties and outside of the university as well as excursion outside the classroom. Not to be held with ENVR 3850. Prerequisite: 60 credit hours of course work, or permission of department head.

GEOG 3860 Animal Geographies (HS) Cr.Hrs. 3
This course presents a variety of topics concerning the interactions between humans and animals, how humans influence and use animals, and the many roles animals play in human lives and environments. Animal Geographies lies at a meeting point between physical and human geography, where we must consider the blurring boundaries between what it means to be animal/human, and the implications of how animals are used and represented. A wide variety of perspectives, beliefs, and points of view will be explored. Prerequisite: Permission of department head.

GEOG 3870 Food Geographies Cr.Hrs. 3
This course provides a critical examination of the geographies of food at a variety of scales, from the body to the global. The course focuses on themes in three interconnected areas: 1) food production and the global food system from farm to plate including agribusiness and alternative food production and distribution models; 2) food consumption habits and beliefs and foodways as geographically contingent material culture; and 3) food (in) security and its relationship to health and wellbeing. This course is cross-listed as HNSC 3630. Prerequisite: a grade of C or better in GEOG 1280 or GEOG 1281 or HNSC 1200 or (GEOG 1200), or permission of department head.

GEOG 3900 Geography of Manitoba (A) Cr.Hrs. 3
A regional study of Manitoba emphasizing the unique character and diversity of Manitoba's cultural landscapes. The historical, social, cultural, economic and political distinctiveness along with the impact of European settlement and aboriginal displacement will be discussed. Prerequisite: a grade of C or better in GEOG 2900, or permission of department head.

6.7 Geography Course Descriptions-4000 Level

GEOG 4050 Ecosystem Management Cr.Hrs. 3
This course will provide students with an understanding of the practical applications of ecological science, environmental policy, and resource management approaches in the large-scale planning of landscapes. The course will review ecological principles and trace the historical development of the ecosystem concept. Comparisons are made to other possible environmental management approaches. The synthesis of major elements and concepts will be reinforced through case studies on the Manitoba landscape, with an emphasis on practical learning by students through field seminars and group discussions. Not to be held with ENVR 4050. Prerequisite: Permission of department head.

GEOG 4060 Biogeography Cr.Hrs. 3
This course will provide students with a general understanding of the historical, ecological, analytical, and conservation aspects of biogeography. The course will also have a dual focus on the principles and concepts of reasons for the distribution of plants and animals worldwide, as well as incorporating discussion on as many local (Manitoba, Canada, North America) examples as possible. Not to be held with ENVR 4060. Prerequisite: Permission of department head.

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 department head.

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 4280 Gender and the Human Environment Cr.Hrs. 3
This upper-level seminar course will develop in students a depth and breadth of understanding appropriate to the honours undergraduate/graduate level in the area of gender geography scholarship. From critical social science theoretical positions, this course asks students to examine what we can learn about how humans live on the earth if we see them as gendered. Just as we may also understand humans and their interactions in and with spaces, places and environments through the lenses of race, ethnicity, class, age and/or combinations of these categories with gender. Prerequisite: a grade of C or better in a minimum of six credit hours in Geography, or 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 4330 Concepts in Atmospheric Modeling Cr.Hrs. 3
This course will primarily focus on numerical modeling applications and techniques of the Earth's atmosphere with an emphasis on weather prediction. This includes understanding basic modeling terminology, numerical schemes, structure of models, types of models, what is required to run a model, and an introduction to data assimilation and ensemble techniques to weather prediction. Not to be held with GEOG 4320. Prerequisite: GEOG 3310 (C) or GEOG 3320 (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 Kinesiology and Recreation Management as REC 4350. Prerequisite: Permission of department head.

GEOG 4390 Global Climate Change Cr.Hrs. 3
Students will be introduced to the complexities of climate changes through a series of introductory lectures and reading assignments that focus on recent scientific publications and review articles (mathematical skills are not required). Both sides of the climate change debate will be addressed in weekly assignments, and students will defend their conclusions in classroom discussion. Each student will take on a project in some aspect of climate change -- glaciers, sea ice, temperature trends, precipitation, agriculture, animal migration, aerosols, or a regional impact. Prerequisite: a grade of C or better in GEOG 3390 (or GEOG 3610 or 053.361), or 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 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 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:[GEOG 3810 (GEOG 3680 or 053.368) (C)], and [MATH 1300 or MATH 1301 (136.130) or MATH 1500 or MATH 1501 (136.150) (C)], or 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 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.

SECTION 7: BACHELOR OF ENVIRONMENTAL SCIENCE AND BACHELOR OF ENVIRONMENTAL STUDIES DEGREE REGULATIONS, PROGRAM DESCRIPTIONS AND COURSES OFFERED BY

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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 populations, 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 Riddell 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 a Riddell 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 a foundation of either introductory Sciences or Social Sciences/Humanities. Students complete an environmental core and a Focus Area that is defined through consultation with a Riddell 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, Major Coop, Honours and Honours Coop students complete 33 credit hours in a Focus Area. Other Focus Area requirements are defined in the graduation requirements in section 7.3.1 in this Chapter. You may also refer to the Focus Area Brochure for further information.

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 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 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 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 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 courses.

Minor in Another Department

Students in the B.Env.Sc. and B.Env.St. have the opportunity to complete a Minor in a subject field that is different than that of the declared major, and which normally consist of 18 credit hours from a department offering this option at the University of Manitoba. Students are not permitted to complete a Minor in Environmental Science or Environmental Studies. Contact a Riddell Faculty student advisor in the Faculty general office for further information about eligible Minors.

Eco-Canada Accreditation

The Environmental Science program is accredited to the National Standard of Environmental Programs in Canada by ECO Canada.

7.2 Advanced Entry Entrance 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 a Riddell Faculty student advisor.

Transfer students, and Second Degree students may be eligible for direct entry into the General or Honours programs. These students should consult with a Riddell Faculty student advisor in the Faculty Dean's Office.

7.2.1 and 7.2.2 define the Advanced Entry Entrance requirements for the degree programs in the Bachelor of Environmental Science and Bachelor of Environmental Studies, respectively.

7.2.1 Bachelor of Environmental Science Advanced Entry Entrance Requirements

Degree Program in B.Env. Sc.	Minimum Number of Credit Hours	Minimum Degree Grade Point Average	Additional Advanced Entry Entrance Requirements
Honours	48	3.25	No failures on entry[1]; a grade of 'B' or better in ENVR 1000 and ENVR 2000 as well as a minimum 'C+' in 6 hours of BIOL 1020[3], BIOL 1030[3] or CHEM 1310[3] and 'C' in the other course.
Honours (Coop)[2]	60	3.25	No failures on entry[1]; ENVR 2900; students must satisfy the requirements for entrance/continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2270, ENVR 3160, STAT 1000[3], STAT 2000[3], BIOL 2300[3] (AGEC 2370), ECON 2390 (ABIZ 2390), BIOL 1020[3], BIOL 1030[3] and one of GEOG 1290[3]or GEOL 1340.
Major	24	2.00	12 credit hours in ENVR 1000, ENVR 2000, BIOL 1020[3], BIOL 1030[3], CHEM 1300[3], CHEM 1310[3], STAT 1000[3], STAT 2000[3], MATH 1500[3] (or MATH 1200[3], MATH 1300[3], MATH 1310, MATH 1510, MATH 1520), one of GEOG 1290[3] or GEOL 1340, PHYS 1020[3] (or PHYS 1050[3]), PHYS 1030[3] (or PHYS 1070[3]), 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)[2]	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 2270, ENVR 3160, STAT 1000[3], STAT 2000[3], BIOL 2300[3](AGEC 2370), ECON 2390 (ABIZ 2390), BIOL 1020[3], BIOL 1030[3], and one of GEOG 1290[3]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 a Student Advisor for further information.
[2]Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information.
[3]Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the entrance requirements chart. Université de Saint-Boniface courses end in the number'1' (e.g. CHEM 1301).

7.2.2 Bachelor of Environmental Studies Advanced Entry Entrance Requirements

Degree Program in B.Env. St.	Minimum Number of Credit Hours	Minimum Grade Point Average	Additional Advanced Entry Entrance Requirements
Honours	48	3.25	No failures on entry[1]; a grade of 'B' or better in ENVR 1000 and ENVR 2000; GEOG 1280[3] and GEOG 1290[3], ENVR 3160, 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)[2]	60	3.25	No failures on entry[1]; ENVR 2900; students must satisfy the requirements for Entrance/continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2350, ENVR 3160, GEOG 1280[3] and GEOG 1290[3], ECON 2390 (ABIZ 2390), STAT 1000[3], one of BIOL 2390[3] (or (AGEC 2370) (or BIOL 2300[3]), and one of BIOL 1010[3], (or BIOL 1030[3]).
Major	24	2.00	12 credit hours taken from ENVR 1000, ENVR 2000, BIOL 1010[2] (or BIOL 1030[2]), STAT 1000[2], NATV 1220, GEOG 1280[3] or GEOG 1290[3]; 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 3160, GEOG 1280[3] and GEOG 1290[3]; ECON 2390 (ABIZ 2390), STAT 1000[3], one of BIOL 2390[3] (AGEC 2370) or BIOL 2300[3]), and one of BIOL 1010[3] (or BIOL 1030[3]).
General	48	2.00	

[1]Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with a Student Advisor for further information.
[2]Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information.
[3]Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the entrance requirements chart. Collège universitaire de Saint-Boniface courses end in the number '1' (e.g. GEOG 1281).

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. A Riddell Faculty student advisor must approve a student's registration each Fall/Winter and Summer 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 section 7.3.1 at each point of assessment. This assessment is based on the student's minimum degree Grade Point Average and the number of failed courses after admission to the Riddell Faculty.

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 section 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 Academic Warning, Probation and Academic Suspension (Academic Standing) in this Chapter.

Students required to withdraw from the Honours degree program will have the statement 'Required to Withdraw from the Honours Program' recorded on their transcript. 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.

7.3.1 Minimum Performance Requirements

	Minimum Performance Requirements		
Degree Program (Credit Hours)	**Minimum Degree Grade Point Average (DGPA)**	**Maximum Credit Hours of Failures**	**Focus Area**
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.
Major (Coop) (120)	2.50	18	33 credit hours of which 21 must be at the 3000- or 4000-level; minimum cumulative GPA of 2.00.
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.
Honours (Coop) (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.

	Additional Graduation Requirements[1]	
Degree Program (Credit Hours)	**Minimum credit hours of course work completed at the 3000- and 4000-levels**	**Coop Option Courses**
General (90)		
Major (120)	33 credit hours	
Major (Coop) (120)	33 credit hours	ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)
Honours (120)	39 credit hours	
Honours (Coop) (120)	39 credit hours	ENVR 2900, ENVR 3900, ENVR 3910, ENVR 3980, ENVR 3920, ENVR 3990; (ENVR 4910 and ENVR 4980 are optional)

[1]Students 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.

7.4 Graduating with Distinction or First Class Honours

With Distinction

Students graduating with a Bachelor of Environmental Science (General) 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 course work.

Students graduating with a Bachelor of Environmental Science (Major) 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 course work.

The term Degree with Distinction will appear both on the parchment and on the student's transcript.

First Class Honours

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 course work. The term First Class Honours will appear both on the parchment and on the student's transcript.

7.5 Bachelor of Environmental Science Program Chart

Bachelor of Environmental Science[1,2]			
YEAR 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, ECON 1010 Plus 3 credit hours from the Faculty of Arts[4]	ENVR 2270[8], ENVR 3160[9], BIOL 2300 (or AGEC 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 within the first 60 credit hours of coursework.			
HONOURS COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500[3], STAT 1000, ECON 1010 Plus 3 credit hours from the Faculty of Arts[4]	ENVR 2270[8], ENVR 3160[9], BIOL 2300 (or AGEC 2370), ECON 2390 (ABIZ 2390), PHYS 10205, STAT 2000, ENVR 2900 One of PHYS 1050[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 within the first 60 credit hours of coursework.			
MAJOR 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500[3], STAT 1000, ECON 1010 Plus 3 credit hours from the Faculty of Arts[4]	ENVR 2270[8], ENVR 3160[9], BIOL 2300 (or AGEC 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 within the first 60 credit hours of coursework.			
MAJOR COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500[3], STAT 1000, ECON 1010 Plus 3 credit hours from the Faculty of Arts[4]	ENVR 2270[8], ENVR 3160[9], BIOL 2300 (or AGEC 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 within the first 60 credit hours of coursework.			
GENERAL 90 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, MATH 1500[3], STAT 1000, ECON 1010 Plus 3 credit hours from the Faculty of Arts[4]	ENVR 2270[8], ENVR 3160[9], BIOL 2300 (or AGEC 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 approve Focus Area	
MINOR 18 CREDIT HOURS			
ENVR 1000, ENVR 2000	12 credit hours of ENVR courses number at the 2000-level or above.		

NOTES:

[1]Advanced Entry into the degree programs is summarized in section 7.2.1 of this ***Chapter***.

[2]The courses required in this program will satisfy the University Mathematics Requirements.

[3]MATH 1510 or MATH 1520 may be taken in place of MATH 1500 (or equivalent).

[4]It is recommended that students consider a selection from List A below when selecting courses from the Faculty of Arts.

[5]PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030, respectively.

[6]MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700 (or equivalent), respectively.

[7]Focus 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***. Information on Focus Areas is available in the Focus Area Brochure.

[8]ENVR 2170 may be used in lieu of ENVR 2270.

[9]ENVR 2650 may be used in lieu of ENVR 3160.

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.

NOTE:

- To fulfil prerequisite requirements, a grade of 'C' must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

Students should review the current course topics available through ***ENVR 2010*** (1.5), ***ENVR 2020*** (3), ***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 3740 (6), GEOG 3750 (3), GEOG 3760 (6), GEOG 3770 (3) and GEOG 4670 (3)***. Also, all courses are not offered every year or every term. The course schedule for the current academic term is available from the Class Schedule .

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 Université de Saint-Boniface may be used in lieu of the specified course identified in the program requirements chart. Université de Saint-Boniface courses end in the number'1' (e.g. CHEM 1301).

7.6 Bachelor of Environmental Studies Program Chart

Bachelor of Environmental Studies[1,2]			
YEAR 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, ECON 1010	ENVR 2350, ENVR 3160[8], ECON 2390 (ABIZ 2390), BIOL 2390[5] Plus 3 credit hours from List B[6]	GEOG 3810[9], ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area[7]	
It is recommended that students complete the W course within the first 60 credit hours of coursework.			
HONOURS COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280[3], GEOG 1290[3], NATV 1220[4], BIOL 1010[5], STAT 1000, ECON 1010	ENVR 2350, ENVR 3160[8], ECON 2390 (ABIZ 2390), BIOL 2390[5], ENVR 2900 Plus 3 credit hours from List B[6]	GEOG 3810[9], ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area[7] ENVR 3900, ENVR 3910, ENVR 3920, ENVR 3980, ENVR 3990 (ENVR 4980 and ENVR 4910 are optional)	
It is recommended that students complete the W course within the first 60 credit hours of coursework.			
MAJOR 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280[3], GEOG 1290[3], NATV 1220[4], BIOL 1010[5], STAT 1000, ECON 1010	ENVR 2350, ENVR 3160[8], ECON 2390 (ABIZ 2390), BIOL 2390[5] Plus 3 credit hours from List B[6]	GEOG 3810[9], ENVR 4110 Plus 33 credit hours in an approved Focus Area[7]	
It is recommended that students complete the W course within the first 60 credit hours of coursework.			
MAJOR COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, GEOG 1280[3], GEOG 1290[3], NATV 1220[4], BIOL 1010[5], STAT 1000, ECON 1010	ENVR 2350, ENVR 3160[8], ECON 2390 (ABIZ 2390), BIOL 2390[5], ENVR 2900 Plus 3 credit hours from List B[6]	GEOG 3810[9], ENVR 4110 Plus 33 credit hours in an approved Focus Area[7] ENVR 3900, ENVR 3910, ENVR 3920, ENVR 3980, ENVR 3990 (ENVR 4980 and ENVR 4910 are optional)	
It is recommended that students complete the W course within the first 60 credit hours of coursework.			

GENERAL 90 CREDIT HOURS		
ENVR 1000, ENVR 2000, GEOG 1280[3], GEOG 1290[3], NATV 1220[4], BIOL 1010[5], STAT 1000, ECON 1010	ENVR 2350, ENVR 3160[8], ECON 2390 (ABIZ 2390), BIOL 2390[5] Plus 3 credit hours from List B[6]	GEOG 3810[9], 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 numbered at the 2000-level or above.	

NOTES:

[1]Advanced Entry into the degree programs is summarized in 7.2.2.

[2]The courses required in this program will satisfy the university mathematics requirements.

[3]GEOG 1281 and GEOG 1291 may be used in lieu of GEOG 1280 and GEOG 1290.

[4]Students are permitted to substitute NATV 1220 with another 3 credit hours from the department (not a language) or approved alternative course. See the Riddell Faculty student advisor for assistance.

[5]Students 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 BIOL 2300 (or AGEC 2370) instead of BIOL 1010 and BIOL 2390.

[6]Students 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.

[7]Focus 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***. Information on Focus Areas is available in the Focus Area Brochure.

[8]ENVR 2650 may be used in lieu of ENVR 3160.

[9]GEOG 3680 may be used in lieu of GEOG 3810.

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.

NOTE:

To fulfil prerequisite requirements, a grade of 'C' must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

Students should review the current course topics available through ***ENVR 2010*** (1.5), ***ENVR 2020*** (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 3740 (6), GEOG 3750 (3), GEOG 3760 (6), GEOG 3770 (3) and GEOG 4670 (3).*** Also, all courses are not offered every year or every term. The course schedule for the current academic term is available from the **Class Schedule**.

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 Université de Saint-Boniface may be used in lieu of the specified course identified in the entrance requirements chart. Université de Saint-Boniface courses end in the number'1' (e.g. GEOG 1281).

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 (3)
ANTH 1220	Cultural Anthropology (3)
ANTH 1520	Critical Cultural Anthropology (3)
ECON 1020	Introduction to Macroeconomic Principles (3)
NATV 1200	The Native Peoples of Canada (3)
NATV 1240	The Native Peoples of Canada, Part 2 (3)
PHIL 1200	Introduction to Philosophy (6)
PHIL 1290	Critical Thinking (3)
PHIL 1320	Introductory Logic (6)
PHIL 1510	Historical Introduction to Philosophy (6)
RLGN 1420	Ethics in World Religions (3)
RLGN 2180	Theory of Nature (3)

List B: Courses containing significant international content:

ABIZ 1010	Economics of World Issues and Policies (3)
ECON 2550	Political Economy 2: Economic Growth and Fluctuations in a Global Economic Environment (3)
ECON 3670	International Trade (3)
POLS 2040	Introduction to International Relations (6)
POLS 3220	Globalization and the World Economy (3)
POLS 3250	International Political Economy (3)
GEOG 4260	Sacred Lands (3)

or as approved by a Riddell Faculty student advisor

7.7 Environment, Earth, and Resources Course Descriptions

EER 1000 Earth: A User's Guide Cr.Hrs. 3
This course will present a multi-disciplinary introduction to the Planet Earth as both the source of essential resources and as the site of resulting negative impacts. Focus in the course will be provided by addressing important and current topics, case studies, and concepts that the well-educated citizen of the Earth should understand and will include natural and human-induced processes within a broad range of spatial and temporal scales.

7.8 Environmental Science and Environmental Studies Course Descriptions-1000 Level

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 with BIOL 1340 (071.134)

7.8 Environmental Science and Environmental Studies Course Descriptions-2000 Level

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) or BIOL 1340 (071.134) (C).

ENVR 2010 Field Topics in Environment Cr.Hrs. 1.5
Field and practical experience in selected topics of current interest in the Environmental Science and Studies, with the content to vary depending on the needs of students and faculty. Prerequisite: Permission of department head.

ENVR 2020 Extended Field Topics in Environment Cr.Hrs. 3
Field and practical experience in selected topics of current interest in the Environmental Science and Studies, with the content to vary depending on the needs of students and faculty. Prerequisite: Permission of department head.

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) or BIOL 2380 (BOTN 2180 or 001.218 or ZOOL 2180 or 022.218) or BIOL 2382 (BOTN 2190 or 001.219 or ZOOL 2190 or 022.219) or AGRI 2180 (065.218) or 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. 1.5
(Formerly 128.219) A survey of general principles underlying the effects of toxic substances on biological systems, including consideration of the history, scope and applications of toxicology, and the mechanisms of toxic action. Not to be held with ENVR 2180 (128.218) or BIOL 2380 (BOTN 2180 or 001.218 or ZOOL 2180 or 022.218), or BIOL 2382 (BOTN 2190 or 001.219 or ZOOL 2190 or 022.219), or AGRI 2180 (065.218), or 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 2270 Environmental Problem Solving and Scientific Thinking Cr.Hrs. 3
A course to help students develop skeptical and scientific thinking around environmental issues and problems. A multi-disciplinary approach will be taken, using current topical issues as examples. Not to be held with (ENVR 2170 or 128.217). Prerequisites: [CHEM 1310 or CHEM 1311 (002.131) (C)] and [BIOL 1030 or BIOL 1031 or (071.125) (C)].

ENVR 2350 Technical Communication in the Environmental Sectors Cr.Hrs. 3
(Lab Required) (Formerly 128.235) An introduction to technical communication skills required for environmental practitioners in research, government, and industry. The course covers technical writing and literature search techniques, business writing including reports, memos and e-mails, professional presentation skills, and fundamental internet skills. Practical experience is gained through assignments and laboratory exercises. Not to be held for credit with (128.205). Prerequisite: ENVR 1000 (128.100) or BIOL 1340 (071.134) (C), or 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 2900 Professional Development in the Environmental Sectors 1 Cr.Hrs. 1.5
(Formerly 128.290) Through self directed learning students are introduced to the environmental sectors and issues including workplace health and safety, the respectful workplace, managing workloads and expectation, and professionalism. The course is a mandatory requirement to Cooperative Education Option admission. Prerequisite: 30 credit hours of university credit.

7.8 Evironmental Science and Environmental Studies Course Descriptions-3000 Level

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. 1.5
(Formerly 128.301) Field and practical experience in selected topics of current interest in the Environmental Sciences and Studies, with the content to vary depending on the needs and interests of students and faculty. Prerequisite: Permission of 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: BIOL 2390 (BOTN 2280 or 001.228 or ZOOL 2290 or 022.229) (C), or BIOL 2300 (BOTN 2370 or BOTN 2371 or 001.237 or ZOOL 2370 or ZOOL 2371 or 022.237) (C), or AGEC 2370 (065.237) (C), or permission of department head.

ENVR 3160 Environmental Responsibilities and the Law Cr.Hrs. 3
Environmental responsibilities and their legal framework in terms of policies, legislation, standards and guidelines and the tools to manage responsibility are examined 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 and risk assessment, are also discussed. Not to be held with (ENVR 3150 or 128.315 or ENVR 2650) or ABIZ 3550. Prerequisite: a minimum grade of C in ENVR 2000, or permission of department head.

ENVR 3180 Methods in Ecotoxicology Cr.Hrs. 3
(Lab Required) This is a laboratory-based course exploring the development, conduction and application of bioassays, biomarkers, fioindicators 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. Not to be held with (ENVR 3300). Prerequisites: a minimum grade of C in each of ENVR 2180 or BIOL 2380 (BOTN 2180, ZOOL 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 permission of department head.

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 3160 or (ENVR 3150 or 128.315) (C)], and [BIOL 2300 (BOTN 2370 or BOTN 2371 or 001.237 or ZOOL 2370 or ZOOL 2371 or 022.237) (C), or AGEC 2370 (065.237) (C)], or permission of 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: Permission of 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 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 3750 Green Building and Planning Cr.Hrs. 3
An overview of the concepts and tools of Green building design and Green Planning. The course covers the history and trends in Green Building and Planning, related policies, tools and techniques. There is a strong emphasis on learning from local case-studies through seminars and field trips. Prerequisite: ENVR 2000 and 57 credit hours, or permission of department head.

ENVR 3850 Sustainable Manitoba (A) Cr.Hrs. 3
This course approaches local sustainability issues from an interdisciplinary perspective. By looking at the ecological, social and economic aspects from a variety of discipline perspectives, a fuller understanding of sustainability is achieved. The broad range of perspectives is achieved through participation of guest speakers from other faculties and outside of the university as well as excursion outside the classroom. Not to be held with GEOG 3850. Prerequisite: 60 credit hours of course work, or permission of department head.

ENVR3900 Professional Development in the Environmental Sectors 2 Cr.Hrs. 1.5
(Formerly 128.390) Attendance and participation in seminars, conferences and workshops to foster greater interaction between students and practitioners in the environmental sectors. Students improve professional skill sets through assignments 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. 1.5
(Formerly 128.391) Work term report, completed in conjunction with the coop placement, designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. Prerequisite: ENVR 2900 (128.290) (C). Prerequisite or Concurrent Requirement: ENVR 3980 (128.398).

ENVR 3920 Coop Work Term Report 2 Cr.Hrs. 1.5
(Formerly 128.392) Work term report, completed in conjunction with the coop placement, designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. Prerequisite: 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).

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 or Concurrent Requirement: ENVR 3900 (128.390).

7.8 Environmental Science and Evironmental Studies Course Descriptions-4000 Level

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. 1.5
(Formerly 128.401) 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 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 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 4050 Ecosystem Management Cr.Hrs. 3
This course will provide students with an understanding of the practical applications of ecological science, environmental policy, and resource management approaches in the large-scale planning of landscapes. The course will review ecological principles and trace the historical development of the ecosystem concept. Comparisons are made to other possible environmental management approaches. The synthesis of major elements and concepts will be reinforced through case studies on the Manitoba landscape, with an emphasis on practical learning by students through field seminars and group discussions. Not to be held with GEOG 4050. Prerequisite: Permission of department head.

ENVR 4060 Biogeography Cr.Hrs. 3
This course will provide students with a general understanding of the historical, ecological, analytical, and conservation aspects of biogeography. The course will also have a dual focus on the principles and concepts of reasons for the distribution of plants and animals worldwide, as well as incorporating discussion on as many local (Manitoba, Canada, North America) examples as possible. Not to be held with GEOG 4060. Prerequisite: Permission of department head.

ENVR 4110 Critical Thinking and the Environment Cr.Hrs. 3
(Lab Required) (Formerly 128.411) Topical issues and responses regarding the environment including conservation, management, and policy making are critically evaluated at local, national, and global scales. Term projects emphasizing applied work with environmental organizations and researchers are presented. Not to be held with (128.410 or 001.468). Prerequisites: ENVR 2000 (128.200) (C), and 72 credit hours of course work, or permission of 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 BIOL 2380 (BOTN 2180 or 001.218 or ZOOL 2180 or 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 with (128.422). Prerequisite: ENVR 3400 (128.340) (C).

ENVR 4500 Thesis Project in Environmental Science and Studies Cr.Hrs. 6
(Formerly 128.450) A research thesis project in any aspect of environmental science or environmental studies, chosen in consultation with the course coordinator and an appropriate supervisor, typically a faculty member. Written reports and oral presentation on the results of the thesis project will be required. The course is normally available only to final year students in the Environmental Science Honours or Environmental Studies Honours Program. Prerequisites: Permission of course coordinator, and a GPA of 3.00 in the last 30 credit hours.

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. 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 3160 (or the former ENVR 2650), or permission of department head.

ENVR 4910 Coop Work Term Report 3 Cr.Hrs. 1.5
(Formerly 128.491) Work term report, completed in conjunction with the coop placement, which is designed to integrate professional experiences with the

concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. Prerequisite: ENVR 3990 (128.399) (P).

ENVR 4980 Work Term 3 Cr.Hrs. 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).

SECTION 8: DEPARTMENT OF GEOLOGICAL SCIENCES: BACHELOR OF SCIENCE IN GEOLOGICAL SCIENCES - GEOLOGY, GEOPHYSICS, AND GENERAL DEGREE REGULATIONS, PROGRAM DESCRIPTIONS AND COURSES OFFERED BY

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8.1 Academic Staff

Please refer to the Clayton H. Riddell Faculty of Environment, Earth, and Resources website at: umanitoba.ca/environment/about/academic_staff.html

8.2 Program Information

The Geological Sciences deal with the history of the Earth and its life, especially that which is recorded in rocks. Different component parts of the Earth system, the lithosphere, biosphere, atmosphere and hydrosphere, operate at different length and time scales. During interactions between the spheres there is feedback between the component parts as energy and mass are exchanged, transferred and redistributed. In a geological context, the feedback can occur on a global scale, or on very small scales such as that which we see in minerals. More recently humans have become a major force in this Earth system because we have intervened in many of these exchanges.

Considering the Earth's past, geoscientists typically work with long time scales (in the order of millions to billions of years). We also use Hutton's original philosophy of uniformitarianism, stated as the present is the key to the past, to solve geological problems. However, as we see changes at the Earth's surface (our environment) occurring on very short time scales we need to learn to extract the signal of human activity from the Earth's pre-human past. Once we understand and quantify the nature and extent of the Earth's natural evolution as well as our more recent environmental impact, geological sciences can help predict future changes to the Earth.

Geology and Geophysics are the sciences that provide the quantitative data on the physical and chemical behaviour and characteristics of Earth materials - rocks, minerals, fluids and gases. These data are needed to model the behaviour of minerals in natural as well as many industrial systems. The theoretical and instrumental expertise needed to tackle many resource extraction, mineral processing and environmental problems is resident in geological science departments. From a broad Earth, environmental and resource perspective our collective future will depend on sustainable use of our Earth's resources and care of the environment.

The three-year General program (comprising of 90 credit hours) 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 the Faculty of Education in this calendar) or other programs that 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 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

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

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 2.30 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, 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 in a subject field that is different than that of the declared major, and which normally consist of 18 credit hours from a department offering this option at the University of Manitoba. Students in the B.Sc. Geological Sciences are not permitted to complete a Minor in Geological Sciences. The Minor requirements are described in section 3.2 of this Chapter. Contact the department and/or a Riddell Faculty student advisor in the Faculty Dean's 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 Degree Grade Point Average of 2.50 as stipulated in Entrance 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 Riddell 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 degree Grade Point Average of 2.30 as stipulated in the Entrance and Continuation Requirements Table (section 8.3.4). Students who do not meet the minimum performance requirement will be required to withdraw from the Major program and will be placed in the General program provided their Degree Grade Point Average is 2.00 or above. Students will have the notation 'Required to Withdraw from the Major Program', recorded on their transcript.

If below 2.00, students will be placed on academic warning, probation or academic suspension as outlined in section 3.14 Academic Warning, Probation and Academic Suspension (Academic Standing) in this Chapter.

Failed courses: A student is required to repeat those failed courses that are specified as required courses for the program. Students are subject to the University of Manitoba regulations (see General Academic Regulations, Academic Evaluation, 1.2 Repeating a Course as described in this Calendar) and the Riddell Faculty degree regulations regarding eligibility to repeat a course. Students who need to repeat a course more than once to fulfil degree requirements must contact a Riddell Faculty student advisor for approval prior to registration. Students cannot exceed 18 credit hours of failed courses (F's) as calculated on courses applicable to the degree program (DGPA).

Repeating GEOL 4920 Technical Report: Lower priority for entry will be given to students repeating GEOL 4920 after a VW or after a grade has been assigned. The course may be repeated only once after a grade of F.

Program approval

The department head (or designate) and a Riddell Faculty student advisor in the Faculty Dean's Office must approve a student's Major program each term. Students must also obtain departmental approval for all revisions to their programs. For departmental approval, please contact Brenda Miller. The Advanced/Major/Honours Program Approval forms are available on the Riddell Faculty web page. (umanitoba.ca/environment/undergraduate)

Graduation in the Major

In order to graduate from the Geology or Geophysics Major, students must complete all degree program and faculty requirements as stipulated in section 3 and/~/Catalog/ViewCatalog.aspx?pageid=viewcatalog&chapterid=1007&LoadUserEdits=truesection 8 of this Chapter. Students must also achieve the minimum performance requirements as outlined in the Graduation Requirements Table (see section 8.3.5). This is defined as a minimum Degree Grade Point Average of 2.30 on 120 or 121 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. Residence requirements apply both to first and second-degree students.

Recognition of Academic Merit

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 degree. The term 'Degree with Distinction' will appear both on the parchment and on the student's transcript.

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 terms 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 four years. 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, 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 Entrance 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 Riddell 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 a Riddell Faculty student advisor in the Faculty Dean's Office.

Continuation in Honours

A student's academic performance is assessed first with his/her application for admission to the Riddell 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 Entrance and Continuation Requirements Table (section 8.3.4). Students who do not meet the minimum performance requirements will be placed on academic warning, probation or academic suspension as outlined in section 3.14 Academic Warning, Probation and Academic Suspension (Academic Standing) 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.

Failed courses: A student is required to repeat those failed courses that are specified as required courses for the program. Students are subject to the University of Manitoba regulations (see General Academic Regulations, Academic Evaluation, 1.2 Repeating a Course as described in this Calendar) and the Riddell Faculty degree regulations regarding eligibility to repeat a course. Students who need to repeat a course more than once to fulfil degree requirements must contact a Riddell Faculty student advisor for approval prior to registration. Students cannot exceed 18 credit hours of failed courses (F's) as calculated on courses applicable to the degree program (DGPA).

Repeating GEOL 4870 Honours Thesis: Lower priority for entry will be given to students repeating GEOL 4870 after a VW or after a grade has been assigned. The course may be repeated only once after a grade of F.

Program Approval

The department head (or designate) and a Riddell Faculty student advisor in the Faculty Dean's Office must approve a student's Major program each term. Students must also obtain departmental approval for all revisions to their programs. For departmental approval, please contact Brenda Miller. The Advanced/Major/Honours Program Approval forms are available on the Riddell Faculty web page. (umanitoba.ca/environment/undergraduate)

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 Clayton H. Riddell Faculty of Environment, Earth, and Resources. 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 section 3 and section 8 of this Chapter. Students must also achieve the minimum performance requirements as outlined in the Graduation Requirements Table (see section 8.3.5). This is defined for the Honours Geology program as a minimum Degree Grade Point Average of 3.00 on 120 credit hours which constitute the degree and for Honours Geophysics as a minimum Degree Grade Point Average of 2.80 on the 120 (121) credit hours which constitute the degree.

Recognition of Academic Merit

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: BIOL 2300 (or AGEC 2370), CIVL 4250, SOIL 4060, SOIL 4130, SOIL 4500, GEOL 4370, GEOG 3390, ENVR 2180 (BIOL 2380 or AGRI 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 and one of GEOL 1400, GEOL 1410, or GEOL 1420) 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 of 18 credit hours (minimum) in a different department or an interdisciplinary program. e.g. in the Clayton H. Riddell Faculty of Environment, Earth, and Resources, or the Faculty of Arts, or the Faculty of Science. The Minor requirements are described in section 3.2 of this Chapter. Contact the department and/or a Riddell Faculty student advisor in the Faculty Dean's Office for further information about eligible Minors.
- Students will normally complete the Faculty of Arts and Faculty of Science courses requirements, which include 6 credit hours from the Faculty of Arts, 6 credit hours from the Faculty of Science. Students who have not met these requirements in their first year must meet the requirements prior to graduation.

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 completed GEOL 1340 with the grade of 'C'. Refer to Section 8.6 for further program requirements.

Continuation in the General

A student's academic performance is assessed first with his/her application for admission to the Riddell 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 Degree Grade Point Average of 2.00 as stipulated in the Entrance and Continuation Requirements Table (section 8.3.4). Students who do not meet the minimum performance requirement will be placed on academic warning, probation or academic suspension as outlined in section 3.14 Academic Warning, Probation and Academic Suspension (Academic Standing) in this Chapter.

Failed courses: A student is required to repeat those failed courses that are specified as required courses for the program. Students are subject to the University of Manitoba regulations (see General Academic Regulations, Academic Evaluations, 1.2 Repeating a Course as described in this Calendar) and the Riddell Faculty degree regulations regarding eligibility to repeat a course. Students who need to repeat a course more than once to fulfil degree requirements must contact a Riddell Faculty student advisor for approval prior to registration. Students cannot exceed 30 credit hours of failed courses (F's) as calculated on courses applicable to the degree program (DGPA).

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

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.

8.3.4 Geological Sciences Advanced Entry Entrance and Continuation Requirements

	Minimum Degree Grade Point Average	
Degree Program	**Entrance**	**Continuation**
Major (Geology)	2.501	2.301
Major (Geophysics)	2.501	2.301
Honours (Geology)	3.001	3.001
Honours (Geophysics)	2.801	2.801
General (Geological Sciences)	2.001	2.001

Notes:

1In addition to the minimum degree grade point average noted in this chart, specific courses (with minimum grades) are required for entry and these are noted in the program chart for each program.

8.3.5 Geological Sciences Graduation Requirements

Degree Program	**Minimum Degree Grade Point Average**
Major (Geology) (120)	2.30
Major (Geophysics) (120)	2.30
Honours (Geology) (120)	3.00
Honours (Geophysics) (120)	2.80
General (Geological Sciences) (90)	2.00

8.4 B.Sc. Geological Sciences (Geology) Program Chart

8.4 B.Sc. Geological Sciences (Geology)[1,7]			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS GEOLOGY 120 CREDIT HOURS			
GEOL 1340[7] (B) and one of GEOL 1400, GEOL 1410, or GEOL 1420 6 credit hours from the Faculty of Arts	GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2800, GEOL 2770, GEOL 3910[5]	GEOL 2060, GEOL 3110, GEOL 3130, GEOL 3310, GEOL 3440, GEOL 3490, GEOL 3900, GEOL 4910[5] 6 credit hours of Geological Sciences Electives from Lists A and B[4]	GEOL 4670, GEOL 4870 12 credit hours of Geological Sciences Electives from Lists A and B[4] not yet taken.
CHEM 1300, PHYS 1020[2], and MATH 1500[3] must be completed within the first 60 credit hours of course work. It is recommended that students complete the W course within the first 60 credit hours of course work.			

MAJOR GEOLOGY 120 CREDIT HOURS			
GEOL 1340[7] (C+) and one of GEOL 1400, GEOL 1410, or GEOL 1420 6 credit hours from the Faculty of Arts	GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2800, GEOL 2770, GEOL 3910[5]	GEOL 2060, GEOL 3110, GEOL 3130, GEOL 3310, GEOL 3440, GEOL 3490, GEOL 3900, GEOL 4910[5]	GEOL 4670, GEOL 4920 15 credit hours of Geological Sciences Electives from Lists A and B[4] not yet taken
CHEM 1300, PHYS 1020[2], and MATH 1500[3] must be completed within the first 60 credit hours of course work. It is recommended that students complete the W course within the first 60 credit hours of course work.			

Notes:

[1]The courses required in this program will satisfy the University Mathematics requirement.

[2]PHYS 1050 may be used in lieu of PHYS 1020.

[3]MATH 1510 or MATH 1520 may be used in lieu of MATH 1500.

[4]Among the Geological Sciences Electives, all students must complete at least 9 credit hours from List A. In addition, Honours students must complete 9 credit hours from List B or courses from List A not yet completed; Major students must complete at least 6 credit hours from List B or courses from List A not yet completed. NOTE: With departmental approval, students may substitute 6 credit hours of 2000-level or higher courses from other departments in order to satisfy professional registration requirements. See Other Note 1 below.

[5]Students will register for GEOL 3910 and GEOL 4910 in Summer term. NOTE: Students should be aware that they are expected to contribute to transportation and accom modation costs. See the department office at the beginning of each year for information.

[6]**IMPORTANT**: The Honours and Major programs need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. (Letters in brackets indicate the minimum prerequisite standing in a specific course required for entry to the program).

[7]Students who have GEOL 1440 (007.144) or the former 007.124 should consult with the department. At the discretion of the department, GEOL 1440 (007.144) or 007.124 may be permitted in lieu of GEOL 1340 for entry.

One of GEOL 1400, GEOL 1410, or GEOL 1420 is highly recommended to be taken in Year 1, but will not be considered when assessing entrance requirements to the program. If this requirement is not fulfiled in Year 1, it must be completed by the end of Year 2.

NOTE:

- 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 term is available from the **Class Schedule**.
- 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 Université de Saint Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number '1' (e.g. CHEM 1301).

Other Note 1: Geological Sciences - Geology Electives Lists A and B

List A Electives: Honours and Major students must complete a minimum of 9 credit hours from the following courses:

GEOL 2390	Environmental Geology (3)
GEOL 4280	Instrumental Techniques In Geology (3)L
GEOL 4300	Mineral Deposits (3)L
GEOL 4520	Petroleum Geology (3)L
GEOL 4890	Basin Analysis (3)L

List B Electives: Honours students are required to complete a minimum of 9 credit hours; Major students must complete a minimum of 6 credit hours from the following courses:

GEOL 3140	Gemology (3)L
GEOL 3420	Engineering Geology (3)
GEOL 3450	Hydrogeology (3) L
GEOL 3740	Exploration Seismology (3)L
GEOL 3750	Geology and Geophysics of the Planets (3)L
GEOL 3810	Applied Geophysics (3)L
GEOL 4260	Applied Geophysics Field Course (3)
GEOL 4270	Advanced Studies in Earth Sciences (3)
GEOL 4310	Paleontologic Principles (3)L
GEOL 4360	Mineral Exploration Techniques (3) L
GEOL 4370	Global Change (3)
GEOL 4380	Mineral Resource Development (3)
GEOL 4740	Geophysics Field School (6)
GEOG 2250	Introduction to Geographic Information Systems (3)L

and/or up to 6 credit hours of additional courses not yet completed from List A.

NOTE: With departmental approval, up to 6 credit hours of 2000-level or higher courses from other departments may be substituted for courses in List B in order to satisfy professional registration (APEGM) requirements.

8.5 B.Sc. Geological Sciences (Geophysics) Program Char

8.5 B.Sc. Geological Sciences (Geophysics)[5,7]			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS GEOPHYSICS 121 CREDIT HOURS			
GEOL 1340[6] (B) and one of: GEOL 1400, GEOL 1410, or GEOL 1420 PHYS 1050(B) [or PHYS 1020(B+)], PHYS 1070(B), MATH 1210[1], MATH 1510[1](B), and MATH 1710[1](B) [or MATH 1500(B) and MATH 1700(B)1] Plus 6 credit hours from the Faculty of Arts, which should include the required 'W' course	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 6 credit hours of Geological Sciences Geophysics Electives from List B.	
30 Credit Hours	30 Credit Hours	60 Credit Hours for Year 3 and 4[7]	

MAJOR GEOPHYSICS 121 CREDIT HOURS		
GEOL 1340[6] (C+) and one of: GEOL 1400, GEOL 1410, or GEOL 1420 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] 6 credit hours from the Faculty of Arts, which should include the required 'W' course	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 of Geological Sciences Geophysics Electives from List A, 3 credit hours of Geological Sciences Geophysics Electives from List P and 6 credit hours of Geological Sciences Geophysics Electives from List B.

NOTES:

[1]MATH 1690 may be taken in place of MATH 1500 (or MATH 1510) and MATH 1700 (or MATH 1710); MATH 1300 may be taken in place of MATH 1210. Selection of MATH 1300 or MATH 1210 will determine the prerequisite background for Mathematics courses required in years 2, 3 and 4.

[2]MATH 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.

[3]MATH 2600 may be taken in place of MATH 2120

[4]GEOL 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. NOTE: Students are expected to contribute to the costs of transportation, lodging, and food. Contact the Department for further information.

[5]The courses required in this program satisfy the University Mathematics Requirement.

[6]Students who have GEOL 1440 (007.144) or the former 007.124 should consult with the department. At the discretion of the department, GEOL 1440 (007.144) or 007.124 may be permitted in lieu of GEOL 1340 for entry. One of GEOL 1400, GEOL 1410, or GEOL 1420 is highly recommended to be taken in Year 1, but will not be considered when assessing advanced entry entrance requirements to the program. If this requirement is not fulfiled in Year 1, it must be completed by the end of Year 2.

[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)

NOTE:

- 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 term is available from the **Class Schedule**
- 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 Université de Saint- Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number '1' (e.g. PHYS 1051).

Other Note 1: Geological Sciences - Geophysics Electives Lists A, B and P

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 6 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 3420	Engineering Geology (3)
GEOL 3440	Structure and Metamorphism (3)L
GEOL 3450	Hydrogeology (3)L
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 4360	Mineral Exploration Techniques (3)L
GEOL 4370	Global Change (3)
GEOL 4380	Mineral Resource Development (3)
GEOL 4520	Petroleum Geology (3)L
GEOL 4890	Basin Analysis (3)L
GEOL 4910	Advanced Field Mapping (3)
GEOG 2250	Introduction to Geographic Information Systems (3)L

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 Energetics 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) Program Chart

8.6 B.Sc. Geological Sciences (General)		
YEAR 1	YEAR 2	YEAR 3
GENERAL 90 CREDIT HOURS		
GEOL 1340[1] (C) plus one of GEOL 1400, GEOL 1410, or GEOL 1420 A minimum grade of 'C' on 6 credit hours from a second department or program for a minor[3] Meet the Faculty of Arts and Faculty of Sciences courses requirement[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[4]	
It is recommended that students complete the M and W course requirements within the first 60 credit hours of course work.		
MINOR GEOLOGICAL SCIENCES 18 CREDIT HOURS		
GEOL 1340 and one of GEOL 1400, GEOL 1410, or GEOL 1420	Plus 12 credit hours chosen from 2000- and 3000-level courses	

Notes:

[1]Students who have GEOL 1440 (007.144) or the former 007.124 should consult with the department. At the discretion of the department, GEOL 1440 (007.144) or 007.124 may be permitted in lieu of GEOL 1340 for advanced entry.
One of GEOL 1400, GEOL 1410, or GEOL 1420 is highly recommended to be taken in Year 1, but will not be considered when assessing advanced entry entrance requirements to the program. If this requirement is not fulfiled in Year 1, it must be completed by the end of Year 2.

[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 Year 1.

[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 requirements not met in Year 1 must be completed before graduation.

NOTE:

- 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 term is available from the **Class Schedule**
- 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 Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. Université de Saint-Boniface courses end in the number '1' (e.g. GEOG 1281).

8.7 Environment, Earth, and Resources Course Descriptions

EER 1000 Earth: A User's Guide Cr.Hrs. 3
This course will present a multi-disciplinary introduction to the Planet Earth as both the source of essential resources and as the site of resulting negative impacts. Focus in the course will be provided by addressing important and current topics, case studies, and concepts that the well-educated citizen of the Earth should understand and will include natural and human-induced processes within a broad range of spatial and temporal scales.

8.8 Geological Sciences Course Descriptions-1000 Level

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 or 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 1400 Time-Trekker's Travelog: Our Evolving Earth Cr.Hrs. 3
Take a trip across billions of years, as we explore awesome times in the evolution of our planet and its life -- from dust to us! Not to be held with (GEOL 1350 or 007.135 or 007.123).

GEOL 1410 Natural Disasters and Global Change Cr.Hrs. 3
Discover how and when natural disasters occur, and how to identify and recognize them. Explore the Earth processes that lead to natural disasters and global change. Not to be held with (GEOL 1360 or 007.136).

GEOL 1420 Exploring the Planets Cr.Hrs. 3
Discover the Solar System as we explore ancient ideas and modern concepts. Emphasis will be on recent space exploration and a comparison of the Earth and its neighbours. Not to be held with (GEOL 1370 or 007.137 or 007.124).

8.8 Geological Sciences Course Descriptions-2000 Level

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 or (007.134), or (GEOL 1440 or 007.144), or (007.123), or (007.124) (C)], and [MATH 1300 (136.130), or MATH 1310 (136.131), or MATH 1500 (136.150), or MATH 1510 (136.151), or MATH 1520 (136.152), or MATH 1530 (136.153) (C)], and [PHYS 1020 (016.102), 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 or 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 or 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. For Major and Honours Geology students only. Entry to other students would be after consultation with the department and by permission. Not to be held with GEOL 2540 or (007.207) or (007.262). Prerequisites: (40S Chemistry or CHEM 0900 (002.090) (Pass)), and (GEOL 1340 (007.134) (C), or (GEOL 1440 or 007.144) (C), or (007.123) (C), or (007.124) (C), or (007.132) (C), or (007. 133) (C)), or permission of department head. CHEM 1300 (002.130) is highly recommended. This course is intended for Major or Honours Geology students.

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 or CHEM 0900 (002.090) (Pass) or equivalent), and (GEOL 1340 (007.134) (C), or (GEOL 1440 or 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: Any university-level Geology course, or permission of department head.

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 or Corequisite: GEOL 2500 (007.250) (C), or permission of department head.

8.8 Geological Sciences Course Descriptions-3000 Level

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. Prerequisites: (GEOL 2500 (007.250) (C)), and (GEOL 2800 (C), or (007.260) (C), or GEOL 2540 (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 or 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. Prerequisites: (GEOL 2440 (007.244) (C)), and (GEOL 2520 (007.252) (C)), and (GEOL 2530 (007.253) (C)).

GEOL 3440 Structure and Metamorphism Cr.Hrs. 3
(Lab Required) Structural and metamorphic geology, links between deformation and metamorphism, and the application of pressure-temperature and time paths to study metamorphic equilibria. Not to be held with (GEOL 3290 or 007.329). Prerequisities: GEOL 2440, and GEOL 2520, and GEOL 3910, or permission of department head.

GEOL 3450 Hydrogeology Cr.Hrs. 3
(Lab required) The hydrologic cycle and basic hydrologic processes; properties of aquifers and principles of groundwater flow; well hydraulics and groundwater resource evaluation; regional groundwater flow and subsurface geology; and basic chemical hydrogeology. Not to be held with CIVL 4250. Prerequisites: (MATH 1500 or MATH 1510 (C)), and (PHYS 1020 or PHYS 1050 (C)), and CHEM 1300 (C), and (GEOL 2060 or GEOG 2310 (C)), and GEOL 2530 (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. 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 the Summer term. Not to be held with (007.449). Prerequisites: (GEOL 2440 or 007.244)(C)), and (GEOL 2520 (007.252)(C)), and (GEOL 2530 (007.253)(C)), and permission of department head.

8.8 Geological Sciences Course Descriptions-4000 Level

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. 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. Taught with the first half of GEOL 4740 (007.474). Not to be held with GEOL 4740 (007.474). Prerequisites: GEOL 3810 (007.381 or 007.380) (C), and permission of department head.

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. Prerequisites: (GEOL 2520 (007.252) (C)), and (GEOL 2530 (007.253) (C)), and (GEOL 2770 (007.277) (C)).

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. 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. Prerequisites: (GEOL 2060 (007.206) (C)), and (PHYS 2390 (C), and PHYS 2490 (C), or (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. Prerequisites: (GEOL 2060 (007.206) (C)), and (PHYS 2390 (C), and PHYS 2490 (C), or (016.237) (C)).

GEOL 4360 Mineral Exploration Techniques Cr.Hrs. 3
(Lab Required) The course will examine methodologies used in exploration and evaluation of Canadian mineral deposits and case studies illustrating the application of these methods. Prerequisite: GEOL 3910 (C), or GEOL 3810 (C). Recommended pre- or co-requisite: GEOL 4300.

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. Prerequisite: GEOL 3900 (007.390) (C). Prerequisite or Concurrent Requirement: GEOL 3490 (007.349).

GEOL 4380 Mineral Resource Development Cr.Hrs. 3
Examination of economic, political, social, and evironmental considerations that affect exploration and mining activity. Prerequisite: GEOL 3130 (C+) and pre-or co-requisite: GEOL 4300.

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 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 3440 or (GEOL 3290) (C)), or GEOL 4320 (C), or permission of department head.

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 terms. Not to be held with GEOL 4260 (007.426). Prerequisites: GEOL 3810 (007.381 or 007.380) (C), and permission of department head.

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. Prerequisite: PHYS 2490 or (016.237) (C), or permission of department head.

GEOL 4870 Honours Thesis Cr.Hrs. 6
(Formerly 007.487) A thesis based on a research project conducted by a fourth-year Honours student in Geology or Geophysics. Selection of a project and supervisor to be arranged prior to September 30 and submitted in writing to the department head. Consult with the department for submission deadlines. Not to be held with (007.495) or (007.496). Prerequisite: Permission of department head.

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. Offered in the Summer term. Not to be held with (007.449). Prerequisites: (GEOL 3440 or (GEOL 3290) (C)), and GEOL 3910 (C), and permission of department head.

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.

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EXTENDED EDUCATION

Dean: Lori Wallace
Associate Dean(s): Kathleen Matheos
Campus Address/General Office: 166 Extended Education Complex
Fax: (204) 474 7661
Website: umanitoba.ca/extended
Telephone: (204) 474 9921
1 800 432 1960 ext. 9921 (Toll free in Manitoba)
1 888 216 7011 ext. 9921 (Toll free in Canada)

Chapter Contents

SECTION 1: 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 2: PROGRAM AREAS

2.1 Access/Aboriginal Focus Programs

Area Director: Dr. Diedre A. Desmarais
General Office: 166 Extended Education Complex
Telephone: 204-474-8000

Aboriginal Focus Programs

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 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 Counseling Skills Certificate

The Aboriginal Counseling Skills program provides individuals who are employed by First Nation and/or Aborignal social service agencies with the knowledge and skills required to provide culturally appropriate counseling services to individuals and families. The Faculty of Social work offers graduates 3 allocated and 6 unallocated hours of credit.

Aboriginal Environmental Stewardship Diploma

The AES Diploma is a partnership program between Aboriginal Focus Programs and the University of Manitoba's Clayton H. Riddell Faculty of Environment, Earth and Resources and the Faculty of Arts: Department of Native Studies. The 60-credit hour diploma addresses environmental topics of contemporary concern to Aboriginal Peoples in Canada. It offers a specialization uniquely constructed to bring together Aboriginal and Western worldviews and perspectives on environmental stewardship. Courses in the diploma address the assessment, monitoring, protection, management, sustainability, legal requirements and current issues in the environmental field. The AES Diploma is offered on-campus or as a community-based program through collaboration with external stakeholders.

Aboriginal Community Wellness Diploma

The Aboriginal Community Wellness (ACW) Diploma offers an excellent program of studies for people who wish to expand their knowledge and skills in Aboriginal mental health and community wellness services. The Diploma is a partnership program between First Nation Inuit Health and the Manitoba Community Wellness Working Group (MCWWG) and the University of Manitoba's Extended Education and the Faculties of Social Work, Kinesiology, Human Ecology, Nursing and Arts: Native Studies and Psychology. The ACW Diploma provides students with higher education that respects Indigenous knowledge and Western theory through education based on Aboriginal values concerning wellness. The 60-credit hours of the ACW Diploma are typically delivered as 7-day course modules in an off-campus or community-based location.

Access Programs

General Office: 220 Migizii Agamik, 114 Sidney Smith St.
Telephone: 204 474 8000
umanitoba.ca/extended/access-afp

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, 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, Inuit) for entry to the health professional programs such as Medicine, Dentistry, Dental Hygiene, Pharmacy, Medical Rehabilitation (Occupational, 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 programs. Housed within the Centre for Aboriginal 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 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. For information call 474-8000 or, within Manitoba, 1-800-432-1960 extension 8000.

2.2 Continuing Education Programs

Director: Dennis Silvestrone
General Office: 166 Extended Education Complex
Telephone: 204 480 1022

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, accounting, municipal management 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.

To request a copy of the 2013-14 Program Calendar call (204) 474 8016 or toll-free in Canada 1888 216 7011 (extension 8016) or visit our website: umanitoba.ca/extended/coned

2.3 Distance and Online Education

Director: Adnan Qayyum
General Office: 166 Extended Education Complex
Telephone: 204-474-8012
Website: umanitoba.ca/distance

Each year, over 8,000 students complete degree credit courses offered by Distance and Online Education (DE). DE courses are open to all University of Manitoba (UM) students and provide the opportunity to complete online courses without attending scheduled classes. If you require a flexible study schedule, would like to study year round, or simply appreciate the convenience of studying at home, DE provides you the opportunity to complete your degree.

Over 140 degree credit courses are offered from the following schools/faculties: Agricultural and Food Sciences; Art; Arts; Asper School of Business; Clayton H. Riddell Environment, Earth and Resources; Education; Human Ecology; Kinesiology and Recreation Management; Science; and Social Work.

Complete programs offered include a Bachelor of Arts, Bachelor of Arts in Geography, Bachelor of Social Work and Post-Baccalaureate Diploma in Education.

To search for course offereings on Aurora Student at aurora.umanitobca.ca, choose Distance and Online Education under the 'Campus' field. If you would like to request a Distance and Online Education course calendar, visit umanitoba.ca/distance, call 204-474-8012 (toll free at 1-888-216-7011, ext. 8012), or stop by Distance and Online Eduation in the Extended Education Complex.

2.4 English Language Studies and International Programs

Director: Stephanie Olson
General Office: 166 Extended Education Complex
Telephone: 204 474 8738

English Language Studies and International Programs (ELSIP) provides opportunities for language learners to gain proficiency in English as well as other languages.

The Intensive English Program (IEP) offers eight levels of English as a Second Language instruction from beginner to advanced through sessions ranging in length from four weeks to one year, and consisting of 26 hours of classroom instruction per week throughout the year. Academic instruction and socio-cultural activities constitute the basis of this program. Students are housed in residence on campus or with a homestay family. Customized programs are also offered for groups coming from Mexico, Japan and Korea.

ELSIP also offers part-time and full-time TOEFL iBT, IELTS and TOEIC preparation courses several times per year and is an official TOEFL iBT testing site.

At its downtown Winnipeg campus, ELSIP offers adult EAL classes for newcomers sponsored by the government.

In addition to ESL language instruction, ELSIP offers various conversational language courses such as French, Spanish, German and Mandarin for beginner to advanced level students. Courses are part-time; sessions run from September to December, January to April and April to June.

In collaboration with the Faculty of Education, a Certificate in Teaching English as a Second Language (CTESL) is offered to meet the needs of individuals who are pursuing a teaching career in ESL. The Certificate program consists of five 40-hour courses, including four required courses and one approved elective course. Courses may be taken full-time or part-time.

2.5 General Studies

Director: Bill Kops
General Office: 185 Extended Education Complex
Telephone: 204-474-8330 or 474-7154

General Studies provides opportunities for students to take credit courses at the University of Manitoba without being enrolled in a degree program. Our students come from all walks of life: professionals developing their careers; students satisfying entrance requirements to professional and other faculties; seniors enriching their lives; students visiting from other institutions; individuals exploring a career change. Whatever your educational interests, General Studies is a great option for study at the University of Manitoba. Courses are available in the Fall and Winter terms, Summer Session, through Distance and Online Education, and Off-Campus Study.

Entrance Requirements to General Studies

Students may be admitted in one of the following categories: Auditing Student; Mature Student (Canadian Military only); Special Student; Visiting Student. Detailed information on the entrance requirements and a description of the student categories can be found on the Admissions website: umanitoba.ca/admissions or by contacting the General Studies office.

Student Services

A General Studies Student Advisor is available to assist students with course and program planning, and to provide admission and registration information on a drop-in basis Monday through Friday - 9:00 am to 3:00 pm, 185 Extended Education.

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/general_studies.

2.6 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.

2.7 Military Support Office

General Office: 166 Extended Education Complex
Telephone: 204 474 8006

The Military Support Office is designed to assist CF personnel and their immediate family members in the pursuit of a university education.

Through this unique office, the University of Manitoba acknowledges and accommodates the difficulties which extensive mobility can create for military members wishing to complete university degree programs. 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 umanitoba.ca/extended/ military.

2.8 Off-Campus Study

Director: Bill Kops
General Office: 166 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 in the evenings and on weekends. The Courses in High School program allows 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 Alisa.Claman@umanitoba.ca, or visit our website at umanitoba.ca/extended/off-campus.

2.9 Summer Session

Director: Bill Kops
General Office: 166 Extended Education Complex
Telephone: 204 474 6963/8008

Summer Session offers a wide range of courses in May, June, July and August, including compressed on campus courses, summer institutes, travel/study and distance/online courses. Summer Session provides an opportunity to accelerate degree completion, ease course loads in the fall and winter, or catch up on missed courses.

May and June 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.

May to August Evening courses run from early May to early August. Classes are generally scheduled two evenings each week, and meet for two and 1/2 hours.

July and August 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) 474-6963 or (204) 474-8008, or toll-free in Canada 1 888 216 7011 (extension 6963) or e-mail summer@umanitoba.ca, or go to umanitoba.ca/summer.

SECTION 3: CERTIFICATE/DIPLOMA PROGRAMS

3.1 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.

3.2 Education

Adult and Continuing Education

To develop and enrich the knowledge and level of competence of those practicing in the field of adult education. Offered by face-to-face, blended and online study. Part-time study. Some courses are cross-listed as degree credit in the Faculty of Education.

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.

3.3 General Management

Applied Management

This certificate is designed to provide individuals in various work environments with the opportunity to combine management studies with applications relevant to their own careers and industries. 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 two to three years.

Financial & Management Accounting

This certificate program is designed to provide an intermediate level accounting education to anyone working with accounting information. The program provides a solid technical and conceptual foundation in accounting processes. Courses can be applied to an accounting designation or transferred for degree credit. Part-time study, evening classes.

Human Resource Management

Human Resource Management requires leadership, teamwork, communication and strategic planning. Our program provides these skills through seven required and one elective course which will enable you to gain more specialized knowledge. You will benefit from this program whether you have some work experience or are new to the HR field. Part-time study over three years.

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. A specialized stream offered in partnership with the Manitoba Customer Contact Association, and the Learning Technologies Centre are also offered.

Municipal Administration

This certificate program provides an essential body of knowledge required to assume administrative responsibilities within small to mid-size municipalities in Manitoba. Available by independent study. Part-time study over four years.

Quality Management

This certificate program offers a management approach to the design and implementation of quality programs. Offered by independent study. Part-time study over one year.

3.4 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

The ACC Program provides knowledge of the counselling process and practical counselling skills development. It is for people who are involved in direct counselling through their paid or volunteer work. Participants' varied workplaces include: health care, education, social services, government, vocation employment counsellors, managers, and other work places where counselling takes place. Part-time study over five years. The two specialization areas are general counselling and addiction studies.

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 three 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 three years.

3.5 United Way of Winnipeg Leadership Development Certificate Program*

This program is offered in partnership with the United Way of Winnipeg and provides extensive training to sponsored executives. Full-time program for 16 weeks.

3.6 Management/Professional Institute Affiliations

Canadian Institute of Management Certificate Program in Management and Administration* (CIM)

To offer management training for managers and supervisors in industry, business, and government. four years part-time study.

Certificate in Public Sector Management (CPSM) Co-sponsor: The Government of Manitoba

To offer management training for new and developing mid-managers employed by the provincial government. One-year part-time study program delivered in Blended Learning format integrating face-to-face sessions with online learning.

Purchasing Management Association of Canada* (PMAC)

The University of Manitoba participates with the PMAC in the offering the Strategic Supply Chain Management Program, a series of courses designed to develop proficiency in functional area processes and technical competencies, as well as a number of core and elective courses.

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.

DISTANCE AND ONLINE EDUCATION

Section 1: Welcome and General Information

Distance and Online Education (DE) courses are open to all UM students and provide an opportunity for students to complete courses without attending classes. If you require a flexible study schedule, would like to study year round, or simply appreciate the convenience of studying at home, Distance and Online Education provides you the opportunity to complete your degree. Many students choose to enroll in on-campus and Distance and Online Education courses at the same time.

Over 140 degree credit courses are offered from the following faculties/schools: Agricultural and Food Sciences; Art; Arts; Clayton H. Riddell Environment, Earth, and Resources; Education; Human Ecology; Kinesiology and Recreation Management; Science; and Social Work.

Degree programs offered by DE include a Bachelor of Arts, Bachelor of Arts in Geography, Bachelor of Social Work, and a Post-Baccalaureate Diploma in Education.

Please use Aurora Student at aurora.umanitoba.ca to search for course offerings and choose Distance and Online Education under the 'Campus' field. If you would like to request a Distance and Online Education course calendar, visit umanitoba.ca/distance, call 204-474-8012 (toll free in Canada at 1-888-216-7011, ext. 8012) or stop by Distance and Online Education in the Extended Education Complex.

Online Course Delivery

All Distance and Online Education courses are offered online. Courses are hosted by a learning management system (LMS) where you can log on to the UM web server and access your course website in a secure environment.

Course features include: online course materials; audio/video resources; chat, student lounge and e-mail; and online assignment submission. Some courses also have required online audioconferences. For further information regarding studying online, please see umanitoba.ca/distance.

Required textbooks and/or audio/visual materials can be confirmed and ordered from the UM Book Store at umanitoba.ca/bookstore. Early registration is recommended to ensure that you receive required materials prior to the start of term.

Campus Manitoba

www.campusmanitoba.com

Campus Manitoba (CMB) facilitates access to post-secondary education throughout the province of Manitoba through a consortium of institutions in the province. The consortium includes: Brandon University, the University of Manitoba, the University of Winnipeg; Universite de Saint-Boniface, Red River College, University College of the North and Assiniboine Community College.

CMB is a unique program in that students receive credit for courses offered by any of the participating universities. Coordinators at regional Centres provide academic and logistical support for students.

For further information, please call 1-866-445-0063 or email cmbbrandon@brandonu.ca.

Accessing Online Courses

The technologies required for studying by DE can vary depending on the course. Some courses may require a headset and microphone for online audioconferences. Specific course requirements can be found under Syllabus Available in the DE course section found in Aurora Student.

For information regarding accessing online courses, claiming a UMnetID, and technical requirements for online courses, please refer to the 'Accessing Your Course' document found in each DE course section in Aurora Student.

All DE section numbers are prefaced by the letter 'D', i.e. D01, D02, etc.

Section 2: Registration

Initial Access Times

To determine your registration access time, please see the faculty for which you were admitted.

All course registration activities must be done using Aurora Student. You may register for DE courses and on-campus courses at the same time. It is recommended that you register for courses immediately upon your initial registration access time or immediately after the registration period opens.

The section number acts as an identifier for a specific course section. All DE 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 course registration.

Please refer to the Registration System section or to umanitoba.ca/distance for registration dates and procedures. If you have questions regarding registering for DE courses, please contact de_info@umanitoba.ca or call 474-8012 (toll free at 1-888-216-7011, ext. 8012).

2.1 Distance and Online Education Terms

Fall (3 cr. hrs.)	September - December
Winter (3 cr. hrs.)	January - April
Fall/Winter (6 cr. hrs.)	September - April
Dist Ed Winter/Summer (6 cr. hrs.)	January - July
Summer (3 cr. hrs.)	May - August

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 community; students living in Winnipeg must write at the UM Fort Garry Campus.

3.2 Distance and Online Education Course Fees

For information regarding Distance and Online Education tuition fees and any additional compulsory fees (e.g., registration fee, library fee, student services fees, etc.) please refer to umanitoba.ca/registrar or call 474-9420. Undergraduate International Students are subject to an International Differential Fee; please refer to umanitoba.ca/registrar.

Section 4: Contacting Distance and Online Education

For further information and program and course descriptions, go to umanitoba.ca/distance.

To view the 2013-14 Distance and Online Education Course Calendar, go to umanitoba.ca/distance where you can view/print the entire calendar in PDF format, view/print the 2013-14 course offerings in PDF format or search the course offerings using Aurora Student.

If you would like a printed copy of the DE course calendar, go to umanitoba.ca/distance or call (204) 474-8012 (toll-free at 1-888-216-7011, ext. 8012).

For other inquiries, contact:

Distance and Online Education
166 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, ext. 8012
Fax: (204) 474-7661
Email: de_info@umanitoba.ca

umanitoba.ca/distance

GENERAL STUDIES

Section 1: Initial Access Times

General Studies students registering for on-campus, distance & online courses may register starting in August 2013. For more information about initial access times and how to determine your specific time, please refer to the University of Manitoba home page: umanitoba.ca or access Aurora Student in July (select: Enrolment & Academic Records, Registration, Registration Time & Status).

Section 2: Registration Assistance

For information about registration, course descriptions, rules, regulations and procedures visit the following website: umanitoba.ca/extended/general_studies and click on Registration.

Please take the time to become familiar with the academic regulations and requirements of the University of Manitoba and the specific academic regulations and requirements of General Studies by reviewing the following website: umanitoba.ca/extended/general_studies. As well, you may wish to seek the advice of a General Studies Student Advisor.

General Studies Student Advisors are 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.

Drop-in basis: Monday through Friday, 9:00 a.m. to 3:00 p.m. in 185 Extended Education Complex
Telephone: Monday through Friday, 8:30 a.m. to 4:30 p.m.
Student Advisor: Karen Nickerson (204) 474-8330
Assistant Student 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: umanitoba.ca/extended/general_studies

Section 3: Registration Information

3.1 Instructions

For information on how to register for courses using Aurora Student go to umanitoba.ca/registrar/tutorial or check our website: umanitoba.ca/extended/general_studies.

If you are interested in meeting the entrance requirements in a specific faculty, please view the Applicant Information Bulletin at: umanitoba.ca/admissions/application.

Prior to registering, applicable prerequisites for each course must have been fulfilled before attempting to register. This information may be found in Aurora Student (Course Catalog).

If you are an external transfer student, external credits are not evaluated for transfer credit until you apply to a degree program. However, the General Studies office will enter overrides for external course(s) that have been evaluated by the University of Manitoba and that satisfy prerequisite requirements, provided you have obtained a final grade of 'C' or better. Contact a General Studies Student Advisor prior to registration. To access the Transfer Credit Equivalencies database, go to Aurora Student aurora.umanitoba.ca, click on Transfer Credit Equivalencies.

You may register for up to a maximum of 30 credit hours in the combined Fall and Winter terms, and up to a maximum of 15 credit hours in any one term, including Summer Session.

3.2 Returning Students

If you have successfully completed 24 credit hours or more at a recognized post secondary institution (College or University), you are eligible to apply directly to a faculty or school providing you have satisfied the entrance requirements. For detailed information on other faculties and schools refer to the appropriate chapter listed in this catalog or check the Admissions Office Applicant Information Bulletin for entrance requirements and deadline dates: www.umanitoba.ca/admissions. If you need help with course selection or have any concerns about your status, please contact a General Studies Student Advisor (see contact information above).

3.3 Visiting Students

Visiting students who have been admitted and registered previously in at least one course are eligible to register in a subsequent session without reapplying 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; and, you provide the Letter of Permission to General Studies prior to registering (see contact information above).

3.4 Auditing Students

Auditing students must obtain written permission from the course instructor to audit a course. The written permission form and your written consent must then be submitted to a General Studies Student Advisor who will manually register the student for the course(s). New auditing students must apply for admission. Please contact the General Studies Office for information (see contact information above).

Section 4: Information Applicable to All General Studies Students

4.1 Academic Assessment Policy

Academic Assessment gauges student success at the University. Formal academic assessment shall be done following each academic term for all General Studies students who have completed 30 credit hours or more of attempts. In order to be in "good standing" in General Studies, a student must achieve a degree Grade Point Average (GPA) of 2.00 or greater at each assessment period. Students in "good standing" may continue in General Studies or, preferably, transfer to a target faculty.

Students who do not achieve a degree GPA of 2.00 will be placed "on probation", which will appear 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, a student "on probation" must achieve a term GPA of 2.00 in order to proceed. In order to clear probation, a student must achieve a degree GPA of 2.00. While "on probation", students are encouraged to consult the General Studies Student Advisor prior to registration and on a regular basis thereafter.

If a student does not succeed in achieving a term GPA of 2.00, they will be placed on "academic suspension" for one calendar year. A student on "academic suspension" is normally not allowed to register in another faculty or school at the University of Manitoba or to attend any other post-secondary institution during the time of suspension. Following the suspension period, a student may reapply for admission to General Studies.

4.2 Credit Hour Policy

In an effort to assist students with academic decisions, all students who have completed 30 credit hours of study with General Studies will be required to meet with a General Studies Student Advisor before being allowed further registration. 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

General Studies students will need to determine the specific subject and credit hour requirements of the faculty to which they plan to apply. This information is available in this catalog or from the Application Information Bulletin under your interested target faculty on the Admissions Office website: umanitoba.ca/admissions. Students are encouraged to apply to a faculty of their choice as soon as the requirements have been satisfied.

Entry to every faculty and school requires a formal application for admission to be submitted to the Admissions Office. Admission dates and forms are available at the Admissions Office, 424 University Centre or on the Admissions Office website: umanitoba.ca/admissions, click on Apply Now. 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:

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

Faculty of Agricultural and Food Sciences

Faculty of Arts

Faculty of Science

I. H. Asper School of Business

School of Art

All courses offered in the following faculties require teaching faculty written approval before registering, with the exception of courses open to all students as listed under University 1:

Faculty of Architecture

Faculty of Education (5000 level courses only)

Faculty of Engineering

Faculty of Human Ecology

Faculty of Kinesiology and Recreation Management

Faculty of Nursing

Faculty of Social Work (students with less than 30 credit hours)

Marcel A. Desautels Faculty of Music

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 follow the links at: umanitoba.ca/registrar.

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, Gray Academy of Jewish Education, the McLeod Adult Education Centre, Massey Building and the Canadian Mennonite University.

Students can register for Off-Campus Study courses on-line - follow the links at: umanitoba.ca/registrar. Contact Off-Campus Study for more information on courses or for assistance concerning registration procedures (see contact information below). 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, including obtaining written consent when necessary.

2.2 Fall and Winter (September 2013 - April 2014)

Registration for all courses scheduled in Fall and Winter begins mid-July in accordance with the initial access times that apply to your faculty or school for registration as outlined in the Calendar, and continues until mid-September for courses beginning in September, and until mid-January for courses beginning in January. A late fee will be assessed on all registrations that take place during the registration revision period.

2.3 Fee Information

When you register online, 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: 166 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

Registrar's Office (access times, registration, fees, course schedules, exams): umanitoba.ca/registrar

Section 3: Off-Campus Study Courses

Course offerings include Creative Writing, Anthropology, Physics, Native Studies, Nutrition, Yiddish, Geology and Nursing. Check our website for up-to-date course listings and information: umanitoba.ca/extended/off-campus.

FACULTY OF HUMAN ECOLOGY

Dean: Gustaaf P. Sevenhuysen
Associate Dean(s):
Campus Address/General Office: 209 Human Ecology Building
Telephone: (204) 474- 8508
Fax: (204) 474-7592
Email Address: h_ecology@umanitoba.ca

Website: umanitoba.ca/faculties/human_ecology

Academic Staff:
Please refer to the Faculty website at http://www.umanitoba.ca/faculties/human_ecology/

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

1.1 Programs

Program/Degree	Years to Complete	*Total Credit Hours
Bachelor of Health Sciences	4*	120
Bachelor Health Studies	4*	120
Bachelor of Human Ecology	4*	120
Bachelor of Human Ecology (Family Social Sciences)	4*	120
The After Degree Program in Family Social Sciences (Bachelor of Human Ecology	2**	60
Bachelor of Science (Human Nutritional Sciences)	4*	120
Second Degree Option in Human Nutritional Sciences	2**	60
Bachelor of Science (Textile Sciences)	4*	120 (123 for Eng. Sci. option)

*This includes one year (30 credit hours) of study in University 1.

**Approximate as prerequisites must be met in order to progress.

1.2 Available Minors, Options, Concentrations and Streams

Chart

Program	Minor Availability	Options	Concentrations	Streams
Family Social Sciences	Yes: Family Social Sciences Minor	Aging and Developmental Health Child and Youth Developmental Health Family Economic Health Family Violence Social Development		
Human Nutritional Sciences	Yes: Human Nutrition and Metabolism Minor	Foods Food Industry Nutrition	Food Industry Management Food Product Development Quality Assurance	
Second Degree in Human Nutritional Sciences			Dietetics Focus Foods Focus Human Nutrition Focus	
Textile Sciences	Yes: Textile Sciences Minor			Product Development Textile Development
Health Sciences	Yes: Health Sciences Minor			
Health Studies	Yes: Health Studies Minor			
		Interfaculty Option in Aging		

List

Family Social Sciences Options

Aging and Developmental Health Option

Child and Youth Developmental Health Option

Family Economic Health Option

Family Violence Option

Social Development Option

Human Nutritional Sciences Options and Concentrations

Foods Option

Food Industry Option: Food Industry Management Concentration; Food Product Development Concentration; Quality Assurance Concentration

Nutrition Option

Second Degree in Human Nutritional Sciences

Dietetics Focus; Foods Focus; Human Nutrition Focus

Textile Sciences Streams

Product Development Stream

Textile Development Stream: Engineering Sciences Option; Exercise and Sports Science Option; Microbiological Sciences Option

The Interfaculty Option in Aging

1.3 Professional Designations

Graduates from the Human Nutritional Sciences program who have completed the Dietitians of Canada (DC) accredited undergraduate degree with courses as stipulated by DC may apply for a dietetic internship either through Pre-Selection by the Manitoba Partnership Program (MPP) or by application to dietetic internship programs in the final year of their degree or after completion of their degree.

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 2: ADMISSION REQUIREMENTS

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. Detailed admission information is posted on the university website: http://www.umanitoba.ca/student/admissions/application/deadlines/human_ecology/.

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. Beginning in September, 2012, high school students will be eligible to apply for direct entry to the Faculty. Detailed information is posted on the University website (above).

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. Students planning to take BIOL 1020 for any program must have Biology 40S and any Grade 12 Mathematics course.

Minimum Adjusted GPA for consideration: 2.0.

The written English and Mathematics requirements are satisfied by required courses HMEC 2000 (or the former HMEC 2030) and STAT 1000 within the Human Ecology program. HMEC 2000 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 in the U1 Start Book found at http://umanitoba.ca/student/u1/startbook/index.html.

Direct Admission into the Faculty of Human Ecology from High School

To be eligible for admission based on high school, students must have: General Requirements to the University of Manitoba, plus a minimum 85% average over the following, with no less than 60% in each course:

a. English 40S

b. Chemistry 40S, Biology 40S, or a Mathematics 40S

c. A third 40S course

See Applicant Bulletin for complete details. http://umanitoba.ca/student/media/direct_entry_guide.pdf.

SECTION 3: FACULTY 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.

3.1 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 an Academic 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. Courses at the 3000 and 4000 level may be taken with written permission from an Academic Advisor as long as there is space.

3.2 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 quality 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 students record. A maximum of 150 credit hours (25 courses or the equivalent) may be attempted in order to obtain the 120 credit hours.

Effective for the admissions cycle beginning September 2009, to graduate, students in the Interdisciplinary Health Program (IHP) must attain a Degree Grade Point Average of 2.5 (300 quality points on 120 credit hours) on graduation and meet the probation standards as stated below.

Assessment

The status of each student will be assessed in May of each year in which a student is registered. All Direct Entry students will be assessed formally upon completion of at least 24 credit hours in May of each year using the Faculty of Human Ecology's assessment standards. Assessments can include the following comments:

- Faculty minimum met (grade point average meets the standards listed below);
- Dean's Honour (see 3.9)
- Academic Warning
- Probationary status (see below)
- Suspension (see below)
- Suspension - all attempts used (see below)

Academic warning indicates a grade point average between the minimum required at the effective credit hours (year) and the DGPA requirement of 2.0.

There is a maximum of 30 credit hours of attempts allowed for each academic program; once those attempts are used (repeated courses, grades of F or D), it is impossible to graduate.

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.

Assessment Standards		
Human Ecology Programs: General Degree, Family Social Sciences, Human Nutritional Sciences, and Textile Sciences		
Effective Credit Hours	**Minimum Grade Point Average**	
9 – 21 credit hours	< 2.0	Academic Warning
24 – 30 credit hours	1.80	
33 – 60 credit hours	1.85	
63 – 90 credit hours	1.90	
93 – 117 credit hours	1.95	
120+ credit hours	2.0	
Interdisciplinary Health Program: Health Sciences and Health Studies		
9 – 21 credit hours	< 2.0	Academic Warning
24 – 30 credit hours	2.0	
33 – 60 credit hours	2.2	
63 – 90 credit hours	2.4	
93 – 117 credit hours	2.5	
120+ credit hours	2.5	

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.

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.

3.3 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.

3.4 Direct Entry

All Direct Entry studentsw ill be assessed formally upon completion of at least 24 credit hours in May of each year using the Faculty of Human Ecology's assessment standards. Probationary standing is assessed using the criteria listed. Direct Entry students who complete fewer than 24 credit hours by May of their first year will not be formally assessed until the following May. Students who complete 9 - 21 credit hours with a grade point average of less than 2.0 will be placed on academic warning.

3.5 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. There are no supplemental examinations for students who have failed final or deferred examinations.

3.6 Challenge for Credit

A student wishing to challenge a course for credit should contact an Academic 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.

3.7 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 an Academic Advisor by the end of their first academic year to arrange for transfer of credit.

3.8 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.

3.9 Dean's Honour List

Eligible students who achieve a term Grade Point Average of 3.5 or higher in at least 12 credit hours per term will be included in the Deans Honour List.

3.10 Degree With Distinction

Students who graduate with a degree GPA of 3.75 and higher will receive a degree with distinction.

3.11 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.

3.12 Release and Indemnification Forms

In elective courses, students may be required to sign a release form for off-campus activities.

3.13 Written English and Mathematics Requirements

The written English and Mathematics requirements are satisfied by required courses HMEC 2000 and STAT 1000 within the Human Ecology program. HMEC 2000 will be available to students upon admission to the Faculty of Human Ecology.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

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 seven undergraduate programs 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.

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 can 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. There is a quota in effect for intake to each program per academic year. The quota may affect movement into a program after the September intake.

4.1 Advisement

The Faculty will provide entering students with orientation information and will refer a student to 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.

4.2 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 2012 or Later:

All students complete a Faculty core of 9 credit hours consisting of:

Course Number	Course Name
HEAL 2600	Integration of Health Determinants of Individuals
HMEC 2000	Research Methods and Presentation
HMEC 3000	Introduction to Social Epidemiology

- 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.

Notes:
1.Students in the Interdisciplinary Health Program complete PSYC 2250 or HMEC 2000.

2.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.

3. Students admitted between September 2005 and September 2012 are urged to seek academic advising assistance for advice regarding completion of core course requirements.

4.3 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.

4.4 Family Social Sciences

Head: Caroline Piotrowski

Applying knowledge from the social and physical sciences, students in Family Social Sciences examine factors affecting human psychosocial health and wellbeing. They study human development from infancy to old age within the context of families, communities, and 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 and Developmental Health Option; 2) Child and Youth Developmental Health Option; 3) Family Economic Health; 4) Family Violence; 5) Social Development. Family Social Sciences graduates are permitted to complete any option after their degree as a Special Student. Not every Family Social Sciences course will be offered every year. A chart providing course rotation information is available on the Family Social Sciences web page.

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 2012 or Later

Courses to be taken by all Family Social Sciences students:

Course No.	Course Name	Credit Hours
STAT 1000	Basic Statistical Analysis	3
One of:		
STAT 2000	Basic Statistical Analysis 2,	
COMP 1260	Introductory Computer Usage 1	
or any other Science course		3
One of:		
ECON 1010	Principles of Economics	
ECON 1020	Principles of Economics	
ECON 1210	Introduction to Canadian Economic Issues	
ECON 1220	Introduction to Global and Environmental Economic Issues and Policies	3 - 6
HMEC 2000	Research Methods and Presentation	3
HMEC 3000	Introduction to Social Epidemiology	3
HEAL 2600	Integration of Health Determinants of Individuals	3
FMLY 1010	Human Development in the Family	3
FMLY 1012	Introduction to Social Development	3
FMLY 1020	Family Issues Across the Lifespan	3
FMLY 1420	Family Management Principles	3
FMLY 2350	Multicultural Family Issues	3
FMLY 2400	Family Financial Health	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
PSYC 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology	6
	Department Electives	24
	Faculty Electives (3000 level or higher)	3
	Outside Electives	12 – 15
	Free Electives	30

Notes:
1. If students choose ECON 1010 and 1020 (former 1200) or ECON 1210 and 1220, 12 credit hours of outside electives are required.

2. All courses listed in the general Family Social Sciences section (above) are required. In addition, students must choose at least one area (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 are encouraged to take more than one Option. Each Option must consist of 18 non-overlapping credit hours; that is, no course can satisfy the requirement of more than one Option.

Aging and Developmental Health Option

This option is also part of the Interfaculty Option in Aging, which can fulfill the requirement for an option within the Family Social Sciences major.

Course No.	Course Name	Credit Hours
HMEC/REC/ SWRK 2650	Social Aspects of Aging	3
NURS/KIN 2610	Health and Physical Aspects of Aging	3
FMLY 4300	Field Experience (must be focused on Aging)	6
At least 3 credit hours from:		**3**
FMLY 3220	Death and the Family	
FMLY 3240	Families in Later Years	
FMLY 4220	Aging and Risk in a Global Context	
At least 3 credit hours from:		**3**
NURS 2200	Selected Topics in Aging and Health	
PSYC 2370	Developmental Psychology from Adolescence to Old Age	
PSYC 3460	Abnormal Psychology	
PSYC 3490	Individual Differences	
PSYC 3610	Memory	
KIN 4500	Physical Activity and Aging	
REC 4250	Leisure and Aging	
RLGN 1410	Death and Concepts of the Future	
SOC 2490	Sociology of Health and Illness	
SOC 2620	The Sociology of Aging	
SOC 3510	Population Dynamics and Change	
SOC 3540	The Sociology of Health Care Systems	

Child and Youth Developmental Health Option

FMLY 2600	Foundations of Childhood Developmental Health	3
FMLY 3600	Adolescents in Families and Societies	3
FMLY 3330 or FMLY 4604	Parenting and Developmental Health in Children or Children in Adversity	3
At least 9 credit hours from:		**9**
ANTH 2300	Anthropology of Childhood	
FMLY 2800	Family Violence	
FMLY 3610	Developmental Health of Children and Youth	
FMLY 3800	Conflict Resolution in the Family	
FMLY 3802	Intimate Partner Violence	
FMLY 3806	Children, Violence and Rights	
FMLY 4330	Management of Family Stress	
FMLY 4602	Family Relationships, Health and Well-Being	
FMLY 4480	Work and Family Issues	
HNSC 1210	Nutrition for Health and Changing Lifestyles	
HNSC 2130	Nutrition through the Life Cycle	
NURS 4420	Prevention of Illness	
NURS 4440	Health Promotion in the Community	
PSYC 2310	Adolescent Development	
PSYC 2370	Developmental Psychology from Adolescence to Old Age	
PSYC 2440	Behaviour Modification Principles	
PSYC 2450	Behaviour Modification Applications	
PSYC 2860	Language Acquisition	
PSYC 3360	Experimental Child Psychology	
SOC 3830	Youth, Crime and Society	

Family Economic Health Option

At least 9 credit hours from:		**9**
FMLY 3400	Families as Consumers	
FMLY 4330	Management of Family Stress	
FMLY 4400	Family Economics: Poverty and Wealth	
FMLY 4460	Family Financial Counselling	
FMLY 4480	Work and Family Issues	
At least 9 credit hours from (select at least 3 credit hours from courses numbered 3000 or 4000):		**9**
ACC 1100	Introductory Financial Accounting	
ACC 1110	Introductory Managerial Accounting	
ANTH 2430	Ecology, Technology and the Society	
ANTH 2550	Culture and the Individual	
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 3720	Urban and Regional Economics and Policies	
FIN 2200	Corporation Finance	
FIN 3420	Security Analysis	
FMLY 3012	Social Development Policies	
FMLY 3240	Families in Later Years	
FMLY 3610	Developmental Health of Children and Youth	

Course No.	Course Name	Credit Hours
FMLY 4012	Theories of Social Development	
FMLY 4220	Aging and Risk in a Global Context	
FMLY 4602	Family Relationships, Health and Well-Being	
GEOG 1280	Introduction to Human Geography	
GEOG 2210	Economic Geography	
GMGT 2070	Organizational Behaviour	
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	
MKT 2210	Fundamentals of Marketing	
MKT 3230	Consumer Behaviour	
NATV 1200	The Native Peoples of Canada	
NATV 1220	The Native Peoples of Canada, Part 1	
NATV 1240	The Native Peoples of Canada, Part 2	
NURS 4440	Health Promotion in the Community	
SOC 3370	Sociology of Work	
SOC 3470	Political Sociology	
SOC 3510	Population Dynamics and Change	
SOC 3870	Social Inequality	
TXSC 1600	Textiles for Apparel End Uses	
TXSC 1610	Textiles, Product and Consumers	
TXSC 2600	Textiles for Apparel End Uses	
TXSC 2610	Textiles for Non Apparel End Uses	
TXSC 2620	Consumer and Organizational Behaviour Toward Textile Products	
TXSC 3600	Global Apparel and Textiles Trade	

Family Violence Option

FMLY 2800	Family Violence	3
FMLY 3802 or FMLY 3806	Intimate Partner Violence or Children, Violence and Rights	3
FMLY 4802	Family Violence Prevention	3
At least 9 credit hours from (select at least 3 credit hours from courses numbered 3000 or 4000):		**9**
ANTH 3380	Anthropology and Contemporary Social Issues	
FMLY 3610	Developmental Health of Children and Youth	
FMLY 3800	Conflict Resolution in the Family	
FMLY 4220	Aging and Risk in a Global Context	
FMLY 4330	Management of Family Stress	
FMLY 4602	Family Relationships, Health and Well-Being	
FMLY 4604	Children in Adversity	
NATV 1240	The Native Peoples of Canada, Part 2	
NURS 3300	Women and Health	
NURS 3400	Men's Health: Concerns, Issues and Myths	
PSYC 2460	Dyadic Relationships	
SOC 2370	Ethnic Relations	
SOC 2510	Criminology	
SOC 3700	Sociology of Law	
SOC3790	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	

Social Development Option

FMLY 2012	Development, Conflict, and Displacement	3
FMLY 3012	Theories of Social Development	3
FMLY 4012	Social Development Policies	3
Three (3) credit hours from:		**3**
HMEC/SWRK/ REC 2650	Social Aspects of Aging	
FMLY 2800	Family Violence	
FMLY 3240	Families in Later Years	
FMLY 3400	Families as Consumers	
FMLY 3800	Conflict Resolution in the Family	
FMLY 4220	Aging and Risk in a Global Context	
FMLY 4330	Stress in the Family	
FMLY 4400	Family Economics, Poverty and Wealth	
FMLY 4602	Family Relationships, Health and Well-Being	
FMLY 4604	Children in Adversity	
FMLY 4480	Work and Family Issues	
Six(6) credit hours from:		**6**
ANTH 1220	Cultural Anthropology	
LABR 3220	Global Sweatshops, Global Struggles	
NATV 1220	The Native Peoples of Canada, Part 1	
NATV 1240	The Native Peoples of Canada, Part 2	
POL 1000	Democracy and Development	
POL 2070	Introduction to Canadian Government	
POL 4710	Political Theory and the Family	
SOC 2320	Canadian Society and Culture	
SOC 3890	Power and Inequality in Comparative Perspective	
SWRK 2050	Community and Organizational Theory	
WOMN 1600	Introduction to Women's and Gender Studies in the Social Sciences	

4.5 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 Academic Advisor when planning programs prior to registration. ADP students are required to choose at least one option 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 September 2012 or Later

Course No.	Course Name	Credit Hours
Faculty of Human Ecology Core Courses(any 6 credit hours. See note 3):		
At least 6 credit hours from: (see note 3)		
HMEC 2000 or HMEC 3000 or HEAL 2600	Resarch Methods and Presentation / Introduction to Social Epidemiology / Integration of Health Determinants of Individuals	6 - 9
Family Social Sciences Requirements (see note 4):		
FMLY 2350	Multicultural Family Issues	3
FMLY 2400	Family Financial Health	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
And a minimum of 6 credit hours from (see note 5):		**6**
FMLY 2600	Foundations of Childhood Developmental Health	
FMLY 2800	Family Violence	
FMLY 2012	Development , Conflict, and Displacement	
HMEC/SWRK/ REC 2650	The Social Aspects of Aging	
Family Social Sciences Option (see note 6)		**15**
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.

4.6 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 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.

4.7 Human Ecology Program

Chair: Gustaaf Sevenhuysen

NOTE: This program is under review.

The Human Ecology program is one of five 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.

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 2012 or Later

Course No.	Course Name	Credit Hours
ECON 1010 and ECON 1020 or ECON 1210 and ECON 1220	Economics	6
Six credit hours from	ECON 2280,, ECON 2310, ECON 2390, ECON 2400, ECON 2540, or ECON 2550	6
FMLY 1020	Family Issues across the Lifespan	3
Six credit hours from	FMLY 1010, FMLY 1420 or FMLY 1012	6
FMLY 2350	Multicultural Family Issues	3
HMEC 2000	Research Methods and Presentation	3
HMEC 3000	Introduction to Social Epidemiology	3
HEAL 2600	Integration of Health Determinants of Individuals	3
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HNSC 2130	Nutrition through the Life Cycle	3
NATV 1200 or NATV 1220 and NATV 1240	The Native Peoples of Canada The Native Peoples of Canada Part 1 The Native Peoples of Canada Part 2	6
STAT 1000	Basic Statistical Analysis 1	3
PSYC 1200 Or SOC 1200	Introduction to Psychology Introduction to Sociology	6
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 3000 or 4000 level; HMEC 4090, Practicum is highly recommended)	24
	Minor/option	18
	Free electives	12

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 and Gender Studies

4.8 Human Nutritional Sciences

Head: James D. House

Students majoring in Human Nutritional Sciences will choose the Nutrition Option, the Foods Option, the Food Industry Option, or will be admitted to the second degree in Human Nutritional Sciences. The educational requirements to qualify for a dietetic internship and membership with the College of Dietitians of Manitoba (CDM) or dietetic colleges in other Canadian provinces may be met within the Nutrition Option with the recommended selection of courses. Students can apply for a dietetic internship during the program (see application requirements and procedures for Pre-Selection by the Manitoba Partnership Program), 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 Applied Math or Pre-Calculus Mathematics 40S and Chemistry 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 academic advising advice. Sessions begin in late March of each year.

Students admitted in September 2010 or later must register for at least one HNSC course (3 credit hours) in order to stay in the Human Nutritional Sciences program.

Students Admitted in September 2012 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 2000	Research Methods and Presentation	3
HMEC 3000	Introduction to Social Epidemiology	3
HEAL 2600	Integration of Health Determinants of Individuals	3
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HNSC 2130	Nutrition through the Life Cycle	3
HNSC 2140	Basic Principles of Human Nutrition	3
HNSC 2150	Composition, Functional and Nutritional Properties of Foods	3
HNSC 2160	Food Preparation and Preservation	3
HNSC 3330	Ingredient Technology for Designed Foods	3
HNSC 4160	Seminar in Foods and Nutrition	3
HNSC 4290	Food, Nutrition and Health Policies	3
PSYC 1200 or SOC 1200	Introduction to Psychology Introduction to Sociology	6
or combination of the 2 areas		
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body Biology 1 Biology 2	3
(if BIOL 1 and 2 are taken, the additional 3 credit hours are considered to be free electives)		3 6
BIOL 1412	Physiology of the Human Body (See Note 4)	3

All students must select one of the following options to complete the degree program:

Course No.	Course Name	Credit Hours
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 or HNSC 4300	Nutritional Management of Disease States / Community Nutrition Intervention	3
	Department Electives	15
	Free Electives	24
Foods Option		
HNSC 3300 or HNSC 3310	Vitamins and Minerals in Human Health / Macronutrients and Human Health	3
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
MKT 2210	Fundamentals of Marketing	3
	Program Electives (See Note 5)	9
	Free Electives	24
Food Industry Option		
FOOD 4310	Introduction to HACCP	3
GMGT 1010 or GMGT 2030	Business and Society or Administrative Theory	3
HNSC 3260	Food Quality Behaviour	3
HNSC 3300 or HNSC 3310	Vitamins and Minerals in Human Health / Macronutrients and Human Health	3
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	
	Electives (see Advising information for suggested electives)	15

Students in the Food Industry Option must complete one of the following concentrations (15 credit hours). Select 15 credit hours of course work from one of the lists that follow.

Quality Assurance Concentration		**15**
AGRI 2190	Toxicology Principles	1.5
AGRI 2530	Nutritional Toxicology	1.5
FOOD 4160	Food Analysis 1	3
FOOD 4250	Food Analysis 2	3
STAT 3000	Applied Linear Statistical Models	3
STAT 3170	Statistical Quality Control	3

Course No.	Course Name	Credit Hours
Food Product Development Concentration		**15**
FOOD 4160	Food Analysis 1	3
FOOD 4250	Food Analysis 2	3
FOOD 4500	Food Safety and Regulations	3
One of:		
FOOD 3160, FOOD 3170, FOOD 3200	Frozen Dairy Product / Cheese and Milk Products / Baking Science	3
HNSC 4270	Sensory Evaluation of Food	3
HNSC 4290	Food, Nutrition and Health Policies	3
HNSC 4540	Functional Foods and Nutraceuticals	3
STAT 3000	Applied Linear Statistical Models	3
Food Industry Management Concentration		**15**
ACC 1100	Introductory Financial Accounting	3
GMGT 2060	Management and Organization Theory	3
GMGT 3010	Management Decision-Making	3
HRIR 2440	Human Resource Management	3
MKT 3220	Marketing Research	3
HNSC 3342	Management for Food and Nutrition Professionals	3
GMGT 3xxx	3000 level	3

4.8.1 Pre-Professional Preparation

Students in the Human Nutritional Sciences program can complete the entrance requirements for several professional programs as part of the degree.

A. Dietetics Focus: Academic requirements for eligibility to enter a dietetic internship.

1. Courses required in addition to the Human Nutritional Sciences program:

Course Number	Course Name	Credit Hours	Placement in Program
GMGT 1010 or GMGT 2030	Business and Society or Administrative Theory	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 4xxx	One of HNSC 4300, HNSC 4310, HNSC 4362 or HNSC 4340	3 – 6	Department Elective

2. Entry into a dietetic internship is competitive. It is strongly recommended that students seek advice from the Department on all aspects of preparing an application to an internship.

i. Students admitted prior to September 2007:

Students admitted prior to September, 2007 will follow regulations regarding dietetic internship applications in the final year of their degrees (information available on the Human Ecology web site and from the Dean's Office).

ii. Students admitted for September 2007 or later:

Students admitted to the Faculty of Human Ecology's Department of Human Nutritional Sciences in September, 2007 or later, will be eligible to apply to be pre-selected by the Manitoba Partnership Dietetic Education Program (MPP) after completion of 60 – 90 credit hours. Details of the pre-selection process and the academic rating selection criteria will be published by the MPP and a link is available on the Faculty of Human Ecology's web site. If students are not pre-selected by the MPP, there are other opportunities to apply in the final year of degree for internships following degree completion.

3. 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. Check with an Academic Advisor to review the supporting course requirements from previous academic work.

B. Medicine or Dentistry: Eligibility for entry into the program Doctor of Medicine, or the program Doctor of Dental Medicine, at the University of Manitoba.

Courses required in addition to, or as part of, the Human Nutritional Sciences program (additional courses can be taken as electives in the program):

Course Number	Course Name	Credit Hours	Placement in Program
CHEM 2210 [Cannot be held with CHEM 1320 in the same program; prerequisite is CHEM 1310]	Introduction to Organic Chemistry 1: Structure and Function	3	Free Elective
CHEM 2220	Introduction to Organic Chemistry 2: Reactivity and Synthesis	3	Free Elective
CHEM/MBIO 2360	Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy	3	Required; replaces CHEM 2770 in the Human Nutritional Sciences program
CHEM/MBIO 2370	Biochemistry 2: Catabolism, Synthesis and Information Pathways	3	Required; replaces CHEM 2780 in the Human Nutritional Sciences program
	Humanities Requirement		See Faculty of Medicine's website for more information
PHYS 1020	General Physics 1	3	Free Elective
PHYS 1030	General Physics 2	3	Free Elective

C. Master of Physician Assistant Studies:

This program requires completion of a 4 year degree (120 credit hours) including Human Anatomy, Human Physiology, and Biochemistry. Information regarding specific course numbers is found on the Faculty of Medicine's website.

D. Law: Eligibility for entry into the program Bachelor of Laws at the University of Manitoba.

1. The Human Nutritional Sciences program meets the entrance requirements of the Faculty of Law.

NOTES:

1. Under required courses, students can take either CHEM 1320 (University 1: Introduction to Organic Chemistry) or CHEM 1310 (University 1: Introduction to Physical Chemistry). CHEM 1320 may not be held with CHEM 2210.

2. Under required courses, students can take either CHEM/MBIO 2770 (Elements of Biochemistry 1) or CHEM/MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

3. Under required courses, students can take either CHEM/MBIO 2780 (Elements of Biochemistry 2) or CHEM/MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).

4. Under required courses, students can take either BIOL 1412 (Physiology of the Human Body) or BIOL 2410 (Human Physiology 1) and BIOL 2420 (Human Physiology 2). Note that students selecting BIOL 1020 and 1030 are not required to complete BIOL 1410, 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. 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.

6. For students who do not take CHEM 2210 and CHEM 2220, CHEM 1320 is preferred.

4.9 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 or HNSC 4540	Senior Thesis Functional Foods and Nutraceuticals	3

4.10 Second Degree Program in Human Nutritional Sciences

Required Courses -- 45 Credit Hours

Refer to information in section 4.8.1 about applying for a Dietetic internship. 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.

CHEM 1300	University 1: Structure and Modeling in Chemistry (see note 1)	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
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

Course No.	Course Name	Credit Hours
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
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body Biology 1 Biology 2 (see note 4)	3-6
BIOL 1412	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):

A. Dietetics Preparation

HNSC 3342	Management for Foodand Nutrition Professionals	3
HNSC 4140	Quantity Food Production and Management	3
HNSC 4320	Nutrition Management of Disease States	3

B. Human Nutrition

HNSC 4320 or HNSC 4300	Nutrition Management of Disease States Community Nutrition Intervention	3
Choose 6 credit hours from:		6
HNSC 4300,	Community Nutrition Intervention,	
HNSC 4310,	Nutrition and the Elderly,	
HNSC 4340 or	Maternal and Child Nutrition,	
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:

1. 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.

2. Under required courses, students can take either CHEM/MBIO 2770 (Elements of Biochemistry1) or CHEM/MBIO 2360 (Biochemistry 1: Bio-molecules and in Introduction to Metabolic Energy).

3. Under required courses, students can take either CHEM/MBIO 2780 (Elements of Biochemistry 2) or CHEM/ MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).

4. Under required courses, students can take either BIOL 1412 (Physiology of the Human Body) or BIOL 2410 (Human Physiology 1) and BIOL 2412 (Human Physiology 2). Note that students selecting BIOL 1020 and 1030 are not required to complete BIOL 1410, 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. If BIOL 1020 and BIOL 1030 are taken, the additional 3 credit hours are considered to be free electives.

4.11 Human Nutritional Sciences/Red River College Culinary Arts Program

Human Nutritional Sciences/Red River College Culinary Arts Program

Course No.	Course Name	Credit Hours
Required Courses		
CHEM 1300	Structure & Modeling in Chemistry	3
CHEM 1320 or CHEM 1310	Introduction to Organic Chemistry Introduction to Physical Chemistry	3
CHEM 2770	Elements of Biochemistry 1[2]	3
CHEM 2780	Elements of Biochemistry 2[2]	3
STAT 1000	Basic Statistical Analysis 1	3
STAT 2000	Basic Statistical Analysis 2	3
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body Biology 1 Biology 2[1]	3-6
BIOL 1412	Physiology of the Human Body[1]	3
HMEC 2000	Research Methods and Presentation	3
HNSC 2140	Basic Principles of Human Nutrition	3
HNSC 2150	Composition, Functional and Nutritional Properties of Food	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]	3
HNSC 3330	Ingredient Technology for Designed Foods	3
HNSC 4290	Food, Nutrition and Health Policies[4]	3

Courses for Area of Emphasis (6 credit hours from A, B, or C)

A. Dietetics Preparation

HNSC 4320	Nutrition Management of Disease States	3
Choose one from:		
HNSC 4300	Community Nutrition Intervention	3
HNSC 4310	Nutrition and the Elderly	3
HNSC 4340	Maternal Nutrition	3
HNSC 4362	Nutrition Option Practicum	6

B. Human Nutrition

HNSC 4300 or HNSC 4320	Community Nutrition Intervention Nutrition Management of Disease States	3

Course No.	Course Name	Credit Hours
HNSC 4310 or HNSC 4340 or HNSC 4350	Nutrition and the Elderly / Maternal Nutrition / Nutrition Exercise and Sport	3
C. Foods		
HNSC 3260	Food Quality Evaluation	3
HNSC 4540	Functional Foods and Nutraceuticals	3
	Electives	**6**

Notes:

[1]Students must take BIOL 1410 Anatomy of the Human Body or BIOL 1020 Biology 1 and BIOL 1030 Biology 2, AND require BIOL 1412 Physiology of the Human Body (3 credits) in order to take HNSC 3310 Macronutrients & Human Health and HNSC 3300 Vitamins and Minerals in Human Health. Free electives must be used to meet this requirement for BIOL 1412, if BIOL 1020 and BIOL 1030 are taken. Students can take either BIOL 1412 or BIOL 2410 and BIOL 2420.

[2]Students can take either CHEM 2780 /MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360 /MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy). Students can take either CHEM 2780 /MBIO [2]780 (Elements of Biochemistry 2) or CHEM 2370 /MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).

[3]PSYC/SOC 1200 & HNSC 2130 prerequisites are waived in this program. HNSC 2140 must be completed before registering for this course.

[4]HNSC 2130 prerequisite is waived in this program. HNSC 2150, HMEC 2000 and STAT 2000 must be completed before registering for this course.

I**IMPORTANT:** Students who intend to pursue a dietetic intership must take: HNSC 3342 (requires GMGT 1010 or GMGT 2030 to be taken in year 2; the business course uses 3 credit hours of free electives) and must also take HNSC 4140, and 3 credit hours that are selected from HNSC 4300, HNSC 4310, HNSC 4362, and HNSC 4340.

4.12 Interdisciplinary Health Program

Program Chairperson: Shahin Shooshtari

This curriculum consists of two degree 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. The Bachelor of Health Sciences degree provides students with an interdisciplinary background and skill set that will contribute to their preparation for a future in biomedical and health-related careers. This interdisciplinary skill set is seen as advantageous for future physicians and students applying for professional education.

4.12.1 Health Sciences Degree

Students Admitted in September 2012 or Later

Course No.	Course Name	Credit Hours
First year/foundation courses:		
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interaction	3
BIOL 1410	Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human Body	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
ECON 1210	Introduction to Canadian Economic Issues & Policies	3
FMLY 3780 or FMLY 3790	Introduction to the Development Programsfor Children and Families / Evaluation of Programs for Children and Families	3
GMGT 1010 or GMGT 2070	Business and Society / Organizational Behaviour	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HMEC 3000	Introduction to Social Epidemiology	3
HMEC 2000 or PSYC 2250	Research Methods and Presentation / Introduction to Psychological Research	3
NATV 1220 or NATV 1240	Native Peoples of Canada 1 / Native Peoples of Canada 2	3
PHIL 1290	Critical Thinking	3
Take 6 credit hours from the following 9 credit hours:		**6**
GEOG 4290	Geographies of Health and Health Care	3
PHIL 2740	Ethics in Biomedicine	3
SOC 2490	Sociology of Health and Illness	3
HEAL 2600	Integration of Health Determinants of Individuals	3
HEAL 3600	Integration of Health Determinants for Communities	3
HEAL 4600	Integration of Health Determinants for Canada and the World	3
HEAL 4620	Health Sciences Capstone	3
	Elective Courses: To be taken from an approved list of Science courses. At least 24 credit hours must be from the 3000 or 4000 level. A minimum of 21 of the 36 credit hours must be from the Sciences. Approved list on Faculty website.	36
	Free Electives	**15**

4.12.2 Health Studies Degree

Students Admitted in September 2012 or Later

Course No.	Course Name	Credit Hours
ANTH 1210	Human Origins and Antiquity	3
ANTH 1220	Cultural Anthropology	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interaction	3
PSYC 1200	Introduction to Psychology	6
SOC 1200	Introduction to Sociology	6
STAT 1000	Basic Statistical Analysis 1	3
ECON 1210	Introduction to Canadian Economic Issues & Policies	3
FMLY 3780	Introduction to the Development of Programs for Children and Families	
or		
FMLY 3790	Evaluation of Programs for Children and Families	3
GMGT 1010	Business and Society	
or		
GMGT 2070	Organizational Behaviour	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HMEC 3000	Introduction to Social Epidemiology	3
HMEC 2000	Research Methods and Presentation	
or		
PSYC 2250	Introduction to Psychological Research	3
NATV 1220	Native Peoples of Canada 1	
or		
NATV 1240	Native Peoples of Canada 2	3
PHIL 1290	Critical Thinking	3
Take 6 credit hours from the following 9 credit hours:		**6**
GEOG 4290	Geographies of Health and Health Care	3
PHIL 2740	Ethics in Biomedicine	3
SOC 2490	Sociology of Health and Illness	3
HEAL 2600	Integration of Health Determinants of Individuals	3
HEAL 3600	Integration of Health Determinants for Communities	3
HEAL 4600	Integration of Health Determinants for Canada and the World	3
HEAL 4610	Health Studies Capstone	3
	Elective Courses: To be taken from an approved list of Social Science courses. At least 24 credit hours must be from the 3000 or 4000 level. A minimum of 21 of the 36 credit hours must be from the Social Sciences. Approved list on Faculty website.	36
	Free Electives	**15**

Notes:

1. Before entering continuing years in the Faculty of Human Ecology, the overall program must be planned with academic advice. Program advising begins in early April.

2. 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.

3. 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.

4. 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 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 Academic Advisor will give additional guidance.

4.12.3 Health Sciences and Health Studies Minors

Minors in Health Sciences and Health Studies are offered by the Interdisciplinary Health Degree program.

Health Sciences Minor:

HEAL 2600	Integration of Health Determinants of Individuals
HEAL 3600	Integration of Health Determinants for Communities
HEAL 4600	Integration of Health Determinants for Canada and the World
	6 credit hours of Science Orientation courses at the 3000 or 4000 level*
	3 credit hours of Social Science Orientation courses at the 3000 or 4000 level*

TOTAL 18 credit hours

Health Studies Minor:

HEAL 2600	Integration of Health Determinants of Individuals
HEAL 3600	Integration of Health Determinants for Communities
HEAL 4600	Integration of Health Determinants for Canada and the World
	6 credit hours of Social Science Orientation courses at the 3000 or 4000 level*
	3 credit hours of Science Orientation courses at the 3000 or 4000 level*

TOTAL 18 credit hours

*Courses from the approved program electives list for the Interdiscplinary Health Degree Program are listed online at: http://umanitoba.ca/faculties/human_ecology/programs/idh/bhsciences/429.html.

4.13 Textile Sciences

Head: Wen Zhong

This program is currently under review.

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 or Applied Mathematics 40S and Chemistry 40S to take CHEM 1310. Students who consider subscribing to the Engineering Sciences Option must have Pre-Calculus or Applied 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 April 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 2012 or Later

4.13.1 Product Development Stream

Course No.	Course Name	Credit Hours
CHEM 1000 or CHEM 1300	Understanding the World through Chemistry University 1: Structure and Modelling in Chemistry	3
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
HEAL 2600	Integration of Health Determinants of Individuals	3
HMEC 2000	Research Methods and Presentation	3
HMEC 3000	Introduction to Social Epidemiology	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
PERS 1200	Physical Activity, Health and Wellness	3
PSYC 1200 or SOC 1200	Introduction to Psychology Introduction to Sociology	6
STAT 1000	Basic Statistical Analysis 1	3
TXSC 1600	Textiles for Living	3
TXSC 1610	Textiles, Products, and Consumers	3
TXSC 2500	Preparation for Product Development	1
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 4610	Integrative Project	6
TXSC 4620	Colour Management	3
TXSC 4630	Quality Assurance Systems	3
	Department Electives	9
	Free Electives	27

4.13.2 Textile Development Stream

CHEM 1300	University 1: Structure and Modelling in Chemistry	3
CHEM 1310	University 1: 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
HEAL 2600	Integration of Health Determinants of Individuals	3
HMEC 2000	Research Methods and Presentation	3
HMEC 3000	Introduction to Social Epidemiology	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
PERS 1200	Physical Activity, Health and Wellness	3
PSYC 1200 or SOC 1200	Introduction to Psychology Introduction to Sociology	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

Course No.	Course Name	Credit Hours
TXSC 4620	Colour Management	3
TXSC 4630	Quality Assurance Systems	3
Engineering Sciences Option		
ENG 1430 or ENG 1440	Design in Engineering 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: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interaction	3
MBIO 1000	Microbiology 1	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: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interaction	3
KIN 2320	Human Anatomy	3
KIN 2330	Biomechanics	3
KIN 3470	Exercise Physiology	3
BIOL 1412	Physiology of the Human Body	3
	Textile Sciences Department Electives	3
	Free electives	18

4.14 Textile Sciences Minor

A minor in Textile Sciences is offered by the Department of Textile Sciences. Students must complete 18 credit hours, distributed as follows: A maximum of six (6) credit hours in Textile Sciences at the 1000 level, and at least three (3) credit hours in Textile Sciences at the 2000 level, and at least three (3) credit hours in Textile Sciences at the 3000 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 Textile Sciences minor is available in their programs.

4.15 Interfaculty Option in Aging

An Option in Aging is offered by and in the following faculties: Arts, Human Ecology, Nursing, Kinesiology and Recreation Management and Social Work.

To complete the option, students in Human Ecology must complete each of the following requirements:

Interfaculty Option in Aging		
Required Courses (6 credit hours):	HMEC/REC /SWRK 2650 The Social Aspects of Aging	KIN/NURS 2610 Health and Physical Aspects of Aging
At least three (3) credit hours of discipline-specific (professional) applied work in the student's department of registration	Human Ecology Courses: FMLY 4300 HMEC 4090 HNSC 4362	Application is required for all field placement or practicum courses.
Nine (9) credit hours of aging-related courses from participating units	Human Ecology Courses: FMLY 3220 FMLY 3240 FMLY 4220 HNSC 2130 HNSC 4310	

Upon completion of these requirements, a comment will be added to the student's transcript.

4.16 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.

4.17 The Voluntary Minor

Students in the Faculty of Human Ecology may declare and complete a Minor from departments and interdisciplinary programs in which a Minor is offered. The Family Social Sciences Minor and the Minor in 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 5: FAMILY SOCIAL SCIENCES COURSE DESCRIPTIONS

Family Social Sciences Course Descriptions-1000 Level

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 1012 Introduction to Social Development Cr.Hrs. 3
This course is an introduction to Social Development with a particular emphasis on families and communities. Social development is concerned with the advancement of the common good, the effective management of social problems, the meeting of human needs, and the equitable distribution of society's resources. As such, this course explores the social factors and conditions that promote or hinder social development and how this affects the well-being of individual, families, and communities in contemporary societies. Not to be held with 062.172 or FMLY 1900

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) An introductory course that uses an ecosystem perspective resources, decision-making, planning, implementing, evaluating, and communication within family contexts. Applications to balancing work and family, individual and family stress, family finance, environmental issues, and the use of time and human resources will be made. Not to be held with the former 062.142.

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.

Family Social Sciences Course Descriptions-2000 Level

FMLY 2012 Development, Conflict, and Displacement Cr.Hrs. 3
The course is an introduction to development, conflict, and displacement as they affect individuals, families and communities. Specifically, this course examines the current phenomenon of induced displacement due to social conflicts, natural disasters, or uneven development in developing countries. Students will examine concepts and issues arising from induced displacement and explore community based responses to this problem. Not be held with FMLY 2900. Prerequisite: 1012 or consent of the instructor.

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 2400 Family Financial Health Cr.Hrs. 3
A survey of topics that have an impact on the financial health of Canadian families, including personal money management, mortgage financing, credit and debt, educational and retirement planning, taxation, insurance, savings and investments. The course prepares students to help families maximize resources and increase their financial literacy. Prerequisite: FMLY 1420 (051.142). Not to be held with the former FMLY 2070 (062.207).

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
(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.

Family Social Sciences Course Descriptions-3000 Level

FMLY 3012 Theories of Social Development Cr.Hrs. 3
This course is a survey of social development theories that have influence the study and practice of development since the 1950s. It addresses the question of why theories of social development are necessary and why different theories emerged at particular times in history. This course examines explanations of development and underdevelopment as they impact on individuals, families and communities. Not be held with FMLY 4900. Prerequisite: FMLY 1012.

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
Examines parenting and its influence on developmental health, with consideration of change across time, the context in which parenting occurs, and the effect of the parent-child relationship on developmental health. Prerequisites: FMLY 2600 or FMLY 3600. Not to be held with 062.435.

FMLY 3400 Families as Consumers Cr.Hrs. 3
An examination of the factors that influence the consumer behaviour of individuals and families across the life course, with particular attention to the situation of vulnerable consumers. Theory, education, policy and practice are related to contemporary consumer issues and the impact of consumption behaviour on the environment. Prerequisites: [FMLY2400 or FMLY 2070 (062.207)] and [ECON 1210 (018.121) or ECON 1220 (018.122) or ECON 1010 or ECON 1020]. Not to be held with the former FMLY 3450 (062.345).

FMLY 3470 Selected Studies in the Family I Cr.Hrs. 3
(Formerly 062.347) The opportunity to carry out an individual study in the area of the family of particular interest to the student. When enrolment warrants, the department may offer selected topics in a regular course format. Prerequisite: consent of instructor.

FMLY 3600 Adolescents in Families and Society Cr.Hrs. 3
(Formerly 062.360) This course is designed to help students understand the nature of adolescent relationships with their families in communities. The application of theory and research on adolescent relationships to professional practice with families and communities is emphasized. Prerequisite: FMLY 2600 (062.260) and completion of 54 credit hours.

FMLY 3610 Developmental Health of Children and Youth Cr.Hrs. 3
(Formerly 062.361) Population health gradients are largely set early in life and are affected by the environments in which children live. This course examines current knowledge of the social determinants of child and adolescent health. Consideration is given to policy implications, including directions for program development and evaluation. Not to be held with the former 062.450. Prerequisite: FMLY 2600 (062.260). Not to be held with 062.450.

FMLY 3780 Introduction to the Development of Programs for Children and Families Cr.Hrs. 3
(Formerly 062.378) An introduction to the theory and practice of program development with special emphasis on programs for children and families. The course will cover techniques for conducting need assessments, as well as the process of planning and implementing programs to address community need. Prerequisite: HMEC 2000 or HMEC 2050 (028.205).

FMLY 3790 Introduction to the Evaluation of Programs for Children and Families Cr.Hrs. 3
(Formerly 062.379) An introduction to the theory and practice of program evaluation with special emphasis on child and family programs. Considers the purpose of evaluation, types of evaluation, evaluation design and analysis, and the evaluation process. Prerequisite: HMEC 2050 (028.205).

FMLY 3800 Conflict Resolution in the Family Cr.Hrs. 3

(Formerly 062.380) Students will examine the nature and development of conflict in family relationships throughout the life span. Implications of conflict for the quality of family relationships and individual development will be addressed. Prerequisite: FMLY 2800 (062.280) and completion of 54 credit hours.

FMLY 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: FMLY 2800.

FMLY 3806 Children, Violence and Rights Cr.Hrs. 3
Violence against children in their families takes many forms, from sexual exploitation to honour killings. We will explore, through a child rights lens, the forces contributing to violence against children, its impact on human lives, and approaches to prevention being implemented around the world. Prerequisite: FMLY 2800. Not to be held with FMLY 3804.

FMLY 3900 Families, Housing and Community: A Policy Perspective Cr.Hrs. 3
(Formerly 062.390) Examines policy relative to families, housing and community. Primer on public policy process and links to families. Examines housing policies at federal, provincial, and municipal levels and their impact on individuals and families. Opportunity for some field experience. Prerequisite: FMLY 1900 (062.190) or consent of instructor. Not to be held with 062.473.

Family Social Sciences Course Descriptions-4000 Level

FMLY 4012 Social Development Policies Cr.Hrs. 3
This course examines the formulation of social development policies and the impact of these policies on the well-being of individuals, families, and communities. The course uses a seminar format to foster students' capacity to understand and examine policy issues. Students will develop skills in understanding, analyzing, and formulation social development policies. Actual social development case studies will be evaluated and alternative family and community oriented policies discussed. Not be held with FMLY 3900. Prerequisite: FMLY 1012.

FMLY 4220 Aging and Risk in a Global Context Cr.Hrs. 3
This course will take an interdisciplinary perspective on definitions of risk associated with a variety of determinants that shape the daily lived experience of older adults, their families and communities, and the institutions that care for them. Students will evaluate programs, policies and research, and engage in a final project of their choice. Prerequisite or Corequisite: HMEC 2650 or SWRK 2650 or REC 2650 or NURS 2610 or KIN 2610.

FMLY 4300 Field Experience Cr.Hrs. 6
(Formerly 062.430) Provide students with field experience in a supervised setting. The course consists of 120 hours of supervised work in an assigned setting and seminar time with peers and field experience coordinator. Grade is pass/fail. Prerequisite: 84 credit hours and consent of instructor. Not to be held with 062.436 or 062.455 or 062.456 or 062.457.

FMLY 4330 Management of Family Stress Cr.Hrs. 3
(Formerly 062.433) Theories which influence family behaviour during stress are discussed, and coping/managerial skills to mitigate the effects of the stressors are examined. Stress management advice from agencies and in educational settings is analyzed. Prerequisite: FMLY 1020 (062.102

FMLY 4400 Family Economics: Poverty and Wealth Cr.Hrs. 3
Analysis of principles, major problems and trends in the economic welfare of individuals and families in both the Canadian and global economies. Emphasis on families and their relationships to the economy such as income inequality, family economic policy, human capital, proverty and resource distribution within families. Prerequisites: [FMLY 2400 or FMLY 2070 (or 062.207] and [one of ECON 1210 (or 018.121) or ECON 1220 (or 018.122) or ECON 1010 or ECON 1020. Not to be held with the former FAMLY 4450 (or 062.445)].

FMLY 4460 Family Financial Counselling Cr.Hrs. 3
(Formerly 062.446) Theory and practice of financial counselling of debt-burdened families. Debt analysis. Appraisal of alternate solutions and of legal and psycho-social factors in terms of family well-being and financial capacity. Prerequisite: FMLY 3450 (062.345).

FMLY 4470 Selected Studies in the Family II Cr.Hrs. 3
(Formerly 062.447) The opportunity to carry out advanced study in the area of the family of particular interest to the student. When enrolment warrants, the department may offer selected topics in a regular course format. Prerequisite: consent of instructor.

FMLY 4480 Work and Family Issues Cr.Hrs. 3
(Formerly 062.448) An exploration of the interface between paid work and unpaid work and families in the Canadian and international contexts. Topics include demographic trends; parenting, child and elder care; management of work-family conflict; development of workplace solutions; and social policy implications. Prerequisite: FMLY 2400 (or FMLY 2070 or 062.207) and 84 credit hours.

FMLY 4500 Senior Thesis Cr.Hrs. 6
The preparation and presentation of a comprehensive review of the literature and an empirical investigation of an approved topic. Prerequisite: Registered in the final year of the Family Social Sciences program and consent of Department Head. Application required. Enrolment limited.

FMLY 4600 Risk and Resilience in Behavioural and Social Development Cr.Hrs. 3
(Formerly 062.460) The development of behavioural and social difficulties are examined from a risk and resilience perspective. The interaction of factors at all levels of the human ecological system are considered in terms of their impact on increasing risk and/or building resilience in children and youth. Prerequisite: FMLY 2600 (062.260. Not to be held with 062.437.

FMLY 4602 Family Relationships, Health and Well-being Cr.Hrs. 3
This course provides an indepth survey of the interaction between family relationship dynamics, health and well-being across the life course period. The influence of family members on health-related behaviours is reviewed and preventive family-based interventions are evaluated. Prerequisite: FMLY 3600 (or 062.360).

FMLY 4604 Children in Adversity Cr.Hrs. 3
Millions of children live with violence, trauma and other adverse circumstances. We will explore the interactions among individual, family, cultural, legal and policy factors as they affect children's developmental pathways in the face of adversity. Prerequisite: FMLY 2600 or FMLY 3600. May not be held with FMLY 4600 or 62.437.

FMLY 4606 A Social Justice Perspective on Indigenous Maternal and Child Health Cr.Hrs. 3
This course examines the local and global challenges regarding the health care and health care needs of Indigenous peoples, with particular attention to childbearing women, new mothers, and young children. Interdisciplinary theories and methods applied to the study of Indigenous peoples are critically evaluated from Indigenous and social justice perspectives. Prerequisite: FMLY 2350 (062.235) or NURS 3330 (049.333) or NATV 1220 (032.122) or NATV 1240 (032.124).

FMLY 4800 Senior Seminar in Family Violence and Conflict Resolution Cr.Hrs. 3
(Formerly 062.480) Advanced study in the areas of family violence and/or conflict resolution. Special emphasis is placed upon current research and/or practice. Prerequisite: FMLY 3800 (062.380) and completion of 72 credit hours.

FMLY 4802 Family Violence Prevention Cr.Hrs. 3
Family violence prevention theories, research, practices and policies will be critically reviewed with regard to issues such as gender, culture, sexual orientation and others. Prerequisites: FMLY 3802 or FMLY 3806. Not to be held with the former FMLY 4800 (0662.480).

FMLY 4900 Families, Housing and Community: An Action Perspective Cr.Hrs. 3
(Formerly 062.490) Examines relationships between families, housing and community; impact of communities on children; best practices for enhancing quality of life in communities; participatory processes for working with communities. Significant on-site learning. Emphasis on inner-city. Prerequisite: FMLY 2900 (062.290) or FMLY 3900 (062.390) or consent of instructor.

General Human Ecology Course Descriptions-2000 Level

HMEC 2000 Research Methods and Presentation Cr.Hrs. 3
An introduction to research designs, methods and techniques, as well as the practice of disseminating results, in the context of selected determinants of health. Applications in natural and social sciences will be presented. Skills related to presenting research findings will be taught. Prerequisite: STAT 1000 (005.100). Not to be held with HMEC 2050 (028.205).

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).

General Human Ecology Course Descriptions-3000 Level

HMEC 3000 Introduction to Social Epidemiology Cr.Hrs. 3
This course provides an overview of the basic concepts, principles and methods of social epidemiology and their applications for research and practice from a human ecology perspective. Applications to social determinants of health across the life course may include but are not limited to income and food security, early child development and others. Prerequisites: HMEC 2000 [or HMEC 2050] or any 2000-level or higher research course and [HEAL 2600 or HMEC 2030].

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: 39 credit hours in the Human Ecology program and HMEC 2030 (028.203 or 028.103).

HMEC 3500 Developmental Health Cr.Hrs. 3
This course examines how social inequalities affect population health across the lifespan. It is guided by the determinants health with a particular focus on socioeconomic variables. Local, provincial, national and international perspectives provide meaningful insight into the roles of equality and inequality. Prerequisite: Any 2000 level research methods course.

General Human Ecology Course Descriptions-4000 Level

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) with health professionals as field supervisors. Students also have in-class experiences and assignments with an academic instructor. Prerequisite: 84 credit hours in the Human Ecology General or Interdisciplinary Health program and consent of instructor. Application required. Limited Enrolment.

Human Nutritional Sciences Course Descriptions-1000 Level

HNSC 1100 Nutrition for Healthy Living Cr.Hrs. 3
An introduction to nutrition and practical approaches for healthy diet and disease prevention. Prerequisites: Enrollment in the Aboriginal Community Wellness Diploma program. Not to be held with HNSC 1210

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
(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 or HNSC 1100.

Human Nutritional Sciences Course Descriptions- 2000 Level

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 MBIO 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.

Human Nutritional Sciences Course Descriptions-3000 Level

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 [BIOL 1412 or 2420 (ZOOL 1330 or 2540, 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 [BIOL 1412 or 2420 (ZOOL 1330 or 2540, 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 nutritional education. Prerequisites: [PSYC 1200 (017.120) or SOC 1200 (077.120)] and HNSC 2130 (030.213) and HNSC 2140 (030.214)

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 [GMGT 1010 or 2030 (027.203)]

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 3870 Food Geographies Cr.Hrs. 3
This course provides a critical examination of the geographies of food at a variety of scales, from the body to the global. The course focuses on themes in three interconnected areas: 1) food production and the global food system from farm to plate including agribusiness and alternative food production and distribution models; 2) food consumption habits and beliefs and foodways as geographically contingent material culture; and 3) food (in) security and its relationship to health and wellbeing. This course is cross-listed with GEOG 3870. Prerequisites: A grade of "C" or better in GEOG 1280, GEOG 1281, GEOG 1200 or HNSC 1200, or permission of the department head.

Human Nutritional Sciences Course Descriptions-4000 Level

HNSC 4120 Senior Thesis Cr.Hrs. 3
The preparation and presentation of a report based on a survey of the literature or on a laboratory investigation of an approved topic. Prerequisites: Students must be registered in their final year of Human Nutritional Scincs program or the Minor in Human Nutrition and Metabolism. Application required. Enrolment limited. Not to be held with HNSC 4122 or HNSC 4600.

HNSC 4122 Research Project in Human Nutritional Sciences Cr.Hrs. 6
A research project in any aspect of human nutritional sciences, chosen in consultation with the supervising faculty member. A written report and a poster or oral presentation required at the end of the project. Students must be registered in their final year of Human Nutritional Sciences program. Application required. Enrolment limited. May not be held with HNSC 4120 (030.412) OR HNSC 4600.

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. Additionally, students must complete the Food Handlers Certificate Program and must submit the form to the Department by June 15th in order to be permitted to enter HNSC 4140.

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 2000 or HMEC 3100 (028.310).

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 (78.301) 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 2000(or 2050 or 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 KIN 3470, or PHED 3470] or [ZOOL 1330 (002.1330)

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 280 hours of work related to the field experience. Prerequisites: Completion of 84 credit hours in Human Nutritional Sciences, including the following courses from the Food Industry Option: HNSC 3260, HNSC 3330, FOOD 4150 and one of GMGT 1010 or GMGT 2030. 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).

HNSC 4600 Practice-based Research in Human Nutritional Sciences Cr.Hrs. 3
A practice-based research project relevant to dietetic practice. Prerequisite: Registration in the 4th year of the Human Nutritional Sciences program and any two of HNSC 3300, HNSC 3320 & HNSC 3330, and instructor permission required. Enrolment limited to students pre-selected by the Manitoba Partnership Dietetic Education Program. Not to be held with HNSC 4120 or HNSC 4122

Interdisciplinary Health Degree Program Course Descriptions-2000 Level

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: One of CHEM 1300 (002.130) or BIOL 1020 (071.102) or STAT 1000 (005.100); and one of PSYC 1200 (017.120) or SOC 1200 (77.120) or consent of instructor.

Interdisciplinary Health Degree Program Course Descriptions-3000 Level

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 with a grade of "C" or higher and 39 credit hours in the Curriculum for Interdisciplinary Health or consent of instructor.

Interdisciplinary Health Degree Program Course Descriptions-4000 Level

HEAL 4600 Integration of Health Determinants for Canada and the 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 57 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: A grade of C+ in HEAL 3600 and 57 credit hours in the Curriculum for Interdisciplinary Health or consent of instructor. Restricted to students in Health Sciences and Health Studies.

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: a grade of C+ in HEAL 3600 and 57 credit hours in the Curriculum for Interdisciplinary Health or consent of instructor. May not hold with HEAL 4610

HEAL 4650 Selected Topics in Interdisciplinary Health Cr.Hrs. 3
The opportunity to carry out individual study in the area of interdisciplinary health. When enrolment warrants, special topics may be offered in a regular course format. Prerequisite: Consent of Instructor and Chairperson.

Textile Sciences Course Descriptions-1000 Level

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.

Textile Sciences Course Descriptions-2000 Level

TXSC 2420 History of Textiles Cr.Hrs. 3
(Formerly 064.242) Development and diffusion of textile fibres, fabrics, and finishes from prehistoric times to present. May not hold with 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 must pass this course before they will be permitted to continue in TXSC 2630. 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 1000-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 1000-level chemistry].

TXSC 2620 Consumer and Organizational Behaviour Toward Textile Products Cr.Hrs. 3
(Formerly 064.262) Theories and practics 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 2500; TXSC 2600 (064.260). Not to be held with the former 064.348.

Textile Sciences Course Descriptions-3000 Level

TXSC 3470 SELECTED TOPICS 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. Prerequisite: TXSC 2610 (064.261) and [HMEC 2050 (028.205) or any 2000-level or 3000-level research method course] and CHEM 1000 (001.100) or CHEM 1300 (002.130). Not to be held with 064.347 which was offered from September 2004 to September 2005/2006.

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 1010 and 1020 (ECON 1200 (018.120) or ECON 1210 (018.121)] and [ECON 1220 (018.122)] and [HMEC 2000 or 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 lable, 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 2000 or 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 064.221or 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) and TXSC 3650 (064.365). 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 2630 and [HMEC 2000 or HMEC 2050 (028.205)}. Not to be held with 064.224 and 064.342

TXSC 3700 Special Topics in Textile Sciences Cr.Hrs. 6
This course will vary from year to year depending on the trends within the textile/apparel complex. Students will be given the opportunity to study a detailed area of textile sciences throuigh a field experience or travel study. Prerequisite: Permission of the instructor.

Textile Sciences Course Descriptions-4000 Level

TXSC 4210 Seminar in Clothing and Textiles Cr.Hrs. 3
(Formerly 064.421) Critical study of literature and other information sources in the field of clothing and textiles. Oral and written reports required. Restricted to fourth year majors in the department.

TXSC 4260 Textile and Apparel Marketing Cr.Hrs. 3
(Formerly 064.426) Application of marketing in the textile industries. Prerequisites: 064.340 and MKTG 2210 (118.221).

TXSC 4310 PRACTICUM 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 4340 SENIOR PROJECT Cr.Hrs. 3
(Formerly 064.434) Independent study on an approved topic in a) marketing, production or design of apparel, b) history of costume and textiles, c) socio-psychological aspects of clothing, or d) textile performance, preservation and use. A detailed proposal for the study must be submitted in order to register. Prerequisite: completed 84 credit hours in the Clothing and Textile program and consent of department head.

TXSC 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. Prerequisites: A grade of "C" or better in: [TXSC 2600 (064.260)] and [TXSC 2610 (064.261)] and [TXSC 3620 (064.362)] and [TXSC 3500 (064.350)].

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.

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: TXSC 3610 (064.361) and TXSC 3630 (064.363) and TXSC 3640 (064.364). Not to be held with the former 064.430 or TXSC 4340 (064.434) or TXSC 4210 (064.421) or TXSC 4310 (064.431).

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. Stduents will learn the process of preserving colour integrity throughout the supply chain. Prerequisites: TXSC 3610 (064.361). 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

Dean: Dr. Michelle Porter (Acting Dean)
Associate Dean(s): Associate Dean (Academic): Joannie Halas
Campus Address/General Office: 102 Frank Kennedy Building
Telephone: (204) 474 9747
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Academic Staff:
Please refer to the faculty website at umanitoba.ca/faculties/kinrec/about/faculty.html

Chapter Contents

Faculty of Kinesiology and Recreation Management Information

The mission of the faculty is to discover and disseminate knowledge related to physical activity, human movement, sport, and leisure to improve the health, well-being and quality of life of Manitobans, Canadians and citizens of the world.

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 1: DEGREE PROGRAMS OFFERED

1.1 Programs/Majors

Program/Degree	*Years to Complet	Total Credit Hours
Bachelor of Physical Education	3	102
Bachelor of Kinesiology	4	120
Bachelor of Kinesiology-Athletic Therapy	4	126
Bachelor of Recreation Management and Community Development	4	120

*This includes one year (30 credit hours) of study in University 1.

1.2 Available Minor

Minor in Recreation Studies (See Section 4.6 for details)

1.3 Available Option

Interfaculty Option in Aging (See Section 4.7 for details)

1.4 Available Areas Of Emphasis

- Aging (BKin and BRMCD)
- Community Development and Wellness (BKin and BRMCD)
- Culture and Diversity (BKin and BRMCD)
- Coaching (BKin only)
- Fitness Professional (BKin only)
- Sport and Event Management (BRMCD only)
- Sustainable Tourism and Recreation (BRMCD only)

SECTION 2: ADMISSION REQUIREMENTS

Admission Information

The following is a summary of the admission requirements for the Faculty of Kinesiology and Recreation Management. 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 website in January each year.

Direct Entry (from High School)

In the 2012-2013 academic year, the Faculty of Kinesiology and Recreation Management began accepting some students into our three degree programs (excludes Athletic Therapy) directly from High School.

In addition to the general U of M admission requirements for high school students, to be considered for direct entry into the Faculty of Kinesiology and Recreation Management you will require a minimum 85% average over the following courses, with no less than 60% in each individual course:

- English 40S
- Mathematics 40S
- One of Biology 40S (recommended for B.Kin.), Chemistry 40S, Physics 40S, or Social Studies 40S (World Human Geography, Western Civilization History, or Social Studies: World Issues)

Please note that due to limited space students may require a higher average than stipulated. Any student applying for Direct Entry admission to this faculty will automatically be considered for admission to University 1, should they not be granted Direct Entry admission.

Regular Admission (from U1 or another academic program)

The general admision requirement for all degrees except Bachelor of Kinesiology – Athletic Therapy is completion of any 24 credit hours of University 1 coursework. However, in order to complete the degree in the shortest time possible it is recommended that students take the required Year 1 courses before applying to the Faculty. Entering students who have not completed all of the required Year 1 courses must complete them during their program. Equivalent academic course work completed from other recognized post secondary institutions will be considered.

Minimum GPA for admission consideration is 2.0 but admission is competitive.

The Faculty of Kinesiology and Recreation Management strives for a student body within its degree programs that is representative of the rich diversity of peoples within the province and to enrich the overall teaching and learning climate. Our Indigenous Acievement and other University of Manitoba priorities are realized through an Individual Consideration admissions category for applicants who identify as the following underrepresented group: Canada Indigenous/Aboriginal Peoples, Racialized Minorities, Mature Students, ACCESS Program Students, Persons with Disabilites, and those with exceptional circumstances. Students applying under Individual Consideration must have successfully completed at least one year of study (min 24 credit hours) and a minimum AGPA of 2.0.

2.1 Admission Requirements: Bachelor of Kinesiology

Completion of a minimum of any 24 credit hours in University 1. However, in order to complete the degree in four years, the following first-year courses are recommended (30 credit hours):

BIOL 1020 Biology 1: Principles and Themes and BIOL 1030 Biology 2: Biological Diversity, Function and Interaction (with a minimum grade of "C" in each) or BIOL 1000 Biology: Foundations of Life and BIOL 1010 Biological Diversity and Interaction (with a minimum average grade of "C+"). Successful completion of BIOL 1020 and BIOL 1030 or BIOL 1000 and BIOL 1010 is required for admission to the Athletic Therapy Program and is strongly recommended for admission to Kinesiology.

PERS 1200 Physical Activity, Health and Wellness

PERS 1500 Foundations of Physical Education and Kinesiology

PSYC 1200 Introduction to Psychology

STAT 1000 (M) Basic Statistical Analysis 1

3 credit hours to fulfill the Written English Requirement

6 credit hours of Electives

Note: Students considering applying to the Athletic Therapy Program may consider taking HNSC 1210 Nutrition for Health and Changing Lifestyles as a Year 1 elective as it is reqired in Year 2 of the program.

2.2 Admission Requirements: Bachelor of Physical Education

Completion of a minimum of any 24 credit hours in University 1. However, in order to complete the degree in three years, the following first-year courses are recommended (30 credit hours):

BIOL 1410 Anatomy of the Human Body and BIOL 1412 Physiology of the Human Body (minimum grade of "C") NOTE: BPE students who have completed BIOL 1020 and BIOL 1030 will also be required to take BIOL 1412, as BIOL 1412 is a pre-requisite for KIN 3470.

Written English Requirement: ENGL 1XXX English Literature (6 credit hours)

PERS 1500 Foundations of Physical Education and Kinesiology

PSYC 1200 Introduction to Psychology

A course that satisfies the Mathematics requirement from the Mathematics or Statistics department

6 credit hours of Electives (in area of teachable minor)

2.3 Admission Requirements: Bachelor of Recreation Management and Community Development

Completion of a minimum of any 24 credit hours in University 1. However, in order to complete the degree in four years, the following first-year courses are recommended (30 credit hours):

PERS 1300 Introduction to Leisure Travel

PERS 1400 Concepts of Recreation and Leisure

PSYC 1200 Introduction to Psychology

STAT 1000 (M) Basic Statistical Analysis 1

3 credit hours to fulfill the Written English Requirement

12 credit hours of Electives

Note: Students may consider taking SOC 1200 Introduction to Sociology as an elective in Year 1 as it is required in Year 2 of the program.

2.4 Additional Admission Requirements

High School Prerequisites: Math 40S (minimum grade of 50%) is required for all programs. Biology 40S (minimum grade of 50%) is required for BKin and BPE. Chemistry 40S and Physics 40S are not required but may be helpful for BKin and BPE.

Valid Health Care Provider CPR and Standard First Aid certification are required for successful applicants to the Bachelor of Kinesiology - Athletic Therapy Program, prior to the commencement of courses in this program.

2.5 Transfer and Second Degree Students

Students admitted to the Faculty of Kinesiology and Recreation Management following the completion of another recognized university degree or course-work may transfer in credit that is deemed equivalent toward the course requirements of a Kinesiology and Recreation Management undergraduate degree. Students are eligible to transfer a maximum of 50 credit hours to the Bachelor of Physical Education degree and a maximum of 60 credit hours to the Bachelor of Kinesiology and Bachelor of Recreation Management and Community Development programs.

Students who hold a degree and have completed further courses at the University of Manitoba which are applicable to their second degree in the Faculty of Kinesiology and Recreation Management but which were not used for credit toward their first degree may receive additional transfer credit for that work.

Equivalent courses completed at other universities or post-secondary institutions 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 an Academic Advisor in the Faculty General Office for information on how to optimize their transfer credit. Course transfer equivalencies will not be processed until after an application and all necessecary documents have been submitted.

2.6 Visiting Students

Students who are enrolled and pursuing a degree at another institution may apply to be a visiting student with the Faculty of Kinesiology and Recreation Management. A Letter of Permission from the home institution granting permission to register for courses from the University of Manitoba is required in order for access to be granted to those courses.

2.7 Special Students

After-Degree Special Students

Students who have successfully completed a first degree program in a related field who are not seeking another degree and wish to register for courses from the Faculty of Kinesiology and Recreation Management are eligible to apply as Special Students.

SECTION 3: FACULTY ACADEMIC REGULATIONS

All students are asked to note that some academic policies and regulations may be subject to change. Please check the Web Calendar at umanitoba.ca for updated information.

The provisions of the following chapters from the Undergraduate Calendar (University Policies, and General Academic Regulations and Requirements) 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.

3.1 Scolastic Standards: Academic Assessment

Scholastic Standards

Formal academic assessments are performed following each term for all Faculty of Kinesiology and Recreation Management students who have completed 3 or more credit hours. As a result of this assessment students will be determined to be minimum met, satisfactory, on probation, suspension warning, or academic suspension for one year. All academic assessments will appear on the student's official transcript.

Minimum Met

Students must achieve a minimum DGPA of 2.0 at each point of assessment in order to have met the minimum requirements of the Faculty of Kinesiology and Recreation Management. Students who do not achieve a minimum DGPA of 2.0 will be placed on probation.

Probation

Once placed on probation, a student will be placed on hold and must meet with an academic advisor to review performance and to receive an override in order to register for another term. Students on probation who achieve a minimum term GPA of 2.0 will be assessed as satisfactory. Students who do not achieve a minimum term GPA of 2.0 will be placed on suspension warning.

Satisfactory

The assessment of satisfactory is used once a student has been placed on probation but has subsequently achieved a minimum term GPA of 2.0. Students with satisfactory standing will be able to register without restrictions. Students who do not maintain a minimum term GPA of 2.0 will be placed on suspension warning.

Suspension Warning

Once placed on suspension warning, a student must meet with an academic advisor before registering for another term. Students on suspension warning who achieve a minimum term GPA of 2.0 will be assessed as satisfactory. Students who do not achieve a minimum term GPA of 2.0 will be placed on academic suspension.

Academic Suspension

A student placed on academic suspension in the Faculty of Kinesiology and Recreation Management is not permitted to register for a period of one calendar year. The notation "Academic Suspension for 1 Year" will be recorded on the student's transcript.

Once a student has served a one year suspension, they must contact an academic advisor in order to be reinstated for future registration.

3.2 Policy on Repeating Faculty Required Courses

A minimum grade of "C" is required to pass all Faculty-required courses. Students will be permitted to repeat a failed Faculty-required course only once while in the program. Students who fail the same Faculty-required course twice will normally be required to withdraw from the program.

3.3 Dean's Honour List

Students enrolled in 12 credit hours or more who achieve a Term GPA of 3.50 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, and Summer).

The Dean's Honour List designation will appear on the student's transcript.

3.4 University Gold Medal and Program Medals

Gold Medal

The Faculty of 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 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.

Program Medals

There are two program medals awarded each year in the Faculty of Kinesiology and Recreation Management 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 Kinesiology and Recreation Management is not registered (the three programs are Kinesiology, Physical Education, and Recreation Management and Community Development).

3.5 Degree With Distinction

Awarded to students who graduate with a cumulative Degree GPA of 3.8 or higher. The notation of 'Degree with Distinction' will appear on the student's parchment and transcript.

3.6 Attendance and Withdrawal

Students absent from class for three or more days due to illness are required to present a certificate from a physician. Unexcused absence of more than three hours of class time in a theory course or experiential learning course may result in the student being required to withdraw from the course or may result in an "F" grade being assigned.

3.7 Leave of Absence

Students who have not registered for a full academic session will need to reactivate their status by contacting the Faculty General Office and must consult with an Academic Advisor. Students who have been absent from study for more than 5 years or have attended another institution since their last registration (not on a Letter of Permission) will have to re-apply for admission to the university.

3.8 Time Limit for Completion of the Degree

Students admitted to the Bachelor of Kinesiology, Bachelor of Physical Education, 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 Undergraduate Program Administrator.

3.9 Academic Integrity

The Faculty of Kinesiology and Recreation Management strictly adheres to the University of Manitoba Student Discipline By-Law and will enforce these regulations. It is the responsibility of the student to know what constitutes academic dishonesty. Plagiarism or any other form of cheating is subject to academic penalty, which could be as serious as suspension or expulsion from the Faculty or university. Students are encouraged to avoid academic misconduct by learning more about the University of Manitoba regulations at:

http://umanitoba.ca/student/resource/student_advocacy/index.html

3.10 Student Academic Appeals

Students who wish to appeal matters concerning their academic status should contact the Faculty of Kinesiology and Recreation Management Associate Dean (Academic). The Faculty has an academic appeals process for students who wish to appeal a policy or decision affecting their program of study.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

Degree Requirements and Course Selection

It is the student's responsibility to have read the 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.

The following requirements apply to students in all four undergraduate degree programs in the Faculty. The four degree programs 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:

KIN - Denotes required and elective courses in the Kinesiology degree program

PERS - Denotes elective and core courses common to the undergraduate degree programs

PHED - Denotes required and elective courses in the Physical Education degree program

REC - Denotes required and elective courses in the Recreation Management and Community Development degree program

Course No.	Course Name	Credit Hours
Introductory Core Courses (12-15 credit hours):		
PSYC 1200	introduction to Psychology	6
University Math Requirement:		
STAT 1000	Basic Statistical Analysis 1 (or MATH 1XXX Mathematics)*	3
University Written Requirement:		
Any course satisfying Written English Requirement or (ENGL 1XXX English Literature 6)** BPE students only		3
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
PERS 4100	Current Issues†	3

**In lieu of PERS 3460, KIN 2540 Psychology of Sport and Physical Activity (3) fulfils the social science requirement for Athletic Therapy Program students only

†BKin and BRMCD only

4.1 Program Requirements: Bachelor of Kinesiology

(Students admitted in September 2013 or later)

Program and Graduation Requirements: Bachelor of Kinesiology

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 Degree Grade Point Average (DGPA) of 2.00 with a minimum grade of "C" in all Faculty-required 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.

Course No.	Course Name	Credit Hours
YEAR 1 / University 1: 30 Credit Hours		
BIOL 1XXX	BIOL 1020 Biology 1: Principles and Themes **and** BIOL 1030 Biology 2: Biological Diversity, Function and Interaction (with a minimum grade of "C" in each) **or** BIOL 1000 Biology: Foundations of Life **and** BIOL 1010 Biological Diversity and Interaction (with a minimum grade of "C+")	3
PERS 1200	Physical Activity, Health and Wellness	3
PERS 1500	Foundations of Physical Education and Kinesiology	3
PSYC 1200	Introduction to Psychology	6
STAT 1000	Basic Statistical Analysis 1	3
1XXX W	Written English Requirement	3
	Elective	6
YEAR 2: 30 Credit Hours		
BIOL 2410	Human Physiology 1	3
BIOL 2420	Human Physiology 2	3
PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	6
PERS 3350	Introduction to Research	3
KIN 2320	Human Anatomy	3
KIN 2330	Biomechanics	3
	Electives	9
YEAR 3: 30 Credit Hours		
KIN 2540	Psychology of Sport and Physical Activity	3
KIN 3470	Exercise Physiology	3
KIN 3512	Principles of Fitness Training	3
KIN 3740	Resistance Training and Conditioning	3
PERS 3100	Inclusive Physical Activity and Leisure	3
PERS 3340	Philosophy of Physical Activity and Leisure	3
PERS 3460	Sociology of Physical Activity and Leisure	3
	Electives	9
YEAR 4: 30 Credit Hours		
KIN 3450	Motor Learning	3
KIN 4500	Physical Activity and Aging	3
PERS 4100	Current Issues	3
	Electives	21*

- PERS 4630 Supervised Fieldwork Experience is strongly recommended in Year 4 (12 credit hours)
- A maximum of 21 credit hours of electives may be taken from outside the Faculty following Year 1.

Degree Exit Requirement: Current Basic Rescuer CPR and Emergency or Standard First Aid Certification

4.2 Program Requirements: Bachelor of Kinesiology - Athletic Therapy

(Students admitted in September 2013 or later)

Program and Graduation Requirements: Bachelor of Kinesiology - Athletic Therapy

To graduate with a four-year Bachelor of Kinesiology – Athletic Therapy degree, a student must have passed the 126 credit hours of the program outlined below and must have achieved a Degree Grade Point Average (DGPA) of 2.00 with a minimum grade of "C" in all Faculty-required courses.

A maximum of 166 credit hours may be attempted in order to obtain the 126 credit hours required for graduation with the Bachelor of Kinesiology - Athletic Therapy.

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.

Successful completion of BIOL 1020 and BIOL 1030, with a minimum grade of "C", or BIOL 1000 and BIOL 1010, with a minimum average grade of "C+" is a requirement for admission to the Athletic Therapy Program.

Valid Health Care Provider CPR and Standard First Aid certification are required before the beginning of each term of registration (if lapsed, students must re-certify). Each year while in the program, Athletic Therapy students must also register as members with both the Manitoba Athletic Therapists Association (MATA) and Canadian Athletic Therapists Association (CATA).

Athletic Therapy Practica (KIN 3912, KIN 3914 & KIN 4910)

Students in the Athletic Therapy Program will be required to complete several hours of clinical and field (sports team) experiences on campus and in the community during their degree. These experiences provide opportunities to apply the knowledge and skills students obtain via their educational curriculum, in a practical hands-on manner, and therefore enhance their preparation for the Canadian Athletic Therapy Association (CATA) examinations. Students must successfully complete the previous year's courses and be registered in all of the present year's courses in order to register in each practicum (KIN 3912, KIN 3914 & KIN 4910).

YEAR 1 / University 1: 30 Credit Hours

Course No.	Course Name	Credit Hours
BIOL 1XXX	BIOL 1020 Biology 1: Principles and Themes and BIOL 1030 Biology 2: Biological Diversity, Function and Interaction (with a minimum grade of "C" in each) or BIOL 1000 Biology: Foundations of Life and BIOL 1010 Biological Diversity and Interaction (with a minimum grade of "C+")	3
PERS 1200	Physical Activity, Health and Wellness	3
PERS 1500	Foundations of Physical Education and Kinesiology	3
PSYC 1200	Introduction to Psychology	6
STAT 1000	Basic Statistical Analysis 1	3
1XXX W	Written English Requirement	3
	Elective	6

YEAR 2: 33 Credit Hours

BIOL 2410	Human Physiology 1	3
BIOL 2420	Human Physiology 2	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	3
PERS 3350	Introduction to Research	3
KIN 2320	Human Anatomy	3
KIN 2330	Biomechanics	3
KIN 2750	Athletic Therapy Skills	3
KIN 3200	Basic Trauma and Life Support	3
KIN 3320	Advanced Human Anatomy	3

YEAR 3: 33 Credit Hours

KIN 3160	Pathology and Sports Medicine	3
KIN 3330	Functional Assessment and Restoration A	3
KIN 3332	Functional Assessment and Restoration B	3
KIN 3400	Therapeutic Modalities	3
KIN 3470	Exercise Physiology	3
KIN 3512	Principles of Fitness Training	3
KIN 3740	Resistance Training and Conditioning	3
KIN 3912	Athletic Therapy Practicum	4
KIN 3914	Clinical Block Placement	2
PERS 3100	Inclusive Physical Activity and Leisure	3
PERS 3340	Philosophy of Physical Activity and Leisure	3

YEAR 4: 30 Credit Hours

KIN 2540	Psychology of Physical Activity and Leisure	3
KIN 3450	Motor Learning	3
KIN 4160	Advanced Pathology and Sport Medicine	3
KIN 4330	Advanced Biomechanics	3
KIN 4400	Therapeutic Exercise Rehabilitation	3
KIN 4500	Physical Activity and Aging	3
KIN 4910	Athletic Therapy Practicum	6
PERS 4100	Current Issues	3
	Elective	3

Degree Exit Requirement: Current Basic Rescuer CPR and Emergency or Standard First Aid Certification

4.3 Program Requirements: Bachelor of Physical Education

(Students admitted in September 2011 or later)

Program and Graduation Requirements: Bachelor of Physical Education

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 Degree Grade Point Average (DGPA) of 2.00 with a minimum grade of "C" in all Faculty-required courses.

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.

Course No.	Course Name	Credit Hours
YEAR 1 / University 1: 30 Credit Hours		
BIOL 1410	Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human Body	3
ENGL 1XXXW	English (1200, 1300, or 1310 & 1340)	6
PERS 1500	Foundations of Physical Education and Kinesiology	3
PSYC 1200	Introduction to Psychology	6
'M' Requirement	MATH or STAT course	3
1XXX W	Written English Requirement	3
	Electives / Teaching Minor	6
YEAR 2: 36 Credit Hours		
KIN 2320	Human Anatomy	3
KIN 2330	Biomechanics	3
PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	3
PHED 2550	Growth and Motor Development	3
Required Experiential Learning Courses (ELCs):		
PHED 2710	Human Movement Principles (ELC)	3
PHED 2720	Developmental Games and Activities (ELC)	3
PHED 2730	Gymnastics, Dance and Rhythmic Activities (ELC)	3
PHED 2740	Fitness Theory and Practice (ELC)	3
	Electives / Teaching Minor	9

Course No.	Course Name	Credit Hours
YEAR 3: 36 Credit Hours		
KIN 2540	Psychology of Sport and Physical Activity	3
KIN 3450	Motor Learning	3
KIN 3470	Exercise Physiology	3
KIN 3512	Principles of Fitness Training	3
PERS 3100	Inclusive Physical Activity and Leisure	3
PERS 3460	Sociology of Physical Activity and Leisure	3
PHED 3360	Culturally Relevant Physical Education and Health	3
PHED 3710	Active Health and Human Potential	3
Faculty Electives - Must include 1 or 2 of the following Experiential Learning Courses (ELCs):		6
PHED 2400	Coaching Theory and Practice	(3)
PHED 2402	Advanced Coaching Theory and Practice	(3)
PHED 3102	Aboriginal Song and Dance	(3)
Course No.	**Course Name**	**Credit Hours**
PHED 3740	Resistance Training and Conditioning	(3)
PHED 3750	Lifestyle Activities	(3)
PHED 3760	Diverse Populations Mentorship	(3)
PHED 3770	Aboriginal Games and Activities	(3)
PHED 4710	Outdoor Education	(3)
REC 4720	Wilderness Adventures	(3)
	Electives / Teaching Minor	6

Degree Exit Requirement: Current Basic Rescuer CPR and Emergency or Standard First Aid Certification

4.4 Program Requirements: Bachelor of Recreation Management and Community Development

(Students admitted in September 2013 or later)

Program and Graduation Requirements: Bachelor of Recreation Management and Community Development

To graduate with a four-year Bachelor of Recreation Management and Community Development degree, a student must have passed the 120 credit hours of the program outlined below and must have achieved a Degree Grade Point Average (DGPA) of 2.00 with a minimum grade of "C" in all faculty-required 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 Recreation Management and Community Development degree.

Course No.	Course Name	Credit Hours
Year 1 - University 1: 30 credit hours		
PERS 1300	Introduction to Lesiure Travel	3
PERS 1400	Concepts of Recreation and Leisure	3
PSYC 1200	Introduction to Psychology	6
W	Written English Requirement	3
STAT 1000	Basic Statistical Analysis 1	3
	Electives	12
Year 2: 30 credit hours		
SOC 1200	Introduction to Sociology	6
PERS 2100	Introduction to Professional Practice	3
PERS 2200	Program Planning Principles	3
PERS 3350	Introduction to Research	3
Course No.	**Course Name**	**Credit Hours**
REC 2400	Management and Marketing of Leisure Services	3
REC 3090	Foundations of Sustainable Nature-Based Tourism	3
	Electives	9
Year 3: 30 credit hours		
PERS 3100	Inclusive Physical Activity and Leisure	3
PERS 3340	Philosophy of Physical Activity and Leisure	3
PERS 3460	Sociology of Physical Activity and Leisure	3
REC 3200	Advanced Program Planning and Research	3
REC 4070	Community Development and the Leisure Delivery System	3
REC 4XXX	Advanced Recreation Electives*	6
	Electives	9
Year 4: 30 credit hours		
PERS 4100	Current Issues	3
REC 4XXX	Advanced Recreation Electives*	6
	Electives	21**

*Note: Advanced Recreation Electives offered change each year. Consult with an Academic Advisor for a list of approved courses that may fulfil this requirement.

** PERS 4630 Supervised Fieldwork Experience is strongly recommended in Year 4 (12 credit hours)

** A maximum of 18 credit hours of electives may be taken from outside the Faculty following Year 1.

Degree Exit Requirement: Current Basic Rescuer CPR and Emergency or Standard First Aid Certification

4.5 Program Requirements for Students Admitted Prior to 2011

Faculty of Kinesiology and Recreation Management Students admitted before September 2013 will notice changes to course and program requirements. Students admitted prior to 2013 should contact the Undergraduate Program Administrator or Academic Advisor at the Faculty General Office for information on their specific degree requirements and courses needed for graduation.

4.6 Minor in Recreation Studies

To qualify for and declare the Minor in Recreation Studies (123), students must achieve a grade of "C" or better in the two introductory courses PERS 1300 and PERS 1400. A student must obtain approval and declare the minor with their home faculty for access into advanced REC courses.

Required Core Courses for the Minor in Recreation Studies (12 credit hours):

Course No.	Course Name	Credit Hours
PERS 1300	Introduction to Leisure Travel	3
PERS 1400	Concepts of Recreation and Leisure	3
REC 2400	Management and Marketing of Leisure Services	3
REC 3090	Sustainable Nature-Based Tourism (3 credit hours)	

Electives (Choose 6 credit hours from the following):

REC 4090	Sustainable Nature-Based Tourism Planning, Management and Research	3
REC 4170	Sport Management	3

Course No.	Course Name	Credit Hours
REC 4250	Leisure and Aging	3
REC 4400	The Administration of Special Events	3
REC 4350	Parks and Protected Areas Planning and Management (Summer Session Travel Study – Instructor Permission Required)	6
PERS 4200	Special Topics	3

**External students may complete up to 12 credit hours from the Recreation Studies Minor course list without declaring the minor. Students who declare the minor must take the minimum 18 credit hours but will be allowed to take up to 30 hours from the above courses.

Note: No minor in Physical Education or Kinesiology is offered.

4.7 Interfaculty Option in Aging

The Option in Aging is offered by and in the following faculties: Arts, Human Ecology, Nursing, Kinesiology and Recreation Management, and Social Work.

Students in the Faculty of Kinesiology and Recreation Management can elect to complete the Option in Aging which consists of 18 credit hours of aging-related coursework. All Option in Aging students MUST complete the following two courses (6 credit hours):

- KIN 2610/ NURS 2610 Health and Physical Aspects of Aging (alternates between faculties)
- REC 2650/HMEC 2650/SWRK 2650 Social Aspects of Aging (alternates between faculties)

PLUS ONE OF (3 credit hours):

- REC 4250 Leisure and Aging (BRMCD students; not offered every year)
- KIN 4500 Physical Activity and Aging (BKin students)

AND ELECTIVES* (9 credit hours):

- Approved age related courses from Kinesiology and Recreation Management or other faculties. A current list of applicable courses is available at the Faculty General Office.

In order to declare the Option in Aging, students must meet with an Academic Advisor once they have successfully completed the two compulsory courses of KIN 2610/ NURS 2610 and REC 2650/HMEC 2650/SWRK 2650.

Upon graduation, a student who has met all the requirements will have the concentration added to their transcript indicating they have completed the Option in Aging.

4.8 Supervised Fieldwork Experience (PERS 4630)

The supervised fieldwork experience is a professionally supervised experience that provides the student with the opportunity to apply knowledge gained in academic courses, and gives exposure to a workplace environment in a related field.

Students in the BKin and BRMCD programs are eligible to register for the 12 credit hour course provided they will complete 90 credit hours toward the degree and achieve a minimum Degree Grade Point Average of 2.5 or higher at the end of the third year of their degree. Student placements are scheduled for 13 weeks (working full-time) during the Fall Term (September through December). Information on the application process, deadlines and course details are available on the Faculty website and at the Faculty General Office.

4.9 External Minors

Kinesiology and Recreation Management students may choose and declare an external minor offered by the Faculty of Arts, Clayton H. Riddell Faculty of Environment, Earth, and Resources, Faculty of Human Ecology, Faculty of Science, Faculty of Management, Marcel A. Desautels Faculty of Music, or School of Art. Completion of a declared minor is optional. See the applicable faculty and department chapters for the requirements of each minor. Minors must be declared with an Academic Advisor at the Faculty General Office in order to be approved and appear on a student's transcript.

In order to declare the Management Minor from the I. H. Asper School of Business, Faculty of Kinesiology and Recreation Management students must achieve a 3.0 DGPA (or higher). If a student has successfully completed 18 credit hours of course work from the Faculty of Management, and a 2.0 GPA in the Management course work by the time of graduation, the Minor in Management may also be declared upon completion of the degree program.

4.10 Education Teachable Minors (BPE Program)

Students who intend to apply for admission to the Faculty of Education after completing their BPE degree should review the information in the current Undergraduate Calendar and consult with the Faculty of Education to ensure they are selecting an appropriate teachable minor and courses for their choice of the Early, Middle or Senior Years stream.

4.11 Canadian Society for Exercise Physiology Certifications (CSEP: CPT & CEP)

The Canadian Society for Exercise Physiology Certified Exercise Physiologist (CSEP-CEP) is the highest level of professional certification for Kinesiology graduates in Canada. Through specific theory and practical based course work students are prepared for the national certification process. Further information can be found on the Faculty's website on how to become a Certified Personal Trainer (CSEP-CPT) or a Certified Exercise Physiologist (CSEP-CEP).

SECTION 5: REGISTRATION INFORMATION FOR ALL STUDENTS

Faculty Academic Advisors

If you require further information after reading the Undergraduate Calendar, contact the Kinesiology and Recreation Management academic advisors, 8:30 a.m. - 4:30 p.m. Monday - Friday.

Patti Dickieson, Academic Advisor
103B Frank Kennedy Centre
telephone (204) 474 9748
Karen Borbridge, Advising/Office Assistant
102 Frank Kennedy Centre
telephone (204) 474 9747

5.1 Faculty Orientation Sessions

All new students admitted to the Faculty must attend an Orientation session in order to be unblocked from registration. Dates will be provided with the letter of acceptance (normally in early July before registration initial access) and on the Faculty website.

At this session students will receive important information regarding their program, registration, and an orientation manual. Upon acceptance into the Faculty, students from outside of the province will be sent an orientation manual and should contact an Academic Advisor to discuss registration and other matters prior to registration initial access.

5.2 Course Sequencing and Prerequisites

Planning the sequence of required courses is essential. Several Faculty courses in all degrees require successful completion of another course in order to reg-

ister. Some courses may only be offered once per year. Please check current catalogue course descriptions and class schedules in your program to ensure that you achieve what is necessary for efficient course enrolment in future terms.

5.3 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 the 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 Academic Advisor for the necessary registration override prior to initial access.

Students will be permitted to repeat a failed Faculty-required course only once while in the program. Students who fail the same Faculty-required course twice will normally be required to withdraw from the program.

5.4 Course Space Reserves

Each degree program requires courses from outside faculties and departments. Specific sections in the following required courses have spaces reserved for students:

Recreation Management and Community Development: There are select reserved sections for STAT 1000.

Kinesiology/AT: There are select reserved sections for BIOL 2410, BIOL 2420, and STAT 1000.

Physical Education: There are select reserved sections for BIOL 1410 and BIOL 1412.

Students with the appropriate program code, major and/or minor will be able to access the reserve seats within a course section.

5.5 Experiential Learning Courses (ELCs)

Experiential learning courses (ELCs) provide three credit hours of integrated theory and practice, and include applied activities that are designed to translate theoretical components to hands-on-learning in the gymnasium, dance studio, fitness studio, playing field, outdoor environment or clinic. Below is a list of Faculty of Kinesiology and Recreation Management experiential learning courses:

Course Number	Course Name
KIN 2750	Athletic Therapy Skills
KIN 3740	Resistance Training and Conditioning
PHED 2400	Coaching Theory and Practice
PHED 2402	Advanced Coaching Theory and Practice
PHED 2710	Human Movement Principles
PHED 2720	Developmental Games and Activities
PHED 2730	Gymnastics, Dance and Rhythmic Activities
PHED 2740	Fitness Theory and Practice
PHED 3102	Aboriginal Song and Dance
PHED 3710	Active Health and Human Potential
PHED 3750	Lifestyle Activities
PHED 3760	Diverse Populations Mentorship
PHED 3770	Aboriginal Games and Activities
PHED 4710	Outdoor Education
REC 4720	Wilderness Adventures

5.6 Courses Requiring a Paid Facility Use Pass

In some courses students will be required to purchase a facility use pass in order to gain access into and utilize various learning environments. Students should be prepared to have their pass within the first week of class in the applicable term. Students report to the Recreation Services Customer Service Desk in Frank Kennedy Centre and must present a current proof of registration. Recreation Services information and rates can be found at:

http://umanitoba.ca/faculties/kinrec/bsal/programs

The following courses require a facility use pass:

Course Number	Course Name
KIN 3470	Exercise Physiology
KIN 3740	Resistance Training and Conditioning (ELC)
KIN 4460	Fitness Appraisal and Lifestyle Counselling
KIN 4560	Advanced Fitness Appraisal and Lifestyle Counselling
PERS 3170	Canadian Sport History
PHED 2400	Coaching Theory and Practice (ELC)
PHED 2402	Advanced Coaching Theory and Practice (ELC)
PHED 2710	Human Movement Principles (ELC)
PHED 2720	Developmental Games and Activities (ELC)
PHED 2730	Gymnastics, Dance and Rhythmic Activities (ELC)
PHED 2740	Fitness Theory and Practice (ELC)
PHED 3102	Aboriginal Song and Dance
PHED 3750	Lifestyle Activities (ELC)
PHED 3770	Aboriginal Games and Activities (ELC)
REC 3200	Advanced Program Planning and Leadership

5.7 Course Field Work Fees

Course Number	Course Name	Fee Amount
PERS 1500	Foundations of Physical Education and Kinesiology:	$58.00
PHED 2740	Fitness Theory and Practice:	$10.00
PHED 3750	Lifestyle Activities:	$30.00
PHED 4710	Outdoor Education:	TBA
REC 3090	Sustainable Nature-Based Tourism:	$40.00
KIN 3320	Advanced Human Anatomy:	$55.00
PHED 3102	Aboriginal Song and Dance:	$25.00
REC 4090	Sustainable Nature-Based Planning, Management, and Research:	$40.00
REC 4720	Wilderness Adventures:	TBA

5.8 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.

5.9 Courses Available to Students in Other Faculties or Schools

Students from University 1 and other faculties or schools may register for the following courses:

- PERS 1200 Physical Activity, Health and Wellness
- PERS 1300 Introduction to Leisure Travel
- PERS 1400 Concepts of Recreation and Leisure
- PERS 1500 Foundations of Physical Education and Kinesiology
- KIN 2610 Health and Physical Aspects of Aging
- REC 2650 Social Aspects of Aging

Students from other faculties or schools (not University 1) may register for the following courses:

- PERS 3170 Canadian Sport History
- KIN 3520 Coaching the High Performance Athlete A
- KIN 3530 Coaching the High Performance Athlete B
- REC 4250 Leisure and Aging

Students who have declared the Recreation Studies Minor may register for additional Recreation Studies courses – refer to requirments in Section 4.6.

Note: During the Summer Session, students from other faculties and schools may register for additional courses after the initial registration access week, provided that they have the pre-requisite courses. Check the course descriptions.

5.10 Departmental Permission

Students from other faculties who wish to register for courses other than those mentioned above may seek departmental permission by obtaining a form from the Faculty General Office (102 Frank Kennedy Centre) at the end of the initial registration access period of the applicable session.

SECTION 6: KINESIOLOGY COURSE DESCRIPTIONS

Kinesiology Course Descriptions-2000 Level

KIN 2320 Human Anatomy Cr.Hrs. 3
(Lab Required) 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 1030 (C) or both BIOL 1000 (071.100) and BIOL 1010 (071.101) (C+ in each) or BIOL 1412 (ZOOL 1330 or 022.133) (C).

KIN 2330 Biomechanics Cr.Hrs. 3
(Lab Required) The mechanical and anatomical analysis of human movement. May not hold for credit with PHED 2330 or PHED 2310 (057.231). Prerequisite: KIN 2320 or PHED 2320 (057.232) (C).

KIN 2540 Psychology of Sport and Physical Activity Cr.Hrs. 3
This course will provide the student with an understanding of psychological variables affecting individuals within sporting and physical activity contexts. Among the topics to be explored with be motivation, arousal/anxiety, group dynamics and youth involvement in sport. May not hold for credit with PHED 2540. Prerequisite: PSYC 1200.

KIN 2610 Health and Physical Aspects of Aging Cr.Hrs. 3
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 2750 Athletic Therapy Skills Cr.Hrs. 3
This course will focus upon the theoretical study 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 their future in the profession of Athletic Therapy. May not hold for credit with PHED 2020 (057.202) or PHED 3180 (057.318). Open to Athletic Therapy students only.

Kinesiology Course Descriptions-3000 Level

KIN 3160 Pathology and Sport Medicine Cr.Hrs. 3
(Lab required) 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: KIN 2320 or PHED 2320 (057.232)(C).

KIN 3200 Basic Trauma and Life Support Cr.Hrs. 3
(Lab required) 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 or 057.319).

KIN 3320 Advanced Human Anatomy Cr.Hrs. 3
(Lab Required) 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. Note: A fieldwork fee is attached tothe course. Prerequisite: [KIN 2320 or PHED 2320 (057.232) (C)]

KIN 3330 Functional Assessment and Restoration A Cr.Hrs. 3
(Lab required) General principles of assessment and restoration; assessment of acute and chronic musculo-skeletal injuries of the lower extremity; rehabilitation techniques to ensure full restoration of function. May not be held with KIN 3300 (PHED 3300 or 057.330). Prerequisite: KIN 3320 (C).

KIN 3332 Functional Assessment and Restoration B Cr.Hrs. 3
(Lab required) Assessment of acute and chronic musculo-skeletal injuries of the upper extremity and spine; rehabilitation techniques to ensure full restoration of function. May not be held with KIN 3300 (PHED 3300 or 057.330). Prerequisite: KIN 3330 (C).

KIN 3400 Therapeutic Modalities Cr.Hrs. 3
(Lab Required) This course will concentrate on the use of therapeutic modalities commonly utilized in the profession of Athletic Therapy. It will introduce the student to various thermal mechanical, and electromagnetic agents used for therapeutic purposes. May not hold for credit with PT 2720 (167.272). Prerequisite: [BIOL 2420) or ZOOL 2540 (22.254].

KIN 3450 Motor Control and Learning Cr.Hrs. 3
(Lab Required). Principles underlying human motor performance and motor skill learning. May not hold for credit with PHED 3450 (057.345).

KIN 3470 Exercise Physiology Cr.Hrs. 3
(Lab required) 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). Prerequisites: BIOL 2420 (ZOOL 2540 or 022.254) (D) or BIOL 1412 (ZOOL 1330 or 022.133) (C).

KIN 3512 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 (KIN 3090 or 057.309) or PHED 3512. Prerequisite: a grade of C or better in PHED 3430 (057.343) or KIN 3470 or PHED 3470.

KIN 3520 Coaching the High Performance Athlete A Cr.Hrs. 3
The development of advanced technical and theoretical expertise in coaching, including conflict management, psychology of performance, effective leadership, making ethical decisions, and practice planning. The course prepares students to be "Trained" in the Competition - Development level of the National Coaching Certification Program (NCCP). May not hold for credit with PHED 3520. Prerequisite: Faculty permission and 45 credit hours of university-level course work. The student must demonstrate a high level of proficiency as an athlete, coach or official in their sport.

KIN 3530 Coaching the High Performance Athlete B Cr.Hrs. 3
The development of advanced technical and theoretical expertise in coaching, including prevention and recovery, leading drug free sport, developing athletic abilities, and designing a basic sport program. The course completes the fully "Trained" component in the Competition - Development level of the National Coaching Certification Program (NCCP). May not hold for credit with PHED 3530. Prerequisite: KIN 3520 or PHED 3520.

KIN 3740 Resistance Training and Conditioning Cr.Hrs. 3
Development of theoretical and practical knowledge of strength training and conditioning for programming over the entire healthy population from inactive sedentary individuals to elite athletes. May no hold for credit with PHED 2620 (057.262 or PHED 3740). Prerequisite: KIN 2320 (PHED 2320 or 057.232) (C) and KIN 3470 (PHED 3470 or PHED 3430 or 057.343) (C). Co-requisite: KIN 3512 (KIN 3090, PHED 3512, PHED 3090 or 057.309) (C). Requires a paid facility use pass.

KIN 3912 Athletic Therapy Practicum Cr.Hrs. 4
To provide clinical and on-field internship experiences on campus and in the community for prospective Athletic Therapy candidates. May not hold for credit with PHED 3910 (057.391) or KIN 3910. Evaluated on a pass/fail basis. Prerequisite KIN 2750 (PHED 2020 or 057.202 or PHED 3180 or 057.318) (C) and KIN 2320 (PHED 2320 or 057.232) (C) and KIN 3200 (PHED 3200 or 057.320 or 057.319) (C).

KIN 3914 Clinical Block Placement Cr.Hrs. 2
Clinical internship experiences on campus and in the community for prospective Athletic Therapy candidates. Evaluated on a pass/fail basis. May not be held for credit with KIN 3910 (PHED 3910 or 057.310). Prerequisites: KIN 3912.

Kinesiology Course Descriptions-4000 Level

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). Recommended prerequisite BIOL 1412 (ZOOL 1330 or 022.133) or BIOL 2420 (ZOOL 2540 or 022.254).

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 tratement 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 (PHED 3160, PHED 3060 or 057.306) (C) and KIN 3470 (PHED 3470, PHED 3430 or 057.343) (C) and KIN 3320 (C).

KIN 4330 Advanced Biomechanics Cr.Hrs. 3
(Lab required) 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 4400 Therapeutic Exercise Rehabilitaion Cr.Hrs. 3
This course will concentrate on therapeutic exercise for the upper and lower extremities, torso and spine. Content will focus upon using exercise and basic therapy techniques to restore function by addressing deficiencies in range of motion, flexibility, strength, power, endurance, proprioception, coordination, agility and speed. Prerequisite: KIN 3740 (PHED 3740, PHED 2620 or 057.262) (C) and KIN 3160 (PHED 3160, PHED 3060 or 057.306) (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 counseling. Note: This course prepares students for certification as a Certified Personal Trainer (CPT) by the Canadian Society for Exercise Physiology. B. Kin. students who wish to prepare for certification as a Certified Exercise Physiologist (CEP) by the Canadian Society for Exercise Physiology, should consult the Undergraduate Program Administrator for information. May not be held for credit with PHED 4460 (057.446). Prerequisite: KIN 3470 (PHED 3470, PHED 3430 or 057.343) (C). Pre- or Co-requisite: PERS 1200 (PHED 1200 or 057.120) (C) and KIN 3512 (PHED 3512, KIN 3090, PHED 3090 or 057.309) (C). Requires a paid facilities use pass.

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 (057.441). Prerequisite: KIN 3470 (PHED 3470,PHED 3430 or 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 3512 (KIN 3090, PHED 3512, PHED 3090 or 057.309) (C) or permission of the instructor.

KIN 4540 Advanced Topics in Sport Psychology Cr.Hrs. 3
This course will provide the student with a deeper understanding of psychological variables affecting individuals within sport contexts, including an exploration of various research methods and theories/research related to motivation, youth, and applied work in sport psychology. May not hold for credit with PHED 4540. Prerequisite: KIN 2540 (PHED 2540).

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 certification as a Certified Exercise Physiologist (CEP) by the Canadian Society of Exercise Physiology. May not hold for credit with PHED 4350 (057.435). Prerequisite: KIN 4460 (PHED 4460 or 057.346) (C) and KIN 3512 (KIN 3090, PHED 3512, PHED 3090 or 057.309)(C). Requires a paid facility use pass.

KIN 4910 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 4910 (057.491). Evaluated pass/fail. Prerequisite: KIN 3914 (KIN 3910, PHED 3910 or 057.310) (C) and KIN 3400 (C) and KIN 3320 (C).

Phys Ed & Rec Studies General Course Descriptions-1000 Level

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. Examination of the benefits of physical activity for health and wellness, the present and recommended levels of physical activity, the factors influencing participation in physical activity, and individual organizational and national interventions for increasing physical activity. 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. May not be held for credit with PHED 1500 (057.150 or 057.132). Note: A field-work fee is attached to the course.

Phys Ed & Rec Studies General Course Descriptions-2000 Level

PERS 2000 Special Topics (Introductory) Cr.Hrs. 3
An introductory examination of selected topics in the fields of kinesiology, physical education and recreation. Topics will vary depending on faculty expertise and student need.

PERS 2100 Introduction to Professional Practice Cr.Hrs. 3
An introduction to professional values and behaviours in the broad fields related to kinesiology, phpysical education, and recreation management including accountability, commitment, ethical decision making, interpersonal communication, respect for diversity, and service. Prerequisites: PERS 1200 (PHED 1200 or 057.120) (C) or PERS 1500 (PHED 1500 or 057.150) (C) and PERS 1400 (REC 1400 or 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, REC 2530 or 123.253). Prerequisites: PERS 1200 (PHED 1200 or 057.120) (C) or PERS 1500 (PHED 1500 or 057.150) (C) and PERS 1400 (REC 1400 or 123.140) (C).

Phys Ed & Rec Studies General Course Descriptions-3000 Level

PERS 3100 Inclusive Physical Activity and Leisure Cr.Hrs. 3
This course introduces the foundations of inclusive physcial activity and leisure and the application of this knowledge to individuals from divers backgrounds and experiences with a focus on people with various forms of impairment. May not hold for credit with PHED 3390 (057.339, REC 3060 or 123.306.) Prerequisite: PERS 2100 (C).

PERS 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. This course provides an overview of issues and topics related to the development of modern sports in Canada. Using the concepts of class, gender, race and ethnic identity as interpretive tools, the course will examine: physical activities and games of First Nations; sport and recreation in new France and British North America; sports in post-Confederation Canada; and developments in the 20th and 21st centuries. May not be held for credit with KIN 3170 (PHED 3170, PHED 3070 or 057.307). Requires a paid facility use pass (day pass acceptable).

PERS 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 (REC 3340, PHED 2340 or 057.234). Prerequisite: PERS 2100 (C).

PERS 3350 Introduction to Research Cr.Hrs. 3
Students will become familiar with the basic principles and methods of research in the biological, life and social sciences. Students will have the conceptual foundations and practical skills needed to locate, understand, and evaluate primary research publications. May not hold for credit with KIN 3350 (REC 3350, REC 2010 or 123.201). Prerequisite: STAT 1000 or STAT 1001 (005.100).

PERS 3460 Sociology of Physical Activity and Leisure Cr.Hrs. 3
This course examines sociological factors that influence and shape participation in the areas of physical activity, sport and leisure. The exploration of students' own experiences in this field is emphasized, using an analytical model examining experiences as they arise out of the interplay of social structure and individual agency. May not hold for credit with PHED 3460 (057.346).

Phys Ed & Rec Studies General Course Descriptions-4000 Level

PERS 4100 Current Issues Cr.Hrs. 3
A capstone course examining current issues and strategies for addressing them in the broad fields related to kinesiology, recreation management, and physical education. Prerequisite: Successful completion of 90 credit hours of course work in the BKin or the BRMCD degree programs.

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. Prerequisite: PERS 1400 (REC 1400 or 123.140)(C) or PERS 1500 (PHED 1500 or 057.150)(C) or PERS 1200 (PHED 1200 or 057.120) or departmental approval.

PERS 4310 Physical Activity Counselling Cr.Hrs. 3
The purpose of this course is to introduce students to physical activity counselling and the associated interpersonal and counselling skills as well as relevent theories that underpin behaviour change and counselling techniques. Through case studies, readings, research, discussions, simulations, role plays and real counselling work students will learn, reflect on and practice proven counselling skills that build motivation and facilitate behaviour change. Pre-requisites: KIN 2540 PSchology of Sport and Physical Activity (C) or PSYC 3660 Sport Psychology (C).

PERS 4320 Sport and the Body Cr.Hrs. 3
A critical analysis of current, interdisciplinary topics pertaining to sport and the body. This course tackles difficult and controversial questions related to the active body. Pre-requisite: PERS 3460 Sociology of Physical Activity and Leisure (c) or permission of the instructor. May not be held with: PERS 4200.

PERS 4340 Sport, Film and Society Cr.Hrs. 3
This seminar format course encourages students to use films as "texts" through which important sociocultural themes related to the study of sport, recreation, physical activity, dance, and physical education can be explored. It builds upon themes explored in courses such as PERS 3460 and uses film as a way to social class, gender, and race/ethnicity and the representations of sport and the moving body. The course is organized around these themes and includes a variety of film genres, primarily feature films and documentaries. Each seminar includes one or more screenings upon which class discussions are based. The course concludes with a screening of the films made by the students themselves, a key component of the course evaluation. Prerequisite: PERS 3460 or written permission of the instructor.

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.

PERS 4630 Supervised Fieldwork Experience Cr.Hrs. 12
The fieldwork practicum is a professionally supervised field experience that provides an opportunity to apply knowledge gained in academic courses, and exposure to new concepts of professional practice in the fields of physical activity, health and wellness, or leisure. Students are placed for a 13-week period of full-time work within a suitable agancy. May not be held for credit with PHED 4620 (057.462, REC 3080, 123.308 or REC 4630). Prerequisite: Successful completion of 90 credit hours of course work in the BKin or BRMCD degree programs and a minimum DGPA of 2.5.

Physical Education Course Descriptions-2000 Level

PHED 2400 Coaching Theory and Practice Cr.Hrs. 3
An introduction to theoretical and practical aspects of coaching at the community and school level, including the examination of topics of philosophical, psychological, ethical and technical significance. The course prepares students for certification from the national Coaching Certification Program (Competition A). May not hold for credit with KIN 2400, KIN 3720, PHED 3720 or PHED 3050 (057.305). Requires a paid facility use pass.

PHED 2402 Advanced Coaching Theory and Practice Cr.Hrs. 3
An analysis of the theoretical and practical aspects of coaching at elite levels, with a particular focus on topics of psychological and technical significance. An emphasis is placed on the sport psychology research literature. The course prepares students for certification from the National Coaching Certification Program (Competition B). May not be held for credit with KIN 2402 or KIN 3730 or PHED 3730. Prerequisite: KIN 2400 or PHED 2400 or PHED 3720 or KIN 3720 or PHED 3050 (057.305) (C). Requires a paid faciltiy use pass.

PHED 2550 Growth and Motor Development Cr.Hrs. 3
Detailed study of physical growth and motor development from conception to adolescence, with implications for physical activity programs. May not be held with 057.255.

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 relection 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 or 047.141). Requires a paid facility use pass.

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). Prerequisite: PHED 2710 (C). Requires a paid facilty use pass.

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 3410 (057.341) or PHED 3140 (057.314). Prerequisite: PHED 2710 (C). Requires a paid facility use pass.

PHED 2740 Fitness Theory and Practice Cr.Hrs. 3
Integrates theory and practice necessary to design and lead safe and effective grouip 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. Note: A fieldwork fee is attached to the course. Prerequisite: KIN 2320 (PHED 2320 or 057.232)(C). Requires a paid facility use pass.

Physical Education Course Descriptions-3000 Level

PHED 3102 Aboriginal Song and Dance Cr.Hrs. 3
An introduction to a variety of traditional and culturally relevant Aboriginal songs and dances representative of Canada's Aboriginal peoples, including First Nations, Metis and Inuit, taught using western and traditional teaching styles with an emphasis on hands-on learning. Evaluated pass/fail. May not be held for credit with PERS 4200. A fieldwork fee is attached to the course.

PHED 3360 Culturally Relevant Physical Education and Health Cr.Hrs. 3
An investigation of physcial health and education from a critical theorist perspective, that is, one that investigates the different relations of power and privilege (based on ability, gender, race, socio-economic class, sexuality ....) experienced within education experiences of young people from diverse backgrounds will be analyzed from a holistic perspective. May not hold for credit with PHED 3100 (057.310). Prerequisite: PHED 2720 (PHED 2650 or 057.265) (C).

PHED 3710 Acitve Health and Human Potential Cr.Hrs. 3
An examination of lifestyle behaviours which can enable or constrain human wellness and potential. By integrating theory with practice, current wellness models and motivational theories will quide strategies for wellness planning personal and professional practice. Introduces students to Manitoba Curriculum Student Learning Outcomes in "Personal and Social Management", and " Healthy Lifestyle Practices", as well as curricular connections for the teaching of "active health". May not be held for credit with PHED 3440 (057.344).

PHED 3750 Lifestyles Activities Cr.Hrs. 3
An introduction to the knowledge, skills, and attitudes that aid in the development of lifelong physically active and healty lifestyles. May not hold for credit with KIN 3750 (REC 3750). Requires a paid facility use pass. Note: A fieldwork fee is attached to the course.

PHED 3760 Diverse Populations Mentorship Cr.Hrs. 3
Practical and theoretical aspects of designing physical activity experiences for students from diverse population, including on site leadership opportunities in a multicultural school context. Evaluated pass/fail.

PHED 3770 Aboriginal Games and Activities Cr.Hrs. 3
This course will provide students with a unique opportunity to explore, in theory and practice, traditional and contemporary world views related to historical, cultural, and environmental approaches to Aboriginal games and activities. Requires a paid facility use pass. Evaluated pass/fail.

Physical Education Course Descriptions-4000 Level

PHED 4710 Outdoor Education Cr.Hrs. 3
To introduce the students to the basic outdoor skills associated with summer/winter backpacking/cross-country skiing/snow shoeing trips. Students will then learn to use a variety of outdoor settings for education opportunities on a variety of topics and disciplines. May not hold for credit with KIN 4710 (REC 4710). A fieldwork fee is attached to the course.

Recreation Studies Course Descriptions-2000 Level

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. Prerequisite: PERS 1400 (REC 1400 or 123.140) (C).

REC 2650 The Social Aspects of Aging Cr.Hrs. 3
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, HMEC 2650, 028.265, SWRK 2650, 047.265 or 123.265).

Recreation Studies Course Descriptions-3000 Level

REC 3090 Sustainable Nature-Based Tourism Cr.Hrs. 3
Analysis of the growth and development of sustain¬able 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 for credit with 123.309. Prerequisite: PERS 1300 (REC 1200 or 123.120) (C) and PERS 1400 (REC 1400 or 123.140) (C). Note: A fieldwork fee is attached to the course.

REC 3200 Advanced Program Planning and Leadership Cr.Hrs. 3
Consideration and application of program planning principles as they relate to sepecialized contexts and diverse populations. Foundations of leadership and interpersonal communication for effective and successful program implementation. May not hold for credit with REC 2540 (123.254, REC 3870 or 123.387). Prerequisite: PERS 2200 (PHED 3080, 057.308, REC 2530 or 123.253) (C). Requires a paid facility use pass.

REC 3310 Cultural Tourism Cr.Hrs. 3
This course will provide students with an understanding of various stakeholder perspectives related to visiting and operating cultural tourism attractions. The following topics will be discussed: tourists' motivations and experiences, cultural resource managers' perspectives on tourism, tourism industry leaders' viewpoint on cultural resources and the relationship between cultural producers and consumers. Prerequisite: PERS 1300 (123.120) (C).

REC 3850 The Planning of Recreation Areas and Facilities Cr.Hrs. 3
The process used to plan both recreational open spaces and facilities. Spe¬cial consideration is given to the role of the recreation professional in relationship to other planners. May not be held for credit with 123.385. Prerequisite: PERS 1400 (REC 1400 or 123.140) (C) and PERS 2200 (PHED 3080, 057.308, REC 2530 or 123.253) (C).

Recreation Studies Course Descriptions-4000 Level

REC 4060 Person Centred Leisure Education Cr.Hrs. 3
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. May not be held for credit with 123.406. Prerequisite: PERS 3100 (REC 3060, 123.306, PHED 3390 or 057.339) (C).

REC 4070 Community Development and the Leisure Service Delivery System Cr.Hrs. 3
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 (123.407). Prerequisite: PERS 2200 (REC 2530, 123.253, PHED 3080 or 057.308) (C) and REC 2400 (C) and completion of 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
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 123.409 (123.430 or 123.432). Prerequisite: REC 3090 (123.309 or 123.330) (C). Note: A fieldwork fee is attached to the course.

REC 4120 Recreational Travel and Tourism Cr.Hrs. 3
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. May not be held for credit with 123.412. Prerequisite: PERS 1300 (REC 1200 or 123.120) (C).

REC 4140 Marketing Recreation and Park Services Cr.Hrs. 3
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. May not be held for credit with 123.414. Prerequisite: REC 2400 (REC 3860 or 123.386) (C) or both MKT 2210 (118.221) and PERS 1400 (REC 1400 or 123.140)(C).

REC 4150 Clinical Aspects of Therapeutic Recreation Cr.Hrs. 3
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. May not be held for credit with 123.415. Prerequisite: PERS 3100 or REC 3060 (123.306) (C).

REC 4170 Sport Management Cr.Hrs. 3
An in-depth coverage of sport management, focusing on Canadian amateur sport systems (municipal, provincial, national) and professional sport organizations. May not be held for credit with 123.417. Prerequisite: REC 2400 (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 or 123.413. Prerequisite: PERS 3100 (C) or REC/SWRK/HMEC 2650 (C) or permission of instructor.

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 conponent 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 4400 The Administration of Special Events Cr.Hrs. 3
Students will learn about theories and concepts that inform the study of special events and will be exposed to advanced management principles and practices and their applocability to the delivery of special events. May not be held for credit with REC 4310 (123.431). Prerequisite: REC 2400 (REC 3860 or 123.386) (C).

REC 4720 Wilderness Adventures Cr.Hrs. 3
Student will learn how to plan and participate in one or more wilderness adventure activities such as canoe tripping, sailing, kayaking, climbing, winter camping, etc. Students will also concentrate on conducting these activities safely with clients. It is hoped that this experience will positively affect future life sport and recreation activities. May not be held for credit with KIN 4720 or PHED 4720. A fieldwork fee is attached to the course.

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)

FACULTY OF LAW

Dean: Lorna A. Turnbull
Associate Dean(s): Lisa K. Fainstein: Associate Dean (J.D. Program) - Debra L. Parkes: Associate Dean (Research and Graduate Studies)
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Telephone: (204) 474 6130
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Website: www.umanitoba.ca/faculties/law

Law Admissions Inquiries lawadmissions@umanitoba.ca

Academic Staff:
Please refer to the Faculty website at umanitoba.ca/faculties/law

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

Program/Degree	*Years to Compete	Total Credit Hours
Juris Doctor (J.D.)	5	157
Master of Laws (LL.M.)	6	161-163 and Thesis

***This includes two years (60 credit hours) of study in an undergraduate program.**

Equivalent academic courses completed at recognized universities elsewhere will be considered. For all admission requirements see: http://law.robsonhall.ca/llb/admission-to-first-year

*The Master of Laws is a thesis-based program designed for completion in one year after the completion of a three year J.D. program. 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/.

SECTION 2: THE PROFESSION AND THE FACULTY OF LAW

Juris Doctor - J.D.

Robson Hall, Faculty of Law, offers a three year J.D. program that starts with the fundamental doctrinal courses that allow students to acquire a solid foundation in law. From the foundational courses, students can move into legal specialities of their choice, or choose to pursue an J.D. concentrating on Aboriginal law, business law, or human rights. Clinical legal education has been a part of the J.D. program since the early 1970s and students develop lawyering skills under faculty guidance, expanding their perspectives and ethical understanding of the role of practising lawyers. Scholarship and research is built into the J.D. program so students have an opportunity to develop a critical understanding of law and its development.

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, Pro Bono Students, L. Kerry Vickar Business Law Clinic and The Legal Help Centre.

2.3 Research and Scholarly Writing

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.

2.4 Faculty of Law Centres of Excellence

Robson Hall is home to two named research chairs. 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.

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. The Desautel Centre's focus is on the needs of closely held businesses. The Faculty of Law also operates the Kerry Vickar Small Business Law Clinic which is headed by a director who is assisted by volunteer mentors from the practising bar.

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. In addition to the Manitoba Law Students Association there exisits a diversity of student groups at Robson Hall. No matter what your interests, joining a student group can greatly enhance your law school experience by providing you with greater opportunities throughout the year to interact with the community and other students. Student groups include:

Business Law Group

Canada Law Games

Citator

Christian Legal Fellowship (CLF)

Family Law Group

Feminist Legal Forum

Manitoba Aboriginal Law Students Association (MALSA)

MBA Mentorship Program

Mediators Beyond Borders

Pro Bono Students Canada (PBSC)

Outlaws

Robson Hall Bilingual Students Association

SECTION 3: ADMISSION TO THE FACULTY OF LAW

3.1 Course Requirements for Admission to J.D. Program

Robson Hall, Faculty of Law offers three First Year Admission categories:

- Index Score (Regular) Category (50% GPA and 50% LSAT score)
- Individual Consideration Category
- Aboriginal Category

The minimum academic requirement for the Index score category is two (2) full years of university level courses including a mathematic requirement (equivalent of 60 credits). The JD. requirement fulfils the Universtiy's English requirement.

All applicants must write the Law School Admission Test (LSAT).

Download a copy of the Applicant Information Bulletin.

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 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 J.D. Degree

To obtain the J.D. degree from the University of Manitoba, ordinarily a student must successfully complete two of the three years of the J.D. program at the University of Manitoba. The remaining year may be completed at another law school as approved by the Admissions Committee or the Dean's office.

4.2 Licence to Practise Law

Graduates who wish to practise must apply to the Law Society of the province in which they wish to practise. Law societies generally require applicants to complete a bar admission course 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 Error! Hyperlink reference not valid..

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; 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.

SECTION 5: PROGRAM REQUIREMENTS

This Section describes the program requirements that are in effect for the 2013-2014 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.

5.1 First Year

Course No.	Doctrinal Courses (Compulsory)	Credit Hours
Each full-time student is required to take all of the following courses:		
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:		
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

Course No.	Doctrinal Courses (Compulsory)	Credit Hours
In either Second Year or Third Year each student must take:		
LAW 2490	Trusts	3
LAW 2640	Family Law	3
LAW 2700	Income Tax Law and Policy	3
Total Credit Hours		**12**

Perspective Courses (One is Compulsory in each of second and third year; more can be taken)

LAW 3012	International Business Law	3
LAW 3014	International Trade Law	3
LAW 3018	Human Rights Law	3
LAW 3070	Gender and the law	3

Course No.	Doctrinal Courses (Compulsory)	Credit Hours
LAW 3090	Children and the Law	3
LAW 3162	Topics in Dispute Resolution	2
LAW 3190	Law and Literature	3
LAW 3230	Aboriginal Peoples and Land Claims	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
	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 3016	Corporations II	3
LAW 3026	Trademarks	3
LAW 3040	Sales and Consumer Law	2
LAW 3050	Commercial 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

Course No.	Doctrinal Courses (Optional)	Credit Hours
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 3880	Municipal and Planning Law	3
LAW 3970	Current Legal Problems A	2
LAW 3980	Current Legal Problems B	3

Each student in **Second Year** must take a minimum of 32 credit hours. The 32 credit hours are made up of mandatory, doctrinal and clinical courses plus electives comprising 14 to 16 credit hours. The 32 credit hours must include at least one perspective course.

Each student in **Third Year** must take a minimum of 32 credit hours. The 32 credit hours are comprised of LPPR and any second or third year compulsary doctrinal courses that have not been taken, plus electives comprising the additional credit hours. The 32 credit hours must include at least one perspective course. Note: LAW 3490 Research Paper is excluded if it has been taken in second year.

Course No.	Doctrinal Courses (Compulsory)	Credit Hours
LAW 3024	The Legal Profession and Professional Responsibility	3

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	3
LAW 3250	Current Legal Problems D A01 Clinical Family Law	3
LAW 3300	Clinical Criminal Law	8
LAW 3340	Advanced Advocacy	3
LAW 3862	Business Transactions: The Art of the Deal	6
	Doctrinal Courses (Optional)	
LAW 3240	Current Legal Problems C	2
	A01 Court of Appeal Clerkship*	2
LAW 3360	Advanced Legal Research	3
LAW 3450	Remedies	3
LAW 3510	Corporate Tax	3
LAW 3520	Taxation of Trusts & Estates	3
LAW 3980	Current Legal Problems B	3
xxx.xxx	Non-Law University Elective**	3

* No more than three of these electives can be selected for credit. Students may take more than three of these electives but no credit will be awarded over the limit.

**This option is available with permission of the Associate Dean. Note; Addition course fee will be assessed by the University.

Third Year

You may only take one of: Clinical Administrative Law, Advanced Advocacy, Intensive Criminal Law, Legal Help Centre Clinical or Clinical Family. If you take Art of the Deal you may take Clinical Administrative Law, Advanced Advocacy, Intensive Criminal Law Legal Help Centre Clinical or Clinical Family. You may not take any other clinical course if you are taking Clinical Criminal Law.

SECTION 6: REGISTRATION

First year students in the Faculty of Law are registered by the faculty after the middle of August. Returning Second and Third year students should register themselves through Aurora. It is the students responsibility to check their Aurora account to confirm: their registration, to verify that they meet Faculty of Law requirements for graduation and access fee statements. In the event that a student fails to properly select courses 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.

SECTION 7: LAW COURSE DESCRIPTIONS

Law Course Descriptions-1000 Level

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 Course Descriptions-2000 Level

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 Course Descriptions-3000 Level

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 agenets, and the legal ramifications for each person when one person acts (purportedly) on behalf of another person.

LAW 3012 International Business Law Cr.Hrs. 3
Explores the legal, practical and social realities of international business transactions.

LAW 3014 International Trade Law Cr.Hrs. 3
The course will deal with the doctrine, practice and policy issues in international trade and business.

LAW 3016 Corporations II Cr.Hrs. 3
An advanced study of corporations law from various theoretical and practical perspectives.

LAW 3018 Human Rights Law Cr.Hrs. 3
Critical and constructive study, at an advanced level, of a significant major subject or set of topics in Human Rights Law.

LAW 3020 Clinical Administrative Law Cr.Hrs. 3
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.

LAW 3022 Insurance Law Cr.Hrs. 3
Introduction to the basic principles of insurance law. The fundamental elements to most types of policies will be examined with particular emphasis on propert and liability insurance. The terms and provisions specific insurance policies and coverages such as automobile, property, liability policies will also be covered.

LAW 3024 The Legal Profession and Professional Responsibility Cr.Hrs. 3
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 the advocate and in the role of counsellor (confidentiality, conflict of interest, etc.); professional responsibilty in the delivery of legal service (competency, fee determination, specialization, regulation etc) and the legal profession and the public interest (goverance of profession, discipline, professional liability etc) These problems are to be studied by the critical examination of case law, codes, canons, and other published materials, by classroom discussion and debate on problems; and by workshops and panels which involve practising lawyers.

LAW 3026 Trademarks and Patents Cr.Hrs. 3
An in-depth examination of the law of Trade-marks and Patents, including underlying policy objectives.

LAW 3028 Copyright Law Cr.Hrs. 3
An in-depth examination of the law of Copyright.

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 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 3120 Philanthropy and the Law Cr.Hrs. 3
This course investigates the origins of, and regulation of, charities and charity law as well as regulation of other non-profit entities. Typical topics considered in this course include the social, economic and cultural importance of an ethic of giving, the tax benefits attendant upon charitable status, dimensions of fund-raising, public and private foundations and terrorism and international charities.

LAW 3130 Poverty Law Cr.Hrs. 3
Specific topics to be covered will include: income security, homelessness and housing, legal aid, panhandling, and anti-poverty advocates' use of international and domestic law in lobbying and test case litigation. The protections afforded by human rights instruments and procedural safeguards/administrative law will also be explored as well as the intersection of poverty with race, gender, family status, age and disability. At the end of the seminar, students will have a basic understanding both of the substantive law and of the nature of legal practice involved in the topics discussed.

LAW 3162 Topics in Dispute 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 3170 Dispute Resolution Cr.Hrs. 3
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) or LAW 3162.

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 3212 Immigration Law Cr.Hrs. 3
The refugee definition; the need for refugee protection; procedural protection for refugee claimants; a comparative study of refugee determination systems; the legality of a refugee sanctuary movement; the legal status of refugee claimants in Canada; refugee and immigrant detention; the relevance of Charter guarantees to refugees and immigrants; visa requirements and airline fines; the international system of refugee protection; racist intention and effect in immigration and refugee law; material misrepresentation as a ground of exclusion; medical inadmissibility; equivalence of Canadian and foreign criminal offenses for purposes of exclusion; the relevance of foreign laws in determining family composition of sponsored immigrants. May not be held with LAW 3200.

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 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 statues 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 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 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 Public International Law Cr.Hrs. 3
Public international law has a complex history, one that lends itself to conflicting interpretations. It has also been the object of a variety of competing theoretical projects, most of which diverge radically on questions of form and substance. This course provides an historically and theoretically reinforced introduction to the basic rules, principles, and institutions of public international law.

LAW 3760 Jurisprudence Cr.Hrs. 2
(Formerly 045.376) This seminar will cover all the major "schools" of jurisprudential theory, with attention paid to particular areas of legal theory and debate, to the nature and function of law, its relation to morality, and to the analysis of rights and other legal relationships. Efforts will be made to relate these areas of debate to legal issues of current interest and practicality.

LAW 3770 Labour-Management Relations Cr.Hrs. 3
(Formerly 045.377) A survey of the development of trade unions; their present status under both federal and provincial legislation regarding the right of association, collective bargaining, and the settlement of disputes.

LAW 3820 Manitoba Law Journal Cr.Hrs. 2
(Formerly 045.382) The editor of the Manitoba Law Journal who successfully completes his/her term of office, and all other editors and journal staff who in addition to successfully completing their terms of office satisfactorily complete a written requirement, may opt for the Manitoba Law Journal credit. Grading: Pass/Fail.

LAW 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 3832 Legal Aid Clinic Cr.Hrs. 3
(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. May not be held with LAW 3830. 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 3852 Private International Law Cr.Hrs. 3
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. May not be held with LAW 3850.

LAW 3862 Business Transactions: The Art of the Deal Cr.Hrs. 6
A study, involving practical exercises of certain aspects of solicitors' work, including interviewing, negotiating, counseling and memo writing.

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 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

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Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

1.1 Degree Programs Offered

Degree	Years to Complete	Total Credit Hours
Bachelor of Commerce Honours	4	120
Bachelor of Commerce Honours (Co-operative Education Option)	4.33+	120

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

1.2 Available Majors and Option

The following Majors may be used to complete the Bachelor of Commerce (Honours) program:

Aboriginal Business Studies

Accounting

Actuarial Mathematics

Entrepreneurship/Small Business

Finance

Generalist

Human Resources Management/Industrial Relations

International Business

Leadership and Organization (NEW:addition pending May 2013 Senate approval)

Logistics and Supply Chain Management

Management Information Systems

Management of Organizations (delete pending May 2013 Senate approval)

Marketing

Operational Research/Operations Management

A detailed explanation of the requirements for each major may be found in Section 4.2.

The Co-operative Educaton Option is the only option that may be used to complete the Bachelor of Commerce (Honours) program. Complete details on the requirements for the Co-operative Education Option are found in Section 4.3.

1.3 Accreditation

In 2009, the Asper School of Business received re-accreditation from AACSB International - The Association to Advance Collegiate Schools of Business.

In 2009, the Asper School of Business received accreditation from the SOA – Society of Actuaries.

These prestigious recognitions affirm 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 2: ADMISSION REQUIREMENTS

2.1 Admission Requirements from High School and Previous Post-Secondary Institutions

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, 424 University Centre. This information is also posted on the University of Manitoba's website.

Direct Entry from High School

To be eligible to apply high school students must have:

1. Manitoba high school graduation, with five full credits at the Grade 12 level, in courses designated S (Specialized), G (General), or U (Dual Credit –University), with

2. A minimum 85% average over three courses: Pre-Calculus Math 40S or Applied Math 40S (Recommended Pre-Calculus 40S), English 40S, and one other 40S/U course, and

3. A minimum 60% in each of the three courses noted in point 2 above, and

4. Applicants may require a higher average than stipulated in point 2 to be successful in the annual competition for admission.

See Applicant Bulletin for complete details.

Track 1 Transfer Students

The following is a summary of the admission requirements for the Bachelor of Commerce (Honours.) for Track 1 transfer students. 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, 424 University Centre. This information is also posted on the University of Manitoba's website.

Requirements (for Track 1 Transfer students)

- [ECON 1010 (3) and ECON 1020 (3)] (6)
- 6 credit hours from: Anthropology, History, Mathematics, Philosophy, Political Studies, Psychology, or Sociology (6)*
- Mathematics MATH 1520 or MATH 1500 (3)
- Statistics STAT 1000 (3)
- A 3 credit hour Written English ("W") course from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline) (3)
- 3 credit hours of electives (3) **

Minimum 24 credit hours completed by April 30. Although 24 credit hours is the minimum requirement for admission, a full year course load would require 30 credit hours; therefore, students only taking 24 credit hours for admission will need to pick up an extra 6 credit hours of course work once in the Asper School of Business.

If students want to complete 30 credit hours in Year 1, students are recommended to take 6 credit hours from this suggested list of recommended courses: GMGT 1010 plus one of GMGT 2060, GMGT 2070 or MKT 2210.

* Courses chosen for this requirement must be independent from courses taken to fulfill other degree requirements.

Critical Thinking (Philosophy) PHIL 1290 is a preferred elective choice

Students must achieve a minimum grade of "C" on each course listed above. Admission in this category is competitive.

See Applicant Bulletin for complete details.

Track 2 Transfer Students

Applicants who are missing one or more of the Track 1/Foundation course requirements may apply under Track 2 provided they have met the following criteria: completed a minimum of 24 credit hours; achieved a minimum admission GPA of 3.1; and achieved a minimum grade of "C" on each course comprising the 24 credit hours. Track 2 applicants are encouraged to complete all outstanding Track 1/Foundation required courses during their first year after admission to the Asper School of Business.

Minimum 24 credit hours completed by April 30. Although 24 credit hours is the minimum requirement for admission, a full year course load would require 30 credit hours; therefore, students only taking 24 credit hours for admission will need to pick up an extra 6 credit hours of course work once in the Asper School of Business.

*Students must achieve a minimum grade of "C" on each course listed above. Admission in this category is competitive.

See Applicant Bulletin for complete details.

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 2013:

First Priority –Direct Entry from High School applicants.

Second Priority - Track 1 applicants with an AGPA of 2.60 or greater in descending order of AGPA. Thirty spaces are reserved for the Track 2 applicants with an AGPA of 3.10 or higher in descending order of AGPA.

Third Priority - Track 2 applicants (who are not already admitted under the Second Priority) with an AGPA of 3.10 or greater in descending order of AGPA.

Fourth Priority - Track 1 applicants with an AGPA of 2.00 - 2.59 in descending order of AGPA.

Both Track 1 applicants and Track 2 applicants may require an AGPA well in excess of the minimum to be successful in the annual competition for admission.

Other requirements

High school prerequisite: Grade 12 Pre-Calculus Mathematics 40S (or equivalent, with a minimum 60 %)

The Written English and Mathematics requirements are satisfied by Track 1/ Foundation courses.

Minimum AGPA 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.

The Bachelor of Commerce (Honours) program does not have a Mature Student Category for admission.

All students seeking admission to the Bachelor of Commerce (Honours) program must first complete either the Direct Entry, Track 1 or Track 2 requirements.

All students planning to enter the Bachelor of Commerce (Honours) program must obtain a minimum of 60 per cent in Grade 12 Pre-Calculus Mathematics 40S (or equivalent) in order to complete all degree requirements.

The Bachelor of Commerce also has a Special Consideration Category.

See Applicant Bulletin for complete details.

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 Track 1/Foundation or Track 2 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 120 credit hours required in the Bachelor of Commerce (Honours) program, including the 24 credit hours that comprise the specific Track 1/Foundation course 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/Foundation course 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 24 credit hours requirement of Track 1/ Foundation course or Track 2 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 Undergraduate Program Advisor in the Undergraduate Program Office for information on how to optimize their transfer credit and advance standing.

See Applicant Bulletin for detailed information on admission requirements.

2.2 Admission Requirements from 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 école 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 4.

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.

See Applicant Bulletin for detailed information on admission requirements.

SECTION 3: 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, which apply specifically to its students and to non-business students taking business courses.

3.1 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.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

3.2 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.

3.3 Management Minor for Non-Business Students

The Management Minor consists of any 18 hours of credit in courses offered by the Asper School of Business. Entrance requirements and enrolment limits vary with a student's faculty of registration. Students planning to enrol in this minor should consult a student advisor in your home faculty.

3.4 Student Responsibility

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, the co-operative education program option, Joint Programs, and 2+2 Programs 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.

When you are registering for courses, it is your responsibility to ensure that you have satisfied all prerequisite and concurrent course requirements.

It is your responsibility to ensure you have registered for the correct courses to satisfy the requirements of the Bachelor of Commerce (Honours) degree.

Read course descriptions carefully to make sure you are not registered for a course that "May Not Be Held With" a course you have already taken. You will not be allowed to apply both courses toward your degree requirements.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

3.5 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 for courses offered by the Asper School of Business unless a higher grade is called for in the course description.

3.6 Degree GPA Requirement for Graduation

Students Admitted in 2011 and Thereafter

Students admitted to the Asper School of Business in 2011 and thereafter must achieve a minimum degree GPA of 2.00 on all 120 credit hours required in the Bachelor of Commerce (Honours) 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/Foundation course requirements that require a grade of "C" or better in each course.

All Track 1/Foundation courses, Core courses, Major courses, Business Options, and Electives applicable to the Bachelor of Commerce (Honours) 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.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

3.7 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.

3.8 Residency Requirement

All Business students must complete a minimum of 60 credit hours at the University of Manitoba in order to satisfy the residence requirement of the Bachelor of Commerce (Honours) degree.

Students participating in approved International Exchange Programs may be exempt from the 60 credit hour requirement. Please consult with the Undergraduate Program Office for more details.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

Students considering completing course work at another university are referred to the chapter, General Academic Regulations and Policy, and the section on Letter of Permission.

3.9 Time Limit for Completion of the Degree

The maximum period of eight 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. This time limit applies to all students, whether full-time or part-time.

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. Students may appeal to the Undergraduate Program Committee for a one year time extension; all appeals must be accompanied by a detailed letter explaining the student's circumstances and appropriate supporting documentation.

3.10 Maximum Number of Failures

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 an Undergraduate Program Advisor in the Undergraduate Program Office for details.

3.11 Repeating, Substituting and Extra Courses

Maximum Limit Allowed

Each student will be permitted to repeat or substitute a maximum of 12 credit hours of previously passed courses, with a maximum of 6 credit hours per course within the regulations detailed below.

After completion of the approved course repeat or substitution, only the latest of the grades achieved will be included in the computation of the degree GPA.

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 or Winter Term. If a student repeats a course for which a grade was recorded, only the latest of the grades achieved will be included in the computation of the degree GPA. Therefore, 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.

Students may not substitute another course for a Core course.

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 completion of the Major course, only the latest of the grades achieved will be included in the computation of the degree GPA. When a course is to be substituted, the student must seek the approval of the Undergraduate Program Office, in writing, prior to enrolling in the new course; failure to do so may result in a denial of the course substitution.

Electives and Business Options

Students who achieve a grade of "F" in an Elective or Option may either repeat that course or substitute another approved course in its place. Upon completion of the course, only the latest 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 request approval from the Undergraduate Program Office in writing prior to enrolling in the new course; failure to do so may result in a denial of the course substitution.

Voluntary Repeats

In order to improve their degree GPA, or to meet a prerequisite requirement, students may, with prior approval from the Undergraduate Program Office, voluntarily repeat any course in which a passing grade has been received, subject to any registration restictions that may be published on the faculty website and subject to the limits imposed at the point of admission. Students must request approval from the Undergraduate Program Office prior to enrolling in the course; failure to do so may result in a denial of the course substitution.

After completion of the approved course repeat or substitution, only the latest of the grades achieved will be included in the computation of the degree GPA.

Extra Courses

Students who would like to take courses extra to their degree are permitted providing prior approval of the Undergraduate Program Office is obtained prior to registration. When a course is extra to the degree but a student would like to substitute the course for another already in the degree, the student must seek the approval of the Undergraduate Program Office, in writing, prior to enrolling in the new course; failure to do so may result in a denial of the course substitution.

3.12 Completing Two Majors (Second Major)

Students Wishing to Complete Two Majors

Note the following Asper School of Business policy: "Students will not be given any registration priority for a second major." The Asper School of Business cannot guarantee that you will obtain space in the courses you would like for a second major.

Students who have completed all the requirements or who have all the courses in registration for a major are not permitted to formally declare a different major unless there is space in the courses needed to complete the different major. Students are not permitted to declare a different major in order to obtain space in full courses.

3.13 Failure to Meet Requirements and the Suspension & Reinstatement Regulations

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 an Undergraduate Program Advisor in the Undergraduate Program Office for details.

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 Undergraduate Program Office.

3.14 Withdrawal from the Bachelor of Commerce (Honours) Program

- A student who does not register for any courses in the Fall or Winter term 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 Fall or Winter term after admission but subsequently voluntarily withdraws from all course work may 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 and completing a signed declaration of non-attendance at another post-secondary institution. 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.

3.15 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 Business 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. Appeals based on compassionate reasons and circumstances must be supported by appropriate documentation. Students requesting Authorized Withdrawals should contact the Undergraduate Program Office.

3.16 Withdrawal from the Co-operative Education Option

Students may be required to withdraw from the program for any of the following reasons:

- Failure to maintain the minimum academic requirements of the Asper School of Business,
- Failure to maintain the minimum credit hour requirements of the academic term in the co-op option,
- Unsatisfactory performance in the work place during a work term,
- Failure to observe the ethical standards of the Asper School and the University in place at the time; including being found guilty of academic dishonesty, or
- When, in the opinion of the Co-op Director and Faculty Advisor, the student does not exhibit sufficient qualities of ability, skills, aptitudes, attitudes, diligence or motivation to complete the program successfully.

Students who wish to withdraw voluntarily from the Co-op Program may do so by written letter to the Co-op Director at any time prior to accepting a position for a work term. Any work term grades earned by the co-op student up to the date of the letter of withdrawal will stand.

Details for all continuing requirements or withdrawal procedures can be found in the Co-operative Education Option/Program Academic Regulations document.

3.17 Maximum Course Load/Minimum Course Load

Students are not permitted to take more than 18 credit hours during an academic term without permission from the the Undergraduate Program Manager.

Students enrolled in the Co-operative Education Option are not permitted to take more than 3 credit hours during a co-operative work term.

Students enrolled in the Co-operative Education Option must register in a minimum of 9 credit hours between co-op work terms.

3.18 Course Selection and Requirements

All students are limited to a maximum of six credit hours of IDM 4050 Readings in Management, IDM 4070 Management Research 1, and IDM 4080 Management Research 2. These courses are considered Business Options, rather than as part of any Major.

ACC 3050 Taxation Accounting, 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.

3.19 Eligibility Requirements for Awards

To be eligible for the Dean's Honours List a student must complete a minimum of 12 credit hours of courses at the University of Manitoba during one academic term and achieve a term GPA of at least 3.50. Students participating in approved International Exchange Programs may be eligible for the Dean's Honour List.

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. Co-operative Education students are eligible to apply for most awards; please check the Asper Undergraduate Program web site and/or with the Financial Aid and Awards Office for more information on the eligibility requirements for Co-operative Education students.

The degree "With Distinction" will be awarded to all students graduating with the Bachelor of Commerce (Honours) Degree who attain a degree GPA of 3.80 or better on the following criteria: students admitted to the Asper School of Business in 2011 and thereafter will have their degree GPA determined on the basis of all courses which form a part of the 120 credit hours required in the four-year degree program.

The University Gold Medal in Business shall be awarded annually. The candidate for the one medal may be a graduate from either the Bachelor of Commerce (Honours) or the Bachelor of Commerce (Honours) [Co-operative Education Option]. Students graduating in October, February, and May are eligible for the Gold Medal in Business which shall be awarded annually at the spring convocation.

Students interested in the detailed terms of reference for the University Gold Medal in Business or who are interested in bursaries, awards and scholarships should contact the Undergraduate Program Office in Asper or the University's Financial Aid and Awards Office.

3.20 Examination Regulations

The faculty adheres to the General University Examination Regulations Policy. For 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 Undergraduate Program Office. The faculty does not offer supplemental examinations. The faculty does not offer Challenge for Credit examinations.

3.21 Letter of Permission to Take Courses at Another University for Transfer of Credit

Students wishing to complete courses at another institution for credit at the University of Manitoba will apply for written permission from the Registrar's Office prior to registering at the other institution. Students should apply for the Letter of Permission at least 4-6 weeks in advance.

To be eligible to take courses on a Letter of Permission, a Business student must:

i) be applying to take a course not currently offered by Asper (when applying to take a course transferred as an Asper course) in the term for which they are applying and

ii) have completed a minimum of 24 credit hours in the Asper School of Business in addition to any transfer credits received upon admission.

Students (including Asper students on an exchange program) will not be granted a Letter of Permission for capstone courses of the Bachelor of Commerce (Honours) Program or capstone courses in its majors (regardless if the course is or is not being offered in any term).

See the on-line University of Manitoba "Academic Calendar and Catalog", Faculty of Management/I.H. Asper School of Business, Program and Graduation Requirements, Program Requirements for Majors, for the defined capstone courses of the Bachelor of Commerce (Honours) program and capstone courses in its majors.

Faculty Council Amendments Approved February 1, 2013.

3.22 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.

3.23 Student Appeals of Academic Regulations

Except as otherwise noted, student appeals should be directed to the Secretary of the Undergraduate Program Committee in the Undergraduate Program Office. The Committee considers appeals from Asper 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 compassionate or medical problems.

3.24 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 Undergraduate Program Office. (Currently under review.)

3.25 Transcipts and Degree Parchments

Majors on Transcripts

After you graduate with your Bachelor of Commerce (Honours) degree, your formally declared major will appear on your University of Manitoba transcript. Your major will appear on your transcript once you have formally declared it on Aurora. Your major will not be listed on the Bachelor of Commerce (Honours) parchment.

If you complete the requirements of a second major within the credit hours required for the Bachelor of Commerce (Honours) degree, you may request that the second major also appear on your transcript after you graduate. See the Undergraduate Program Office in your graduating term to complete a request form.

Co-operative Education Option on Transcripts

If you have successfully completed the Co-operative Education Option, it will appear on your University of Manitoba transcript after you graduate with your Bachelor of Commerce (Honours) degree. The Co-operative Education Option will appear on your transcript once you have formally declared it on Aurora. Also, the Co-operative Education Option will appear on the Bachelor of Commerce (Honours) parchment.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

The Bachelor of Commerce (Honours) program comprises 120 credit hours of course work. The Co-operative Education Option also comprises 120 credit hours of course work plus a minimum of three 4-month approved work terms. The degree encompasses the following components which will be listed in detail below: Track 1/Foundation courses, Program Core courses (common to all students), Major courses, Business Options and Elective courses.

Each student must declare at least one major and present a minimum Degree Grade Point Average of 2.00.

Detailed information on the degree regulations is found in Section 3, in the Undergraduate Program Office (268 Drake) or on the undergraduate web site at: umanitoba.ca/faculties/management/programs/undergraduate/

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

4.1 Program Requirements for the Bachelor of Commerce (Honours) Program – Track 1 with Guaranteed Admission, Track 1 and Track 2

All students admitted under these tracks (including International Students and International from 2+2 Joint Programs) will complete the Bachelor of Commerce Honours Program. The Bachelor of Commerce (Honours) degree is comprised of 120 credit hours and can be divided into the following components:

- The Track 1/FoundationCourse Requirements (24 credit hours)
- The Core (51 credit hours)
- The Major (12 credit hours)
- Business Options (15 credit hours)
- Electives (15 credit hours)
- Business Option or Elective (3 credit hours)

These components comprise 120 credit hours; their associated limits are defined below.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

Track 1/Foundation Course Requirements

All students must complete the specified Track 1/Foundation course requirements. Direct Entry stduents from high school will complete the Track 1/Foundation courses in their first year. Track 1 students complete these requirements prior to their admission to the Asper School of Business. Track 2 students have completed 24 credit hours of university course work but are missing one or more of the specific Track 1/Foundation courses courses. Track 2 students should complete all outstanding Track 1/Foundation courses during their first year after admission to the Asper School of Business and must achieve a minimum grade of "C" in each outstanding Track 1/Foundation courses.

The Core

The CORE consists of 51 credit hours of specified mandatory courses from all four departments in this faculty as well as courses taught by the departments of Economics, Environment, Global Political Economy, Political Studies, , Philosophy and Sociology. 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 Years 2 and 3 of the Bachelor of Commerce Honours Program.

The Major

Each student is required to 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 hours 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

This 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 are required to complete 15 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 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 Undergraduate Program Office.

Electives

This 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 15 credit hours of Electives that meet the following criteria; a minimum of 6 credit hours of the Electives must be at the 2000 Level or higher plus a minimum of 3 credit hours of the Electives must comprise a freely chosen course that meets the Written English "W" requirement at any level.

Business Option or Elective

This component of the program consists of 3 credit hours which may be either a Business Option or Elective and it must be at the 2000 Level or higher.

Course Requirements for Direct Entry, Track 1 and Track 2 Students

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 1: Track1/Foundation Courses	**Cr. Hrs.**
ANTH, HIST, MATH, PHIL, POLS, PSYC, SOC (see Note 1)	6
ECON 1010 AND ECON 1020	6
MATH 1520 OR MATH 1500	3
STAT 1000	3
Written English "W" (see Note 2)	3
Elective (see Note 3)	3
Minimum credit hours to qualify (see Note 4)	**24**
Year 1: Core Courses	
GMGT 1010	3
One of : GMGT 2060, GMGT 2070 or MKT 2210	3
Total credit hours (see Note 4)	**30**
YEAR 2	
ACC 1100	3
ACC 1110	3
FIN 2200	3
GMGT 2010	3
Two of : GMGT 2060, GMGT 2070, MKT 2210;	
whichever two courses not taken in Year 1 (see Note 5)	6
MIS 2000	3
MSCI 2150	3
Electives (see Note 6)	6
Total credit hours	**30**
YEAR 3	
HRIR 2440	3
GMGT 3300	3
SCM 2160	3
International Business Requirement (see Note 7)	3
Ethics (see Note 8)	3
Electives, Options & Major Courses (see Notes 6 and 10)	15
Total credit hours	**30**
YEAR 4	
GMGT 4010	3
Alternative Management Studies (see Note 9)	3
Electives, Options and Major Courses (see Notes 6 and 10)	24
Total credit hours	**30**
Total Credit Hours Required for Degree	**120**

NOTES:

1) 6 credit hours from: Anthropology, History, Mathematics, Philosophy, Political Studies, Psychology, or Sociology. Courses chosen for this requirement must be independent from courses taken to fulfill other degree requirements.

2) Students are required to select a three credit hour course to satisfy the Written English "W"requirement. The "W" course for the Foundation course requirement must be from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline and therefore do not fulfil the Track 1/Foundation Written English course requirement). Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

3) PHIL 1290 Critical Thinking is a preferred elective.

4) For Track 1 transfer students these 24 credit hours of specified courses are the minimum requirements for admission. Direct Entry high school admits will also be taking these Foundation courses in Year 1. All students regardless of admit type must take these courses and achieve a minimum grade of "C" (see applicant bulletin for complete details).

5) The prerequiesite to GMST 2060 and GMGT 2070 is GMGT 1010 (D).

6) In addition to 51 credit hours of Core courses all students must take 12 credit hours in one Major, 15 credit hours of Business Options, 15 credit hours of Electives (which must include a minimum of 6 credit hours at the 2000 Level or higher plus 3 credit hours of Written English "W") plus 3 credit hours of either Business Options or Electives (which must be at the 2000 Level or higher).

7) International Business Requirement: One of the following courses must be chosen: ACT 4250, INTB 2200, FIN 3450, HRIR 4520, MKT 3300, MKT 3240 (Cross-Cultural Brand Management topic only) or SCM 3230.

8) Ethics requirement: One of the following courses: PHIL 2290, PHIL 2750, PHIL 2790, PHIL 2830, GMGT 3030 or GMGT 3581. If a 6 credit hour course is chosen, 3 credit hours will count as Electives.

9) Alternative Management Requirement: One of the following must be chosen: ECON 2540, ECON 2630, ECON 3710, ECON 3810, ENVR 4110, GPE 2700, POLS 3220, POLS 3250, SOC 3870 or GMGT 4210. If a 6 credit hour course is chosen, 3 credit hours will count as Electives. Take careful note of any course prerequisites in your timetable planning.

10) 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:

SUBJECT		Cr. Hrs.
Economics		
ECON 2540	Political Economy 1: Production and Distribution	3
ECON 2630	An Intro to the World's Economies	6
ECON 3710	Sustainable Development: Issues and Policy	3
ECON 3810	Alternative Approached to Macroeonomic Analysis	3
Environment		
ENVR 4110	Critical Thinking and the Environment	3
Global Political Economy		
GPE 2700	Perspectives on Global Political Economy	3
Political Studies		
POLS 3220	Globalization and the World Economy	3
POLS 3250	International Political Economy	3
Sociology		
SOC 3870	Social Inequality	3
Philosophy		
PHIL 2290	Ethics and Society	6
PHIL 2750	Ethics and the Environment	3
PHIL 2790	Moral Philosophy	6
PHIL 283	Business Ethics	3

4.2 Program Requirements for Majors

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.

Capstone Courses for the Facutly and it's Majors:

The capstone course for the Faculty is GMGT 4010. The capstone course for a major will be listed with the major details below (if none is listed then there is no course defined as a capstone course for that major).

Aboriginal Business Studies (Revised)

The Major consists of NATV 3120 and NATV 4320 plus three credit hours from ACC 3040, ENTR 3100, ENTR 4100, FIN 3270, FIN 3470, HRIR 4410 or LEAD 2010 plus either three more credit hours from any course not taken from the list of ACC 3040, ENTR 3100, ENTR 4100, FIN 3270, FIN 3470, HRIR 4410 or LEAD 2010 or any 3 credit hours from NATV 2100, NATV 2110, NATV 2220, NATV 3100, NATV 3160, NATV 3310, NATV 3360, MATV 3370, NATV 4200 OR NATV 4220.

Accounting

The Major consists of: ACC 2010, ACC 2020, ACC 3040 and ACC 4030.

The prerequisite for ACC 2010 is ACC 1100 (C+) and for ACC 3040 is ACC 1110 (C+).

Actuarial Mathematics

The Major consists of any 12 hours from ACT 2020, ACT 2120, ACT 3130, ACT 3230, ACT 3340, ACT 3530, ACT 4140 and ACT 4340.

Prior to registration, all students interested in or enrolled in Actuarial Mathematics should consult the Director or a Undergraduate Program 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 course 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.

Student interested in the Actuarial Mathematics major are encoraged to take MATH 1300 and MATH 1700 as Track 1/Foundation courses or alternately as electives in Year 1.

Entrepreneurship/Small Business (Revised)

The Major consists of: ENTR 3100, ENTR 4100, and FIN 3240, plus one of the following: ENTR 3102, ENTR 3104, or ENTR 3106.

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 FIN 2200 (C+), MATH 1300 (C) or MATH 1310 (C), and STAT 2000 (C).

*Finance students are also required to take MATH 1300 (C) or MATH 1310 (C) and STAT 2000 (C) as part of the electives in their program since it they are part of the prerequisite for the finance courses as stated above.

Capstone Course: FIN 4400.

Generalist

The Major consists of one course from the required list of courses from four different Majors (i.e., Options that are not part of a Major's required course requirements are not eligible for the Generalist Major).

Human Resources Management/Industrial Relations

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 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

The Major consists of: FIN 3450, INTB 2200, HRIR 4520, and MKT 3300.

One of the above four courses may be used in the core program; therefore the major will be comprised of the remaining three courses plus one course from the following list: MKT 3240 Special Topics in Marketing (Cross-Cultural Brand Management topic only), ACT 4250 Managing Insurance Operations in the International Business Environment or SCM 3230 Global Chain Management.

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 Undergraduate Program Office.

Leadership and Organization (New)

The Major consists of 12 credit hours from: GMGT 3010, LEAD 3010, LEAD 3020, LEAD 3030, LEAD 3040, LEAD 4010 AND LEAD 4020.

Students entering the second year of the four year program are advised to take GMGT 2070 and GMGT 2080 as they are prerequisites to some of the advanced courses in the major.

Logistics and Supply Chain Management

The Major consists of: SCM 2210, SCM 2230, SCM 3360 plus one of the following: SCM 2220, SCM 2240, SCM 3230, SCM 4250 (not to be held with the former SCM 4240), OPM 4630.

Recommended Business Options/Electives in this area include: MIS 3500, MIS 3510, INTB 2200, HRIR 3450, GMGT 3160, GMGT 4160, MSCI 3400, IDM 4050, IDM 4070, IDM 4080, MKT 3220, MKT 3340, , GEOG 3800, ECON 2450, ECON 2460.

Management Information Systems

The Major consists of MIS 3500, MIS 3510, MIS 3520, 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 pursing the Management Information Systems Major are also encouraged, but not required, to complete COMP 1020.

Capstone Course: MIS 4500.

Management of Organizations (Discontinued/Deleted)

The Major consists of any 12 hours from: GMGT 3010, GMGT 3020, 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.

NOTE: Students previously pursuing the major may have to consult with the Business Administration Department Head for information and feasibility on completing the major.

Marketing

The Major consists of MKT 3220*, MKT 3230, MKT 4210 and 3 hours from MKT 3240, MKT 3250, MKT 3300, MKT 3310, MKT 3340, MKT 3390, 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.

*Marketing students are also required to take STAT 2000 as one of their electives since it is a prerequisite for MKT 3220.

Capstone Course: MKT 4210.

Operational Research/Operations Management

The Major consists of any 12 hours from MSCI 3400, OPM 3650, OPM 3660, OPM 3670, 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 Undergraduate Program Advisor for program planning advice.

4.3 Program Requirements for the Co-operative Education Option

All students must complete all 120 credit hours of the program including the Core, one of the Majors listed above in Section 4.2, as well as the Option and Elective course components. Students who intend to complete a Co-operative Education Option must also complete a minimum of three (3) 4-month work terms. Students admitted from September 2011 and who successfully complete the minimum three 3 work terms can combine the work terms together to satisfy 3 credit hours of Business Options. Complete details for entrance and continuing requirements may be obtained from the Undergraduate Program Office.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

4.4 Program Requirements for the Asper School of Business/Red River College Joint 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 66 credit hours to earn the Bachelor of Commerce (Honours) degree. The 66 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.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

NOTE: The Joint Program is currently under review; transfer credit details are subject to change.

The Core

The CORE comprises 30 credit hours of the 66 required in the Joint Program. The Foundation courses (6 credit hours) should be taken in the first year at the Asper School. Students must achieve a minimum "C" grade in each Foundation 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 below in the Course Requirements for RRC Joint Program Students.

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. Information on completing a Second Major is listed in Section 3.12. The Majors are listed in Section 4.2.

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.

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 2060 as one of their Business Options.

Business Options

This 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 12 credit hours of Business Options. Some students may want to take Business 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 Business Options from that area. Students may complete a second Major as part of their Business Options requirements. Such students should consult with staff in the Undergraduate Program Office.

Electives

This 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 9 credit hours of Electives that meet the following criteria; a 3 credit hour course at the 2000 Level or higher, 3 credit hours must be a freely chosen course that meets the Written English "W" requirement at any level plus a 3 credit hour elective at any level.

Business Option or Elective

This component of the program consists of 3 credit hours which may be either a Business Option or Elective and it must be at the 2000 Level or higher.

Course Requirements for RRC Joint Program Students

The course requirements for the Asper School of Business/Red River College Joint Program are as follows.

Students should register for the Foundation courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.

Foundation Courses	**Cr. Hrs**
MATH 1520 or MATH 1500 (see Note 1)	3
Written English Course (see Note 2)	3
Program Core Requirements	
ACC 1110	3
MIS 2000	3
GMGT 1010	3
SCM 2160	3
GMGT 4010 (must be taken in final term)	3
Ethics (see Note 3)	3
Alternative Management Studies (see Note 4)	3
International Business (see Note 5)	3
Total Credit Hours	**30**

NOTES:

1) The prerequisite for MATH 1520 or MATH 1500 is a 60 per cent in Grade 12 Pre-Calculus Mathematics 40S 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 may be entitled to an additional three credit hour Elective from their Business Administration diploma.

2) Students are required to select a three credit hour course to satisfy the Written English "W" requirement. The "W" course for the Foundation course requirement must be from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline and therefore do not fulfil the Track 1/Foundation Written English course requirement). Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

3) 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 2750 (3), PHIL 2790 (6), PHIL 2830 (3), GMGT 3030 (3) or GMGT 3581 (3). If a 6 credit hour course is chosen, 3 credit hours will count toward the core Ethics requirement and 3 credit hours will count as Electives.

4) Alternative Management Requirement: One of the following must be chosen: ECON 2540, ECON 2630, ECON 3710, ECON 3810, ENVR 4110, GPE 2700, POLS 3220, POLS 3250, SOC 3870 or GMGT 4210. If a 6 credit hour course is chosen, 3 credit hours will count as Electives. Take careful note of any course prerequisites in your timetable planning.

5) International Business Requirement: One of the following courses must be chosen: ACT 4250, INTB 2200, FIN 3450, HRIR 4520, MKT 3300, MKT 3240 (Cross-Cultural Brand Management topic only) or SCM 3230.

Overall Program Requirements	**Cr. Hrs.**
Foundation Courses	6
Program Core Courses	24
Major Courses	12
Business Options	12
Electives	9
Business Option or Elective	3
Total Credit Hours	**66**

4.5 Program Requirements for the Asper School of Business /Assiniboine Community College Joint 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 66 credit hours to earn the Bachelor of Commerce (Honours) degree. The 66 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.

NOTE: The Joint Program is currently under review; transfer credit details are subject to change.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

The Core

The CORE comprises 39 credit hours of the 66 required in the Joint Program. The Foundation courses (12 credit hours) should be taken in the first year in the Asper School. Students must achieve a minimum "C" grade in each Track 1/Foundation course. The Program Core courses (27 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 below in Course Requirements for ACC Joint Program Students.

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. Information on completing a Second Major is listed in Section 3.12. The Majors are listed Section 4.2.

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.

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.

Business Options

This 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 9 credit hours of Business Options. Some students may want to take Business 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 9 hours of their Business Options from that area. Students may complete a second Major as part of their Business Options requirements. Such students should consult with staff in the Undergraduate Program Office.

Electives

This 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 3 credit hours of Electives that is a freely chosen course that meets the Written English "W" requirement at any level.

Business Option or Elective

This component of the program consists of 3 credit hours which may be either a Business Option or Elective and it must be at the 2000 Level or higher.

Course Requirements for ACC Joint Program Students

The course requirements for the Asper School of Business/Assiniboine Community College Joint Program are as follows.

Students should register for the Track 1/Foundation courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.

Foundation Courses	**Cr. Hrs.**
6 credit hours from: ANTH, HIST, MATH, PHIL, POLS, PSYC OR SOC (See Note 1)	6
MATH 1520 or MATH 1500 (see Note 2)	3
Written English Course (see Note 3)	3

Program Core Requirements	
MIS 2000	3
GMGT 2060	3
GMGT 1010	3
MSCI 2150	3
SCM 2160	3
GMGT 4010 (must be taken in final term)	3
Ethics (see Note 4)	3
Alternative Management Studies (see Note 5)	3
International Business (see Note 6)	3
Total Credit Hours	**39**

NOTES:

1) 6 credit hours from: Anthropology, History, Mathematics, Philosophy, Political Studies, Psychology, or Sociology. Courses chosen for this requirement must be independent from courses taken to fulfill other degree requirements.

2) The prerequisite for MATH 1520 or MATH 1500 is 60 per cent in Grade 12 Pre-Calculus Mathematics 40S 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 may be entitled to an additional three credit hour Elective from their Business Administration diploma.

3) Students are required to select a three credit hour course to satisfy the Written English "W"requirement. The "W" course for the Foundation course requirement must be from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline and therefore do not fulfil the Track 1/Foundation Written English course requirement). Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

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 2750 (3), PHIL 2790 (6), PHIL 2830 (3), , GMGT 3030 (3) or GMGT 3581 (3). If a 6 credit hour course is chosen, 3 credit hours will count toward the core Ethics requirement and 3 credit hours will count as Electives.

5) Alternative Management Requirement: One of the following must be chosen: ECON 2540, ECON 2630, ECON 3710, ECON 3810, ENVR 4110, GPE 2700, POLS 3220, POLS 3250, SOC 3870 or GMGT 4210. If a 6 credit hour course is chosen, 3 credit hours will count as Electives. Take careful note of any course prerequisites in your timetable planning.

6) International Business Requirement: One of the following courses must be chosen: ACT 4250, INTB 2200, FIN 3450, HRIR 4520, MKT 3300, MKT 3240 (Cross-Cultural Brand Management topic only) or SCM 3230.

Overall Program Requirements	**Cr. Hrs.**
Track 1/Foundation Courses	12
Program Core Courses	27
Major Courses	12
Business Options	9
Electives	3
Business Option or Elective	3
Total credit hours	66

4.6 Program Requirements for the Asper School of Business /University College of the North Joint Program

Prior to admission to the Asper School of Business/University College of the North Joint Program students must complete the Business Administration Diploma (University Stream) at University College of the North 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 81 credit hours to earn the Bachelor of Commerce (Honours) degree. The 81 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.

NOTE: The Joint Program is currently under review; transfer credit details are subject to change.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

The Core

The CORE comprises 39 credit hours of the 81 required in the Joint Program. The Foundation courses (15 credit hours) should be taken in the first year in the Asper School. Students must achieve a minimum "C" grade in each Foundation 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 below in Course Requirements for UCN Joint Program Students

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. Information on completing a Second Major is listed in Section 3.12. The Majors are listed in Section 4.2.

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.

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.

Business Options

This 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 15 credit hours of Business Options. Some students may want to take Business 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 Major may take up to 12 hours of their Business Options from that area. Students may complete a second Major as part of their Business Options requirements. Such students should consult with staff in the Undergraduate Program Office.

Electives

This 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 12 credit hours of Electives that meet the following criteria; 6 credit hours must be at the 2000 Level or higher, 3 credit hours must be a freely chosen course that meets the Written English "W" requirement at any level plus a 3 credit hour elective at any level.

Business Option or Elective

This component of the program consists of 3 credit hours which may be either a Business Option or Elective and it must be at the 2000 Level or higher.

Course Requirements for UCN Joint Program Students

The course requirements for the Asper School of Business/University College of the North Joint Program are as follows.

Students should register for the Foundation courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.

Foundation Courses	**Cr. Hrs.**
6 credit hours from: ANTH, HIST, MATH, PHIL,	
POLS, PSYC OR SOC (See Note 1)	6
MATH 1520 or MATH 1500 (see Note 2)	3
Written English Course (see Note 3)	3
STAT 1000	3
Program Core Requirements	
MIS 2000	3
GMGT 1010	3
MSCI 2150	3
SCM 2160	3
GMGT 4010 (must be taken in final term)	3
Ethics (see note 4)	3
Alternative Management Studies (see Note 5)	3
International Business (see Note 6)	3
Total Credit Hours	39

NOTES:

1) 6 credit hours from: Anthropology, History, Mathematics, Philosophy, Political Studies, Psychology, or Sociology. Courses chosen for this requirement must be independent from courses taken to fulfill other degree requirements.

2) The prerequisite for MATH 1520 or MATH 1500 is a 60 per cent in Grade 12 Pre-Calculus Mathematics 40S 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 may be entitled to an additional three credit hour Elective from their Business Administration diploma.

3) Students are required to select a three credit hour course to satisfy the Written English "W"requirement. The "W" course for the Foundation course requirement must be from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline and therefore do not fulfil the Track 1/Foundation Written English course requirement). Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

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 2750 (3), PHIL 2790 (6), PHIL 2830 (3), GMGT 3030 or GMGT 3581 (3). If a 6 credit hour course is chosen, 3 credit hours will count toward the core Ethics requirement and 3 credit hours will count as Electives.

5) Alternative Management Requirement: One of the following must be chosen: ECON 2540, ECON 2630, ECON 3710, ECON 3810, ENVR 4110, GPE 2700, POLS 3220, POLS 3250, SOC 3870 or GMGT 4210. If a 6 credit hour course is chosen, 3 credit hours will count as Electives. Take careful note of any course prerequisites in your timetable planning.

6) International Business Requirement: One of the following courses must be chosen: ACT 4250, INTB 2200, FIN 3450, HRIR 4520, MKT 3300, MKT 3240 (Cross-Cultural Brand Management topic only) or SCM 3230.

Overall Program Requirements	Cr. Hrs.
Foundation Courses	15
Program Core Courses	24
Major Courses	12
Business Options	15
Electives	12
Business Option or Elective	3
Total Credit Hours	81

4.7 Program Requirements for the Asper School of Business /École technique et professionelle joint program

Prior to admission to the Asper School of Business/École technique et professionnelle Joint Program students must complete the Business Administration Diploma (University Stream) at École 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 66 credit hours to earn the Bachelor of Commerce (Honours) degree. The 66 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.

NOTE: Students admitted prior to September 2011 should refer to the 2010-2011 Undergraduate Calendar for a description of their program requirements.

The Core

The CORE comprises 36 credit hours of the 66 required in the Joint Program. The Foundation courses (12 credit hours) should be taken in the first year in the Asper School. Students must achieve a minimum "C" grade in each Foundation 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 below in Course Requirements for ETP Joint Program Students.

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. Information on completing a Second Major is listed in Section 3.12. The Majors are listed in Section 4.2.

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.

Note: Students in the Asper School of Business/École technique et professionnelle joint program who want to major in Finance will be required to take FIN 2200 as one of their Business Options.

Business Options

This 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 9 hours of Business Options. Some students may want to take Business 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 9 hours of their Business Options from that area. Students may complete a second Major as part of their Business Options requirements. Such students should consult with staff in the Undergraduate Program Office.

Electives

This 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 credit hours of Electives that meet the following criteria; 3 credit hours must be at the 2000 Level or higher and 3 credit hours must be a freely chosen course that meets the Written English "W" requirement at any level.

Business Option or Elective

This component of the program consists of 3 credit hours which may be either a Business Option or Elective but it must be at the 2000 Level or higher.

Course Requirements for ETP Joint Program Students

The course requirements for the Asper School of Business/École technique et professionnelle Joint Program are as follows.

Students should register for the Foundation courses in their first year at the University of Manitoba and must achieve a minimum "C" grade in each course.

Foundation Requirements	Cr. Hrs.
6 credit hours from: ANTH, HIST, MATH, PHIL, POLS, PSYC OR SOC (See Note 1)	6
MATH 1520 or MATH 1500 (see Note 2)	3
Written English Course/Elective (see Note 3)	3
Program Core Requirements	
MIS 2000	3
GMGT 1010	3
MSCI 2150	3
SCM 2160	3
GMGT 4010 (must be taken in final term)	3
Ethics (see note 4)	3
Alternative Management Studies (see Note 5)	3
International Business (see Note 6)	3
Total Credit Hours	36

NOTES:

1) 6 credit hours from: Anthropology, History, Mathematics, Philosophy, Political Studies, Psychology, or Sociology. Courses chosen for this requirement must be independent from courses taken to fulfill other degree requirements.

2) The prerequisite for MATH 1520 or MATH 1500 is a 60 per cent in Grade 12 Pre-Calculus Mathematics 40S 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/École technique et professionelle Joint Program and who successfully complete the Mathematical Skills course may be entitled to an additional three credit hour Elective from their Business Administration diploma.

3) Students are required to select a three credit hour course to satisfy the Written English "W"requirement. The "W" course for the Foundation course requirement must be from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline and therefore do not fulfil the Track 1/Foundation Written English course requirement). Courses that satisfy the Written English requirement are listed in the chapter, General Academic Regulations and Policy.

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 2750 (3), PHIL 2790 (6), PHIL 2830 (3), GMGT 3030 or GMGT 3581 (3). If a 6 credit hour course is chosen, 3 credit hours will count toward the core Ethics requirement and 3 credit hours will count as Electives.

5) Alternative Management Requirement: One of the following must be chosen: ECON 2540, ECON 2630, ECON 3710, ECON 3810, ENVR 4110, GPE 2700, POLS 3220, POLS 3250, SOC 3870 or GMGT 4210. If a 6 credit hour course is chosen, 3 credit hours will count as Electives. Take careful note of any course prerequisites in your timetable planning.

6) International Business Requirement: One of the following courses must be chosen: ACT 4250, INTB 2200, FIN 3450, HRIR 4520, MKT 3300, MKT 3240 (Cross-Cultural Brand Management topic only) or SCM 3230.

Overall Program Requirements	**Cr. Hrs.**
Foundation Courses	12
Program Core Courses	24
Major Courses	12
Business Options	9
Electives	6
Business Option or Elective	3
Total Credit Hours	66

SECTION 5: COURSE DESCRIPTIONS

SECTION 5.1 Accounting and Finance - Accounting Course Descriptions 1000 Level (ACC)

ACC 1100 Introductory Financial Accounting Cr.Hrs. 3
(Lab required) Examination of accounting postulates underlying the preparation and presentation of financial statements.

ACC 1110 Introductory Managerial Accounting Cr.Hrs. 3
(Lab required). Role of accounting in creation and application of business information used by decision-makers in the management of enterprise. Prerequisite: ACC 1100 (009.110) (D). Prerequisite or Concurrent Requirement: ECON 1010 (D) and ECON 1020 (D) or the former ECON 1200 (018.120) (D).

SECTION 5.2 Accounting and Finance - Accounting Course Descriptions 2000 Level (ACC)

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) (D).

SECTION 5.3 Accounting and Finance - Accounting Course Descriptions 3000 level (ACC)

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) (D) and ACC 2020 (or 009.202)(D)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 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) (D) and MIS 2000 or MIS 2001 (or 009.200)(D).

SECTION 5.4 Accounting and Finance - Accounting Course Descriptions 4000 level (ACC))

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) (D)] 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) (D) and FIN 2200 (or 9.220) (D). Prerequisite or Concurrent Requirement: ACC 2020 (or 009.202) (D).

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) (D).

SECTION 5.5 Accounting and Finance - Finance Course Descriptions 2000 Level (FIN)

FIN 2200 Corporation Finance Cr.Hrs. 3
An introduction to corporate finance regarding the allocation & acquisition of funds. Topics include: discounted cash flows, capital budgeting, financial instruments, cost of capital, risk-return trade-offs, market efficiency, capital structure and the use of derivatives. Prerequisite: [ACC 1100 (or 009.110) (D)] and [MATH 1500 or MATH 1520 (C)] and [STAT 1000 or STAT 1001 (C)] and [ECON 1010 (C) and ECON 1020 (C) or the former ECON 1200 (or 018.120) (C)].

SECTION 5.6 Accounting and Finance - Finance Course Descriptions 3000 Level (FIN)

FIN 3240 Entrepreneurial Finance Cr.Hrs. 3
Study of entrepreneurial finance, addressing both investment and financing decisions of new ventures, covering both in theory and in practice. May not be held for credit in any program with FIN 3470 and may not be used in place of FIN 3470. Prerequisite: FIN 2200 (or 009.220) (D).

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) (D).

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) (D).

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
An introduction to investment analysis and modern portfolio theory. Topics include equilibrium in the capital markets, fixed income securities, equities and deriviative instruments. Prerequisite: [FIN 2200 (or 009.220) (C+)] and [MATH 1300 or MATH 1310 (C)] and [STAT 2000 (C)].

FIN 3420 Security Analysis Cr.Hrs. 3
This course provides a practical application of techniques to analyse a company for investment purposes and evaluate purchases of stock and fixed-income securities. Topics include financial statement analysis, ratio analysis, alternative methods for forecasting corporate profits and dividends, risk assessment, and valuation techniques. Prerequisites: FIN 2200 (or 009.220) (C+).

FIN 3440 Real Estate Investments Cr.Hrs. 3
An introduction to real estate finance. Topics include valuation, financing, transaction, tax and legal issues. Prerequisite: FIN 2200 (or 009.220) (C+).

FIN 3450 International Finance Cr.Hrs. 3
An introduction to the theory of comparative advantage, foreign exchange markets, international parity relations, international debt and equity markets, international debt operating exposures, and international capital budgeting. Prerequisite: FIN 2200 (or 009.220) (C+).

FIN 3460 Financial Markets and Institutions Cr.Hrs. 3
A study of financial systems with emphasis on Canada. Major topics include monetary policy, financial markets, financial institutions, financial regulation and risk management. 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+)] and [MATH 1300 or MATH 1310 (C)] and [STAT 2000 (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) (D). May not be held with FIN 3240.

FIN 3480 Corporate Finance Theory and Practice Cr.Hrs. 3
Intermediate Corporate Finance including the following topics: Capital budgeting theory and techniques, determination of relevant cost of capital, capital structure, dividend policy, leasing and other special topics. Prerequisite: [FIN 2200 (or 009.220) (C+)] and [MATH 1300 or MATH 1310 (C)] and [STAT 2000 (C)].

SECTION 5.7 Accounting and Finance - Finance Course Descriptions-4000 Level (FIN)

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) (D) and FIN 3480 (or 009.348) (D).

FIN 4270 Options and Futures Cr.Hrs. 3
Mechanics of futures, options and swaps markets. Topics include arbitrage, hedging, forward rate agreements, models of derivative valuation and value-at-risk. Prerequisite: FIN 3410 (or 009.341) (D).

FIN 4400 Financial Management Practices Cr.Hrs. 3
Application of theoretical models in finance to real-world problems using cases. Topics include working capital management, long-term investment and financing decisions, valuation, risk management, reorginaztions and international financial mangement. Prerequisite: FIN 3480 (or 009.348) (D).

Section 5.8 Accounting and Finance - Management Info Systems Course Descriptions 2000 Level (MIS)

MIS 2000 Information Systems for Management Cr.Hrs. 3
(Lab required) Introduction to information systems in organizations, systems development/acquisition, and management issues concerning information technology in organizations.

Section 5.9 Accounting and Finance - Management Info Systems Course Descriptions 3000 Level (MIS)

MIS 3500 Database Management Systems Cr.Hrs. 3
(Formerly 009.350) Designing, developing and managing database systems, by using mainstream design methodologies and popular development tools. Prerequisites: [MIS 3510 (or 009.351) (D)] and [COMP 1010 (or 074.101) (C)].

MIS 3510 Systems Analysis and Design Cr.Hrs. 3
(Formerly 009.351) Analyzing business tasks, processes, information and information technology, and designing information systems by employing methodologies, techniques and popular software used by information systems professionals. Prerequisites: MIS 2000 (or 009.200) (C+).

MIS 3520 Data Communications and Networking Cr.Hrs. 3
(Formerly 009.352) A study of basic data communications topics, including communication media, protocols, network security, network topologies (local and wide area networks), Web development and network management issues. Prerequisite: MIS 2000 (or 009.200) (C+).

Section 5.10 Accounting and Finance - Management Info Systems Course Descriptions 4000 Level (MIS)

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: (Formerly 009.450) A survey of the various issues associated with managing information as a resource. Explores MIS planning frameworks and tools, and the linkages between information systems, organizational structure and organizational strategy. Prerequisites: at least two of the following: ACC 3530 (or 009.353) (D), MIS 3500 (or 009.350) (D), MIS 3510 (or 009.351) (D), MIS 3520 (or 009.352) (D), MIS 4250 (or 009.425) (D).

Section 5.11 Warren Centre for Actuarial Studies Course Descriptions 2000 Level (ACT)

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
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 010.212 or 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). Prerequisite or Concurrent Requirements: [MATH 2750 (or 136.275 (D) or MATH 2720 (or 136.272 or 136.270) (D) or MATH 2730 (or 136.273 or 136.271) (D)] and STAT 2400 (D).

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 or Concurrent Requirement: [MATH 2750 (or 136.275) (D) or MATH 2730 (or 136.273 or 136.271) (D)] and STAT 2400 (D) or consent of instructor.

SECTION 5.12 Warren Centre for Acturial Studies Course Descriptions 3000 Level (ACT)

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 or Concurrent Requirements: ACT 2120 (or 010.212) (C+); and STAT 3400 (or the former STAT 3500 or 005.350) (D).

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+).

ACT 3340 Financial Derivatives for Actuarial Practice Cr.Hrs. 3
Introduction of interest rate models and rational valuation of derivative securities. Prerequisite: ACT 2020 (C+) or consent of instructor.

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+). Prerequisite or Concurrent Requirement: ACT 3230 (or 10.323) (D).

SECTION 5.13 Warren Centre for Acturial Studies Course Descriptions 4000 Level (ACT)

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) (D).

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 Corporate Finance (or 009.220) (C+)

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 or Concurrent Requirement: STAT 3800 (or the former STAT 3600 or 005.360) (D).

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). May not be offered every year. Prerequisite: ACT 3230 (010.323) (D).

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) (D).

ACT 4250 Managing Insurance Operations in the International Business Environment Cr.Hrs. 3
Introduction of the risks inherent in insurance products and assets, as well as the relationships between assets and liabilities across the entire operations of the global insurance enterprise. Prerequisites: FIN 2200 (C+) or consent of instructor.

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 4140 (010.424) (C+).

SECTION 5.14 Business Administration-Entrepreneurship/Small Business Course Descriptions 2000 Level (ENTR).

ENTR 2010 Managing the Smaller Business Cr.Hrs. 3
Small firms dominated the Canadian economic scene and contribute to the nations' economic welfare in a major way but pose different managerial issues and problems for their owner/managers than larger organizations. This course will focus specifically on how to effectively manage and grow the smaller firm. Students may not hold credit for both ENTR 2010 and ENTR 3100. This course is not open to students in the Asper School of Business. This course is not for students who will pursue a major in Entrepreneurship/Small Business. U1 students may take this course.

ENTR 2020 Starting a New Business Cr.Hrs. 3
This is a course for students in all Faculties who may wish to start a business of ther own at some time or assess their potential for such an option. It will cover a broad range of topics to increase your understanding of what it takes to succeed in an entrepreneurial career. Students may not hold credit for both ENTR 2020 and ENTR 4100. This course is not open to students in the Asper School of Business. This course is not for students who will pursue a major in Entrepreneurship/Small Business. U1 students may take this course.

SECTION 5.15 Business Administration-Entrepreneurship/Small Business Course Descriptions 3000 Level (ENTR)

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. Students may not hold credit for both ENTR 3100 and ENTR 2010. Prerequisites: ACC 1100 (or 009.110) (D), and MKT 2210 (or 118.221) (D), and GMGT 2060 (formerly GMGT 2080 or 027.208) (D)].

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 (or 118.221) (D).

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, social entrepreneurship, international entrepreneurship and entrepreneurial histories (e.g. IDEA recipients). Prerequisites: none.

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 reliquishment, the need for succession planning and firm regeneration, the core actors and their issues, ownership structure and estate planning. Prerequisite: GMGT 2060 (D) or GMGT 2080 (027.208) (D).

SECTION 5.16 Business Administration-Entrepreneurship/Small Business Course Descriptions 4000 Level (ENTR)

ENTR 4100 New Venture Analysis Cr.Hrs. 3
A project oriented course focusing on the identification and evaluation of viable new venture concepts and their associated risks, problems, and opportunities. Students may not hold credit for both ENTR 4100 and ENTR 2020. Students are strongly encouraged to take FIN 3240 prior to ENTR 4100. Prerequisites: MKT 2210 (or 118.221) (D) and ACC 1110 (or 009.111) (D) and [GMGT 2060 (D) (or GMGT 2080 (or 027.208) (D)] and FIN 2200 (or 009.220) (D).

SECTION 5.17 Business Administration-General Management Course Descriptions 1000 Level (GMGT)

GMGT 1010 Business and Society Cr.Hrs. 3
The course will provide over arching frameworks to examine the nature, role, and importance of business in society. Key internal operations of business organizations will be discussed (e.g. finance, marketing, operations), but the majority of the course examines the relationships that business firms must balance among key stakeholders in their external environment (i.e. government, owners, customers, communities, suppliers, future generations, etc.). Students will examine various institutional contexts (e.g. economic, political-legal, and socio-cultural) and critically think about relationships between business and society, mindfully considering alternative approaches to management. Special emphasis will be placed on contemporary social issues in business (e.g. sustainable development, corporate social responsibility).

SECTION 5.18 Business Administration-General Management Course Descriptions 2000 Level (GMGT)

GMGT 2010 Business Communications Cr.Hrs. 3
The course provides an introduction to theoretical, cultural, and ethical bases of effective communication. Another goal is to develop students' interpersonal, oral, and written communication skills at individual, group, and organizational levels. The students will also develop analytical, problem-solving, rhetorical, and critical thinking abilities required in organizational and business settings. Students are strongly recommended to take GMGT 2010 in their first 45 credit hours. Not to be held for credit with the former GMGT 2000.

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. This course is not open to students registered in the Asper School of Business. Students may not hold credit for both GMGT 2030 (or 027.203) and GMGT 2060 (formerly GMGT 2080 or 027.208) or GMGT 2070 (or 027.207).

GMGT 2060 Management and Organizational Theory Cr.Hrs. 3
Examination of the underlying principles concerning the formation of organizations and their internal management. Emphasis on the study and analysis of vairous theoretical approaches to organization theory and management. Prerequisite: GMGT 1010 (D). Students may not hold for credit with either GMGT 2080 (027.208) or GMGT 2030 (027.203).

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 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 1010 (D) and ECON 1020 (D)] or ECON 1200 (or 018.120) (D).

SECTION 5.19 Business Administration-General Management Course Descriptions 3000 Level (GMGT)

GMGT 3010 Management Decision-Making Cr.Hrs. 3
(Formerly 027.301) Introduces students to the decision-making process and factors that enter into making decisions, including the objectives and approaches to decision-making, the basic type of managerial decisions, and exemplifications of decision in operations. Decision making will be viewed as a multi-dimensional process involving values, psychology, sociology, social psychology, and politics. The course presents a variety of perspectives useful for making and evaluating decisions in all kinds of organizations. Prerequisites: GMGT 2070 (or 027.207)(D).

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 2060 (or GMGT 2080 (027.203) (D) or GMGT 2080 (or 027.208) (D)] and GMGT 2070 (or 027.207) (D), or consent of instructor.

GMGT 3030 Contemporary Social Issues in Business Cr.Hrs. 3
Study of key issues in the relationship of business organizations and society with emphasis on the impact of management. Prerequisites: [GMGT 2060 or former GMGT 2080 (or 027.208) (D)] and GMGT 2070 (or 027.207) (D).

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 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 1010 and ECON 1020] or ECON 1200 (or 018.120) (D) 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 2060 (or GMGT 2080 or 027.208) (D).

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 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.

SECTION 5.20 Business Administration- General Management Course Descriptions 4000 Level (GMGT)

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, students must be in Year 4, in the final term prior to graduation in the Asper School and have successfully completed (with a minimum grade of (D) in each course) all 30 credit hours of courses specified in Year 2 of the 4-Year Program. Prerequisite or Concurrent Requirement: all remaining core courses specified in Year 3 and 4 of the 4-Year Program (with a minimum grade of (D) in each course).

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 2060 (D) or GMGT 2080 (or 027.208) (D)] and GMGT 2070 (or 027.207) (D).

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) (D).

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) (D).

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 2060 (D) or GMGT 2080 (or 027.208) (D)] and GMGT 2070 (or 027.207) (D).

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 1010 (D) or GMGT 2120 (or 027.212) (D).

GMGT 4210 Seminar in Management and Capitalism Cr.Hrs. 3
This course provides students with an understanding of the institutions, developments, and debates associated with modern capitalism and their implications for management. Students will explore alternative management perspectives and bi-directional interactions within the context of larger issues. It is designed to ensure that students are introduced to a variety of different perspectives, and that no single perspective is unduly privileged over others. Prerequisite: GMGT 1010 (D) or GMGT 2120 (D).

SECTION 5.21 Business Administration-Human Resources/Industrial Relations Course Descriptions 2000 Level (HRIR)

HRIR 2440 Human Resource Management Cr.Hrs. 3
(Formerly 027.244) Introduction to principles and procedures in the management of human resources. Topics include diversity management, conflict resolution, employment, law, planning, job analysis, performance appraisal, staffing, compensation, union-management relations, and current issues.

SECTION 5.22 Business Administration-Human Resource/Industrial Relations Course Descriptions 3000 Level (HRIR)

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 2440 (or 027.244) (D)] and [HRIR 3450 (or 027.345 or 027.341) (D)]. 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.

SECTION 5.23 Business Administration-Human Resources/Industrial Relations Course Descriptions 4000 Level (HRIR)

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) (D).

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) (D).

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) (D).

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) (D) prior to taking this course.

SECTION 5.24 Business Administration-International Business Course Descriptions 2000 Level (INTB)

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.

SECTION 5.27 Business Administration-Leadership Course Descriptions (LEAD)

LEAD 2010 Learning to Lead Cr.Hrs. 3
This seminar provides students with an introduction to and understanding of effective leadership and its application to a variety of group and organizational contexts. The classes encourage interdisciplinary discussions of theoretical, philosophical, historical, and technical elements of effective leadership. The course allows students to reflect on and develop their own leadership style through interactive lectures, experiential activities, and action learning in groups and organizations in which students want to lead and be led. This seminar is intended for all students that have an interest in leadership theory and effective leadership practices. Students may not hold credit for both LEAD 2010 and ARTS 1160. Prerequisite: Students must have completed 15 credit hours of passed courses to register in LEAD 2010.

LEAD 3010 Negotiation and Conflict Management Cr.Hrs. 3

Leaders are regularly called upon to manage conflict, promote cooperation, and resolve competing interests. With a focus on negotiation as a means of conflict resolution, this course blends contemporary research and theory with practical, first-hand experience. Students' effectiveness as negotiators will be developed with readings and class discussions focused on the social and psychological underpinnings of negotiation, and applied with weekly hands-on experiences, ranging from bilateral bargaining games to complex, multi-issue, multilateral negotiation scenarios. Prerequisites: Year three standing (or by permission of instructor).

LEAD 3020 Team Building and Diversity Cr.Hrs. 3
The ability to work effectively with team members is crucial to individual functioning and promotion within organizations. This course examines the structure and dynamics of teams with an aim to understanding team-building, team dynamics, diversity, and managing team conflict. Part of working effectively in teams is understanding diversity and how to encourage collaboration in diverse teams. This course will therefore cover topics related to diversity and cross-cultural awareness. Equivalent to but students may not hold credit for LEAD 3020 and GMGT 3020 with topics Diversity Management and Team Building or Diversity Management or Team Building. Prerequisites: GMGT 2060 (D) [or GMGT 2080 (or 027.208) (D)] and GMGT 2070 (D) (027.207) (D).

LEAD 3030 Corporate, Social, and Environmental Responsibility Cr.Hrs. 3
This course examines the responsibilites of business that accompany maximizing shareholder wealth. This includes balancing the needs of a variety of stakeholders (including owners, employees,customers, suppliers, competitors, neighbours, future generations) among a variety of forms of well-being (e.g. financial, ecological, environmental, social, spiritual, physical). Students will learn theory and best practices. Students are encouraged to take this course in the final two years of their program of studies at the I.H. Asper School of Business. Prerequisites: GMGT 1010 (D) and GMGT 2060 (D) [or GMGT 2080 (or 027.208] (D).

LEAD 3040 Special Topics in Leadership and Organization Cr.Hrs. 3
The content of this course will change from year to year based on: cutting edge topics, research innovations, and trends in leadership. Example topics might include: Organizational Health and Safety; Organizational Justice; Women and Leadership; Advanced Organizational Behaviour; Advanced Organizational Theory. Prerequisites: GMGT 2060 (D) [or GMGT 2080 (027.208) (D)] and GMGT 2070 (or 027.207) (D), or by permission of instructor.

LEAD 4010 Leading Change Cr.Hrs. 3
Organizations regularly face change due to market demands, competition, and economic pressures. The ability to lead change effectively is crucial to organizational success. This course will focus on how to: understand resistance to change, manage change processes, and support employees in times of uncertainty. Prerequisites: GMGT 2060 (D) [or GMGT 2080 (or 027.2080] (D) and GMGT 2070 (or 027.207) (D).

SECTION 5.28 Interdepartmental Courses 2000 Level (IDM)

IDM 2980 Work Term 1 Cr.Hrs. 0
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 2982 Co-op Work Term 1 Cr.Hrs. 1
Work assignment in business, industry, or government for students registered in the Asper School of Business co-operative option. Prerequisite: Written permission from the Asper School of Business Co-operative Education Office. May not be held with IDM 2980.

SECTION 5.29 Interdepartmental Course Descriptions 3000 Level (IDM)

IDM 3980 Work Term 2 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).

IDM 3982 Co-op Work Term 2 Cr.Hrs. 1
Work assignment in business, industry, or government for students registered in the Asper School of Business co-operative option. Prerequisite: IDM 2980 with a grade of P or IDM 2982 with a grade of C and written permission from the Asper School of Business Cooperative Eduction Office. May not be held with IDM 3980.

SECTION 5.30 Interdepartmental Courses 4000 Level (IDM)

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 4980 Work Term 3 Cr.Hrs. 0
Work assignment in business, industry, or government for students registered in the Asper School of Business Co-operative option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail)

IDM 4982 Co-op Work Term 3 Cr.Hrs. 1
Work assignment in business, industry, or government for students registered in the Asper School of Business co-operative option. Prerequisite: IDM 3980 with a grade of P or IDM 3982 with a grade of C and written permission from the Asper School of Business Co-operative Education Office. Not to be held with IDM 4980.

SECTION 5.31 Marketing Course Descriptions 2000 Level(MKT)

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.

SECTION 5.32 Marketing Course Descriptions 3000 Level (MKT)

MKT 3220 Marketing Research Cr.Hrs. 3
Study of the planning and implementation of research required to make informed marketing decisions. Prerequisites: MKT 2210 (or 118.221) (D) and STAT 2000 (or 005.200) (D) or consent of instructor.

MKT 3230 Consumer Behaviour Cr.Hrs. 3
(Formerly 118.323) Study of buying behaviour of individuals and organizations as affected by psychological and sociological forces within society. Prerequisite: MKT 2210 (or 118.221) (D).

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) (D).

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) (D).

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) (D).

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. (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. May not be held with the former 118.321. Prerequisite: MKT 2210 (or 118.221) (D).

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) (D).

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. May not hold with the former 118.329. Prerequisite: MKT 2210 (or 118.221) (D).

SECTION 5.33 Marketing Course Descriptions 4000 Level (MKT)

MKT 4210 Marketing Management Cr.Hrs. 3
An examination of strategies and tactics marketing managers use for products and services at various stages in the product life cycle. Uses qualitative and quantitative analyses to develop critical thinking essential for making marketing decisions. Can only be taken in final year of program. Prerequisites: [MKT 3220 (118.322) (D) or MKT 3230 (118.323) (D)], and [one other 3000 or 4000 level Marketing course (D)], and [ACC 1110 (009.111) (D)]. Pre- or co-requisite: either MKT 3220 (118.322) (D) or MKT 3230 (118.323) (D), but not both.

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) (D).

SECTION 5.34 Supply Chain Management-Management Science Course Descriptions 2000 Level (MSCI)

MSCI 2150 Introduction to Management Sciences Cr.Hrs. 3
An introduction to management science techniques and models. Topics include linear programming, distribution problems, deicison theory and queuing models. May not hold with the former 164. 215 or 027.215 or ABIZ 2520. Prerequisites: [MATH 1520 (or 136.152) (C) or MATH 1500 (or 136.150) (C) or equivalent] and [STAT 1000 (005.100) (C) or equivalent]

SECTION 5.35 Supply Chain Management-Management Science Course Descriptions 3000 Level (MSCI)

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. May not hold with the former 027.340. Prerequisite: MSCI 2150 (or 164.215) (D) or consent of instructor.

SECTION 5.36 Supply Chain Management -Management Science Course Descriptions 4000 Level (MSCI)

MSCI 4200 Topics in Managment Science Cr.Hrs. 3
(Formerly 164.420) Topics of current interest in management science. May not hold with former 027.420. Prerequisite: MSCI 2150 (or 164.215) (D). 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. May not hold with former 027.422. Prerequisite or Concurrent Requirement: one of MSCI 3400 (or 164.340 or 027.340) (D) or MSCI 4200 (or 164.420 or 027.420) (D) or MSCI 4230 (or 164.423 or 027.423) (D).

SECTION 5.38 Supply Chain Management-Operations Course Descriptions 3000 Level (OPM)

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. May not hold with former 027.365. Prerequisite: SCM 2160 [or the former OPM 2600 (or 164.260) (D)] and STAT 1000 (C).

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 opon 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. Prerequisite: SCM 2160 [or former OPM 2600 (or 164.260)] (D) and STAT 1000 (C).

OPM 3670 POM Project in Industry Cr.Hrs. 3
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. May not hold with former 027.367. Prerequisites: [SCM 2160 or former OPM 2600 (or 164.260 or 027.260) (D)] and STAT 1000 (C) or consent of instructor.

SECTION 5.39 Supply Chain Management-Operations Course Descriptions 4000 Level (OPM)

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. May not hold with former 027.462. Prerequisite: MSCI 2150 (or 164.215) (D) and SCM 2160 or OPM 2600 (or 164.260) (D). May not hold with former 027.462.

SECTION 5.40 Supply Chain Management-Supply Chain Management Course Descriptions 2000 Level (SCM)

SCM 2160 Supply Chain and Operations Management Cr.Hrs. 3
Study of supply chain management (SCM) and operations management. Positions operations management as a critical area of study within SCM. Focuses on process approach and system design. May not hold credit for both SCM 2160 and the former OPM 2600. Prerequisites: None.

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 1010 and ECON 1020 (C)] or former ECON 1200 (or 018.120) (D).

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 deleivery of the finished product to the end user.

SCM 2240 Purchasing and Supply Management Cr.Hrs. 3
Purchasing and supply management is an increasingly important element of corporate strategy as global supply chains become longer and more complex. In this course, students will learn about a major paradigm shift in purchasing, from a clerical activity to a strategic corporate function. The course covers strategic supply management, inter-organizational relationships, product and service specifications, price and cost analysis, negotiation, quality management, supply chain information technology, and other important purchasing topics, from a supply chain management perspective. Students may not hold credit for both SCM 2240 and SCM 2220 Topic: Purchasing Management.

SECTION 5.41 Supply Chain Management-Supply Chain Management Course Descriptions 3000 Level (SCM)

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) (D) or SCM 3360 (or 164.336 or 118.336) (D); 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. May not be held with the former 118.336 or 118.326.Prerequisite: MKT 2210 (or 118.221) (D).

SECTION 5.42 Supply Chain Management-Supply Chain Management Course Descriptions 4000 Level (SCM)

SCM 4250 Beyond Business: Advanced Issues in Supply Chain Management Cr.Hrs. 3
The material covered in this course moves beyond a business perspective and analysizes the relationship between supply chain management (SCM) and other parts of society as a whole. It examines the issues that arise as supply chain management interests with government and society. May not be held with the former SCM 4240 (or 164.424). Prerequisite: SCM 2230 (D); or the former 164.230 (D); or consent of instructor.

SCHOOL OF MEDICAL REHABILITATION

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Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

1.1 Programs,

Program/Degree	Years to Complete	Total Credit Hours
Master of Occupational Therapy (M.O.T.) *	**Regular Program:** 2 years**	107
	Accelerated Program: 1 year***	12
Master of Physical Therapy (M.P.T.) ****	2 years**	102
Bachelor of Medical Rehabilitation (Respiratory Therapy) (B.M.R.(R.T.)	**Regular Program:** 4 years (U1+3 years)	143
	Degree Completion Program: 5 years	30

* For further information about the Master of Occupational Therapy program, refer to the School of Medical Rehabilitation website: http://umanitoba.ca/medrehab/ot

** Requires prior completion of a 3 or 4-year undergraduate degree.

*** Requires prior completion of a Bachelor of Medical Rehabilitation (Occupational Therapy) degree or equivalent.

**** For further information about the Master of Physical Therapy program, refer to the School of Medical Rehabilitation website: http://umanitoba.ca/medrehab/pt

1.2 Professional Designations

Master of Occupational Therapy (M.O.T.)

For information about the Master of Occupational Therapy program, refer to the School of Medical Rehabilitation website: http://umanitoba.ca/medrehab/ot

Master of Physical Therapy (M.P.T.)

For information about the Master of Physical Therapy program, refer to the School of Medical Rehabilitation website: http://umanitoba.ca/medrehab/pt

Bachelor of Medical Rehabilitation (Respiratory Therapy) (B.M.R.(R.T.)

Respiratory Therapists are able to work throughout Canada after graduation from a Council on Accreditation in Respiratory Therapy accredited (CoARTE) educational program and successful completion of the credentialing examination produced by the Canadian Board for Respiratory Care (CBRC). Only the Canadian Society of Respiratory Therapists (CSRT) has the right to confer the title of Registered Respiratory Therapist (RRT) by virtue of a candidate's successful completion of the national certification examinations. The examination produced by the CBRC is recognized both nationally and internationally. In order to write the CBRC examination, applicants must have graduated from a respiratory therapy educational program in Canada, which has been accredited by CoARTE. Writing of the national exam is scheduled twice a year. The University respiratory therapy department provides a list of potential program graduates to the CBRC in order to verify eligibility to write the national certification exam. Further information regarding the national certification exam can be found at http://www.csrt.com/en/education/index.asp.

Students admitted into the program of studies in respiratory therapy should note carefully that while the University of Manitoba, School of Medical Rehabilitation may admit students to its course of studies, the right to practice as a respiratory therapist is granted only through the appropriate authority of the province concerned, through a process of licensure. To be eligible for employment in Manitoba, graduates must register with the Manitoba Association

of Registered Respiratory Therapists (MARRT). Regulations are similar in most other provinces in that the students must pass the CBRC examination and be registered with the regulatory body in that jurisdiction. Further information regarding registration in Manitoba can be found at http://www.marrt.org/index.jsp?p=membership. Students are highly encouraged to become student members of both provincial and national professional associations.

The Respiratory Therapy program maintains accreditation through the Council on Accreditation of Respiratory Therapy Education (CoARTE). Accreditation was most recently awarded in 2007 for a 6-year term.

SECTION 2: ADMISSION REQUIREMENTS

Intro Medical Rehab

The following is a summary of the admission requirements. Equivalent academic courses completed at the University of Manitoba or recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in applicant information packages that are available from the School of Medical Rehabilitation website (http://umanitoba.ca/medrehab). 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.

2.1 Course Requirements: Occupational Therapy

For information about the Master of Occupational Therapy program, refer to the School of Medical Rehabilitation website: http://umanitoba.ca/medrehab/ot

2.2 Course Requirements: Physical Therapy

For informatiion about the Master of Physical Therapy program, refer to the School of Medical Rehabilitation website: http://umanitoba.ca/medrehab/pt

Admission criteria for the M.P.T. program can be found at: http://www.umanitoba.ca/faculties/medicine/units/medrehab/pt/pt_mpt_eligibility.html

2.3 Course Requirements: Respiratory Therapy

Regular Program

BIOL 1020 and BIOL 1030 Biology 1 & 2, or both BIOL 1000 and BIOL 1010 Biology

SOC 1200 Introduction to Sociology, or PSYC 1200 Introduction to Psychology

STAT 1000 Introductory Statistics

3 credit hour course to satisfy the written English requirement

6 credit hours of electives to total 24 credit hours in University 1

Other requirements: Respiratory Therapy

Minimum GPA required for consideration: 3.0. Minimum GPA required in core courses: 3.0.

The written English and mathematics requirement must be satisfied in University 1. For students admitted prior to 2011, the mathematics requirement was satisfied after admission to Respiratory Therapy by required course REHB 2460.

While Respiratory Therapy does not require specific high school courses, Biology 40S and either Physics 40S or Chemistry 40S are required in order to take Biology 1: Principles and Themes (BIOL 1020), which is a required course option for admission. English 40S and Math 40S are highly recommended.

Selection Criteria: 67% Grades and 33% Interview.

Degree Completion Program

In addition to the regular degree program in Respiratory Therapy, the School offers a degree completion program. Generally, individuals who have attained a diploma in respiratory therapy from an accredited program of studies in Canada, who are actively involved in the practice of the profession, and who demonstrate an interest in continuing their studies in this field, will be accepted. The degree completion program requires a minimum of 30 credit hours of study to be determined by the student in consultation with the department head and/or faculty advisor.

SECTION 3: FACULTY ACADEMIC REGULATIONS

3.1 General

Respiratory Therapy

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.

3.2 Health Requirements

Students 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, CPR and mask fit requirements are current.

Immunizations

Standard Health Record Form Packages are sent to new students in Respiratory Therapy upon acceptance into the program. New students in Respiratory Therapy are required to return forms to their department by the dates published yearly in the Health Record Form Packages. Returning students are required annually to review and update immunizations as necessary.

Cardiopulmonary Resuscitation Certification

All students (both new and returning) in the Department of Respiratory Therapy are required to obtain Heart and Stroke Foundation of Canada certification in cardiopulmonary resuscitation annually. Certification must be at the Basic Life Support (BLS) for Healthcare Providers. Students in year 1 and 2 of the program will be required to provide proof of certification by September 3rd. Students in year 3 of the program will be required to provide proof of certification before the first day of their fieldwork placement. For students in all years of the program, proof of certification must not have an issue date prior to the last week in June of the current year. This will ensure that the certification remains current until the end of the clinical education period for each year in the program.

Mask Fit Certification

Clinical/fieldwork education sites require students to maintain mask fit certification. Information on acquiring this certification is provided to new students with the Health Record Form Packages. All students are required to maintain mask fit certification throughout the program.

3.3 Dean's Honour List

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.

3.4 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.

3.5 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 a Child Abuse Registry Check.

All respiratory therapy students are required to obtain a formal Criminal Record Check and a formal Child Abuse Registry Check by the first day of classes of each year of the program. These records must have been issued within the ninety (90) days previous to that date to ensure that they remain current until the end of the clinical education period for each year of the program.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 Academic Education

Respiratory Therapy

Course No.	Course Name	Credit Hours
First Year		
ANAT 1030	Human Anatomy	3
PHGY 1030	Fundamentals of Medical Physiology	6
RESP 127 0	Respiratory Anatomy and Physiology	3
RESP 1280	Medical Microbiology and Disease Transmission	2
RESP 1290	Cardiopulmonary Pharmacology	2
RESP 1320	Applied Sciences for Respiratory Therapy	3
RESP 1330	Technical Aspects of Respiratory Therapy	3
RESP 1360	Treatment Administration in Respiratory Care	3
RESP 1370	Ventilatory Support Principles	6
RESP 1380	Basic Fieldwork 1	4
Total credit hours		**35**
Second Year		
REHB 2450	Research Methodology for Medical Rehabilitation	3
RESP 2300	Respiratory Clinical Assessment	6
RESP 2310	Clinical Aspects of Ventilatory Management	3
RESP 2320	Ventilatory Support Instrumentation	6
RESP 2330	Pulmonary Investigations	3
RESP 2340	Physiologic Measurements and Instrumentation	3
RESP 2350	Cardiology	3
RESP 2360	Pediatrics	3
RESP 2370	Anesthesiology	3
RESP 2380	Basic Fieldwork 2	4
RESP 2390	Clinical Integration and Simulation	6
Total credit hours		**43**
Third Year		
REHB 3460	Introduction to Health Care Administration and Management	3
RESP 3320	Clinical Education in Pediatric Respiratory Care	3
RESP 3350	Clinical Education in Pulmonary Diagnostics	3
RESP 3360	Clinical Education in Anesthesia	3
RESP 3370	Clinical Education in Community Care	4
RESP 3410	Clinical Education in Critical Care	8
RESP 3420	Clinical Education in Neonatal Care	5
RESP 3430	Clinical Education in General Therapeutics	6
RESP 3440	Current Topics in Respiratory Therapy	6
Total credit hours		**41**

Students may not obtain any grade lower than "C" in all required courses.

4.2 Clinical/Fieldwork Education

1,520 full-time hours of clinical/fieldwork experience are required. 240 hours of clinical education time is organized into blocks that occur at four intervals throughout years one and two of the B.M.R.(R.T.) program. The remaining 1,280 hours of clinical education is conducted throughout year three. All placements occur in Manitoba, with the majority of these occurring within greater Winnipeg.

SECTION 5: COURSE DESCRIPTIONS

Course Descriptions- Occupational Therapy

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.

Course Descriptions- Physical 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 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. 112 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. 150 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.

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.

Course Descriptions-Medical Rehabilitation

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 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). 37 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.

Course Descriptions-Respiratory Therapy

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). 53 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 spirometries and bedside spirometry. 50 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
A seminar based preparatory period, followed by 80 hours of clinical fieldwork experiences in respiratory therapy, delivered with concurrent tutorial and laboratory based learning opportunities. The field work portion will be provided under the supervision of registered respiratory therapists at one or more approved clinical sites. Course is evaluated on a pass/fail basis.

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. 90 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 2380 Basic Fieldwork 2 Cr.Hrs. 4
Building on RESP 1380 (Basic Fieldwork1) and RESP 2390 (Clinical Integration and Simulation), this course is comprised of fieldwork experiences which provide the student the opportunity to apply the integrated concepts learned in the first two years of the Respiratory Therapy program in a clinical setting. This course will prepare students for advanced clinical education coursework. Prerequisites: RESP 1380, RESP 2390.

RESP 2390 Clinical Integration and Simulation Cr.Hrs. 6
This course provides the student an opportunity to integrate concepts learned in the first two years of the Respiratory Therapy program, and to learn life support protocols prior to participation in advanced clinical education coursework. The course will be delivered through a variety of formats including classroom, seminar, and clinical simulation. Prerequisite: This course is restricted to students registered in year two of the Bachelor of Medical Rehabilitation in Respiratory Therapy program who have completed all required courses for year one of the program.

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. Course evaluated on a pass/fail basis. 432 hours.

RESP 3320 Clinical Education in Pediatric Respiratory Care Cr.Hrs. 3
(Formerly 169.332) Three weeks of clinical experience in the Pediatric Intensive Care Unit at Children's Hospital. Shiftwork and extended shifts may be required. Course evaluated on a pass/fail basis. 144 hours.

RESP 3330 Clinical Education in Neonatal Respiratory Care Cr.Hrs. 4
(Formerly 169.333) Four weeks of clinical experience in the Neonatal Intensive Care Unit at Children's Hospital and/or St. Boniface General Hospital. Shiftwork and extended shifts may be required. Course evaluated on a pass/fail basis. 180 hours.

RESP 3340 Clinical Education in Maternal/Fetal Health Cr.Hrs. 1
(Formerly 169.334) One week of clinical experience in maternal and fetal health at the Women's Centre, Health Sciences Centre. Course evaluated on a pass/fail basis. 36 hours.

RESP 3350 Clinical Education in Pulmonary Diagnostics Cr.Hrs. 3
(Formerly 169.335) Three weeks of clinical experience in the pulmonary diagnostic laboratory of an approved clinical site. Course evaluated on a pass/fail basis. 144 hours.

RESP 3360 Clinical Education in Anesthesia Cr.Hrs. 3
(Formerly 169.336) Three weeks of clinical experience designed to acquaint the student with actual clinical techniques and procedures used in the operating and recovery room. Course evaluated on a pass/fail basis. 144 hours.

RESP 3370 Clinical Education in Community Care Cr.Hrs. 4
(Formerly 169.337) Four weeks of clinical experience in community care settings including: pre-hospital care, health and wellness promotion, interfacility transport, chronic care, home care and community outreach. Course evaluated on a pass/fail basis. 180 hours.

RESP 3380 Clinical Education in Respiratory Care Cr.Hrs. 4
(Formerly 169.338) Four weeks of clinical experience spent in the non-intensive care setting working with a variety of medical and surgical patients. Course evaluated on a pass/fail basis. 180 hours.

RESP 3410 Clinical Education in Critical Care Cr.Hrs. 8
This course enables students to critically apply skills and concepts in the care of adult patients requiring critical respiratory care. The focus is on attainment of essential Respiratory Therapy competencies for practice. This course is evaluated on a pass/fail basis. This course is restricted to students registered in year three of the Bachelor of Medical Rehabilitation in Respiratory Therapy program who have completed all the required courses for year two of the program. May not be held with the former RESP 3310 (169.331).

RESP 3420 Clinical Education in Neonatal Care Cr.Hrs. 5
This course enables students to critically apply skills and concepts in the care of infants requiring critical respiratory care in the Labor & Delivery, and Neonatal units of the hospitals. The focus is on attainment of essential Respiratory Therapy competencies for practice. This course is evaluated on a pass/fail basis. This course is restricted to students registered in year three of the Bachelor of Medical Rehabilitation in Respiratory Therapy program who have completed all the required courses for year two of the program. May not hold with the former RESP 3330 (169.333).

RESP 3430 Clinical Education in General Therapeutics Cr.Hrs. 6
This course enables students to critically apply skills and concepts in the care of adult patients requiring general respiratory care (non-critical care) in the hospital setting. The focus is on attainment of essential Respiratory Therapy competencies for practice. This course is evaluated on a pass/fail basis. This course is restricted to students registered in year three of the Bachelor of Medical Rehabilitation in Respiratory Therapy program who have completed all the required courses for year two of the program. May not hold with the former RESP 3380 (169.338).

RESP 3440 Current Topics in Respiratory Therapy Cr.Hrs. 6
Focuses on current issues in health and healthcare, in particular as they relate to respiratory therapy. Students complete a thorough review of the current evidence for practice and ongoing research relating to a topic of interest, and present their findings in a professional forum.This course is restricted to students registered in year three of the Bachelor of Medical Rehabilition in Respiratory Therapy program who have completed all the required courses for year two of the program. Not to be held with the former RESP 3300 (169.330).

FACULTY OF MEDICINE

Dean: Brian Postl
Associate Dean(s): Associate Dean (Undergraduate): Ira Ripstein Associate Dean (Professionalism & Diversity): Samia Barakat Associate Dean (Students): Bruce Martin
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Website: umanitoba.ca/medicine

Chapter Contents

SECTION 1: MEDICAL EDUCATION

1.1 Mission Statement

The Mission of the Faculty of Medicine is to 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 inquiry 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.

The Mission of the Undergraduate Medical Education Program is to provide an environment which will assist students to become competent, caring, ethical physicians with the ability to think critically. This experience will prepare students to choose their area of training wisely, to successfully continue their education, and subsequently to meet responsibilities to their patients and society.

Medical education in Manitoba is designed to provide students with the knowledge and experience they need to practise medicine in a profession where new developments in science and 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, 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.

1.2 History of the Faculty

Medical education in Manitoba 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 440. 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 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, and medical microbiology. 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 practised in Winnipeg and in rural and northern Manitoba also provide students with the opportunity to study community medicine outside the major teaching institutions.

1.3 Neil John Maclean Health Sciences Library

The Neil John Maclean Health Sciences Library provides access to a wide range of evidence-based medicine resources in print and electronic format. Online resources include core medical textbooks such as Harrison's Priniciples of Internal Medicine, drug reference resources such as Lexi-Comp, and clinical point of care tools such as UptoDate, First Consult, MD-Consult, and Access Medicine. The Library subscribes to over 4,500 online journals and the articles in this collection are dynamically linked from important medical databases such as PubMed, EMBASE, and Scopus. Students can access all of the online resources on-campus using the Bannatyne campus wireless network and from home with a student ID number and password. The Library's facilities include 12 seminar rooms, which can be booked by students for group study, 92 study carrels, and 32 computers for walk-in use. Librarians offer training on the use of key medical resources and information management both as part of the curriculum and in regularly scheduled sessions throughout the year.

1.4 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 OW3.

More than 300 graduate students are doing research and pursuing Masters and Doctoral degree programs in the Faculty of Medicine. Their research training programs offer opportunities to conduct research at a number of sites including Bannatyne Campus, the National Virology Lab, St. Boniface Research Centre, and the Institute for Bio-Diagnostics. Graduate programs are available in the Departments of Anatomy, Biochemistry and Medical Genetics, Community Health Sciences, Immunology, Medical Microbiology, Pathology, Pharmacology, Physiology, and Surgery.

1.5 Master of Physician Assistant Studies

The Master of Physician Assistant Studies program is the first graduate level program for Physician Assistant Education in Canada. Upon completion of the comprehensive two year program, graduates receive a Master of Physician Assistant Studies degree. The program educates outstanding Physician Assistant clinicians who serve their communities and advance the profession in Manitoba and Canada. The program also nurtures the future leaders of the profession, and leads the field in academic preparation of Physician Assistants in Canada.

1.6 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 including: curriculum development, faculty development, design of evaluation tools and assessment strategies and the provision of standardized patients. The second purpose of the department of Medical Education is to engage in research and scholarly activity related to medical education and serve as an academic home for faculty with primary appointments within medical education.

1.7 Continuing Professional Development

This office is responsible for the Continuing Professional Development 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 Professional Development, Faculty of Medicine, University of Manitoba, S203-753 McDermot Avenue, Winnipeg, MB R3E 0W3.

SECTION 2: ADMISSION TO THE FACULTY OF MEDICINE

The Applicant Information Bulletin is the official policy document for Admission. The document can be found at: www.umanitoba.ca/student/admissions/media/medicine_bulletin.pdf

2.1 Degree Offered

Doctor of Medicine (M.D.)

Minimum time to graduation: Four years in the Faculty of Medicine following an undergraduate degree.

2.2 Eligibility Requirements for Admission

Refer to the Applicant Information Bulletin for the eligibility requirements:

http://umanitoba.ca/faculties/medicine/admissions/applying.html

All applicants must meet the following eligibility requirements:

- Canadian citizen or permanent resident of Canada;
- Bachelor's degree no later than June 30, 2013 from a university recognized by the University of Manitoba
- A minimum of 6 credit hours in Biochemistry at the university level with a minimum grade of C; applicants should refer to the Acceptable Biochemistry Course Combinations spreadsheet found on the Admissions website: http://umanitoba.ca/faculties/medicine/admissions/info.html#Eligibility_Requirements_To_Apply
- Credit hours in the humanities/social sciences;
- Medical College Admission Test (MCAT); the MCAT is administered by the AAMC and further information can be found at: www.aamc.org ;
- Adjusted Grade Point Average (AGPA) of 3.30 or higher;
- Technical Standards Requirement; the Faculty of Medicine has identified the requisite skills and abilities for admission, promotion and graduation in the MD program; these can be found at the following link: http://umanitoba.ca/faculties/medicine/media/Essential_Skills_and_Abilities_for_Admissions_Promotion_and_Graduation_Policy__June_2012.pdf
- Accommodation Policy; the Faculty of Medicine supports individuals with disabilities who may require accommodation to meet the requisite skills and abilities; the policy can be found at the following link:http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Accommodation_for_Undergraduate_Medical_Students_with_Disabilities.pdf
- Proficiency in English Language; all applicants whose primary language is other than English must demonstrate proficiency in the English language; please contact Enrolment Services at the University of Manitoba;
- Adult Criminal Record and Child Abuse Registry Checks; all applicants must complete a self-declaration regarding adult criminal records, pending criminal charges and registration on the child abuse registry as an offender; this self-declaration must be done at the time of application; an adult criminal record check, declaration of pending criminal charges and child abuse registry self-check are required at the time of registration and annually thereafter;
- Professional Registration; all medical students must be eligible for, and become registered with the College of Physicians and Surgeons of Manitoba (CPSM) by the time of registration; eligibility requirements can be viewed on the CPSM website at: www.cpsm.mb.ca;
- All applicants must have participated and been successful in the Multiple Mini Interview (MMI).

2.3 Eligibility Requirements for Transfer

Applications for transfer are only accepted from students registered and in good standing at an LCME accredited medical school. Transfers can only be considered if there is a seat available through attrition. Details regarding the transfer policy can be found at the following link: http://umanitoba.ca/faculties/medicine/alumni/media/Transfer_Policy.pdf.

2.4 Immunization Requirements

Immunization requirements can be viewed at: http://umanitoba.ca/faculties/medicine/education/undergraduate/immunestatus.html.

2.5 Certification in Cardio-Pulmonary Resuscitation (CPR)

Students must have CPR designated as "Health Care Provider Level C" acceptable to the standards of the Heart and Stroke Foundation at the time of registration in Year I. Students must have annual renewal of their CPR registration acceptable to the standards of the Heart and Stroke Foundation throughout the Undergraduate Medical Education program. Evidence of current renewal must be provided on an annual basis prior to the beginning of the academic year. Failure to comply, may result in exclusion from all academic programs until renewal is obtained.

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 an undergraduate medical student may be obtained from the Undergraduate Medical Education Office. These regulations include the following:

- A student will not be permitted to register unless the student is in good academic and financial standing from the previous year.
- No year may be repeated more than once.
- A student who withdraws from the Faculty of Medicine without prior written notice will be considered to have terminated connection with the Faculty and will not be eligible for re-admission.
- A student who withdraws from the Faculty having given due notice intention to withdraw is eligible for re-admission. If re-admission is approved the student will be required to conform to the rules and regulations, fee schedules, sequence of courses, in effect at the time of such readmission.
- A student 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.
- A student who has been or expects to be prevented from attending any regular examination by reason of illness or other cause beyond the student's control should at once notify the Associate Dean, Students and must abide by the requirements of the Deferred Examination Policy and Procedures found at:http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Deferred_Examination.pdf
- The Faculty Executive Council reserves the right to require a 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.

- Each student is 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. The Faculty of Medicine Professionalism website provides additional information: http://umanitoba.ca/faculties/medicine/education/undergraduate/professionalism.html.
- Each student 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 or whose progress is delayed by medical illness. When a student fails to complete the program, Progress 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 the University of Manitoba, 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.

3.2.1 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 license 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.

3.2.2 Provincial Registration

The College of Physicians and Surgeons of Manitoba is the regulation body for the physicians in Manitoba. Each medical student must be registered with the College of Physicians and Surgeons of Manitoba in each year of the 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 or http://cpsm.mb.ca/.

SECTION 4: THE PROGRAM FOR THE M.D. DEGREE

4.1 Governance

The program and its curriculum are 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 Education Curriculum Executive Committee. The Curriculum Executive Committee is chaired by the Director, UGME Curriculum. The Terms of Reference for this committee and committee membership can be viewed at http://umanitoba.ca/faculties/medicine/education/undergraduate/curriculum/Links.html. The Curriculum Executive Committee is responsible for the curriculum, 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 objectives of the program can be found at: http://umanitoba.ca/faculties/medicine/education/undergraduate/ugme_mission_objectives.html. 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. 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. 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 Curriculum Executive Committee to improve the program.

4.3 The Plan of the Curriculum

The curriculum is in the process of renewal. The renewed curriculum will be person/patient centered and will be presented over the four academic years as a fully integrated spiral scaffold curriculum.

A revised curriculum for the Clerkship portion (Years Three and Four) of the program will be introduced in the Fall of 2013. A revised curriculum for the Pre-Clerkship phase (Years One and Two) of the program will be introduced in the Fall of 2014.

4.3.1 Professionalism

Professionalism, behaviour and attitudes befitting medical professionals, an important component of the Undergraduate Medical Education curriculum. The goal is to instill the attributes of professionaism and to emphasize to medical learners that professional charateristics and attributes are necessary for the practice of medicine and for their identity as physicians.

The Faculty of Medicine has developed a professionalism charter that serves as a framework for defining and demonstrating medical professionalism.

In cases where lapses in the level of professionalism necessary to underpin medical education are recognized, 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 unprofessional behaviour, regardless of performance in the curriculum.

4.3.2 Pre-Clerkship Program:

The goals and objectives of the UGME Pre-Clerkship curriculum are based on the mission and objectives of the undergraduate program as outlined: http://umanitoba.ca/faculties/medicine/education/undergraduate/ugme_mission_objectives.html. The evaluation of student academic progress is based on achievement of the learning objectives provided to students on-line via a curriculum management system known as the Online Portal for Advanced Learning (OPAL).

The curriculum is composed of six instructional blocks over two years that address the basic medical sciences, population health, human growth and development as well as systems-based learning (for example, cardiovascular, reproduction, etc.) The two-year Pre-Clerkship curriculum brings together teachers and facilitators from across all Faculty Departments, other healthcare related faculties and disciplines as well as members of the public. All basic medical sciences, including anatomy, molecular biology, 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 anaesthesia, clinical health psychology, family medicine, internal medicine, obstetrics, gynaecology, ophthalmology, otolaryngology, paediatrics, psychiatry, surgery are involved in all aspects of the curriculum. An overview of each Block within the Pre-Clerkship component of the Undergraduate Medical Education program can be viewed at: http://umanitoba.ca/faculties/medicine/education/undergraduate/program_overview.html.

Methods of Teaching

A variety of approaches are used to facilitate learning. These include self-directed learning, small group tutorials, lectures, lab practicals or demonstrations and simulation.

Methods of Assessment

Formative and summative assessments are provided throughout the Pre-Clerkship curriculum. These include self-reflection, learning portfolios, tutor feedback, instructional tests, multiple choice examinations, practical examinations, and short and long answer examinations.

Attendance

Certain learning sessions within the UGME program are designated as "mandatory attendance" sessions. These are generally sessions in which patients or their families are involved; clinical skills are being taught; or clinical care is being provided. Attendance at these sessions is recorded and reported to the UGME office, and contributes to the evaluation of the learner's professionalism, The Attendance Policy can be viewed at http://umanitoba.ca/faculties/medicine/media/Pre-Clerkship_Student_AttendanceREVISED_Mar_12_2012.pdf

The procedures outlined in this policy do not preclude course directors, session leaders and instructors from tracking student learner attendance in their sessions and discussing any concerns related to attendance with the learners.

4.3.3 Clerkship Program:

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 Curriculum Committee for which the terms of reference and membership can be viewed on the website: http://umanitoba.ca/faculties/medicine/education/undergraduate/ugme_governance.html.

The Clerkship Program consists of the Introduction to Clerkship, core clerkship rotations, a multiple specialty rotation, and electives. It lasts 20 months. Core clerkships last a minimum of six weeks, multiple specialty clerkships are comprised of shorter individual rotations and electives are offered in units of two weeks or longer.

Clerkship Phase I:

Introduction to Clerkship (ITC) (4.5 weeks): The Clerkship Program begins with the ITC that is a preparation for clerkship. Each department that provides instruction in ITC has the goal of presenting information and clinical experiences that are relevant to clerkship as a whole.

Core Clerkship Rotations (48 weeks): The primary responsibility of the clerks in the program is the care of patients under the supervision of postgraduate students and faculty. Rotation through all major clinical disciplines is provided and these are supplemented by "elective" periods. Six-week periods are spent in family/community medicine, internal medicine, selectives in medicine and surgery, obstetrics/ gynaecology, paediatrics, psychiatry, surgery, and a multiple specialty rotation consisting of anaesthesia, 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 rotations.

Clerkship Phase II:

Electives and CaRMS National Interview Period (24 weeks): There are three major elective periods during clerkship. The first period occurs from the end of the core clinical rotations to the December break; the second occurs in January prior to the CaRMS National Interview Period; and the third period follows the CaRMS National Interview Period. Throughout the elective periods, 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, but must be approved by the Director, Electives.

Students are responsible for all costs associated with electives and CaRMS interviews, e.g. transportation, accommodation etc.

MCCQE Part I Refresher Series (5.5 weeks): This is a short program of half day lectures and time for self study in preparation for the licensing examination of the Medical Council of Canada Qualifying Examination Part I (MCCQE Pt 1) and then the actual writing of the MCCQE Part 1 examination. The clerkship program ends with students participating in a mandatory Advanced Cardiac Life Support (ACLS) course.

4.3.4 Requests for Conscience-Based Objections

The Faculty of Medicine acknowledges that at times, learners may object to participating in educational activities. Learners who object to participation in educational activities may refer to the ***Conscience Based Exemptions Policy*** available online at: http://umanitoba.ca/faculties/medicine/media/Conscience-Based_Exemptions_Policy_-_June_24_2013_(mn).pdf in order to seek a Conscience-Based Objection.

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).

Progress Committee: The Progress Committee meets regularly to evaluate the performance and progress of students enrolled in the Undergraduate Medical Education program.

The responsibilities of the Progress Committee include:

- Recommending to FEC the academic standards by which the progress of students are judged and ensuring that examiners have followed the policies and procedures set by FEC.
- Determining which students may proceed to the next stage of the program or to graduation.
- Determining 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.
- Placing students on Monitored Academic Status or Probationary Academic Status.
- Ensuring 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, Pre-Clerkship Year 1, COE Pre-Clerkship Year 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 COEs 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.

5.2 Evaluation in the Pre-Clerkship Program

5.2.1 Summative Examinations

The COEs will inform the students of the pre-determined pass mark for each examination at the beginning of their block. The students, however, will be given the overall as well as the actual marks obtained in the different sections of the examination. Student 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 the students' active files. A student can view his or her active file in accordance with the Student Records Policy and procedures at: http://umanitoba.ca/faculties/medicine/education/ed_dev/media/Student_Records.pdf.

The Faculty of Medicine uses a Pass/Fail system where grades are not reported external to the Faculty of Medicine. Transcripts and Medical Student Performance Reports 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.

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. In addition, there is a mid-block examination in Block 1. Each examination may use various methods of evaluation: multiple choice questions, short answer questions, etc. There may also be take-home assignments in each course that contribute to the final mark.

The student's performance in the Clinical Skills course will be assessed by OSCE-type examination, typically conducted at the end of Year II. Expectations for student conduct and information related to pass marks for summative examinations can be found in the following UGME policies.

- Examination Conduct Policy : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Examination_Conduct.pdf
- Examination Results Policy : http://umanitoba.ca/faculties/medicine/media/Examination_-_Results__June_2012.pdf
- Deferred Examinations Policy : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Deferred_Examination.pdf
- Examination Accommodation Procedures : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Accommodation_for_Undergraduate_Medical_Students_with_Disabilities.pdf

5.2.2 Failures of the Evaluation in Pre-Clerkship Years 1 and 2

The UGME Promotion and Failure Policy governs decisions related to student promotion and failure at the Pre-Clerkship level http://umanitoba.ca/faculties/medicine/media/Promotion_and_Failure__June_2012.pdf

Students failing up to two examinations are permitted to supplementary examinations in accordance with the Supplemental Examination Policy that can be viewed at http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Supplemental_Examinations.pdf

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 Director, Remediation during the summer period. Following the remediation, they will sit a supplemental examination comparable but different from 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 Year 1 and Year 2 who are successful on the supplemental examination(s) will be promoted.

Year 1 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 Associate Dean, Students who will recommend to the Progress Committee whether the student should be re-admitted.

Students who fail Year 2 will automatically repeat it and are not subject to review by the Admissions Committee.

5.2.3. Formative Evaluation in Pre-Clerkship

A variety of formative evaluative exercises are conducted in Pre-Clerkship including instructional tests, practice questions, reflective writing, self-evaluation, and peer-evaluations.

5.2.4. Remediation in Pre-Clerkship

The student will be required to meet with the Director, Remediation to develop a remedial plan. 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. The student will also be required to meet with the Associate Dean, Students, who may also direct the student to other faculty members or services for students.

5.3 Evaluation of Students in the Clerkship Program

The Faculty of Medicine is currently going through a period of significant Curriculum Renewal. Changes will be phased in beginning with the Clerkship that will begin in August 2013.

5.3.1 For Students beginning Clerkship prior to August 2013:

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).

5.3.1.1 Methods of Summative Evaluation (General)

The policy and procedures applicable for evaluation are:

- Examination Conduct Policy : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Examination_Conduct.pdf
- Examination Results Policy : http://umanitoba.ca/faculties/medicine/media/Examination_-_Results__June_2012.pdf
- Deferred Examinations Policy : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Deferred_Examination.pdf
- Examination Accommodation Procedures: http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Accommodation_for_Undergraduate_Medical_Students_with_Disabilities.pdf

Various methods will be used to assess students, including the final evaluation reports (FITERs); written external NBME examinations and OSCE-type exams. Student performance for evaluation purposes during examinations may be recorded in writing, orally, by computer, by audio or by video taping. All material necessary to generate the mark such as papers, computer records and tapes will be destroyed once the student has passed that evaluation. Such material can be of help to a student needing remediation before the examination.

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. Furthermore, this material, 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.

5.3.1.2 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 the 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 will be reported to the Associate Dean UGME, who will inform the COE Clerkship. Each student will receive a warning from the Associate 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.

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.

5.3.1.3 ITC Remediation

Failure for inadequate attendance

The coordinator of the block of sessions missed may, with approval of the Director, Clerkship Curriculum, provide the student with a remedial course, of comparable educational experience in that subject; the student will have to attend and perform satisfactorily to pass the ITC.

5.3.1.4 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, and projects..

Clinical Performance

The objectives of the Clerkship Program are consistent with the Undergraduate Medical Education Objectives found at: http://umanitoba.ca/faculties/medicine/education/undergraduate/ugme_mission_objectives.html

The Midpoint In-Training Report (MITER) is a formative evaluative exercise in rotations of four weeks or longer. The student uses this report to complete a self-evaluation which is then discussed with the student's preceptor. If a student's early 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, the student must be given help to improve performance to the expected standard. The Clerkship Director, or designate, will collect preceptor assessments throughout the rotation. The Clerkship Director, or designate, 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 objectives will be completed for each rotation.

A failing student must be informed of the failure by the Clerkship Director, or designate, preferably before the end of the rotation but not later than seven working days after the rotation is complete. 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 following the completed rotation. In the case of a tie, the chair of COE Clerkship will have the deciding vote, otherwise he or she will not vote.

On occasions, Progress Committee may deem it necessary to forward feed student summative evaluation information to subsequent Clerkship Directors, or designates. In such instances, the student will be informed and the process will follow that outlined in the Forward Feeding Policy and Procedures found at: http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Forward_Feeding_Clerkship_Summative_Evaluation_Information.pdf

Clerkship Written Examinations

Students will take the National Board of Medical Examiners (NBME) subject examinations at the end of the following clerkship periods: obstetrics/ gynaecology, paediatrics, psychiatry, and surgery. For internal medicine, the NBME examination will take place after the internal medicine selective rotation. For core 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 NBME examination will re-sit this examination as outlined in the Supplemental Examination Policy: http://umanitoba.ca/faculties/medicine/education/ed_dev/media/SupplementalExams.pdfhttp://umanitoba.ca/faculties/medicine/education/undergraduate/media/Supplemental_Examinations.pdf

5.3.1.5 The Comprehensive Clinical Examination (CCE)

The goal of the Comprehensive Clinical Examination (CCE) is to objectively evaluate student 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.

5.3.1.6 The Multiple Specialty Rotation in Clerkship (MSR)

Method of Evaluation

The evaluation of students during each component of the MSR clerkship rotation includes assessments of attendance, performance and could include faculty prepared examinations. Students will be expected to attend all clinical, small group, and laboratory sessions. Clinical performance will be judged, where applicable, as in the major clerkships. The Clerkship Director, or designate, must advise each student by the midway point of each component of the rotation if his or her performance is likely to lead to a failing assessment in that component. In such cases, the student must be given help to improve performance to the expected standard. The Clerkship Director, or designate, will use all evaluations to make a final decision on the student's performance at the end of each component of that rotation. A failing student must be informed of the failure by the preceptor, Clerkship Director, or designate preferably before the end of the rotation but not later than seven working days after the rotation is complete. 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 preceptor(s) pass/fail assessments to determine the overall, pass/ fail standing for the student in that department.

5.3.1.7 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 Director, Electives, and unsatisfactory assessments will be submitted to the COE Clerkship.

5.3.1.8 Remediation during Clerkship

Generally in the Clerkship program remediation is scheduled during electives or other suitable time as determined by the Faculty. The Director, Remediation in consultation with the Clerkship Director, or designate will design this remediation which may include further clinical experience.

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 rotation will usually be taken during an elective period.

Remediation for NBME Examination Failures

Students failing any two NBME examinations (in the same subject or different subjects) will receive a remedial period of training from the department of that subject. The Director, Remediation in conjunction with the Clerkship Director, or designate, will design the remediation; further clinical experience may be needed to meet that purpose. Such a remedial period will be a maximum of four weeks and will usually be taken in an elective period, and followed by a third attempt at the National Board examination.

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 usually be taken during elective time. This remediation will be evaluated by a clinical assessment and may include an oral and/or written exam.

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 evaluation will be used and may be supplemented by a clinical oral and/ or written examination if the department deems it necessary. The remedial will usually be taken in an 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 examination if the COE Clerkship deems it necessary.

5.3.1.9 Failure of a Student in the Clerkship Program

The Clerkship Program is a continuum held over Year 3 and Year 4. 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, Internal Medicine Selective, Surgery, Surgery Selective, Paediatrics, Obstetrics/ Gynaecology, 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) Community Health Sciences
vi) Elective
vii) ITC

2. Failure of Examinations

The student has failures in one or more of the following:a) A single NBME subject examination three times

OR

b) A total of five NBME examinations

OR

c) The CCE after remediation

3. Remediation Related Failures

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.

Complete information related to promotion and failure in any year of the Undergraduate Medical Education program can be found in the Undergraduate Medical Education Promotion and Failure Policy and Procedures at http://umanitoba.ca/faculties/medicine/education/ed_dev/media/PromotionAndFailure.pdfhttp://umanitoba.ca/faculties/medicine/media/Promotion_and_Failure__June_2012.pdf

5.3.1.10 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 Repeat Clerkship will consist of the following, at a minimum: Six-week rotations in each of Core Internal Medicine, Core Surgery, Paediatrics, Family Medicine, Psychiatry, and Obstetrics/Gynaecology, plus 12 to16 weeks of electives. A student in the Repeat Clerkship will also be required to complete the ACLS course (0.5 weeks), the LMCC refresher course (4.5 weeks). The student will be granted 3 weeks for CaRMs interviews and two weeks for vacation. Furthermore, if the failure occurred prior to the completion of the Medicine Selective, Surgery Selective, Multiple Specialty Rotation (MSR), or Community Health Sciences Project, then these will be required components of the Repeat Clerkship as well. The student must satisfactorily meet all clinical assessments, examinations, the CCE, as well as remedial rotations (as appropriate), regardless of whether they had been passed previously. The terms of the Repeat Clerkship will be submitted to the Progress Committee for review and final approval.

5.3.1.11 Terms for Failure of the Repeat Clerkship

The terms for failure of the Repeat Clerkship are the same as listed above in 5.3.1.9 "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.

5.3.2 For Students beginning Clerkship on August 2013 or later:

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).

5.3.2.1 Methods of Summative Evaluation (General)

The policy and procedures applicable for evaluation are:

- Examination Conduct Policy : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Examination_Conduct.pdf
- Examination Results Policy : http://umanitoba.ca/faculties/medicine/media/Examination_-_Results__June_2012.pdf
- Deferred Examinations Policy : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Deferred_Examination.pdf
- Examination Accommodation Procedures : http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Accommodation_for_Undergraduate_Medical_Students_with_Disabilities.pdf

Various methods will be used to assess students, including the final evaluation reports (FITERs); written external NBME examinations and OSCE-type exams. Student performance for evaluation purposes during examinations may be recorded in writing, orally, by computer, by audio or by video taping. All material necessary to generate the mark such as papers, computer records and tapes will be destroyed once the student has passed that evaluation. Such material can be of help to a student needing remediation before the examination.

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. Furthermore, this material, 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.

5.3.2.2 The Transition to Clerkship (TTC)

The goal of Transition to Clerkship (TTC) 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 TTC is to ensure that students are ready to begin the 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 TTC.

Method of Evaluation

Students failing to attend mandatory sessions will be reported to the Associate Dean UGME, who will inform the COE Clerkship. Each student will receive a warning from the Associate 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 TTC will be failed.

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.

5.3.2.3 TTC Remediation

Failure for inadequate attendance

The coordinator of the block of sessions missed may, with approval of the Director, Clerkship Curriculum, provide the student with a remedial course, of comparable educational experience in that subject; the student will have to attend and perform satisfactorily to pass the TTC.

5.3.2.4 The Major Clinical Clerkships

- Family Medicine
- Internal Medicine
- Internal Medicine Selective
- Surgery
- Surgery Selective
- Musculoskeletal Rotation
- Obstetrics/Gynecology
- Pediatrics
- Psychiatry

Method of Evaluation

The evaluation of the students during the clinical clerkship rotations may be assessed by review of clinical performance, written examinations, and projects.

Clinical Performance

The objectives of the Clerkship Program are consistent with the Undergraduate Medical Education Objectives found at: http://umanitoba.ca/faculties/medicine/education/undergraduate/ugme_mission_objectives.html

The Midpoint In-Training Report (MITER) is a formative evaluative exercise in rotations of four weeks or longer. The student uses this report to complete a self-evaluation which is then discussed with the student's preceptor. If a student's early 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, the student must be given help to improve performance to the expected standard. The Clerkship Director, or designate, will collect preceptor assessments throughout the rotation. The Clerkship Director, or designate, 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 objectives will be completed for each rotation.

A failing student must be informed of the failure by the Clerkship Director, or designate, preferably before the end of the rotation but not later than seven working days after the rotation is complete. 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 following the completed rotation. In the case of a tie, the chair of COE Clerkship will have the deciding vote, otherwise he or she will not vote.

On occasions, Progress Committee may deem it necessary to forward feed student summative evaluation information to subsequent Clerkship Directors, or designates. In such instances, the student will be informed and the process will follow that outlined in the Forward Feeding Policy and Procedures found at: http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Forward_Feeding_Clerkship_Summative_Evaluation_Information.pdf

Clerkship Written Examinations

Students will take the National Board of Medical Examiners (NBME) subject examinations at the end of the following clerkship periods: obstetrics/ gynaecology, paediatrics, family medicine and psychiatry. For internal medicine, the NBME examination will take place after the internal medicine/emergency medicine block. For surgery, the NBME examination will take place after the surgery/anesthesia block. The passing standard for National Board Exams will be the 11th percentile of the entire reference group. Students failing a NBME examination will re-sit this examination as outlined in the Supplemental Examination Policy: http://umanitoba.ca/faculties/medicine/education/ed_dev/media/SupplementalExams.pdf.

5.3.2.5 The Comprehensive Clinical Examination (CCE)

The goal of the Comprehensive Clinical Examination (CCE) is to objectively evaluate student 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.

5.3.2.6 The Minor Clinical Clerkships

- Emergency Medicine
- Anesthesia
- Community Health Sciences
- Electives
- Ophthalmology
- Otolaryngology

Method of Evaluation

The evaluation of the students during the clinical clerkship rotations may be assessed by review of clinical performance, written examinations, and projects..

Clinical Performance

The objectives of the Clerkship Program are consistent with the Undergraduate Medical Education Objectives found at: http://umanitoba.ca/faculties/medicine/education/undergraduate/ugme_mission_objectives.html

The Midpoint In-Training Report (MITER) is a formative evaluative exercise in rotations of four weeks or longer. The student uses this report to complete a self-evaluation which is then discussed with the student's preceptor. If a student's early 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, the student must be given help to improve performance to the expected standard. The Clerkship Director, or designate, will

collect preceptor assessments throughout the rotation. The Clerkship Director, or designate, 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 objectives will be completed for each rotation.

A failing student must be informed of the failure by the Clerkship Director, or designate, preferably before the end of the rotation but not later than seven working days after the rotation is complete. 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 following the completed rotation. In the case of a tie, the chair of COE Clerkship will have the deciding vote, otherwise he or she will not vote.

On occasions, Progress Committee may deem it necessary to forward feed student summative evaluation information to subsequent Clerkship Directors, or designates. In such instances, the student will be informed and the process will follow that outlined in the Forward Feeding Policy and Procedures found at: http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Forward_Feeding_Clerkship_Summative_Evaluation_Information.pdf

5.3.2.7 The Transition to Residency (TTR)

The goal of the Transition to Residency (TTR) is to prepare students for residency programs. Students will be assessed for attendance and performance in learning groups.

Method of Evaluation

Students failing to attend mandatory sessions will be reported to the Associate Dean UGME, who will inform the COE Clerkship. Each student will receive a warning from the Associate 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 TTC will be failed.

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.

5.3.2.8 Remediation during Clerkship

Generally in the Clerkship program remediation is scheduled during electives or other suitable time as determined by the Faculty. The Director, Remediation in consultation with the Clerkship Director, or designate will design this remediation which may include further clinical experience.

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 rotation will usually be taken during an elective period.

Remediation for NBME Examination Failures

Students failing any two NBME examinations (in the same subject or different subjects) will receive a remedial period of training from the department of that subject. The Director, Remediation in conjunction with the Clerkship Director, or designate, will design the remediation; further clinical experience may be needed to meet that purpose. Such a remedial period will be a maximum of four weeks and will usually be taken in an elective period, and followed by a third attempt at the National Board examination.

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 usually be taken during elective time. This remediation will be evaluated by a clinical assessment and may include an oral and/or written exam.

5.3.2.9 Failure of a Student in the Clerkship Program

The Clerkship Program is a continuum held over Year 3 and Year 4. 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, Internal Medicine Selective, Surgery, Surgery Selective, Musculoskeletal rotation, Paediatrics, Obstetrics/ Gynaecology, Psychiatry, and Family Medicine)

OR

b) One major clerkship and:

i) its remedial, or
ii) a TTC remedial, or
iii) a TTR remedial, or
iv) a remedial of a minor clerkship

OR

c) Remedials in two of the following:

i) Anesthesia
ii) Emergency Medicine
iii) Otolaryngology
iv) Ophthalmology
v) Community Health Sciences
vi) Elective
vii) TTC
viii) TTR

2. Failure of Examinations

The student has failures in one or more of the following:

a) A single NBME subject examination three times

OR

b) A total of five NBME examinations

OR

c) The CCE after remediation

3. Remediation Related Failures

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.

Complete information related to promotion and failure in any year of the Undergraduate Medical Education program can be found in the Undergraduate Medical Education Promotion and Failure Policy and Procedures at http://umanitoba.ca/faculties/medicine/media/Promotion_and_Failure__June_2012.pdf

5.3.2.10 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 Repeat Clerkship will consist of the following, at a minimum: Six-week rotations in each of Core Internal Medicine, Core Surgery, Paediatrics, Family Medicine, Psychiatry, and Obstetrics/Gynaecology, plus 12 to16 weeks of electives. A student in the Repeat Clerkship will also be required to complete the ACLS course (0.5 weeks), the LMCC refresher course (4.5 weeks). The student will be granted 3 weeks for CaRMs interviews and two weeks for vacation. Furthermore, if the failure occurred prior to the completion of the Medicine Selective, Surgery Selective, Musculoskeletal Rotation, Emergency Medicine Rotation, Anesthesia Rotation, Community Health Sciences Course, then these will be required components of the Repeat Clerkship as well. The student must satisfactorily meet all clinical assessments, examinations, the CCE, as well as remedial rotations (as appropriate), regardless of whether they had been passed previously. The terms of the Repeat Clerkship will be submitted to the Progress Committee for review and final approval.

5.3.2.11 Terms for Failure of the Repeat Clerkship

The terms for failure of the Repeat Clerkship are the same as listed above in 5.3.2.9 "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 clinical rotations or take temporary leave. For planned leave, prior permission must be obtained from the Associate Dean, UGME and/or Associate Dean, Students or designate. For leaves due to sudden or unexpected circumstances, the Associate Dean, UGME, the Director, Clerkship Curriculum, and the Clerkship Director or designate of the rotation must be informed. Written documentation of the reason for leave will be required by the Associate Dean, UGME. The information is confidential to the Associate Dean, UGME and Associate Dean, Students or designate.

Students who require an extended leave from the Clerkship Program may have a delayed graduation.

If a student misses more than 25% of a rotation, the student will not receive credit for the rotation regardless of the reason. The student will be required to repeat the entire rotation.

Brief periods of leave may be taken upon notification and approval by the Director, Clerkship Curriculum. For complete details on attendance during clerkship please refer to the full Clerkship Attendance Policy and procedures at: http://umanitoba.ca/faculties/medicine/education/undergraduate/policies.html.

Generally, the Clerkship program is completed in 79 weeks, excluding CaRMS interview time and holiday time. When, due to leaves of absence, a student will take more than 79 weeks, including elective periods, to complete the Clerkship Program the Committee of Evaluation 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.

5.5 Reappraisal and Appeal of Failed Rotations and Examinations

A student who has failed or received "Unsatisfactory' on a Block examination or an OSCE-Type examination can request a reappraisal of the evaluation in accordance with the Reappraisal of Student Evaluations Policy http://umanitoba.ca/faculties/medicine/education/undergraduate/media/Reappraisal_of_Student_Evaluations_18_Oct_2012.pdf

If the student is not accepting of the decision reached by a Reappraisal Committee as outlined in the above stated policy, the student can appeal the decision to the Undergraduate Student Appeals Committee: http://umanitoba.ca/faculties/medicine/education/ed_dev/media/UGME_Student_Appeals.pdf.

A student can appeal a decision of the Undergraduate Student Appeals Committee to the Faculty of Medicine Student Appeals Committee and a student appeal of the Faculty of Medicine Student Appeals Committee can be brought to the Senate Committee on Student Appeals.

The Faculty of Medicine will not accept requests for reappraisal of external examinations. The National Board of Medical Examiners (NBME) provides a Score Recheck Service, details of which are posted on the NBME website at:http://www.nbme.org/Schools/Subject-Exams/score.html. Students are responsible for the cost of a Score Recheck that may be requested on their behalf by the Faculty of Medicine.

SECTION 6: ACADEMIC RESEARCH IN MEDICAL EDUCATION

6.1 Intro Medicine

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.

6.2 Med II Summer Research Program

The Med II Summer Research Program is offered over one summer term and gives second year medical students an opportunity to engage in original research, either in basic, translational, clinical or community health based projects, under the supervision of a member of the Medical Faculty. The aim of the program is to provide medical students with the opportunity to:

- Develop skills at research design, hypothesis testing, critical evaluation of data and effective communication of results
- Discover whether they would further training to become a physician researcher, either through continuing in a formal graduate program during or after medical school or as a clinician researcher
- Students will have the opportunity to expand their clinical skills through an optional one-half to one full day/week clinical placement
- The program consists of three components:
- Research project
- Written report
- Dissertation

The program is open to undergraduate students in the Faculty of Medicine and in special cases; selected undergraduate students from other Canadian and international medical schools. This is a non-degree, non-credit course. This program may not be taken concurrently with any part of the medical curriculum nor may the student be enrolled in the B. Sc. (Med.) or MD/PhD program. The student must be 'in good standing' within the Faculty of Medicine to qualify.

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 an application which Includes a project proposal to the Undergraduate Research Committee. If the project proposal is accepted by the committee, students are accepted into the MED II Summer Research Program and can then be registered with the university for the course summer session. An examining committee comprised of faculty members, one from outside the department in which the research work Is carried out, will be established for each student by their respective supervisor. Students will be required to produce research and present their findings acceptably in both a written report and oral presentation at the conclusion of their course in conjunction with the B. Sc. (Med.) Dissertation Event. Students will be evaluated by their Supervisor at the end of their summer term and by their examining committee following the completion of the requirements of the program. Students will be required to withdraw from the program if they make unsatisfactory progress. The program is on a Pass/Fail basis. Incompletion of the program outside of the normal voluntary withdrawal time frame will be considered a fail.

Program Fees

At this time there are no program fees (subject to change).

Stipendiary Support

Students receive stipendiary support during the thirteen week term. Presently support is in the amount of $5000.00 for the thirteen week term.

SECTION 7: ADDITIONAL DEGREES IN MEDICINE

7.1 Bachelor of Science in Medicine (B.Sc. (Med.))

7.1.1 General Information

The Bachelor of Science in Medicine program is offered over two summer terms; following the first and second year of the undergraduate program in Medicine. The B.Sc. (Med) program is designed to provide the undergraduate medical student with an opportunity to gain firsthand experience in medical research. A large variety of basic science, translational and clinical research projects are available for the student to choose from each year.

The program consists of four components:

- Research project
- Clinical exposure
- Written report
- Dissertation

The program is open to undergraduate students in the Faculty of Medicine and, if approved by the B.Sc. (Med) Committee, to selected undergraduate students from other Canadian and international medical schools. The work for this degree may be carried out in any department of the Faculty of Medicine at the University of Manitoba as well as approved external facilities. This program may not be taken concurrently with any part of the medical curriculum nor by a student who is not in good standing. 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 an application which includes a project proposal to the B.Sc.(Med) Committee. If the project proposal is accepted by the committee, students are accepted into the B.Sc. (Med) Program and can then be registered with the university for the B.Sc.(Med) summer sessions.

An examining committee comprised of faculty members excluding the B. Sc.(Med) program director, one from outside the department in which the research work is carried out, will be established for each student by their respective supervisor.

Students will be required to produce research and present their findings acceptably in both a written report and oral presentation at the conclusion of their second summer. Students will be evaluated by their Supervisor after the first summer and by their examining committee 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 at the University of Manitoba or other approved institution. In this case, the B.Sc.(Med) degree will not be conferred.

The program is on a Pass/Fail basis. Incompletion of the program outside of the normal voluntary withdrawal time frame will be considered a fail.

7.1.2 Program Fees

The program fees will be additional to the Faculty of Medicine tuition fees. Program fees change annually.

7.1.3 Stipendiary Support

Students receive stipendiary support during each 13 week term. Presently support is in the amount of $5000.00 per 13 week term.

7.2 MD/PhD Program

7.2.1 Purpose

The combined-degree MD/PhD Program 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, providing them advanced clinical, academic and research skills.

7.2.2 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 who obtained advanced/graduate training prior to admission may be granted advanced standing. Students will be considered to be full-time graduate students (see Faculty of Graduate Studies guidelines pertaining to Full-Time Status) throughout the entire period. Typically, following completion of Med II, students undertake a 3-4 year sabbatical from MD training to undertake and complete doctoral research training. They then return to third year Medicine to begin Clerkship.

7.2.3 Eligibility

Medical Students are eligible to apply upon initial admission to Medicine and at any time during the first two years of the MD program. Semi-annual competition deadlines are posted at the program website : http://umanitoba.ca/faculties/medicine/research/grad_undergrad/6696.html

7.2.4 Application Process

Potential applicants should carefully review full details on the application process posted on the program website. Students wishing to apply should contact the Director of the Program early in the process (hayglass@cc.umanitoba.ca). Acceptance will minimally require: 1) identification of a supervisor (within a department at the University of Manitoba which has an approved PhD program) who has adequate resources for the research expenses necessary for proposed program of study and whose department recommends acceptance, 2) interview with the Faculty MD/PhD Selection Committee and their recommendation for acceptance, and 3) acceptance by the Faculty of Graduate Studies.

7.2.5 Program Fees

The total tuition fees payable are the sum of the fees required for the MD and PhD programs of study. Continuing fees (Faculty of Graduate Studies) are also applicable. Under current tax regulations, such fees are largely refunded as tax credits to graduates who continue to reside in the province of Manitoba. In most instances, a tax free stipend (current minimum $21,000 pa) is provided for six years to trainees who enter the program and remain in good standing. The six years of support is NOT shortened for trainees who achieve their research-based PhD in less than six years before returning to medical training.

7.2.6 Administration

After initial assessment of the complete application dossier by the MD/PhD Program Director, the program advisory and admission committee (PAAC), chaired by the MD/PhD Program Director, reviews all eligible applications and makes a recommendation to the Faculty of Graduate Studies. The Associate Deans for Research, UGME, and Students, Faculty of Medicine and the Associate Dean, Faculty of Graduate Studies, are advisory to the Program Director, Advanced Degrees in Medicine. They will ensure: 1) adequate resources for all aspects of the delivery of the program, 2) liaison with the Trainee's host 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 4) the provision of program elements considered important to the success of the Option.

7.2.7 Coursework

The minimum course requirements of the Faculty of Graduate Studies, as defined by individuals departmental supplementary regulations, are applicable in addition to the normal curriculum of undergraduate medical studies.

7.2.8 Research/Thesis Requirements

The quality and quantity of research supporting the thesis shall be consistent with that required for all other doctoral candidates in the field.

7.2.9 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 semi-annual program-wide, MD/PhD Student Research in Progress Forum. 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 promote networking within the program. Each student will be required to present a research update once a year,and satisfactory performance at this yearly assessment a requirement for continuation of program support.

7.2.10 Conferment of the Dual Degrees of MD/PhD

The MD and PhD degrees will usually be conferred simultaneously during convocation upon satisfactory completion of the MD and PhD programs.

SECTION 8: REGISTRATION INFORMATION

8.1 Initial Registration 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. 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.

Each student is registering in the same course for both the Fall AND Winter sessions. Med III students will be able to register in their Summer session in mid-March. Students are asked to contact the Administrator, Enrolment at (204) 789-3627 if registering difficulties are encountered.

Courses for the Undergraduate Medical Education program are:

Program & Year	Faculty/ School Codes	Terms	Dept. Number & Course Number	Lecture Section	Lab Section
Medicine I	05	Fall 2013 and Winter 2014	UGME 1000	L01	Not Applicable
Medicine II	05	Fall 2013 and Winter 2014	UGME 2000	L01	Not Applicable
Medicine III	05	Fall 2013, Winter and Summer 2014	UGME 3000	L01	Not Applicable
Medicine IV	05	Fall 2013 and Winter 2014	UGME 4000 UGME 4990	L01	Not Applicable

8.2 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 Administrator, Enrolment at (204) 789-3627 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.

8.3 Prior to Registration

New Students: All incoming students must complete an application to the College of Physicians and Surgeons of Manitoba, complete a Heart and Stroke certified course in BLS for Healthcare Providers (HCP-C) and submit the following documentation prior to the first day of class: immunization records, Adult Criminal Records Check (with vulnerable sector search), Child Abuse Registry Self-Check, Essentail Skills and Abilities (Technical Standards) for Admission, Promotion and Graduation in the MD Program, and Accommodation for Undergraduate Medical Students with Disabilities. If you are unable to submit these documents by the first day of class please contact Enrolment Services at (204) 789-3627.

Returning Students: All returning students must re-certify their CPR in a Heart and Stroke certified course in BLS for Healthcare Providers (HCP-C) and submit a copy of their card to the Faculty of Medicine office prior to the first day of class. Returning students must be registered with the College of Physicians and Surgeons of Manitoba by June 30 of each year and must provide current documentation on Adult Criminal Record Check (with vulnerable sector search) and Child Abuse Registry Self-Check prior to the first day of class.

SECTION 9: COURSE DESCRIPTIONS

Biochemistry & Medical Genetics Course Descriptions-3000 Level

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.

Biochemistry & Medical Genetics Course Descriptions-4000 Level

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.

Human Anatomy & Cell Science Course Descriptions-1000 Level

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.

Pharmacology Course Descriptions-4000 Level

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.

PHAC 4030 Drugs in Human Disease I Cr.Hrs. 3
Foundation physiological principles underlying human disease intergrated with drug dispostion and effects of important drug groups on disorders of the authonomic and centreal nervous systems, and the cardiovascular system. May not be held with PHAC 4020. Prerequisites: BIOL 2410 (former ZOOL 2530 or 022.253) and BIOL 2420 (former ZOOL 2540 or 022.254).

PHAC 4040 Drugs in Human Disease II Cr.Hrs. 3
Foundation physiological principles underlying human disease integrated with effects of important drug groups on endocrine and organ system disorders, allergy and inflammation, infection, and cancer. The course also offers an introduction to basic clinical pharmacology as well as several current specialized topics in pharmacology. May not be held with PHAC 4020. Prerequisites: BIOL 2410 (former ZOOL 2530 or 022.253) and BIOL 2420 (former ZOOL 2540 or 022.254).

Physiology Course Descriptions-1000 Level

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.

Pharmacology Course Descriptions-2000 Level

PHAC 2100 Pharmacology Cr.Hrs. 6
(Formerly 089.210) General principles of pharmacology including consideration of the pharmacodynamics of important drugs and control and modification of drug action.

MARCEL A. DESAUTELS FACULTY OF MUSIC

Dean: Edmund Dawe
Associate Dean(s): Gordon Fitzell
Campus Address/General Office: 206 Music Building
Telephone: (204) 474-9310
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Website: umanitoba.ca/music

Academic Staff:
Please refer to the Faculty of Music website at umanitoba.ca/music/

Chapter Contents

SECTION 1: DEGREE AND DIPLOMA PROGRAMS OFFERED

Degree	Years to Complete	Total Credit Hours
Bachelor of Music	4 *	126
Bachelor of Music (Composition)	4 *	126
Bachelor of Music (History)	4 *	126
Bachelor of Music (Performance)	4 *	126
Bachelor of Music/ Bachelor of Education (currently under review)	5 **	174 – 177
Bachelor of Jazz Studies	4 *	126
Post-Baccalaureate Diploma in Performance	1	30

* Minimum time to graduation: Four years if admission is directly from high school and five years if admission is via University 1.

** 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.

SECTION 2: ADMISSION TO MUSIC

2.1 Course Requirements for Admission from High School

Admission to the Faculty 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. Private lessons in your instrument and formal instruction in music theory and keyboard study are strongly recommended. Good academic performance in subject areas other than music is also strongly recommended. Refer to: umanitoba.ca/faculties/music/prospective/Undergraduate.html for audition information or musicadmissions@umanitoba.ca

SECTION 3: ACADEMIC REGULATIONS

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty 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 and Bachelor of Jazz Studies programs is to provide a basic framework of knowledge and ability; both theoretical and practical, from which either professional activities or graduate specialization can start. The Bachelor of Music 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 either Bachelor of Music, with the following concentrations: Performance, Composition, History, and General Music and the five-year Integrated Bachelor of Music/Bachelor of Education. The four-year Bachelor of Jazz Studies is a direct entry program from high school. Practical study may be in piano, organ, harp, harpsichord, classical guitar, lute, recorder, voice, or any standard orchestral instrument: strings, woodwinds, brass, and percussion, and all the traditional jazz instruments. Ensemble work is included in all years of the program. Music courses are available to students in other faculties and schools. Consult section 7.0 or the appropriate section of this Calendar for regulations.

3.1 Written English Requirement and Mathematics Requirement

Students in the Bachelor of Music and the Bachelor of Jazz Studies programs meet the university's written English requirement through three credit hours of English; ENGL 1310 or an equivalent. The university's mathematics requirement is met through the required 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 and Bachelor of Jazz Studies.

3.2 Electives (Non-Music)

Students are required to take one course in a subject other than music for each year of the Bachelor of Music and Bachelor of Jazz Studies program to a total of 21 credit hours (18 for the Integrated B.Mus./B.Ed. - currently under review). With the exception of the university's written English requirement in the first year, the student is free to choose any subject but is advised to seek the advice of faculty.

3.3 Ensembles

The Faculty offers a wide variety of opportunities for participation in ensembles such as the Women's Choir, Concert Choir, University Concert Band, University Singers, University Symphony Orchestra, University Wind Ensemble, University Jazz Orchestra, Jazz Ensembles, Opera Theatre, Chamber Ensembles, Percussion Ensemble, Musical Theatre, XIE (eXperimental Improv Ensemble), and other wind, string and keyboard combinations. Bachelor of Music students are required to participate in two ensembles each year for four years. Bachelor of Jazz Studies students are required to participate in one ensemble each year for four years. The Ensemble Committee determines placement in credit ensembles; 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.

3.4 Scholarships

Entrance and continuing scholarships are available for Faculty students. Details may be obtained from Financial Aid and Awards or the Marcel A. Desautels Faculty of Music.

3.5 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 Marcel A. Desautels Faculty of Music. Regulations regarding the grading of all practical courses at the Faculty 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 and Bachelor of Jazz Studies programs, except where the Faculty Student 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, 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 sessional (September to April) Grade Point Average of less than 2.0 (C), or failure to achieve a grade of "C" or better in two Music courses will result in a student being placed on probation. While on probation, the student remains in the program but is subject to a set of conditions that are established by the Faculty of Music. A student failing to meet these conditions may be placed on suspension. Each student is permitted a maximum 21 credit hours of failed Music courses in the Bachelor of Music and Bachelor of Jazz Studies programs. Students will not be permitted to register for a required music course more than twice without the permission of the Dean.

3.6 Dean's Honour List

B.Mus. and B.Jazz students who achieve a sessional (September to April) Grade Point Average of 3.5 and are registered in a minimum of 80% of a full-time program in both fall and winter terms will be eligible for the Dean's Honour List. Students who are granted incomplete or deferred status will not be eligible.

3.7 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 dean. 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 4: PROGRAM REQUIREMENTS- BACHELOR OF MUSIC, BACHELOR OF JAZZ STUDIES, YEARS 1-4

These programs are in effect for students admitted since 1997-98. Students who entered in previous years should consult earlier calendars.

4.1 First Year 1997-2012

Course Number	Course Name	Credit Hours
Bachelor 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 3230	Acoustics of Music	3
ENGL 1310	English	3
Total Credit Hours		**32**
Bachelor of Jazz Studies		
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1182	Jazz Ensemble 1	2
MUSC 1192	Jazz Rhythm and Performance Techiques	2
MUSC 1280	Musical Style and Structure 1	3
MUSC 1290	Musical Style and Structure 2	3
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**

4.1a First Year: as of September 2013

Course Number	Course Name	Credit Hours
Bachelor of Music: General		
MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study (Composition Students take MUSC 1404 – Introduction to Composition 1 (3 cr. hr.s) and MUSC 1414 - Introduction to Composition 2 (3 cr.hrs.)	6
* MUSC 3230	Acoustics of Music	3
** Written English Requirement		
ENGL 1310	English	3
Total Credit Hours		**32**

* a 3 credit hour MATH 1xxx or STAT 1xxx may be taken in place of MUSC 3230, Acoustics of Music

** or any 3 credit hour course that meets the written English requirement; consult with an advisor before making a selection

Course Number	Course Name	Credit Hours
Bachelor of Jazz Studies		
MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1182	Jazz Ensemble 1	2
MUSC 1192	Jazz Rhythm and Performance Techniques	2
MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6
* MUSC 3230	Acoustics of Music	3
** Written English Requirement		
ENGL 1310	English	3
Total Credit Hours		**32**

* a 3 credit hour MATH 1xxx or STAT 1xxx may be taken in place of MUSC 3230, Acoustics of Music

** or any 3 credit hour course that meets the written English requirement; consult with an advisor before making a selection

4.2 Second Year: 1997-2012

Bachelor 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
	Non-Music elective	6
Total Credit Hours		**32**
Bachelor of Jazz Studies		
MUSC 2072	Jazz History 1	3
MUSC 2082	Jazz History 2	3
MUSC 2112	Jazz Theory 1	3
MUSC 2122	Jazz Theory 2	3
MUSC 2182	Jazz Ensemble 2	2
MUSC 2192	Jazz Improvisation 1	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**

SECTION 4.2a Second Year: as of September 2013

Course Number	Course Name	Credit Hours
Bachelor of Music: General		
MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2
MUSC 2190	Ensemble	2
MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6
	* Core Music History Elective	3
	* Core Music History Elective	3
	Non-Music Electives	6
Total Credit Hours		**32**

* See Section 4.6: Core Music History Electives

Bachelor of Jazz Studies		
MUSC 2072	Jazz History 1	3
MUSC 2082	Jazz History 2	3
MUSC 2112	Jazz Theory 1	3
MUSC 2122	Jazz Theory 2	3
MUSC 2182	Jazz Ensemble 2	2
MUSC 2192	Jazz Improvisation 1	2
MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6
	Non-Music Electives	6
Total Credit Hours		**32**

4.3 Third Year: 1997-2012

Bachelor of Music - 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.

Bachelor of Music - 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**

Course Number	Course Name	Credit Hours
Bachelor of Music - Composition		
MUSC 2460	Conducting	3
MUSC 3150	Orchestration	3
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3300	Composition Study	6
MUSC 3650	Electroacoustic Music	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**

Bachelor of Music - General		
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6
MUSC 3960	Music of the 20th Century 1	3
MUSC 3970	Music of the 20th Century 2	3
	Music History elective	3
Course Number	**Course Name**	**Credit Hours**
	Music Theory elective	3
	Music or non-music elective	3
	Non-Music electives	6
Total Credit Hours		**31**

Bachelor of Jazz Studies		
MUSC 3112	Jazz Composition and Arranging 1	3
MUSC 3182	Jazz Ensemble 3	2
MUSC 3192	Jazz Improvisation 2	2
MUSC 3272	Jazz Performance Skills	3
MUSC 3442	Jazz Pedagogy 1	3
MUSC 3470	Major Practical Study	6
MUSC 3552	Jazz Recital 1	6
	Non-Music electives	6
Total Credit Hours		**31**

NOTE: A grade of at least "B" is required in 3552 for graduation with the Bachelor of Jazz Studies.

SECTION 4.3a Third Year: as of September 2013

Bachelor of Music: Performance		
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6
MUSC 3550	Recital 1	3
MUSC 3974	Music Theory After 1900	3
	* Core Music History Elective	3
	Music Electives	6
	Non-Music Electives	6
Total Credit Hours		**31**

NOTE: A grade of at least "B" in MUSC 3550 is required to continue in the Performance Concentration.

* See Section 4.6: Core Music History Electives

Course Number	Course Name	Credit Hours
Bachelor of Music: History		
MUSC 3050	Research Methods	3
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6
MUSC 3974	Music Theory After 1900	3
	* Core Music History Elective	3
	Music History Elective	3
	Music Theory Elective	3
	Non-Music Electives	6
Total Credit Hours	**31**	**31**

* See Section 4.6: Core Music History Electives

Bachelor of Music: Composition		
MUSC 2460	Conducting	3
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6
MUSC 3650	Electroacoustic Music	3
MUSC 3964	History of Western Art Music After 1900	3
MUSC 3974	Music Theory After 1900	3
	Music or Non-Music Elective	3
	Non-Music Electives	6
Total Credit Hours		**31**

Bachelor of Music: General		
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6
MUSC 3974	Music Theory After 1900	3
	* Core Music History Elective	3
	Music Theory Elective	3
	Music Elective	3
	Music or Non-Music Elective	3
	Non-Music Electives	6
Total Credit Hours		**31**

* See Section 4.6: Core Music History Electives

Bachelor of Jazz Studies		
MUSC 3112	Jazz Composition and Arranging 1	3
MUSC 3182	Jazz Ensemble 3	2
MUSC 3192	Jazz Improvisation 2	2
MUSC 3272	Jazz Performance Skills	3
MUSC 3442	Jazz Pedagogy 1	3
MUSC 3470	Major Practical Study	6
MUSC 3554	Jazz Recital 1	3
	Music Elective	3
	Non-Music Electives	6
Total Credit Hours		**31**

NOTE: A grade of at least "B" in MUSC 3554 is required to continue in the Bachelor of Jazz Studies Program

4.4 Fourth Year: 1997-2012

Course Number	Course Name	Credit Hours
Bachelor of Music - 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.

Bachelor of Music - 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)	9
	Non-Music electives	6
Total Credit Hours		**31**

Bachelor of Music - Composition		
MUSC 3550	Recital 1	3
MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2
MUSC 4300	Composition Study	6
MUSC 4650	Interactive Computer Music	3
MUSC 4660	Computer Assisted Composition	3
	Music History elective	3
	Music Theory elective	3
	Non-Music Electives	6
Total Credit Hours		**31**

Bachelor of Music - 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	9
	Music or Non-Music Electives	6
	Non-Music Electives	6
Total Credit Hours		**31**

Course Number	Course Name	Credit Hours
Bachelor of Jazz Studies		
MUSC 4112 -	Jazz Composition and Arranging 2	3
MUSC 4182	- Jazz Ensemble 4	2
MUSC 4192 -	Jazz Improvisation 3	2
MUSC 4442	- Jazz Pedagogy 2	3
MUSC 4470	- Major Practical Study	6
MUSC 4562	- Recital 2	6
	Music Elective	3
	Non-Music Electives	6
Total Credit Hours		**31**

NOTE: A grade of at least "B" is required in 4562 for graduation with the Bachelor of Jazz Studies.

SECTION 4.4a Fourth Year: as of September 2013

Course Number	Course Name	Credit Hours
Bachelor of Music: Performance		
MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2
MUSC 4470	Major Practical Study	6
MUSC 4560	Recital 2	6
	* Core Music History Elective	3
	Music Electives	6
	Non-Music Electives	6
Total Credit Hours		**31**

NOTE: A grade of at least "B" in MUSC 4560 is required for graduation with the Performance Concentration.

* See Section 4.6: Core Music History Electives

Course Number	Course Name	Credit Hours
Bachelor of Music: 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
	* Core Music History Elective	3
	Music History Elective	3
	Music Electives (9 credit hours if MUSC 4160 is elected)	6
	Non-Music Electives	6
Total Credit Hours		**31**

* See Section 4.6: Core Music History Electives

Course Number	Course Name	Credit Hours
Bachelor of Music: Composition		
MUSC 3550	Recital 1	3
MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2
MUSC 4470	Major Practical Study	6
MUSC 4650	Interactive Computer Music	3
MUSC 4660	Computer Assisted Composition	3
	* Core Music History Elective	3
	Music Theory Elective	3
	Non-Music Electives	6
Total Credit Hours		**31**

* See Section 4.6: Core Music History Electives

Course Number	Course Name	Credit Hours
Bachelor of Music: General		
MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2
MUSC 4470	Major Practical Study	6
or MUSC 4160	Major Practical Study	3
	* Core Music History Elective	3
	Music Electives (9 credit hours if MUSC 4160 is elected)	6
	Music or Non-Music Electives	6
	Non-Music Electives	6
Total Credit Hours		**31**

* See Section 4.6: Core Music History Electives

Course Number	Course Name	Credit Hours
Bachelor of Jazz Studies		
MUSC 4112	Jazz Composition and Arranging 2	3
MUSC 4182	Jazz Ensemble 4	2
MUSC 4192	Jazz Improvisation 3	2
MUSC 4442	Jazz Pedagogy 2	3
MUSC 4470	Major Practical Study	6
MUSC 4562	Jazz Recital 2	6
	Music Elective	3
	Non-Music Electives	6
Total Credit Hours		**31**

NOTE: A grade of at least "B" in MUSC 4562 is required for graduation with a Bachelor of Jazz Studies

SECTION 4.5 Electives: Third & Fourth Years

MUSC 2072	Jazz History 1	3
MUSC 2082	Jazz History 2	3
MUSC 2110	Music Theory 3	3
MUSC 2112	Jazz Theory 1	3
MUSC 2120	Music Theory 4	3
MUSC 2122	Jazz Theory 2	3
MUSC 2460	Conducting	3
MUSC 3050	Research Methods (History Concentration requirement)	3
MUSC 3054	Medieval and Renaissance Music History	3
MUSC 3064	Baroque Music History	3
MUSC 3074	Classical Music History	3
MUSC 3084	Romantic Music History	3
MUSC 3090	Introduction to Musicology	3
MUSC 3100	Opera Repertoire	3
MUSC 3104	History of Opera 1: From Monteverdi to Mozart	3
MUSC 3114	History of Opera 2: From Mozart to the Modern Era	3
MUSC 3130	Music for Children 1	6
MUSC 3140	Music for Children 2	6
MUSC 3150	Orchestration (Composition Concentration requirement)	3

Course Number	Course Name	Credit Hours
MUSC 3230	Acoustics of Music (fulfills University "M" requirement)	3
MUSC 3270	Performance Skills	3
MUSC 3360	Topics in Music Education	3
MUSC 3380	From Rock to Rap and Beyond: A History of Popular Music in the Later 20th Century	3
MUSC 3390	From Ragtime to Rock'n'Roll: A History of Popular Music in the 20th Century	3
MUSC 3404	From New Wave to Rave: A History of Popular Music in the Late 20th Century	3
MUSC 3480	Minor Practical Study	3
MUSC 3620	Independent Study 1	3
MUSC 3650	Electroacoustic Music	3
MUSC 3690	Percussion Techniques	3
MUSC 3730	Early Music Development	3
MUSC 3770	Vocal Techniques	3
MUSC 3780	Woodwind Techniques	3
MUSC 3790	Brass Techniques	3
MUSC 3800	String Techniques	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 3884	Introduction to Jazz for Music Educators	3
MUSC 3894	Guitar Techniques	3
MUSC 3964	History of Western Art Music After 1900	3
MUSC 3974	Music Theory After 1900	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 4140	History of Canadian Music	3
MUSC 4154	Choral Repertoire	3
MUSC 4330	Advanced Analysis	3
MUSC 4350	Music for Children 3	6
MUSC 4360	Wind Repertoire	3
MUSC 4370	Wind Conducting Techniques	3
MUSC 4380	Piano Repertoire (Required for Piano Performance Majors)	3
MUSC 4390	Piano Chamber Music Literature Seminar	3
MUSC 4430	Pedagogy and Repertoire	3
MUSC 4440	Vocal Pedagogy (Required for Voice Majors in Performance and General Concentrations)	3
MUSC 4480	Minor Practical Study	3
MUSC 4490	Piano Pedagogy (Required 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 4650	Interactive Computer Music	3
MUSC 4660	Computer Assisted Composition	3
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

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.

SECTION 4.6 Core Music History Electives

In addition to the required first-year History sequence (MUSC 1004, 3 credit hours and MUSC 1014, 3 credit hours), ***Bachelor of Music*** students must choose four additional courses (12 credit hours) from the chart below – at least one from each column. ***Integrated Bachelor of Music/Bachelor of Education*** students must choose two additional courses (6 credit hours) from different columns.

Note: At least one course from each column will be offered every year.

A	B	C
MUSC 3064 Baroque Music History	MUSC 3054 Medieval and Renaissance Music History	MUSC 2072 Jazz History 1
MUSC 3074 Classical Music History	MUSC 3964 History of Western Art Music After 1900	MUSC 2082 Jazz History 2
MUSC 3084 Romantic Music History		MUSC 3090 Introduction to Ethnomusicology
		MUSC 3104 History of Opera 1: From Monteverdi to Mozart
		MUSC 3114 History of Opera 2: From Mozart to the Modern Era
		MUSC 3380 From Rock to Rap and Beyond: A History of Popular Music the in the Later 20th Century

		MUSC 3390 From Ragtime to Rock'n'Roll: A History of Popular Music in the 20th Century
		MUSC 3404 From New Wave to Rave: A History of Popular Music in the Late 20th Century
		MUSC 4140 History of Canadian Music
		MUSC 4130 History of Women in Music
		Topics Courses in Music History

SECTION 4.7 Music Minors

Music Minor for Students in Faculties other than the Faculty of Music

The music minor requires 18 credit hours of MUSC courses as follows:

Course Number	Course Title	Credit Hours
MUSC 1280	Musical Style & Structure 1	3
MUSC 1290	Musical Style & Structure 2	3
	Music courses from List A below	12

Note: Acceptance into all MUSC courses is subject to space availability, consent of the instructor, and prerequisite requirements.

For a minor in music, it is recommended that MUSC 1280 (Musical Style & Structure 1) and MUSC 1290 (Musical Style & Structure 2) be taken before all other courses in List A.

Note: Completion of a minor in music does not satisfy the "teachable minor" required for admission to the After Degree B.Ed. Program in middle years and senior years.

List A

Course Number	Course Title	Credit Hours
MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3
MUSC 1050	The Well-Tempered Concert-Goer	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 2072	Jazz History 1	3
MUSC 2082	Jazz History 2	3
MUSC 2110	Music Theory 3	3
MUSC 2112	Jazz Theory 1	3
MUSC 2120	Music Theory 4	3
MUSC 2122	Jazz Theory 2	3
MUSC 2460	Conducting	3
MUSC 3050	Research Methods	3
MUSC 3054	Medieval and Renaissance Music History	3
MUSC 3064	Baroque Music History	3
MUSC 3074	Classical Music History	3
MUSC 3084	Romantic Music History	3
MUSC 3090	Introduction to Ethnomusicology	3
MUSC 3104	History of Opera 1: From Monteverdi to Mozart	3
MUSC 3114	History of Opera 2: From Mozart to Modern Era	3
MUSC 3130	Music for Children 1	6
MUSC 3140	Music for Children 2	6
MUSC 3230	Acoustics of Music	3
MUSC 3380	From Rock to Rap and Beyond: A History of Popular Music in the Later 20th Century	3
MUSC 3390	From Ragtime to Rock'n'Roll: A History of Popular Music in the 20th Century	3
MUSC 3404	From New Wave to Rave: A History of Popular Music in the Late 20th Century	3
MUSC 3650	Electroacoustic Music	3
MUSC 3690	Percussion Techniques	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 3840	Topics in Music	3
MUSC 3884	Introduction to Jazz for Music Educators	3
MUSC 3894	Guitar Techniques	3
MUSC 3964	History of Western Art Music After 1900	3
MUSC 3974	Music Theory After 1900	3
MUSC 4130	History of Women in Music	3
MUSC 4140	History of Canadian Music	3
MUSC 4154	Choral Repertoire	3
MUSC 4350	Music for Children 3	6
MUSC 4650	Interactive Computer Music	3
MUSC 4660	Computer Assisted Composition	3
MUSC 4750	Choral Techniques 1	3
MUSC 4760	Choral Techniques 2	3
MUSC 4770	Band & Orchestral Techniques 1	3
MUSC 4780	Band & Orchestral Techniques 2	3

List A: Eligible Ensemble Courses

MUSC 1180	Ensemble	2
MUSC 1182	Jazz Ensemble 1	2
MUSC 1190	Ensemble	2
MUSC 2180	Ensemble	2
MUSC 2182	Jazz Ensemble 2	2
MUSC 2190	Ensemble	2
MUSC 3180	Ensemble	2
MUSC 3182	Jazz Ensemble 3	2
MUSC 3190	Ensemble	2
MUSC 4180	Ensemble	2
MUSC 4182	Jazz Ensemble 4	2
MUSC 4190	Ensemble	2

NOTES:

1. All Ensemble courses are 2 credit hours each.
2. Students may take a maximum of three ensemble courses as part of a minor in music.
3. Participation in ensembles is determined by audition.

SECTION 5: PROGRAM REQUIREMENTS-INTEGRATED BACHELOR OF MUSIC/BACHELOR OF EDUCATION YEARS 1-5

Currently under review.

SECTION 5.1 First Year:1997-2012

Course Number	Course Title	Credit Hours
Bachelor 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 3230	Acoustics of Music	3
ENGL 1310	English	3
Total Credit Hours		**32**

SECTION 5.1a First Year: as of September 2013

Course Number	Course Title	Credit Hours
Choral Music Specialization		
MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1180 or MUSC 1182	Ensemble	2
MUSC 1190 or MUSC 1192	Ensemble	2
MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2
MUSC 1400 OR MUSC 1404 AND MUSC 1414	Major Practical Study / Introduction to Composition 1 / Introduction to Composition 2	6 / 3 / 3
ENGL 1xxx		3
	Students who have English as their teachable minor take 1000 Level English to fulfill the U of M written English requirement	
	Students who have History as their teachable minor take a 1000 level non-music History to fulfill the U of M written English requirement	
	Students who have a teachable minor other than English or History may take any 1000 level, 3 credit hour course that fulfills the U of M written English requirement: consult an advisor before making a selection	
* MUSC 3230	Acoustics of Music (meets the U of M Mathematics Requirement)	
Total Credit Hours		**32**

* a 3 credit hour MATH 1xxx or STAT 1xxx may be taken in place of MUSC 3230, Acoustics of Music

In this program, a "C" or better is required in all courses. Non-music courses must be at the 1000 level or higher.

Course Number	Course Title	Credit Hours
Early/Middle Years Music Specialization		
MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1180 or MUSC 1182	Ensemble	2
MUSC 1190 or MUSC 1192	Ensemble	2
MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2
MUSC 1400 OR MUSC 1404 AND MUSC 1414	Major Practical Study / Introduction to Composition 1 / Introduction to Composition 2	3 / 3 / 6
ENGL 1xxx	Any English at the 1000 level	3
* MUSC 3230	Acoustics of Music (meets the U of M Mathematics Requirement)	
Total Credit Hours		**32**

* a 3 credit hour MATH 1xxx or STAT 1xxx may be taken in place of MUSC 3230, Acoustics of Music

In this program, a "C" or better is required in all courses. Non-music courses must be at the 1000 level or higher.

Course Number	Course Title	Credit Hours
Instrumental Music Specialization		
MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3
MUSC 1180 or MUSC 1182	Ensemble	2
MUSC 1190 or MUSC 1192	Ensemble	2
MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2
MUSC 1400 OR MUSC 1404 AND MUSC 1414	Major Practical Study / Introduction to Composition 1 / Introduction to Composition 2	6 / 3 / 3
ENGL 1xxx		3
	Students who have English as their teachable minor take 1000 Level English to fulfill the U of M written English requirement. Students who have History as their teachable minor take a 1000 level non-music History to fulfill the U of M written English requirement. Students who have a teachable minor other than English or History may take any 1000 level, 3 credit hour course that fulfills the U of M written English requirement: consult an advisor before making a selection.	
* MUSC 3230	Acoustics of Music (meets the U of M Mathematics Requirement)	
Total Credit Hours		**32**

* a 3 credit hour MATH 1xxx or STAT 1xxx may be taken in place of MUSC 3230, Acoustics of Music

In this program, a "C" or better is required in all courses. Non-music courses must be at the 1000 level or higher.

SECTION 5.2 Second Year: 1997-2012

Course Number	Course Title	Credit Hours
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* see(**)		6
Total Credit Hours		**35**

NOTE: Apply to Integrated Program during Year 2. Deadline to apply is February 1.

*For listing of teachable minors, see Senior Years teachable major/minor chart in the Education section of the calendar.**Only those students admitted into their 3rd year in the Faculty of Education for September 2008 and earlier are permitted a 2nd music specialization. Prior to beginning Year 5 students must have completed the Aboriginal Education Requirement and the Special Education/Diversity Requirement which is defined as 3 credit hours Aboriginal Education and 3 credit hours Special Education/Diversity.

SECTION 5.3 Third Year: 1997-2012

Integrated Bachelor of Music/Bachelor of Education Program		
MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	3
MUSC XXXX	Music Specialization	6
EDUB 1200	Teaching the Arts in Senior Years	3
EDUB 1600	Teaching General Music	3
	Aboriginal Education Requirement or Special Education/Diversity Requirement see Aurora calendar for current offerings	3
	Teachable Minor	6
Total Credit Hours		**34**

Intersession:

EDUB 1940	Integrated Programs School Experience I	3

SECTION 5.4 Fourth Year: 1997-2012

Course Number	Course Title	Credit Hours
Integrated Bachelor of Music/Bachelor of Education Program		
MUSC 4180 -	Ensemble	2
MUSC 4190 -	Ensemble	2
MUSC 4470 -	Major Practical Study	6
MUSC 3970	Music of the 20th Century 2	3
EDUB 2240 - OR	Teaching Music in Senior Years	
EDUB 2160 -	Teaching Music in Early/Middle Years	3
EDUB 2160 -	Teaching Music in Early/Middle Years	3
	Aboriginal Education Requirement or Special Education/Diversity Requirement (whichever requirement was not fulfilled in Year Three) see Aurora calendar for current offerings	3
	Music Specialization	12
	Teachable Minor	6
Total Credit Hours		**37**

Intersession:

EDUB 1950 -	Integrated Programs School Experience 2	3

SECTION 5.5 Fifth Year: 1997-2012

Integrated Bachelor of Music/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 3credi hour Education complementary course)	3
EDUB 1XXX	Students with a Music teachable minor take an Education Complementary Course. (admitted to Faculty of Education September 2008 or earlier). Students admitted September 2009 and beyond take a Year 1 Curriculum & Instruction Course in their minor area.	3
Total Credit Hours		**30**

Further information about the integrated program is in the chapter for the Faculty of Education.

SECTION 5.6 Teachable Minors

Currently under review.

SECTION 6: POST-BACCALAUREATE DIPLOMA IN PERFORMANCE

The Marcel A. Desautels 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 as well as in other faculties and schools at the University of Manitoba.

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 video 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 the 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. Completed application forms must be received by February 15th to begin study in September, or June 15th for a January start date.

6.3 Program Requirements

MUSC 5400 Major Practical Study, 1 hr. instruction/week or the equivalent, 6 credit hours

MUSC 5560 Recital, 1 hr. instruction/week, 6 credit hours

MUSC 5180 Ensemble, 3 credit hours

Electives: chosen from available 3000 and 4000 level courses recommended by the advisor and approved by the Faculty, 15 credit hours

Total Credit Hours: 30

Note: A minimum of 18 credit hours must be taken in the Marcel A. Desautels Faculty of Music (although all 30 may be taken within the Faculty).

Reminder: While Faculty 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.

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 and Bachelor of Jazz Studies programs as outlined in the Faculty 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 Dean 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 that counted for credit in a previous degree.

6.7 Credit Transfer

The Faculty's Registrar will process transfer of credits into the PBDP program. 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, 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. The Dean may grant extensions 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, 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 students must attain a grade of "C" or higher for a 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's specialized forms will be used for the performance-related courses.

SECTION 7: OFFERINGS FOR NON-MUSIC STUDENTS

7.1 Courses Offered in the B.Mus. and B.Jazz Program for Students in Other Faculties

Some courses are offered outside the B.Mus. and B.Jazz programs for students in other faculties. For information, contact the Faculty of Music Registrar.

Two courses are available without pre-requisites or special permission from Music, for non-music students:

MUSC 1050 - Well-Tempered Concert-Goer, 3 credit hours, may be used towards a Music Minor

MUSC 1930 - Rudiments of Music, 3 credit hours, is not applicable to a Music Minor

For information on completing a Music Minor in another faculty, please refer to Section 4.7 in the Faculty of Music calendar.

SECTION 8: COURSE DESCRIPTIONS

Music Course Descriptions-1000 Level

MUSC 1004 Introduction to Music in History 1 Cr.Hrs. 3
A survey of Western music from early monophony to c. 1750 through an examination of genres and aesthetic foundations. The course will include comparison to non-Western musical traditions.

MUSC 1014 Introduction to Music in History 2 Cr.Hrs. 3
A continuation of MUSC 1004, covering the eras from c. 1750 to the present. A survey of Western music from c. 1750 to the present through an examination of genres and aesthetic foundations. The course will include contemporary art music and comparison to non-Western musical traditions. Prerequisite: MUSC 1004 or consent of the 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. This course may not be used for credit towards the Bachelor of Music or Bachelor of Jazz Studies degree.

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,Concert Choir, 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 1182 Jazz Ensemble 1 Cr.Hrs. 2
Participation in jazz ensemble(s) as assigned by the 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) (placement to be determined by the Ensemble Committee).

MUSC 1192 Jazz Rhythm Performance Techniques Cr.Hrs. 2
A practical approach to rhythmic proficiency in jazz, including emphasis on rhythmic and harmonic etudes, standard song form interpretation, interaction, call and response language for jazz performance.

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:MUSC 1930 or Conservatory Canada Grade 4 Theory or RCM Advanced Rudiments or consent of the Faculty of Music. Continuation in the Music Minor requires a grade "C" or better in this course. This course may not be used as credit towards the Bachelor of Music or the bachelor of Jazz Studies degree.

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) or consent of the Faculty of Music. Continuation in the Music Minor requires a grade of "C" or better in this course. This course may not be used for credit towards the Bachelor of Music or the Bachelor of Jazz Studies degree.

MUSC 1384 Musicianship 1 Cr.Hrs. 2
A practical approach to the cultivation of critical aural perception, specifically, to develop the student's sight-singing, transcription and keyboard skills. Not to be held with MUSC 1380. For music students only.

MUSC 1394 Musicianship 2 Cr.Hrs. 2
A continustion of MUSC 1384. Prerequisite: MUSC 1384. Not to be held with MUSC 1390. For music students only.

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 1404 Introduction to Composition 1 Cr.Hrs. 3
A study of contemporary theoretical and practical approaches to rhythm, pitch, timbre, texture and form. For music students only or with permission from the Faculty of Music.

MUSC 1414 Introduction to Composition 2 Cr.Hrs. 3
A continuation of MUSC 1404 Introduction to Composition 1. Prerequisite: MUSC 1404. For music students only or with permission from the faculty of Music.

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. This course may not be used for credit towards the Bachelor of Music or the Bachelor of Jazz Studies degree.

Music Course Descriptions-2000 Level

MUSC 2072 Jazz History 1 Cr.Hrs. 3
A broad survey of the development of jazz and early popular styles of the 20th Century up until the early 1950s. This course is designed to reveal the origins of modern jazz and conventional jazz performance practices. Prerequisite: MUSC 1014 or consent of the Faculty of Music.

MUSC 2082 Jazz History 2 Cr.Hrs. 3
A broad survey of jazz styles from 1950 to the present, with an emphasis on the development of contemporary performance practices. Prerequisite: MUSC 2072 or consent of the Faculty of Music.

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 2112 Jazz Theory 1 Cr.Hrs. 3
This course is designed to develop fluency in the writing and recognition of the elements of jazz: melodic and harmonic intervals, modes and scales, rhythm and meter, harmonic structure, and the principles of melodic and homophonic design. Prerequisite: MUSC 1120 (or 033.112) or consent of the Faculty of Music.

MUSC 2120 Music Theory 4 Cr.Hrs. 3
(Formerly 033.212) An examination of the diffusion of tonality in instrumental textures through the writing and analysis of chromatic paraphrase, florid counterpoint in two parts and chromatically-extended homophony leading to the Cavatina and ternary form. Prerequisite: MUSC 2110 (or 033.211) or consent of the Faculty of Music.

MUSC 2122 Jazz Theory 2 Cr.Hrs. 3
A continuation of Jazz Theory 1. New topics will include transcription analysis, transposition of lead sheets, modal and substitute harmony. Prerequisite: MUSC 2112 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, Concert Choir, 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). Prerequisite: MUSC 1180 or consent of the Faculty of Music.

MUSC 2182 Jazz Ensemble 2 Cr.Hrs. 2
Participation in jazz ensemble(s) as assigned by the ensemble committee. Prerequisite: MUSC 1182 or consent of the Faculty of Music.

MUSC 2190 Ensemble Cr.Hrs. 2
(Formerly 033.219) Participation in a Faculty of Music Ensemble other than the one designated in MUSC 2180 (placement to be determined by Ensemble Committee). Prerequisite: MUSC 1190 or consent of the Faculty of Music.

MUSC 2192 Jazz Improvisation 1 Cr.Hrs. 2
A course designed to give the student practical application of rhythmic devices, rhythmic modes, melodic and harmonic devices, scales, chords, and substitutions in the context of song forms, song fragments, repertoire. The student will be required to keep a journal of melodic devices and original jazz compositions. Prerequisite: MUSC 1120 (or 033.112) or consent of the Faculty of Music.

MUSC 2384 Musicianship 3 Cr.Hrs. 2
A continuation of MUSC 1394. Prerequisite: MUSC 1394. Not to be held with MUSC 2380. For music students only.

MUSC 2394 Musicianship 4 Cr.Hrs. 2
A continuation of MUSC 2384. Prerequisite: MUSC 2384. Not to be held with MUSC 2390. For music students only.

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. Prerequisite: MUSC 1400 or MUSC 1414.

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.

Music Course Descriptions-3000 Level

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 3054 Medieval and Renaissance Music History Cr.Hrs. 3
A study of music history with emphasis on historical and stylistic developments of the Middle Ages and Rensaissance periods. Prerequisites: MUSC 1014 or consent of the Faculty of Music. Not to be held with MUSC 1070.

MUSC 3064 Baroque Music History Cr.Hrs. 3
A history of European art music from the late 16th to the early 18th centuries (the so-called Baroque period) beginning with the invention of opera and the monodic and concerted styles in Italy and their subsequent adoption in the rest of Europe and the emergence of national schools and culminating in the works of Bach and Handel. Prerequisites: MUSC 1014 or consent of the Faculty of Music. Not to be held with MUSC 1080.

MUSC 3074 Classical Music History Cr.Hrs. 3
A history of European art music from the early-18th to the early-19th centuries (the so-called Classical period) beginning with the innovations of Neapolitan opera and sinfonia their subsequent adoption in the rest of Europe, culminating in the Viennese school of Haydn, Mozart and Beethoven. Prerequisites: MUSC 1014 or consent of the faculty of Music. Not to be held with MUSC 2070.

MUSC 3084 Romantic Music History Cr.Hrs. 3
A study of the changing styles, forms and contexts of music from the late 18th century to 1915 (the Romantic Period). Prerequisites: MUSC 1014 or consent of the Faculty of Music. Not to be held with MUSC 2080.

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. Prerequisite: MUSC 1014.

MUSC 3100 Opera Repertoire Cr.Hrs. 3
(Formerly 033.310) The nature of the opera, its beginnings and development to modern times.

MUSC 3104 History of Opera 1: from Monteverdi to Mozart Cr.Hrs. 3
A history of opera from its origins to the late eighteenth century, tracing various styles, genres and composers through representative works in the central Italian, as well as the French, English and German schools. Prerequisites: MUSC 1014 or consent of the Faculty of Music.

MUSC 3112 Jazz Composition and Arranging 1 Cr.Hrs. 3
A study of the fundamentals of part writing such as instrumental range and transposition, various styles of unison writing, simple harmonic writing, melodic, harmonic and rhythmic devices along with standard and non-standard song structures. Course will culminate in a recital of student compositions and arrangements. Prerequisite: MUSC 2112 or consent of the Faculty of Music.

MUSC 3114 History of Opera II: from Mozart to the Modern Era Cr.Hrs. 3
A history of opera from the late 18th century and the masterpieces of Mozart to the present, tracing the various styles, genres and composers through representative works. Prerequisite: MUSC 1014 or consent of the faculty of Music.

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 to 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 Faculty of Music.

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, Concert Choir, 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). Prerequisite: MUSC 2180 or consent of the Faculty of Music.

MUSC 3182 Jazz Ensemble 3 Cr.Hrs. 2
Participation in jazz ensemble(s) as assigned by the ensemble committee. Prerequisite: MUSC 2182 or consent of the Faculty of Music.

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) (placement to be determined by Ensemble Committee). Prerequsite: MUSC 2190 or consent of the Faculty of Music.

MUSC 3192 Jazz Improvisation 2 Cr.Hrs. 2
A continuation of Jazz Improvisation 1. Rhythmic devices, rhythmic modes, melodic and harmonic devices, scales, chords and substitutions in the context of song form, song fragments, repertoire. The student will be required to keep a journal of melodic devices and original jazz compositions. Prerequisite MUSC 2192 or consent of 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 participation.

MUSC 3272 Jazz Performance Skills Cr.Hrs. 3
A course designed to equip the student with the techniques necessary to rehearse, interact and perform effectively with an ensemble in various situations.

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 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....The nineties focuses on the continual mainstreaming of music on the edge of rap, alternative and world beat. Prerequisite: MUSC 1014 or consent of the Faculty of Music.

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. Prerequisite: MUSC 1014 or consent of the Faculty of Music.

MUSC 3404 From New Wave to Rave: A History of Popular Music in the Late 20th Century Cr.Hrs. 3
A survey of popular music from the end of twentieth century, beginning with the revolutions that occurred during the late seventies and early eighties (disco and rap, punk and hardcore) that transformed pop music, setting the course for music of the two final decades of the century. Prerequisite: MUSC 1014 or consent of the Faculty of Music.

MUSC 3442 Jazz Pedagogy 1 Cr.Hrs. 3
A course designed to instruct jazz musicians on procedure and methodology for teaching jazz song form, rhythmic concepts, repertoire and history to K-8 students. Class members will teach and perform with students from the Faculty of Music Preparatory Division.

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. Prerequisite: MUSC 1014, MUSC 1120, MUSC 1394, MUSC 2400 and MUSC 3230. 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) The program must be approved by the applied instructor and the jury members. Prerequisite: MUSC 1014, MUSC 1120, MUSC 1394, MUSC 2400 and MUSC 3230, or consent of the Faculty of Music. For Music students only.

MUSC 3554 Jazz Recital 1 Cr.Hrs. 3
Preparation and performance of a public recital. The program must be approved by the applied instructor and jury members. Prerequisite: MUSC 2082, MUSC 2122, MUSC 2394, and MUSC 2400 or consent of the Faculty of Music. For Music students only.

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 3650 Electroacoustic Music Cr.Hrs. 3
An introduction to electroacoustic music composition with the focus on acousmatic music. The course covers sound aesthetics, historical perspective of electro-acoustic music, repertoire and basic studio techniques such as sound editing, digital signal processing, multi channel techniques and sound mixing.

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. Prerequisite: MUSC 2460 or consent of the Faculty of Music.

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. Prerequisite: MUSC 2460 and MUSC 3770 or consent of the Faculty of Music.

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. Prerequisite or Corequisite: MUSC 2460 or the consent of Faculty of Music.

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. Prrequisite: MUSC 2460 or consent of the Faculty of Music.

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. Prerequisite: MUSC 2460 or consent of the faculty of Music.

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. Prerequisite: MUSC 2460 or consent of the Faculty of Music.

MUSC 3820 Topics in Music Cr.Hrs. 3
(Formerly 033.382) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3830 Topics in Music Cr.Hrs. 3
(Formerly 033.383) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3840 Topics in Music Cr.Hrs. 3
(Formerly 033.384) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3850 Topics in Music Cr.Hrs. 3
(Formerly 033.385) This course may vary from year to year depending on the needs and interests of instructors and students.

MUSC 3884 Introduction to Jazz for Music Educators Cr.Hrs. 3
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. Prerequisites: MUSC 2460 or consent of the Faculty of Music. Not to be held with MUSC 3880.

MUSC 3894 Guitar Techniques Cr.Hrs. 3
Class instruction in guitar technique. Development of basic techniques and examination of materials and procedures for individual and group instruction. Prerequisite: MUSC 2460 or consent of the Faculty of Music.

MUSC 3964 History of Western Art Music After 1900 Cr.Hrs. 3
A survey of the processes, contexts and conceptual constructs of Western art music from 1900 to present. Prerequisites: MUSC 1014 or consent of the Faculty of Music.

MUSC 3974 Music Theory After 1900 Cr.Hrs. 3
A survey of music theoretical approaches, analytical techniques and compositional trends in Western art music from 1900 to the present. Prerequisite: MUSC 2120 or consent of the Faculty of Music.

Music Course Descriptions-4000 Level

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 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 4112 Jazz Composition and Arranging 2 Cr.Hrs. 3
A continuation of Jazz Composition and Arranging 1. The student will write for larger ensembles, including jazz orchestra. Course will culminate in a recital of student compositions and arrangements. Prerequisite: MUSC 3112 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 4140 History of Canadian Music Cr.Hrs. 3
A survey of music in Canada from Colonial times to the present, encompassing both folk, popular and classical traditions.

MUSC 4154 Choral Repertoire Cr.Hrs. 3
A study and examination of choral repertoire for various types of choral ensembles. Prerequisites: MUSC 2460 or consent of the Faculty of Music. Not to be held with MUSC 4150.

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, Concert Choir, 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). Prerequisite: MUSC 3180 or consent of the Faculty of Music.

MUSC 4182 Jazz Ensemble 4 Cr.Hrs. 2
Participation in jazz ensemble(s) as assigned by the ensemble committee. Prerequisite: MUSC 3182 or consent of the Faculty of Music.

MUSC 4190 Ensemble Cr.Hrs. 2
(Formerly 033.419) Participation in a Faculty of Music Ensemble other than the one designated in MUSC 4180 (or 033.418) (placement to be determined by Ensemble Committee). Prerequisite: MUSC 3190 or consent of the Faculty of Music.

MUSC 4192 Jazz Improvisation 3 Cr.Hrs. 2
A continuation of Jazz Improvisation 1 and 2. Rhythmic devices, rhythmic modes, melodic and harmonic devices, scales, intervallic devices, chords, and substitutions in the context of song forms, song fragments, repertoire. The student will be required to keep a journal of melodic devices and original jazz compositions. Prerequisite: MUSC 3192 or consent of the Faculty of Music.

MUSC 4330 Advanced Analysis Cr.Hrs. 3
A survey of analytical approaches to tonal and post-tonal music. Aspects of musical structure, perception and performance will be explored through readings and the analysis of major works from the core repertoire. Prerequisite: MUSC 2120 or consent of the Faculty of Music.

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. Prerequisite: MUSC 4770 (033.477) and MUSC 4780 (033.478), or consent of the Faculty of Music.

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). Prerequisite: MUSC 4770 (033.477) and MUSC 4780 (033.478), or consent of the Faculty of Music.

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 4442 Jazz Pedagogy 2 Cr.Hrs. 3
A continuation of Jazz Pedagogy 1, with a focus on high school students. Class members will teach and perform with students from the Faculty of Music Preparatory Division. Prerequisite: MUSC 3442 or consent of the Faculty of Music.

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 Faulty 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 graduation recital. The program, which must be approved by the applied instructor and jury members. Prerequisite: MUSC 2120, MUSC 2394 and MUSC 3550 or consent of the Faculty of Music. For Music Students only.

MUSC 4562 Jazz Recital 2 Cr.Hrs. 6
Preparation and performance of a public graduation recital. The program must be approved by the applied instructor and the jury members. Prerequisite: MUSC 2082, MUSC 2122, MUSC 22394 and MUSC 3554 or consent of the Faculty of Music. For Music Students only.

MUSC 4630 20th to 21st Century Piano Repertoire Cr.Hrs. 3
(Formerly 033.463) Piano repertoire from 1900 to the present.

MUSC 4650 Interactive Computer Music Cr.Hrs. 3
An introduction to interactive computer music composition. The course covers different techniques for interaction between performers and a computer. Experiments will be done using major software for live MIDI and audio processing. The course also covers sound synthesis. Possibilities are given to write with either projects involving performers or multi-disciplinary projects (e.g., installation including visual elements). Prerequisite: MUSC 3650 or consent of the Faculty of Music.

MUSC 4660 Computer Assisted Composition Cr.Hrs. 3
An introduction to Computer Assisted Composition. The course covers a variety of mathematical models for structuring musical parameters, such as probability, iterative functions, spectral pitch organization, rule-based systems and morphological models. Different environments using the Lisp language are used as a base for experiments. Prerequisite: MUSC 1414 or consent of the Faculty of Music.

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. Prerequisite: MUSC 2460 and MUSC 3770 or consent of the Faculty of Music.

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. Prerequisite: MUSC 2460, MUSC 3790, MUSC 3780 and MUSC 3690 or MUSC 3800 or MUSC 3894 or consent of the faculty of Music.

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).

Post-Baccalaureate Course Descriptions-5000 Level

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

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Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

1.1 Programs

Program/ Degree	Years to Complete	Total Credit Hours	Maximum Years to Complete
Four-Year Baccalaureate Nursing Program/Bachelor of Nursing:	4*	129	6
Baccalaureate Program for Registered Nurses**/Bachelor of Nursing:	2	45	5

*This includes one year (30 credit hours) of study in University 1.

**This program is designed specifically for active practicing Registered Nurses.

1.2 Available Options

Inter-Faculty Option in Aging

Inter-Faculty Option in Aging courses are offered by the following faculties: Arts; Human Ecology; Nursing; Kinesiology and Recreation Management; 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 Option in Aging is available from a student advisor.

1.3 Professional Designation

A graduate of the Four-Year Baccalaureate Nursing Program must write the Canadian Registered Nurse Examination (CRNE) to become eligible to practice nursing. Following successful completion of all courses, the Faculty of Nursing provides the College of Registered Nurses of Manitoba (CRNM) with a letter indicating that the student has completed the program requirements and is a potential graduand. Completion of the program entitles students to apply to work as graduate nurses and to apply to write the CRNE to obtain the designation, Registered Nurse (RN). Approval of the application to write the CRNE will be subject to the graduate's meeting the requirements of the CRNM. Application and registration information can be obtained from the CRNM website at: www.crnm.mb.ca.

SECTION 2: ADMISSION REQUIREMENTS

2.1 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 website at http://www.umanitoba.ca/student/admissions/.

Courses Completed at Recognized Universities Other Than the U of M

Non-Nursing courses must be assessed as exact equivalents in order to meet the specific course requirements for admission under Option 1 or Option 2. 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.

Non-Nursing courses that were completed more than 10 years prior to admission and that have been evaluated by the University of Manitoba can be used in the admission process but will not be considered for transfer credit toward the Nursing degree. Thus, only courses completed within 10 years prior to the date of admission to the Faculty of Nursing will be considered for transfer credit.

All courses (regardless of age) within the most recent 60 credit hours of university level course work will be included in the calculation of AGPA.

The above information also applies to Nursing courses taken at universities other than the U of M; however, Nursing courses will be considered for evaluation and credit only if completed within 5 years prior to application/ admission.

See also Section on "Advanced Standing/Transfer Credit".

Failures in Nursing Courses

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.

Course Requirements for Admission

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. Option 2 applicants require 3 credit hours of 1000 level English in addition to the University Written English requirement. See Option 2.

The AGPA for admission will be calculated on the most recent 60 credit hours (including repeated courses) of university level 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).

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. Preference will be given to Option 1 applicants. The lowest AGPA accepted in 2012- 2013 was 3.5333 for Option 1, and 3.9211 for Option 2.

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

The above general requirements for admission, and:

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 University Written English requirement must be met. 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.

BIOL 1410 Anatomy of the Human Body (formerly ZOOL 1320)

BIOL 1412 Physiology of the Human Body (formerly ZOOL 1330)

NURS 1260 Human Growth & Development

NURS 1280 Introduction to Nursing

MBIO 1220 Essentials of Microbiology (see Note 6)

3 credit hours of Humanities electives (see Note 2)

6 credit hours of Social Science courses (see Note 3)

6 credit hours of courses offered by the Faculty of Science

(see Notes 4, 5, and 6)

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. Students taking a Women's Studies course to meet the Humanities requirement should ensure that the course is on the Humanities list. For example, WOMN 1600 Women's Studies in the Social Sciences and WOMN 2510 are not Humanities courses.

Note 3: Select from: Introduction to Psychology PSYC 1200 (6), or Introduction to Sociology SOC 1200 (6), or Human Origins and Antiquity 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.

Note 6: 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. Math 40S is a prerequisite for Microbiology and Statistics.

Option 2

The general requirements for admission, and:

All applicants must have completed at least 30 credit hours. The University written English requirement must also be met (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 . Completed courses must include:

1000 level English (3 credit hours) (e.g. ENGL 1310, ENGL 1340). This is not the same as the Written English requirement.

1000 level Science (3 credit hours)

Applicants from Diploma and Degree Nursing Programs Category

Applicants who have attended but have not completed 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 admission requirements under Option 1 or Option 2, including the competitive AGPA in the year of application, apply for admission by the application deadline, and provide supplementary information, including the name of the Dean, Director, Head, or Coordinator of the Nursing Program in which the student was previously registered, and who will be contacted by the Faculty of Nursing.

The Admissions Committee reserves the right to deny admission to the University of Manitoba Nursing program based on any of the supplementary information. Applicants who would be eligible to register in third or fourth year courses will be considered for admission only if space is available.

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 from Aboriginal populations of Canada only. Applicants in this category must meet the minimum entrance requirements of Option 1 including a minimum AGPA of 2.5; however, they do not have to meet the competitive grade point average of admitted students in the admission year. Applicants must apply by the application deadline and also complete a supplementary application form that is sent by the Admissions Office following submission of the regular application. The Supplementary Application and information are due no later than June 1.

Detailed information is on the Faculty of Nursing website at:

http://umanitoba.ca/faculties/nursing/prospective/undergrad/special_consideration.html

Appeals of decisions are limited to the question of procedural regularity only. The merits of the decision are not subject to review.

Provisional Admission - Criminal Record, Child Abuse Registry, Immunization and CPR

All successful applicants are admitted provisionally pending compliance with the Criminal Record, Child Abuse Registry, immunization and CPR requirements of the Faculty of Nursing. Failure to meet the requirements by August 1 will result in the offer of admission being revoked. Contact the Faculty of Nursing or http://umanitoba.ca/faculties/nursing/prospective/media/non_academic_requirements_2013.pdf for further information about the Non-Academic Admission Requirements.

Applicants are advised to carefully check the recommended start dates in the above document before beginning the process of complying with these admission requirements. Immunization must be started in November, prior to application, so that the August 1 deadline can be met. Any costs associated with the Non-Academic Admission Requirements are the responsibility of the applicant.

Criminal Record Search Certificate

Following their provisional admission to the program, applicants must provide a Criminal Record Search Certificate, including Vulnerable Persons Search, by August 1. As it can take up to 120 days to obtain these documents, it is recommended that applicants apply for the Criminal Record Search certificate and Vulnerable Sector Search between March 1 and March 15 in the year of application.

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. Failure to disclose any criminal record will invalidate an applicant's application and shall result in automatic expulsion from the Faculty of Nursing if the applicant has been admitted.

The College of Registered Nurses of Manitoba (CRNM) also 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 review process by the Faculty of Nursing is independent of the review process conducted by the CRNM.

Child Abuse Registry Check

Following their provisional admission to the program, applicants must provide a Child Abuse Registry check by August 1. As it can take up to 120 days to obtain these documents, it is recommended that applicants apply for the Child Abuse Registry check between March 1 and March 15 in the year of application.

Any applicant on the Child Abuse Registry will be denied admission.

Immunization

A complete immunization record is an admission requirement for the program. Applicants provisionally admitted to the program must meet the August 1 deadline for submission of their immunization record or their offer of admission will be revoked. Detailed information about the Immunization admission requirement can be found in the Non-Academic Admission Requirements document found at http://umanitoba.ca/faculties/nursing/prospective/media/non_academic_requirements_2013.pdf.

Because it takes a number of months to complete the immunization requirements, it is recommended that all applicants start their immunizations in November prior to application in order to meet the August 1 deadline.

CPR Certification

CPR certification at the Health Care Provider Level (C) is a requirement for admission to the Faculty of Nursing. Certification should not be obtained before April of the year of admission, as it must be valid for the entire academic year. It must be submitted to the Faculty of Nursing by August 1.

Advanced Standing/Transfer Credit

Advanced standing will be considered for courses completed at the University of Manitoba.

Nursing courses from any university, including the University of Manitoba, will be considered for advanced standing/transfer credit only if they have been completed within five years prior to admission to the Faculty of Nursing.

Credit for Nursing courses previously completed as a student in the Faculty of Nursing is not given if there has been a lapse of five years or more since last attendance in the program.

Non-Nursing courses completed at other recognized institutions will be considered if completed within the past 10 years.

See also section on "Courses Completed at Recognized Universities other than the University of Manitoba."

Advanced Placement Option: LPN

Applicants who graduated from the Licensed Practical Nursing (LPN) Program from Assiniboine Community College within five years of admission years prior to admission to the Faculty of Nursing may be eligible for transfer credit. Applicants must meet admission requirements.

Advanced Placement Option: RPN

Registered Psychiatric Nurses may be eligible for advanced standing in the Four-Year Baccalaureate Nursing Program. Applicants should inform the Faculty of their RPN status

2.2 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 available from the Admissions Office website at: http://www.umanitoba.ca/student/admissions/

Admission Requirements

1) Graduation from an approved diploma of nursing education program;

2) Current active practicing membership in a Canadian provincial or territorial 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.

Failures in Nursing Courses

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.

Proof of Professional Registration

Active practicing membership must be maintained throughout the program in the Canadian 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 or other Canadian jurisdiction in which they hold membership, (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 or if taken more than five years prior to admission. Credit for non-nursing courses taken at other universities over 10 years prior to admission will not be granted.

Graduates of the Red River College Diploma Nursing Accelerated Program (DNAP) (est. 2000) will receive 12 credit hours of 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: NURS 3210 Research Methods, NURS 4220 Law and Ethics, and 6 credit hours of non-nursing electives. The Nursing courses must have been completed within five years, and the non-Nursing courses completed within 10 years, prior to admission to the Faculty of Nursing. All remaining courses for the BPRN must be completed at the University of Manitoba in order to meet the residency requirement for the BPRN, unless the electives were completed at the University of Manitoba.

Transfer of Credit for Advanced Certificate Programs

No credit will be given for these certificates in the BPRN.

SECTION 3: ACADEMIC REGULATIONS

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the Faculty of Nursing has regulations and requirements, published below, that apply specifically to its students.

Following the regulations for all students, please see the regulations that are specific to each program.

3.1 Regulations for the Four-Year Baccalaureate Nursing Program

Students are obligated to be familiar with all regulations governing their continued progress in the program.

Security of Academic Records

The University's policies regarding the security of student academic records are found in the chapter, University Policies, of this Calendar.

Registration Status in the Program

Students admitted to the Program must complete a minimum of 3 credit hours of course work in the Faculty of Nursing in the Fall or Winter term of their admission year.

Students are expected to maintain contact with the program by registering in at least one nursing course during each consecutive Fall and Winter term while they are enrolled in the Program.

Students who wish to interrupt their studies must apply in writing to the Associate Dean, Undergraduate Programs, for a leave of absence.

Leave of Absence

Students wishing to interrupt their studies must submit a written request for a leave of absence, normally by June 1, to the Associate Dean, Undergraduate Programs, Faculty of Nursing. Later requests may be considered in exceptional circumstances. A leave of absence may normally be granted for a maximum period of one year. Requests for an extension to the leave of absence or for a subsequent leave of absence must be made in writing and will be subject to approval by the Associate Dean, Undergraduate Programs.

In order to return to the Faculty of Nursing, students must submit a written request for reinstatement to the Associate Dean, Undergraduate Programs, no later than May 1 of the year of return. Requests for reinstatement will not normally be considered after May 1. Students who do not apply for reinstatement by May 1 will normally be considered as having left the Nursing program, and will be withdrawn from the Faculty of Nursing.

Decisions made in response to requests for leaves of absence or reinstatement can be appealed to the Faculty of Nursing Admissions Committee.

Leave of absence status does not extend the program time limit outlined in the Faculty of Nursing regulations. To maintain leave of absence status, and not be discontinued from the Faculty of Nursing, students may not attend any other faculty or institution during the period in which the leave of absence is in effect. Students on a leave of absence will be subject to the same Criminal Record and Child Abuse Registry policies as students taking courses and, at the time of requesting a return to studies, will be required to provide a current self-declaration of a criminal record and child abuse registry listing.

Students who attend another faculty or institution while on leave, or who have been withdrawn from the Faculty of Nursing because they were not granted a leave of absence and did not take at least one Nursing course in Fall or Winter term, must re-apply through Admissions should they wish to return.

Residence Requirements

See the chapter, General Academic Regulations and Requirements in this Calendar.

Coursework and Evaluation

"0900" Level Courses

Credit will not be given for "0900" courses.

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 theGeneral Academic Regulations and Requirements in this Calendar. The mathematics requirement will be met in Year 2 of Nursing by Statistics STAT 1000.

Prerequisite Deficiency

Students who enroll in courses provisionally pending satisfactory completion of pre- or co-requisites 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.

Supplemental Examinations or Tests

The Faculty of Nursing does not permit supplemental examinations or tests.

Academic Progression

Effective September 2013 for all students:

Students are required to obtain a minimum of "C" grade in every letter grade course, a "Pass" in every Pass/Fail course, and a Program GPA of 2.5 to graduate. A final grade of "D" or "F" in a letter grade course or "Fail" in a Pass/Fail course taken to complete the degree requirement is considered a failure.

Academic assessments will be based on student performance in letter grade courses. The Term Grade Point Average (TGPA) will be calculated at the conclusion of each academic term in which the student has completed a minimum of 6 credit hours. Students who do not complete the minimum credit hours in one term will be assessed as "too few credit hours to assess." These students will be assessed over two terms or more at the end of the term in which they reach the threshold of 6 credit hours.

The final term of the Four-Year Baccalaureate Program (NURS 4290) will be excluded from assessment providing the student meets graduation requirements. Students are required to have a minimum Program GPA of 2.5 to be eligible for graduation.

****See http://umanitoba.ca/faculties/nursing/current/undergrad/policies/assessment_policy.html for details and procedures.

Good Academic Standing

A student with a TGPA of 2.5 or higher will be assessed "Faculty Minimum Met."

Academic Warning

The first time a student's TGPA drops below 2.5, the student will receive an Academic Warning.

Academic Probation

The second time that a student's TGPA drops below 2.5, the student will be placed on Academic Probation.

Academic Suspension

The third time that a student's TGPA drops below 2.5, the student will be placed on Suspension. Students who are suspended shall be ineligible to take any courses at the University of Manitoba or on a letter of permission for a minimum of eight and a maximum of 15 calendar months.

A student may apply for reinstatement on academic probation after the term of suspension has been completed.

Required to Withdraw

Students who have been permitted to return from Suspension and whose TGPA drops below 2.5 a fourth time will be Required to Withdraw. Students who are Required to Withdraw are ineligible for re-admission to the Faculty of Nursing.

Dean's Honour List

The Dean's Honour list will be determined after each term of study. Students who achieve a minimum Term GPA of 3.75, and who are registered for a minimum of 12 credit hours will be placed on the Dean's Honour List. Students registered in a Fall/Winter term spanned course will be reconsidered for their eligibility for listing on the Fall Term Dean's Honour List at the end of Winter Term. Students who complete a course on a Letter of Permission may request to have these courses included in the assessment for Dean's Honour List. Students with a grade of D, F, or "Fail" in that term will not be eligible for Dean's Honour List.

Degree with Distinction

Students who achieve a Degree GPA of 3.8 and above based on the last 68 credit hours of course work, including Pass/Fail courses, will be eligible for a Degree with Distinction. Students with a grade of D, F, or "Fail" in the last 68 credit hours will not be eligible.

Voluntary Withdrawal

Students admitted in September, 2004 or 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. Students planning to withdraw from any course are advised to speak with a student advisor regarding the implications of this decision. Any financial implications will be the responsibility of the student.

Attendance

Regular attendance at class is expected of all students in all courses. Attendance in on-line courses will be interpreted as regular and consistent participation in the course. 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.

A course leader 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.

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 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 or any two clinical courses. 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.

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 1.

Failures in Clinical (Pass/Fail) Courses

Students who fail a clinical course will be required to accept a supportive learning contract prior to being given permission to register in another clinical course.

Failures in Clinical Course Rotations

Students who fail a rotation of a clinical course in which there are multiple rotations will be debarred from the course immediately following that rotation and will receive a final grade of "Fail". These students will not be permitted to voluntarily withdraw from the course following receipt of the failed grade.

Unsafe Clinical Practice Policy

The debarment policy will be invoked when the student demonstrated unsafe clinical practice. Unsafe clinical practice involves actions or behaviours which result in adverse effects or the risk of adverse effects to the health and well-being (psychological or physical) of the client, family, staff, faculty, or other students. Unsafe clinical practice is an occurrence, or a pattern of behaviour involving unacceptable risk.

Clinical Practice

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.

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 on the Faculty of Nursing website.

Transportation costs to clinical practice settings are the responsibility of the student.

Every effort will be made to accommodate eligible students who register for clinical courses during the initial registration period. However, spaces in clinical courses are dependent upon the availability of clinical sites, which are determined by health care agencies and the availability of clinical teachers. Therefore, the Faculty cannot guarantee that all students who registered for the course can be accommodated.

Clinical Agency Requirements

The Faculty of Nursing has contractual arrangements with the agencies in which students are placed for clinical practice. The contracts set out specific expectations regarding the preparation of students prior to their placement in any clinical site and their fitness to practice.

The Faculty of Nursing assists the student to complete the following requirements and further information about how these requirements are met will be provided during Year 2 orientation or during NURS 0500.

1. Personal Health Information Act (PHIA)

PHIA cards are required for clinical practice and will be checked at clinical sites.

2. Non-Violent Crisis Intervention Workshop

3. Electronic Patient Record Training

The following requirements are the responsibility of the student and must be completed independently, according to deadlines established by the Faculty of Nursing. For newly admitted students, instructions about how to fulfill these requirements is set out in Section 3.1 Admission Requirements. Information set out below is for returning students only.

4. Immunizations

Once admitted to the Faculty of Nursing, students are required to maintain an up-to-date immunization status. Deadlines for completion of required vaccines will be established for individual students as needed. Students should keep a copy of their immunization records and retrieve their immunization records from their files upon graduation.

- Penalty for Non-Compliance with Immunization Policy

Returning students, including Joint Baccalaureate Nursing program students from Red River College entering fourth year, who do not comply with the deadlines for completion of their immunizations, will be placed on hold status, which blocks the student from the registration system. Students on hold will be permitted to register in mid-August after all documentation has been received. Students who register in mid-August may not be able to register in some or all of the courses they had originally planned to take, and may experience a delay in completing the program. Hold status also prevents receipt of refunds or histories/transcripts from the Registrar's Office, attending clinical practice, and graduation.

5. Criminal Record Search Certificate

Some clinical practice sites require that students complete a current or additional Criminal Record Search Certificate prior to the first clinical practice day.

Students charged with or convicted of a criminal offence 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 Professional Unsuitability Committee for the implications of the conviction in view of the professional mandate to protect the public.

6. Child Abuse Registry

Some clinical practice sites require that students complete a current or additional Child Abuse Registry search check prior to the first clinical practice day.

Students listed on the Child Abuse Registry are required to report this information to the Associate Dean, Undergraduate Programs, Faculty of Nursing. A listing on the Child Abuse Registry or failure to report the listing will result in dismissal from the program.

7. Cardiopulmonary Resuscitation Certification (CPR)

All students are required to obtain certification in CPR at the Health Care Provider Level (C). Returning students, including those certified at the Instructor level, must recertify in April/May each year to ensure that their certification is valid for the entire academic year. Proof of re-certification must be submitted annually by June 1 to the Student Services Assistant or designate.

- Penalty for Non-Compliance with CPR Policy

Returning students, including Joint Baccalaureate Nursing program students from Red River College entering fourth year, who do not comply with the deadlines for submission of the CPR re-certification, will be placed on hold status, which blocks the student from the registration system. Students on hold will be permitted to register in mid-August after all documentation has been received. Students who register in mid-August may not be able to register in some or all of the courses they had originally planned to take, and may experience a delay in completing the program. Hold status also prevents receipt of refunds or histories/transcripts from the Registrar's Office, attending clinical practice and graduation.

8. Mask Fit Testing

Mask-fit test cards are required for clinical practice and will be checked at clinical sites.

Attire for Clinical Practice

All students are required to wear uniforms, name tags and crests during clinical courses unless given specific instructions not to do so by the agency in which they are placed for clinical practice.

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 Faculty of Nursing website, umanitoba.ca/nursing. See chapter, General Academic Regulations and Requirements.

Disciplinary Appeal

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.

3.2 Regulations for the Baccalaureate Program for Registered Nurses

- Students are obligated to be familiar with all regulations governing their continued progress in the program.

Security of Academic Records

The University's policies regarding the security of student academic records are found in the chapter, University Policies, of this Calendar.

Registration Status in the Program

Students admitted to the BPRN must complete a minimum of 3 credit hours of course work in the Fall or Winter term following admission. Admission will be revoked for students do not complete at least 3 credit hours in their first or second term of study following admission.

Students are expected to maintain contact with the program by registering in at least one nursing course during each consecutive Fall and Winter term while they are enrolled in the Program.

Students who wish to interrupt their studies must apply in writing to the Associate Dean, Undergraduate Programs, for a leave of absence. Refer to section on Leave of Absence for further information.

Program Planning

Students are expected to meet with a Nursing Student Advisor prior to May 15 to plan their program for the upcoming year. Students who do not meet with the Nursing Student Advisor will be placed on hold status, which blocks the student from the registration system and prevents receipt of refunds or histories/transcripts from the Registrar's Office, and graduation.

Leave of Absence

BPRN students wishing to interrupt their studies must have completed a minimum of 3 credit hours of course work in the Faculty of Nursing in the Fall or Winter term of their admission year. 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 a leave of absence status at the University of Manitoba, students may not attend any other post-secondary institution during the period in which the leave of absence is in effect. See section Transfer of Credit.

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 advanced 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; 3) the student who has attended another faculty or an institution following withdrawal from Nursing must re-apply. See section 2.1 Advanced Standing/Transfer of Credit. Note that the BPRN must be completed within five years, including time on a leave of absence.

Residence Requirements

Students 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.

Course Work and Evaluation

Supplemental Examinations or Tests

The Faculty of Nursing does not permit supplemental examinations or tests.

"0900" Level Courses

Credit will not be given for "0900" courses.

Prerequisite Deficiency

Students who enrol in courses provisionally pending satisfactory completion of pre- or co-requisites 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.

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. Students not registered with the College of Registered Nurses of Manitoba (CRNM) and continuing in the program must submit proof annually of active practicing status in the Canadian jurisdiction in which they hold membership.

After admission and at any time prior to completing the program, students with any changes to their active practicing status with the CRNM, or other Canadian jurisdiction in which they hold membership (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.

Academic Progression

Students will be required to obtain a minimum of "C" grade (2.0) in every course, and a minimum 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 by the faculty.

Students must have a minimum Degree GPA of 2.5 to proceed in the program. For further information, refer to: Academic Probation - Baccalaureate Nursing Program for Registered Nurses.

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 Honour list. The Dean's Honour list will be determined after each term of study.

Degree with Distinction

Students who obtain a Degree GPA of 3.8 and above in their program of studies will be eligible for a Degree with Distinction.

Academic Probation

Students 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.

Voluntary Withdrawal

Students 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. Students planning to withdraw from any course are advised to speak with a student advisor regarding the implications of this decision. Any financial implications will be the responsibility of the student.

Attendance

Regular attendance at class is expected of all students in all courses. Attendance in on-line courses will be interpreted as regular and consistent participation in the course. 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.

A course leader 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.

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 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 and are required to withdraw from the Faculty of Nursing are ineligible for re-admission to the Faculty of Nursing.

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 Faculty of Nursing website, umanitoba.ca/nursing. See chapter, General Academic Regulations and Requirements.

Immunization, CPR, Criminal Record Search Certificate, Child Abuse Registry Check Requirements

Immunizations

Immunizations are a requirement mandated by the Regional Health Authorities.

Immunization forms are sent to students upon acceptance into the program. Additional forms are available upon request. New students enrolling in the BPRN must provide proof of current immunizations by August 1 for the Fall term, December 1 for the Winter term, and April 15 for the Summer term. See Penalty for Non-Compliance of Immunization and CPR section. Students should keep a copy of their immunization records and retrieve their immunization records from their files upon graduation.

Cardiopulmonary Resuscitation Certification (CPR)

All students must be certified at the Health Care Provider Level (C). Newly admitted students must submit proof of certification to the Student Services Assistant or designate by August 1 for the Fall term, December 1 for the Winter term, and April 15 for the Summer term. Thereafter, registered nurses are to maintain current certification at the required level.

Penalty for Non-Compliance of Immunization and CPR

Students who do not comply with the deadlines for proof of current CPR and/or immunizations will be placed on hold status, which blocks the student from the registration system. Students on hold status will be permitted to register 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. Students who register after the initial registration period may not be able to register in some or all of the courses they had originally planned to take, and may experience a delay in completing the program.

Criminal Record Search/Child Abuse Registry Check

Students 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.

Students registered in a jurisdiction other than the CRNM must submit a Criminal Record Search Certificate and a Child Abuse Registry check.

Name Tags

Students are required to wear a University of Manitoba Faculty of Nursing name tag during clinical/project courses when meeting with patients or clients.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 Four-Year Baccalaureate Nursing Program

The program can be done by part-time and full-time study.

All courses from any given year are to be completed before proceeding to the next year.

Course No.	Course Name	Credit Hours
University 1	**30 credit hours**	
BIOL 1410	Anatomy of the Human Body (see Note 1)	3
BIOL 1412	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 or SOC 1200 or ANTH 1210 and ANTH 1220	Introduction to Psychology Introduction to Sociology Human Origins and Antiquity (3) Cultural Anthropology (3)	6
	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. WOMN 1600 Women in the Social Sciences does not meet the Humanities requirement.

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. Students should check for pre-requisites for 2000 and 3000 level Native Studies courses.

Course No.	Course Name	Credit Hours
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 Or NATV 1240 Or NATV 2020 Or NATV 2220 Or NATV 2450 Or NATV 3240	Native Peoples of Canada, Part I Native Peoples of Canada, Part II Metis of Canada Native Societies and the Political Process Images of Indian People in North American Society Native Medicine and Health	3

Course No.	Course Name	Credit Hours
Year 4	**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. 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. 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 and requirements of the College of Registered Nurses of Manitoba.

NURS 4290 Clinical Practicum

All other courses in the curriculum must be successfully completed and the grade posted 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. 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.

4.1.1 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 1.2). Of the total credit hours of electives, at least 6 credit hours must be at the 2000 level or higher. Electives offered by the Faculty of Nursing are:

Course No.	Course Name	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. Note: Each course is normally offered every second year.

Inter-Faculty Option in Aging – See Section 1.2

4.2 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 Faculty of Nursing, 474-7452.

4.2.1 Special Student Status in Nursing

Students who are not admitted to the BPRN 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 BPRN.
- A nursing course completed as a special student may be accepted subsequently for credit in the BPRN up to five years from the date of completion.

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 or other jurisdiction.

Completion of courses as a special student does not guarantee admission into the BPRN. All students must complete the application forms and submit required information by the application deadline for the term in which students are applying, 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.

4.2.2 BPRN - Curriculum

Note: Nursing electives may not be offered every year.

Course No.	Core Courses:	Credit Hours
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 4 and 5)	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 2)	10
	Non-Nursing Electives (see Note 3)	9

Nursing Electives

Course No.	Core Courses:	Credit Hours

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 2200	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 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)

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/IDES/ HMEC/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) 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.

3) Of the 9 credit hours of non-Nursing electives, no more than 6 credit hours may be at the 1000 (introductory) level. See section 5.4 for suggestions re: Non-Nursing Electives for the BPRN. Students may not take courses for credit for which it is assumed that the content was covered in the diploma nursing program (i.e., Anatomy, Physiology, Microbiology, Pharmacology, Psychology, Sociology, etc.).

4) Graduates of the DNA program at Red River College are required to substitute a 4 credit hour Nursing clinical course for NURS 3220.

5) NURS 3360 and NURS 4300 are no longer offered. Students who have previously completed either course within 5 years prior to admission to the Faculty of Nursing may use NURS 3360 in place of NURS 3220 and/or NURS 4300 as a nursing elective.

4.2.3 Clinical Courses and NURS 3200 (Long Term Illness) and NURS 4210 (Independent Study) for the BPRN

Review section 3.1 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.

For courses NURS 3200 (Long Term Illness) and NURS 4210 (Independent Study), 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. Registration in these courses is restricted to students who have contacted the course leader.

NURS 4210 Independent Study in Nursing

The Independent Study in Nursing is designed to provide the learner with an opportunity to synthesize previous learning while working with a high degree of independence. Under the guidance of a faculty advisor, students explore a topic of their choosing and design learning objectives consistent with the purpose of the course. Students are required to contact the course leader at least 8 weeks prior to the start of the course to select a topic and faculty advisor. The choice of topic, the proposed plan for completion of the Independent Study, and the faculty advisor must all be approved by the Faculty of Nursing.

Information sessions are scheduled, normally in April for the Fall session and in October for the Winter session, to familiarize students with the course. Students should check the Faculty's web page, BPRN section, for announcements about dates and times.

If a practice setting is required as part of the student's learning objectives, the student is responsible for negotiating access to the setting and addressing agency and faculty requirements. Be advised that 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 practice setting. These arrangements are subject to approval by the Faculty and require pre-planning.

Note: the prerequisite for this course is 35 credit hours of completed study in the program.

4.2.4 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. See Note 4 under 4.4 BPRN Curriculum. Some suggestions follow:

Faculty of Arts courses - e.g. anthropology, native studies, psychology, sociology, religion

Faculty of Human Ecology - e.g. human nutritional sciences, family social sciences

Asper School of Business (Management) - e.g. courses in business administration, management, organizational behaviour

Faculty of Kinesiology and Recreation Management

Faculty of Science - e.g. biology, chemistry, computer science, microbiology, zoology

Faculty of Social Work - e.g. courses in social welfare policy, communication skills

4.3 Courses Available to Students in Other Faculties

Students registered in faculties other than Nursing may take the following Nursing courses without Faculty permission:

NURS 1260	Human Growth & Development
NURS 1280	Introduction to Nursing
NURS 2200	Selected Topics in Aging and Health (see note 1)
NURS 3330	Women and Health (see note 1)
NURS 3400	Men's Health: Concerns, Issues and Myths (see note 1)

NOTES:

1) These courses are not intended for first year students.

SECTION 5: COURSE DESCRIPTIONS

Nursing Course Descriptions-1000 Level

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 profession of nursing and basic concepts relevant to nursing practice, education, and research are described. Past, present and future roles and functions of the nurse will be explored.

Nursing Course Descriptions-2000 Level

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 theory and skills necessary to collect a comprehensive health history and perform a complete physical examination. Nursing health assessment is presented as the systematic collection of data that can be used to make decisions about ways to promote, maintain or restore health.

NURS 2130 Nursing Skills Laboratory Cr.Hrs. 2
(Formerly 049.213) This is a scenario based course with an emphasis on provision of safe, competent, ethical care in the context of provision of introductory psychomotor nursing skills. Content is current and evidence based and deals with individuals across the lifesoan and across cultures. Development of independent learning strategies and evaluation of learning needs are integral to the course.

NURS 2180 Clinical Nursing Practice I Cr.Hrs. 3
(Formerly 049.218) Concepts of health promotion are applied to the care of infants, children, adolescents and young adults. The focus is on health related nursing phenomena and the development of assessment, communication, teaching/facilitive skills, and basic psychomotor skills. Pre or corequisite: NURS 1280 (or 049.128); and NURS 2120 (or 049.212); and NURS 2130 (or 049.213); and NURS 2240. Course is evaluated on a pass/fail basis.

NURS 2190 Clinical Nursing Practice II Cr.Hrs. 3
(Formerly 049.219) Concepts of health promotion and illness prevention are applied to the care of healthy and at risk 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); and NURS 2120 (or 049.212); and NURS 2130 (or 049.213); and NURS 2230. Course is evaluated on a pass/fail basis.

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 pharmcology (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.

NURS2240 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)

Nursing Course Descriptions-3000 Level

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 developing critical appraisal skills to support evidence-informed nursing practice. Strongly recommended that students complete STAT 1000 prior to NURS 3210.

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 3280 Nursing Skills Laboratory Cr.Hrs. 2
(Formerly 049.328) This is a scenario based course with an emphasis on provision of safe, competent, ethical care in the context of provision of intermediate level psychomotor nursing skills. Content is current and evidence based and deals with individuals across the lifespan and across cultures. Development of independent learning strategies of learning needs are integral to the course.

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/disorder and during the perioperative experience. 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/perioperative experience. 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). Course is evaluated on a pass/fail basis.

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 clients of all ages with long term illness. The course focuses chronic illness and related phenomena, analytical thinking, development of nursing roles, application of research findings and memberships on an interdisciplinary team. Pre- or corequisite: NURS 3280 (or 049.328); NURS 3310 (or 049.331). Course is evaluated on a pass/fail basis.

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 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
The legal and ethical foundations that guide nursing practice are examined. The process of critical analysis and reasoning will be applied to common legal and ethical issues. Not to be held with the former 049.216.

Nursing Course Descriptions-4000 Level

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. Orientation to the concept of prevention and health promotion as focal concepts in the practice of nursing with families in communities. Pre- or corequisite: NURS 3220 (or 049.322). 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 focuses on the effects of alterations in mental health on the individual, the family and the community. It explores how nurses can facilitate healing and promote mental health. The student will gain a greater awareness of the therapeutic use of self in the provision of nursing care. Societal and historical issues influencing mental health in populations will be highlighted.

NURS 4270 Clinical Nursing Practice V Cr.Hrs. 4
(Formerly 049.427) This course focuses on the application of concepts, issues, research and skills related to the nursing care of individuals and families who are experiencing emotional/psychological distress. The focus is on critical thinking and relational practice skills; and the development of the professional, advocate and collaborator roles. Pre or Co-requisites: NURS 4250 (or 049.425); NURS 4260 (or 049.426). Course is evaluated on a pass/fail basis.

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. Course is evaluated on a pass/fail basis.

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. The focus will be on promoting the health of aggregates and communities. Prerequisite: As a general principle, all courses from any given year are to be completed before proceeding to the next year.

NURS 4430 Clinical Nursing Practice 6 Cr.Hrs. 3
Students will apply relevant concepts, theories, and research in population health promotion, primary health care, and prevention of illness. The focus is on the development of nursing skills to work effectively with aggregates and communities. Prerequisites: NURS 2180 (or 049.218), NURS 2190 (or 049.219), NURS 3300 (or 049.330); and NURS 3320 (or 049.332). Corequisites: NURS 4440 and NURS 4420. Course is evaluated on a pass/fail basis.

NURS 4440 Prevention of Illness Cr.Hrs. 3
This course focuses on the concepts of risk reduction and the prevention of illness and injury as they are applied to individuals, groups, and populations. The nurse's role in prevention and the early detection of health risks is highlighted. Issues and research relevant to illness and injury prevention are incorporated. Not to be held with the former NURS 2170 (or 049.217). Prerequisites: As a general principle, all courses from any given year are to be completed before proceeding to the next year.

FACULTY OF PHARMACY

Dean: Neal Davies
Associate Dean(s): Lavern Vercaigne, Yuewen Gong
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Website: http://umanitoba.ca/faculties/pharmacy

Academic Staff: Please refer to the Faculty website for an Academic Staff listing: http://umanitoba.ca/faculties/pharmacy/staff/academic_staff.html

Pharmacists are specialists in drug therapy and provision of pharmaceutical care. This not only involves the traditional function of preparing and dispensing medications but also 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. 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, MHRC, 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.

Chapter Contents

SECTION 1: DEGREE PROGRAMS OFFERED

1.1 Programs

Program/Degree	*Years to Complete	*Total Credit Hours
B.Sc. Pharmacy	5	166

*This includes one year (30 credit hours) of study in University 1. The Total Credit Hours for this program decreased from 169 to 166 for the 2013-14 academic year.

1.2 Professional Designation

Manitoba Pharmaceutical Association

Students who are accepted for admission to the Faculty of Pharmacy shall file an application for registration as a student of the Manitoba Pharmaceutical Association, prior to the start of classes in September of the year they are admitted to the Faculty. Information will be included in the admission package sent to each student, and can also be obtained from The Manitoba Pharmaceutical Association, 200 Tache Ave., Winnipeg, Manitoba R2H 1A7; telephone, (204) 233-1411. Failure to complete this requirement will result in students being unable to participate in the Structured Practice Experiential Program (SPEP).

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. Although PEBC has no language proficiency requirements, language proficiency does affect candidates' performance in the Qualifying Examination (Part I and Part II). Effective written and verbal communication skills, at levels satisfactory for a health professional, are essential for practice and for success in taking the PEBC examinations.

SECTION 2: ADMISSION REQUIREMENTS

2.1 Course Requirements

(University of Manitoba)

Chemistry CHEM 1300 and CHEM 1310

Biology BIOL 1020 and BIOL 1030

Mathematics MATH 1500, or MATH 1510 or MATH 1520

6 credit hours of Arts electives (of which 3 hours satisfy the University Written English requirement): 0900 courses such as ENGL 0940 are NOT acceptable.

9 credit hours of open electives: 0900 courses such as ENGL 0930 are NOT acceptable.

All admission requirements, as well as application deadline dates and forms, are included in the Applicant Information Bulletin which is available on the University website at: http://umanitoba.ca/student/admissions/application/programs/pharmacy-application.html

2.2 Other Requirements

Other requirements

High school prerequisites: Biology 40S, Chemistry 40S, and Pre-Calculus Math 40S (min. 60%).

Minimum AGPA for consideration: 3.50. (Please refer to the Faculty of Pharmacy Applicant Information Bulletin for more details.)

The admission process includes a written critical skills essay.

Selection criteria: 70% AGPA, 30% written critical skills essay. Only students with an essay score of fifteen or more (out of a possible thirty) 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 required to provide a self-declaration of a Criminal Record and Child Abuse Registry listing following provisional admission, and subsequently a current, official Criminal Record Search and Child Abuse Registry Check. All documents must be submitted to the Faculty of Pharmacy Dean's Office by the first day of classes. 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 conducted by the Faculty of Pharmacy is independent of the review process conducted by the Manitoba Pharmaceutical Association.

Immunization

All students enrolled in the Faculty of Pharmacy must be immunized against the following diseases: diphtheria/tetanus/pertussis, polio, rubella, measles, mumps, chickenpox, Mantoux/Tuberculosis and hepatitis B and influenza. Students admitted to first year Pharmacy will be provided with an Immunization package at the time of acceptance into the Faculty. Students have the option to complete their immunizations with their own healthcare provider or participate in the Bannatyne Immune Status Program on campus. Students will be required to complete their Immunization Record Form by the end of their first year. Students will not be able to attend clinical rotations until all immunization requirements are up-to-date. Students are responsible for updating their immunizations as needed. Completion of the immunization schedule is required for course progression in Pharmacy.

SECTION 3: FACULTY 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.

3.1 Scholastic Progress

For course progression in the Faculty of Pharmacy students must achieve a minimum combined fall and winter term GPA of 2.00, 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 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 of the dean be permitted to apply for a supplementary examination in that course.

Application forms for supplementary examinations are available in the Faculty of Pharmacy Dean's 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 2.00, 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.

3.2 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 office of Student Advocacy 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. 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 http://crscalprod1.cc.umanitoba.ca/~/Catalog/ViewCatalog.aspx?pageid=viewcatalog&topicid=837242&topicgroupid=13406&LoadUserEdits=trueStudent Advocacy. 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.

3.3 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 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 the application date. No transfer of credit will be permitted for courses where a "D" grade (or its percentage equivalent) has been awarded.

3.4 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.

3.5 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 Dean's Office 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.

3.6 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.

3.7 Deferred Final Examinations

Students may file an application for a deferred final examination with the Dean for reasons of illness or other disability, or for compassionate reasons, setting out the reasons for the deferral. The application must be filed within seven working days of the end of the examination series in which the examination was scheduled to be written and must be accompanied by a medical certificate or otherwise appropriate documentation certifying the reason for the deferral, the inability of the student to write the examination at the regular scheduled time and, where possible, indicating the period of disability. Based on the evidence provided, the Dean shall decide whether the application is approved. Students who, for medical reasons receive deferred examination privileges for all final examination series may not re-register until they have established, through proper medical consultation, their fitness to resume studies. Any students requesting a deferred examination on the grounds that they are participating in an inter-university, provincial, inter-provincial, national or international scholastic or athletic event shall be granted said deferral, provided an application is filed with the Dean of the Faculty well in advance (normally 20 working days) of the scheduled examination; and that the Dean is satisfied, based on the evidence provided, that the application should be approved and that an appropriate time, and acceptable invigilator is not otherwise available to the student. Any student requesting deferred examination(s) 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.

3.8 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.

3.9 Dean's Honour List

Eligible students who achieve a combined fall and winter sessional GPA of 4.00 or higher will be placed on the Dean's Honour List. Eligible students must have completed a minimum of 12.5 credit hours in each of the fall and winter terms. (Exception: Fourth year students must complete a minimum of 10 credit hours during the winter term). The Dean's Honour List designation is not applied until the end of the winter term.

3.10 Academic Self-Declaration

All students accepted into the Faculty of Pharmacy will be required to complete a Self-Declaration of Records Form which declares current or previous academic suspensions and disciplinary actions. The disclosure contained therein must be satisfactory to the Faculty of Pharmacy.

3.11 Experiential Training (Structured Practical Experiential Program [SPEP])

Approved Placement Sites are limited, and the University cannot warrant that it will be able to find sufficient suitable placement sites in convenient locations, in a timely manner or at all. Students are responsible for all costs associated with SPEP, including travel and living expenses where placements are outside Winnipeg.

3.12 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.

3.13 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 Faculty of Pharmacy Dean's Office.

3.14 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 4: PROGRAM AND GRADUATION REQUIREMENTS

4.1 Student Responsibility

Students are advised to carefully review the Faculty of Pharmacy chapter of the Undergraduate Calendar to ensure compliance with degree program requirements.

It is the student's responsibility to know all relevant regulations, policies and practices.

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.

4.2 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 Faculty of Pharmacy Dean's Office at (204) 474-9306.

4.3 Course Information by Year

First Year Orientation

A mandatory orientation session will be held on Wednesday, September 4, 2013 for 1st Year Pharmacy students. More information on the orientation session will be mailed out in July to all students admitted to the faculty.

First 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 only be held until mid August.

When registering for Chemistry & Microbiology please register in the correct lecture & lab sections that have been reserved for Pharmacy Students.

Fall Term classes commence on Thursday, September 5, 2013. Attend all lectures/laboratories scheduled for that day.

The courses in the first year of the program are as follows:

Course No.	Course Name	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 1110	Pharmacy Skills Laboratory (PSL-1)	3
PHRM 1300	Fundamentals of Pharmaceutics	2
PHRM 1430	Applied Pathophysiology for Pharmacy Students	3
PHRM 1700	Structured Practical Experiential Program 1 (SPEP-1)	1
MBIO 1010	General Microbiology	3
ANAT 1030	Human Anatomy	3
PHGY 1030	Fundamentals of Medical Physiology	6
Total Credit Hours		**31**

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 only be held until mid August.

When registering for Microbiology please register in the correct lecture section that has been reserved for Pharmacy Students.

Fall Term classes commence on Thursday, September 5, 2013. Attend all lectures/laboratories scheduled for that day.

An IPE event is scheduled for the afternoon of Wednesday, March 12, 2014.

PHRM 2700 (SPEP-2) – This course falls under the Spring/Summer session guidelines. The Faculty of Pharmacy Dean's Office will register you for this course in March. Fees for PHRM 2700 will be assessed in March 2014.

SPEP-2 will take place May 5, 2014 - May 16, 2014 with a debriefing session to be held on May 16, 2014.

The courses in the second year of the program are as follows:

Second Year		
PHRM 2100	Pharmacy Skills Lab 2 (PSL-2)	3
PHRM 2222	Medicinal Chemistry	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 (SPEP-2)	2
MBIO 3010	Microbiology	3
PHAC 2100	Pharmacology	6
Total Credit Hours		**36**

Third Year Students

Register at your initial access time.

Fall Term classes commence on Thursday, September 5, 2013. Attend all lectures/laboratories scheduled for that day.

Term 2:

Classes End:	March 24, 2014
Exams:	March 28 - April 4, 2014
SPEP 3:	April 7 - May 2, 2014

The SPEP-3 debriefing session will be held on May 2, 2014.

PHRM 3700 (SPEP-3) – This course falls under the Spring/Summer session guidelines. The Faculty of Pharmacy Dean's Office will register you for this course in March. Fees for PHRM 3700 will be assessed in March 2014.

The courses in the third year of the program are as follows:

Course No.	Course Name	Credit Hours
Third Year		
PHRM 3110	Pharmacy Skills Lab 3 (PSL- 3)	3
PHRM 3220	Medicinal Chemistry 2*	3
PHRM 3230	Principles of Professional Practice	2
PHRM 3310	Clinical Pharmacy 2	10
PHRM 3320	Pharmaceutical Analysis Lab	3
PHRM 3430	Natural Products	3
PHRM 3520	Principles of Scientific Literature Evaluation	4
PHRM 3550	Clinical Pharmacokinetics	3
PHRM 3640	Principles of Biotechnology	3
PHRM 3700	Structured Practical Experiential Program 3 (SPEP-3)	4
Total Credit Hours		**38***

*This is the final year PHRM 3220 will be offered. The Total Credit Hours for third year will decrease from 38 to 35 for the 2014-15 academic year.

Fourth Year Students

Register at your initial access time.

Fall Term classes commence on Tuesday, September 3, 2013. Attend all lectures scheduled for that day.

Classes End:	Monday, October 28, 2013
Exams:	October 31 - November 1, 2013
SPEP:	Block 1 November 4 - December 13, 2013
	Block 2 January 6 – February 14, 2014
	Block 3 February 24 – April 4, 2014
Electives:	Block 1 November 4 - December 20, 2013
	Block 2 January 6 – February 21, 2014
	Block 3 February 24 – April 11, 2014

The courses in the fourth year of the program are as follows:

Fourth Year		
PHRM 4230	Pharmacy Practice Management	4
PHRM 4310	Clinical Pharmacy 3	4
PHRM 4450	Toxicology	3
PHRM 4470	Current Topics	3
PHRM 4700	Structured Practical Experiential Program 4 (SPEP - 4)	10
PHRM 4800	Electives Program	10
Total Credit Hours		**34**
Total Program Credit Hours:		**136***

* The Total Program Credit Hours for students currently in the third and fourth year of the program will be 139.

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 fall or winter term, or both.

SECTION 5: COURSE DESCRIPTIONS

PHRM 1000 Introduction to Pharmacy Cr.Hrs. 1
(Formerly 046.100) This course provides an orientation to Pharmacy and to the application of medicines within the context of today's dynamic medical care system. It has been designed to highlight professionalism early in the Pharmacy curriculum and will provide the opportunity for students to interact with Pharmacy professionals "at the cutting edge" of pharmacy practice.

PHRM 1110 Pharmacy Skills Laboratory Cr.Hrs. 3
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. 2
(Formerly 046.130) In a classroom and laboratory setting, this course provides an introduction to the compounding of pharmaceutical products and the physiochemical basis of product formulation. Practical aspects of formulation and an introduction to the dispensing function are also explored.

PHRM 1430 Applied Pathophysiology for Pharmacy Students Cr.Hrs. 3
(Formerly 046.143) A comprehensive theoretical foundation of the phenomena that produce alterations in human physiology function across the lifespan. Course content will prepare the student for subsequent courses related to diagnosis and management of disease processes associated with pathophysiologic dysfunction/alterations.

PHRM 1700 Structured Practical Experiential Program 1 Cr.Hrs. 1
(Formerly 046.170) This course is a service-learning experience, providing students the opportunity to work in community-based patient/client-centred settings. This course also includes two half day job shadowing experiential rotations in a variety of pharmacy practice settings (eg. community pharmacy practice, institutional pharmacy practice) under the supervision of pharmacist preceptors consistent with the Manitoba Pharmacy Act. It serves to familiarize students with the health care setting and the pharmacist's role. 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 2222 Medicinal Chemistry Cr.Hrs. 6
This course explores the physicochemical aspects of drug structure in absorption, distribution, metabolism, and excretion and the interaction between drugs and their receptors as they relate to the biochemical, pharmacological, and therapeutic actions of medicinal compounds. Not to be held with the former PHRM 220 or PHRM 3220. Prrequisites: CHEM 2210, CHEM 2360, CHEM 2370.

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 Cr.Hrs. 2
(Formerly 046.270) This course offers experiential learning in a variety of pharmacy practice settings (eg. community pharmacy practice, institutional pharmacy practice) It consists of 2 one week rotations at the end of the second year of the program. This course builds on skills learned in SPEP 1 and focuses on the practice of drug preparation and distribution, non-prescription medication counseling, and jurisprudent under the supervision of pharmacist preceptors consistent with the Manitoba Pharmacy Act. 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 3110 Pharmacy Skills Laboratory III Cr.Hrs. 3
(Formerly PHRM 3100, 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. May not be held with PHRM 3100 or 046.310.

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 3230 Principles of Professional Practice Cr.Hrs. 2
This course offers the opportunity to explore professionalism, ethics and socio-economic aspects of the health care system. May not be held with PHRM 3210.

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 3520 Principles of Scientific Literature Evaluation Cr.Hrs. 4
Primary literature is critically analyzed. Discussion of how study results impact on treatment strategies are emphasized. May not be held with PHRM 3510.

PHRM 3550 Clinical Pharmacokinetics Cr.Hrs. 3
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. may not be held with PHRM 3500 or 046.350.

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 Cr.Hrs. 4
(Formerly 046.370) This course offers experiential learning in a variety of pharmacy practice settings (e.g. community pharmacy practice, institutional pharmacy practice) It consists of 2 two week rotations at the end of the third year of the program. This course builds on skills learned in SPEP 1 and SPEP 2 and focuses on the introduction of applying pharmaceutical care to patients under the supervision of pharmacist preceptors consistent with the Manitoba Pharmacy Act. 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 Cr.Hrs. 10
(Formerly 046.461) This course offers experiential learning in a variety of pharmacy practice settings (e.g. community pharmacy practice, institutional pharmacy practice) It consists of 2 six week rotations. This course builds on skills learned in SPEP 1, SPEP 2 and SPEP 3 and focuses on practicing advanced pharmaceutical care and further developing therapeutic and disease knowledge under the supervision of pharmacist preceptors consistent with the Manitoba Pharmacy Act. Students will be graded on a pass/fail basis.

PHRM 4800 PHARM ELECTIVES 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

Dean: Mark Whitmore
Associate Dean(s): Peter Graham, Roy Roshko, Michele Piercey-Normore
Campus Address/General Office: 239 Machray Hall
Telephone: (204) 474 8256
Fax: (204) 474 7618
Email Address: Ask a Science Advisor

Website: umanitoba.ca/science

Academic Staff: For complete listings of the Faculty of Science Academic Staff, please refer to departmental websites.

Chapter Content

SECTION 1: DEGREES AND PROGRAMS OFFERED BY THE FACULTY OF SCIENCE

1.1 Degree Offerings

Degree Offering Name	Minimum Years to Complete[1]	Minimum Required Credit Hours
Bachelor of Science General Degree - B.Sc. General	3	90
Bachelor of Science Major Degree – B.Sc. Major	4	120
B.Sc. Major Degree – Co-operative Option	5[3]	120
Bachelor of Science Double Major Degree	4	120[2]
Bachelor of Science Honours Degree – B.Sc. Honours	4	120 - 129
B.Sc. Honours Degree – Co-operative Option	5[3]	120
Bachelor of Computer Science Honours – B.C.Sc. Honours	4	120
B.C.Sc. Honours Degree – Co-operative Option	5[3]	120
Bachelor of Science Double Honours Degree	4	120[2]

NOTES:

1. This number includes one year (24 or more credit hours) of study compled in University One.

2. The actual number of credit hours required to complete the Double Major and Double Honours programs may exceed 120 credit hours and will depend on each specific program, designed in consultation with the departments involved.

3. This number includes a minimum of 12 months paid employment.

1.2 Program Offerings (Honours, Majors, Minors, Focus Areas)

Program	Theme / Focus / Concentration / Option	Honours	Major	Co-op	Minor
Actuarial Mathematics		•			
Biochemistry		•	•	•	
Biological Sciences		•	•	•	•
Theme Areas	Cell, Molecular and Developmental Biology	•	•	•	
	Ecology and Environmental Biology	•	•	•	
	Environmental and Integrative Physiology	•	•	•	
	Evolution and Biodiversity	•	•	•	
	Integrative Biology	•	•	•	
Biotechnology		•	•	•	
Program Streams	Analytical Biotechnology	•	•	•	
	Environmental Biotechnology	•	•	•	
	Molecular Biotechnology	•	•	•	
Chemistry		•	•	•	•
Focus Areas	Bioanalytical Chemistry	•	•	•	
	Biopharmaceutical Chemistry	•	•	•	
	Biophysical Chemistry	•	•	•	
	Environmental Chemistry	•	•	•	
	Materials Science	•	•	•	
	Organic Chemistry	•	•	•	
	Physical Chemistry	•	•	•	
	Quantum / Computational Chemistry	•	•	•	
Computer Science		•	•	•	•
Areas of Specialization	Theoretical Computer Science	•	•	•	
	Networks and Security	•	•	•	
	Artificial Intelligence	•	•	•	
	Human-Computer Interaction	•	•	•	
	Databases	•	•	•	
	Software Engineering	•	•	•	
	Computer Systems	•	•	•	
	Web-Based Systems	•	•	•	
Computer Science – Mathematics Joint Program		•		•	
Computer Science – Physics and Astronomy Joint Program		•		•	
Computer Science – Statistics Joint Program		•		•	
Genetics		•	•	•	
Mathematics		•	•		•
Applied Mathematics			•		
Options	Computer Science Option		•		
	Economics Option		•		
	Statistics Option		•		
Mathematics – Physics and Astronomy Joint Program		•			
Mathematics – Economics Joint Program		•			
Microbiology		•	•	•	•
Physics and Astronomy		•	•		•
Options	Astronomy (Option A)	•			
	Physics (Option B)	•			
	Medical and Biological (Option C)	•			
Psychology		•	•		•
Statistics		•	•	•	•
Statistics – Actuarial Mathematics Joint Program		•			
Statistics – Mathematics Joint Program		•			
Statistics – Economics Joint Program		•			

SECTION 2: ADMISSION TO THE FACULTY OF SCIENCE

2.1 Direct Entry Admissions Requirements

1. Manitoba high school graduation with five full credits at the Grade 12 level in courses designate S, G, or U.

2. A minimum 85% average over the following, with no less than 60% in each course:

a. English 40S

b. Pre-Calculus Mathematics 40S (recommended) or Applied Mathematics 40S; AND,

c. One of Biology 40S, Chemistry 40S, Computer Science 40S, or Physics 40S

2.2 Entrance to Science from University 1: Transiting

To transit from University 1 to the Faculty of Science a student must have completed a minimum of 24 credit hours of courses and achieved a cumulative grade point average of at least 2.00. If a student has satisfied the minimum requirements for entry to Science, they simply perform the transit function on AURORA Student to enter the Faculty of Science. There are no fees for transiting and there is no application form required. If you need assistance with transiting to Science from University 1, please contact a Faculty of Science Academic Advisor. Students who do not meet the aforementioned minimums may still be eligible to enter the Faculty of Science and can appeal to be considered for admission to Science on the recommendation of the Dean. For further information please contact a Faculty of Science Academic Advisor and/or refer to the Faculty of Science applicant information brochure and the University Admissions website: www.umanitoba.ca/admissions.

Students intending to enter a 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.

2.3 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 Academic 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 Division of Extended Education.

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: Please refer to the Admissions website at umanitoba.ca/admissions or the Admissions section at the front 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 Academic Advisor regarding departmental transfer credit policies. **All courses acceptable to the Faculty of Science must be transferred.**

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 – see applicant information bulletin for details on AGPA) on all previous university work are eligible for admission as Second Degree students.

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 to all continuation, residency and graduation requirements as described in Section 3.

Specific information on requirements for a Bachelor of Science degree following the completion of a degree in another faculty or school, or at another university, is available in the general office.

2.5 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.

2.6 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 of Science general office. The Faculty of Arts will prohibit auditors from registering in their courses until after the initial access period for registration.

2.7 Returning to Science after an Extended Leave

Students who have been away from Science for more than a year are blocked from using AURORA STUDENT. They must consult with a Science Academic Advisor. If the student has not attended another post-secondary institution, they are eligible to return. The advisor will determine academic progress, registration date and time, and discuss degree plans. Students planning a return to studies are strongly urged to contact an Advisor well in advance of the start of registration. 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 for Fall term.

Students who have graduated must re-apply (July 1 for Fall Term – Other deadlines may be found at umanitoba.ca/admissions) and be academically competitive for admission.

SECTION 3: ACADEMIC REGULATIONS

3.1 Regulations Applicable to All Programs

The provisions of the chapters: "General Academic Regulations and Requirements" and "University Policies" apply to all students. In addition, the Faculty of Science has regulations and requirements published below that apply specifically to its students.

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 regarding 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 GPA calculations relating to a student's program of study.

There is a limit on the number of 'F' grades permitted in any degree.

Students who wish to repeat a course must obtain permission to repeat the course from the Faculty of Science prior to registration.

NOTE: In most cases, professional Faculties and Schools have specific rules governing the way repeated courses are treated in their admission process. Check the applicant information bulletin of the appropriate Faculty or School, or with the Admissions Office (424 University Centre), or with a Science student advisor for information regarding how different professional programs treat repeated courses in determining admission.

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 the Registrar's Office. No withdrawals will be permitted after the deadlines posted in the Academic Schedule.

There is no longer a limit on the number of Voluntary Withdrawal hours a student can accumulate (effective September 2006).

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 Academic Advisor for information.

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.

For more information on Letters of Permission, refer to the Registration Information section of this calendar or to the Registrar's Office website at: umanitoba.ca/registrar .

Academic Dishonesty

Academic dishonesty is intentional cheating, fabrication, impersonation, or plagiarism. It is also knowingly or inadvertently 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 Academic Advisor or a faculty member. Information about academic penalties for academic dishonesty is available on the Faculty of Science website.

Academic Assessment

Effective September 2013, each student in the Faculty of Science will be placed on academic suspension for one year, regardless if there has been evidence of improved performance, if they have more than 36 credit hours of "F" grades.

Following a one year suspension, the student may return upon application to the Faculty of Science by selecting one of the following irreversible options:

(a) to continue with no possibility of further "F" grades. Any further "F" grades will result in academic suspension for two years. (Following the two year suspension, the student may apply to the Faculty of Science 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.)

Required to Withdraw from Major or Honours

If your last assessment was "Required to Withdraw from the Honours or the Major program," you **must** consult a Science Academic Advisor prior to registration. An advisor will review new degree plans, determine eligibility for a desired program, and update any affected university records.

Students on "Hold"

If a student is on "Hold", they are prevented from any registration transaction (including Voluntary Withdrawals) until you have cleared this status. Contact a Science Academic Advisor if you wish to drop a course while on "Hold".

Term work 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 term work requirements to the satisfaction of a department may 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

Students unable to write a final examination because of illness, disability, or for compassionate reasons, must file an application in the faculty general office for a deferred examination. The application must be filed within 48 hours of the examination. 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 granted to a student who has written the final examination.

Deferred examinations that need to be re-deferred, and/or requests where a student is seeking a deferral in a third examination series (i.e. Fall 2008, Winter 2009, Winter 2010 – any course) must be approved by the Faculty of Science Committee on Student Standing. Students must appeal, in writing, to the Committee on Student Standing and provide precise documentation that outlines why a deferral request should be granted in their case.

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.

Appeal for 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. Requests for authorized withdrawals must be submitted in writing to a Faculty of Science Academic Advisor. The Office of Student Advocacy located at 519 University Centre (474-7423, student_advocacy@umanitoba.ca) is available to provide information and assistance.

Appeal for other Academic Concessions

Students who believe they have grounds for academic concessions based on their personal circumstances should consult with a Science Academic Advisor. The Office of Student Advocacy located at 519 University Centre (474-7423, student_advocacy@umanitoba.ca) is available to provide information and assistance.

Laboratory 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.

Laboratory 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 the written permission 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.

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. Failure to check out of your laboratory may result in your academic records being placed on HOLD.

3.2 B.Sc. (General) Degree Academic Regulations

B.Sc. (General) – Three Year Degree

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 pursue 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 with passing grades ("D" or better) in each course. A student must obtain a minimum grade point average of 2.00 on the 90 credit hours which constitute the degree to qualify for the degree of Bachelor of Science (General).

There is no limit on the number of courses that can be taken within the B.Sc. (General). Students may not exceed 36 credit hours of failures.

Introductory Level Science courses (24 credit hours): Students must select 6 credit hours from each of 3 areas listed below (18 credit hours) in Group A. Additionally, students must select 6 credit hours from any courses listed in Group A and/or Group B.

NOTE: No more than 6 credit hours may be selected from any single subject area for use toward the 24 credit hours of introductory course requirements.

Group A:

Astronomy: six credit 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 (or COMP 10122) and COMP 1020

Mathematics: six credit hours chosen from MATH 1200 (or MATH 12101), MATH 1300 (or equivalent), MATH 1500, (or equivalent), MATH 1700 (or equivalent).

Microbiology: MBIO 1010 and MBIO 2020

Physics: PHYS 1020 or PHYS 1050; and PHYS 1030 or PHYS 1070

Statistics: STAT 1000 (or STAT 22203) and STAT 2000

Group B:

BIOL 1410, FORS 2000.

Notes:

1. MATH 1210 is intended for Engineering students and may not be held for credit with MATH 1200 or MATH 1300.

2. COMP 1012 is intended for Engineering students and may not be held for credit with COMP 1010.

3. STAT 2220 is intended for Engineering students and may not to be held for credit with STAT 1000

Advanced Level Science Courses (36 credit hours): Effective for students entering Science September 2008 or later2, to satisfy the advanced level requirements of the 3-year General Degree program, eighteen (18) credit hours at the 2000, 3000, and (or) 4000 level must be chosen from each of two of the following Science departments: Biological Sciences, Chemistry, Computer Science, Mathematics, Microbiology, Physics and Astronomy, and (or) Statistics.

Of the 36 credit hours (total) from the advanced areas of study, at least 6 credit hours must be chosen from 3000 or 4000 level courses. Students should note prerequisite requirements for upper level courses when planning their program. Appropriate courses and combinations of courses are detailed in each departmental section. Substitute courses from a department may be taken by obtaining written authorization from the chosen department.

Other Faculty Courses (12 credit hours): a minimum of 12 credit hours must be taken from outside the Faculty of Science, of which at least six credit hours must be from the Faculty of Arts. A maximum of 30 credit hours may be taken from outside the Faculty of Science for use in the General Degree program.

Elective Courses (18 credit hours): 18 credit hours of the B.Sc. General Degree are open electives.

Biological Sciences Option - Effective Fall Term 2009: Effective September 2009, students may elect to choose all 36 credit hours of advanced level course requirements from the Department of Biological Sciences (formerly Botany and Zoology) provided they follow the specified course selections prescribed in the Biological Sciences Focus Chart - B.Sc.General.

Chemistry Option - Effective Fall Term 2010: Effective September 2010 students may elect to choose a specific set of introductory courses, plus all 36 credit hours of the advanced level course requirements from the Department of Chemistry provided they follow the specified course selections (introductory and advanced levels) prescribed in Chemistry Focus Chart - B.Sc. General.

NOTES:

1. Students having difficulty with the interpretation of these regulations or the way in which they are applied, are urged to contact a Science Academic Advisor in the general office. Students are responsible for their own degree progress and completion.

2. Students admitted to the Faculty of Science prior to September 2008 should consult with a Science Academic Advisor about degree requirements.

B.Sc. General Degree Minimum Performance Requirements

Effective September 2013, each student in the Faculty of Science will be placed on academic suspension for one year, regardless if there has been evidence of improved performance, if they have more than 36 credit hours of "F" grades.

Following a one year suspension, the student may return upon application to the Faculty of Science by selecting one of the following irreversible options:

(a) to continue with no possibility of further "F" grades. Any further "F" grades will result in academic suspension for two years. (Following the two year suspension, the student may apply to the Faculty of Science 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.)

B.Sc. General Degree Residence Requirements

There are two ways in which students may fulfill the minimum requirement of credit hours that must be taken at the University of Manitoba: by taking at least 48 credit hours at the University of Manitoba; or by taking at least the final 30 credit hours at the University of Manitoba. The courses used to satisfy the residence requirement must be acceptable for credit in the Faculty of Science. Residency requirements apply to both first and second degree students.

3.3 B.Sc. (Major) Degree Academic Regulations

B.Sc. (Major) – Four-Year Degree

The four year Major programs provide in-depth study and enable graduates to function competently in a career in their chosen subject area.

While this program is not intended for students pursuing graduate studies, 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.

B.Sc. (Major): Academic Regulations

To qualify for the degree Bachelor of Science (Major), a student must complete 120 credit hours or more, with minimum grades of "C" on Major Program Specific courses (as specified by the department), passing grades ("D" or better) on the remaining courses, and a minimum grade point average 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.

At least 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. Students in the Major degree programs may take a maximum of 36 credit hours from outside the Faculty of Science.

B.Sc. (Major): Entrance Requirements

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). 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 that 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 (DGPA of 2.00 for Second Degree students and Start Afresh students) regardless of the point of entry, and must meet continuation requirements as outlined below.

B.Sc. (Major): Continuation Requirements

To continue in the program, a student must maintain a Cumulative Grade Point Average of 2.00 (DGPA of 2.00 for Second Degree students and Start Afresh students) at each point of assessment. Students who do not meet this minimum will be required to withdraw from the Major program.

There is no minimum term course load requirement for the Major program.

Failed courses: Any student that exceeds 18 credit hours of failing grades after entering a Major program will be required to withdraw from that program. **Students are also subject to the academic assessment policy found in 3.1 Regulations Applicable to all Students.**

A student will be required to repeat those failed courses specified as required courses for the program; however, with the approval of the department the student may be allowed to substitute a new course for any elective course failed.

Program Approval: The department must approve a student's Major program prior to registration for courses in 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.

B.Sc. (Major): Residence Requirement

To satisfy the Faculty of Science residency requirements, a student must successfully complete at least 60 credit hours 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 to both first and second degree students.

B.Sc. Double Major Programs

Students may wish to pursue a Double-Major program in the Faculty of Science. Consultation with, in addition to specific course selection and approval from, the departments involved must occur prior to the commencement of any Double-Major program. Students must also consult with a Faculty of Science Academic Advisor prior to the start of any Double-Major program.

3.4 B.Sc. (Major) Cooperative Option Academic Regulations

The Major programs that offer a Cooperative Option are: Biochemistry, Biological Sciences, Biotechnology, Chemistry, Computer Science, Genetics, and Microbiology.

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 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 Biological Sciences 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).

To continue in a four year Major Cooperative Option a student must attain a minimum Degree 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'. Continuation in a four year Major Cooperative Option is also contingent upon satisfactory performance in employment terms.

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.

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. **Students are also subject to the academic assessment policy found in 3.1 Regulations Applicable to all Students.**

Four year Major Cooperative Option students who are required to withdraw, or voluntarily revert to an alternative degree program must fulfil all academic requirements of that degree.

3.5 Honours Academic Regulations

B.Sc. (Honours) and B.C.Sc. (Honours) – Four Year Degrees

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).

Students must complete the university written English and Mathematics requirements as described in the chapter, General Academic Regulations and Policy, of this Calendar.

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, these six credit hours, including the three credit hours of written English, should be completed in Year 1.

Honours Entrance Requirements

To enter an Honours degree program, a student must have completed at least 24 credit hours, have a minimum DGPA of 3.00, and a grade of "B" or better in at least one introductory course designated by the department(s).

Another way to gain entry to the many Faculty of Science Honours programs is through the **Second Year Entry Route**. If a student finds himself/herself ineligible to enter a desired Honours program following the completion of 24 or more credit hours, eligibility to enter Honours via the second year entry route can be established by taking a minimum of 18 credit hours over consecutive Fall and Winter Terms (formerly called a Regular Session) with a minimum of 9 credit hours in each term. The 18 credit hours chosen must be applicable to the program the student wishes to enter, and the student must achieve at least a "B" average on those 18 credit hours. If a student chooses to attempt more than 18 credit hours over the consecutive Fall and Winter terms, the best applicable 18 credit hours will be used to calculate whether or not the "B" average has been achieved for the purpose of assessing eligibility for entrance to the Honours program of choice. Note: Students wishing to enter an Honours program using the Second Year Entry Route must also have an overall DGPA of at least 3.00.

Program Approval: The department must approve a student's Honours program prior to registration for each session. Students must also obtain departmental approval for any and all revisions to their program.

Honours Continuation Requirements

A minimum Degree Grade Point Average of 3.00 is required at each point of assessment. Certain departments may have more rigorous continuation requirements. Check the specific departmental section for further information.

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 after entering 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. **Students are also subject to the academic assessment policy found in 3.1 Regulations Applicable to all Students.**

Honours Graduation Requirements

To qualify for the degree, Bachelor of Science (Honours), a student must complete a minimum of 120 credit hours or more with a minimum grade of C on all courses contributing to the 120 credit hours that satisfy the program requirements. Additionally, students must have a minimum degree grade point average of 3.00.

Honours Residence Requirement

A student must successfully complete a minimum of 60 credit hours at the University of Manitoba. The courses used to satisfy the requirement must be acceptable for credit in the Faculty of Science. Residency requirements apply to both first and second degree students.

Withdrawal from Honours

Honours students reverting to an alternate degree program must fulfil all academic requirements of that degree.

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 Honours Cooperative Option Academic Regulations

The Honours programs offering a Cooperative Option are: Biochemistry, Biological Sciences, Biotechnology, Chemistry, Computer Science, Genetics, Microbiology, Joint Computer Science - Mathematics, Joint Computer Science – Physics and Astronomy, and the Joint Computer Science – Statistics 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 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).

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.

Students who accumulate more than 15 credit hours of failed courses after entering the Honours Co-op 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. **Students are also subject to the academic assessment policy found in 3.1 Regulations Applicable to all Students.**

Continuation in an Honours Cooperative Option is contingent upon satisfactory performance on Employment Terms.

Honours Cooperative Option students who are required to withdraw or voluntarily revert to an alternative degree program must fulfill all academic requirements of that degree.

3.7 Minors: Academic Regulations for Science Students

Students in B.Sc. Major and Honours programs may, if they wish, declare and complete a Minor from any department or interdisciplinary program at the University of Manitoba which offers a listed Minor. In the Faculty of Science Minors are listed in the program charts for each department and interdisciplinary program. Other available Minor requirements can be found within the appropriate sections of the departmental/school/faculty offerings. Completion of a Minor in a B.Sc. Major or Honours program 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 on, due to restricted opportunities in later years of their programs. Completion of a Minor may require that a student take more than the minimum number of credit hours required for graduation. If they wish, students may choose to complete and declare multiple Minors in the four year Major and Honours degree programs.

The Minor is not available to students in the B.Sc. General Degree program.

A Minor will normally consist of a minimum of 18 credit hours specified by the department(s) offering the Minor. Courses required in a student's specific Honours or Major degree program are acceptable for use in a chosen Minor, subject to the Faculty of Science regulation stating that students may not declare both their Major and Minor from the same department or interdisciplinary program.

Minors not offered by the Faculty of Science can be selected from the following list. For further information about courses required for the completion of a specific Minor, please refer to the section of the calendar that relates to the chosen area.

Animal Systems, Entomology, Food Science, Plant Biotechnology, Soil Science, Art History, Anthropology, Asian Studies, Canadian Studies, Catholic Studies, Central and East European Studies, Classics, Greek, Latin, Economics, English, Film Studies, Theatre, French, Spanish, Italian, German, Russian, Ukrainian, Polish, History, Icelandic, Labour Studies, Linguistics, Medieval Studies, Native Studies, Native Languages, Near Eastern and Judaic Studies, Philosophy, Political Studies, Psychology, Religion, Sociology, Ukrainian Canadian Heritage Studies, Women's and Gender Studies, Geography, Geological Sciences, Physical Geography, Environmental Science, Environmental Studies, Human Nutrition and Metabolism, Family Social Sciences, Management*, and Music.

***Faculty of Management/Asper School of Business:** 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 Academic Advisor.

3.8 Dean's Honour List, Degree with Distinction, First Class Honours

Dean's Honour List (all programs)

Students enrolled in 12 credit hours or more who achieve a Term Grade Point Average of 3.75 or higher will be placed on the Dean's Honour List. The Dean's Honour List will be calculated after each term.

Degree with Distinction (4-Year Major Degree and 3-Year General Degree)

To obtain a Degree with Distinction a student must achieve a final minimum Degree Grade Point Average of 3.80. The term "Degree with Distinction" will appear on the student's parchment and the student's transcript of marks.

First Class Honours (Honours Degree Only)

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 on the student's parchment and on the student's transcript of marks.

3.9 Faculty of Science Academic Awards

Refer to the Faculty of Science Website for information regarding awards available to Faculty of Science Students:

http://umanitoba.ca/faculties/science/about/awards.html

To be eligible for any award granted exclusively on the basis of academic performance, a student must be enrolled in 100% of a full program as defined by the department.

3.10 Academic Advising,

Contact Information
Science General Office: 239 Machray Hall
Telephone: (204) 474 8256
Toll-Free: 1 800 432 1960, extension 8256
E-mail: science_advisor@umanitoba.ca
Website: www.umanitoba.ca/science

Science Advisor Availability: availability calendar

Student Responsibility

You must ensure that you are selecting the correct courses that will enable you to satisfy your degree requirements. Specific degree requirements are listed in the program charts found in the departmental/program sections of

this chapter. Final completion of specific degree requirements is the student's responsibility. Academic Advisors are available to answer any questions regarding a student's academic progress.

AURORA STUDENT will not check degree requirements. You are responsible for knowing the requirements of your degree. Consult with a Science Academic Advisor for advice and assistance if you are uncertain about your degree requirements.

AURORA Student will not prevent a student from registering in two (or more) courses that are designated as not to be held for credit with one another. It is the student's responsibility to ensure that they are not registered for courses that are ineligible to be held for credit with one another. Read the course descriptions carefully. If you are unsure about a course you have selected, check with a Science Academic Advisor prior to the revision deadline. No academic concessions will be granted in this regard.

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.

General Degree Program

Students in the General program are not required to contact a Science Academic Advisor before registration; however, they are strongly advised to do so. A Science Academic Advisor can answer any questions about degree progress and entry to professional faculties that may affect registration.

Students reverting from a Major or Honours program to the General program must consult a Science Academic Advisor prior to registration, so that their university records may be changed.

Science Academic Advisors may check your degree progress periodically. These checks are completed after registration. **Reminder: It is the student's responsibility to know and satisfy all degree requirements.**

Honours, Major, and Cooperative Options

Honours students are required to register in a minimum of 9 credit hours during each Fall and Winter Term. Prior to declaring graduation, Honours, Major, and Co-op students are encouraged to have their programs checked by Science Academic Advisors on a regular basis. However, at the minimum, students must have their program checked and approved by a Science Academic Advisor prior to the start of the term they enter their program and again prior to the term they plan on completing their degree.

Students entering or changing a program must see a Science Academic Advisor so that eligibility can be checked and university records updated.

SECTION 4: PROGRAMS AND COURSES OFFERED BY THE FACULTY OF SCIENCE

Important Course Selection Information

The courses required to complete the specific Honours, Major, General and Minor programs in Science are listed in the program charts found below.

Not all courses included in the course description sections below are currently offered. The course schedule for the current academic year is available through AURORA Student. Students should note that space in Honours and Major specific courses may be reserved for students in those programs.

All Honours and Major Degree Programs (4-year degrees) offered by the Faculty of Science satisfy the University "M" (Mathematics) requirement.

Students registered in the 3-Year General Degree programs are responsible for ensuring that they successfully complete a course that will satisfy the University's "M" (Mathematics) requirement.

Students in all programs are responsible for ensuring that they successfully complete a course that will satisfy the University's "W" (Written English) requirement.

For a complete listing of courses that satisfy the University's "W" and "M" requirements refer to appendix A of the General Academic Regulations and Requirements section of this Calendar.

In the Faculty of Science, unless otherwise noted, a minimum grade of "C" is required in any course listed as a prerequisite.

NOTE: Course prerequisites may be waived with written consent of the department

4.1 Actuarial Mathematics Program

Program Director: Jeffrey Pai
Campus Address/General Office: 640 Drake Centre
Telephone: 204 474 6412
Email Address: jpai@ms.umanitoba.ca

Website: www.umanitoba.ca/actuarial

4.1.1 Program Information

This is an interdisciplinary program leading to a Bachelor of Science (Honours) degree in Actuarial Mathematics 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 than does the Actuarial Mathematics program offered by the I.H Asper School of Business.

The Warren Centre, with the department of Statistics, offers a joint Honours program (see Section 4.13.3).

To enter the program, a student must have completed a minimum of 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in one of the following courses: a three (3) credit hour Written English (W) course, MATH 1300, MATH 1500, MATH 1700, STAT 1000, or both of ECON 1010 and ECON 1020. All of these courses are program requirements and students are strongly urged to take them in the first year.

To continue in the Actuarial Mathematics Honours program, students must maintain a minimum DGPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00, 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

Students must achieve a minimum grade of "C+" in each of the following for both prerequisite purposes and graduation requirements:

ACT 2020, ACT 2120, ACT 2210, ACT 3130, ACT 3230, ACT 3340, ACT 3530, ACT 4060, ACT 4140, ACT 4340

In order to receive course credit for, and examination exemptions from, future Society of Actuaries (SoA) and VEE courses, students must obtain a minimum grade of "B" in the following courses: ECON 1010, ECON 1020, ACC 1100, FIN 2200, STAT 3470, and STAT 3490. Contact the Warren Centre for Actuarial Studies and Research for further information.

4.1.2 Actuarial Mathematics Program Chart

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS ACTUARIAL 120 CREDIT HOURS			
ECON 1010[5], ECON 1020[5] MATH 1500[1], MATH 1700[1], MATH 1300[1] STAT 1000, STAT 2000 3 credit hour "W" requirement	ACT 2020, ACT 2120 STAT 2400, STAT 3400 ACC 1100[2,5], FIN 2200[2,5], ACT 2210 MATH 2720[1], MATH 2730[1] MATH 2300[4]	ACT 3130, ACT 3230, ACT 3340, ACT 4140 STAT 3050, STAT 3800 GMGT 2010	ACT 4060, ACT 4340 STAT 3470[5], STAT 3490[3,5] MSCI 2150
6 credit hours of electives[2]		9 credit hours of approved electives[6]	15 credit hours of approved electives[6]
30 Hours	30 Hours	30 Hours	30 Hours
JOINT STATISTICS - ACTUARIAL MATHEMATICS HONOURS: See Section 4.13.3			

NOTES:

[1] MATH 1510 or MATH 1520 may be taken instead of MATH 1500; MATH 1310 may be taken instead of MATH 1300; MATH 1710 may be taken instead of MATH 1700MATH 1690 may be taken in place of both MATH 1500 and MATH 1700; MATH 2750 may be taken in place of both MATH 2720 and MATH 2730.

[2] Students are strongly urged to complete ACC 1100 in Year 1 when possible. FIN 2200 may be taken in Year 2,3 or 4; however, it is strongly recommended that it be completed in Year 2. Note that ACC 1100 is a prerequisite for FIN 2200.

[3] STAT 3490 may be taken in Year 3 or 4.

[4] MATH 2300 may be taken in Year 2, 3 or 4.

[5] In order to receive course credit and examination exemptions from future Society of Actuaries (SoA) and VEE courses, students must obtain a minimum grade of "B" in these courses. Contact the Warren Centre for Actuarial Studies and Research for further information.

[6] Recommended Electives

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.

Year 3: FIN 3410, STAT 3480

Year 4: FIN 3270, STAT 4100, STAT 4200, STAT 4520, STAT 4530, STAT 4630.

4.2 Biochemistry

Head: Deborah Court, Department of Microbiology; Peter Budzelaar, Department of Chemistry

Campus Address/General Office: 418 Buller Building / 360 Parker Building

Telephone: 204 474 9372 / 204 474 9321

Email Address: dcourt@cc.umanitoba.ca and Chemistry_Dept@umanitoba.ca

Website: http://umanitoba.ca/faculties/science/departments/microbiology/ OR http://www.umanitoba.ca/chemistry

4.2.1 Program Information

The program coordinators must approve a student's Honours or Major program each session. Students must also obtain approval for any and all revisions to their program.

Biochemistry Honours Degree Requirements

To enter the joint Honours program in Biochemistry, a student must have completed at least 24 credit hours with a minimum GPA of 3.00 and also obtained a minimum grade of "B" in CHEM 1310 and a minimum grade of "C+" in BIOL 1020. BIOL 1030, PHYS 1020 (or PHYS 1050), PHYS 1030 (or PHYS 1070), MATH 1500 and MATH 1700 are required courses in the program and students are strongly encouraged to complete them in first year.

To continue in the Biochemistry Joint Honours program, students must maintain a minimum GPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the Biochemistry Joint Honours degree, a student must achieve a minimum GPA of 3.00 and obtain a minimum grade of "C" on the courses that make up the 120 credit hours of the degree.

Chemistry and Microbiology Option Courses for Biochemistry Honours Students:

CHEM: 2290, 3360, 3370, 3390, 3400, 3490, 3580, 3590, 4370, 4570, 4580, 4590, 4600, 4640, 4650, 4670, 4680, 4690, 4710 (6)

MBIO: 3000, 3010, 3030, 3280, 3430, 3470, 4010, 4020, 4410, 4440, 4480, 4520, 4530, 4570, 4580, 4600, 4610, 4670 (or 4672)

Option courses no longer offered that may be used if taken prior to their deletion: CHEM 3380, MBIO 2280, MBIO 3440, MBIO 3480, MBIO 4320, MBIO 4470, and MBIO 4510. NOTE: Several of these courses may not be held with current course offerings found on the above option lists. Please refer to the calendar descriptions for more information about specific course restrictions.

Other options may be considered and approved by the program advisor.

Biochemistry Honours 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 April of their second 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 a minimum of nine (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 GPA of 3.00 and a minimum grade of "C" on all courses that contribute to the 120 credit hours of the degree.

In addition to the program specific courses, in years 3 and 4 students will select 21 credit hours from the list of optional Microbiology and Chemistry courses found below. Additionally, students will select 12 credit hours of Science electives (see note 5).

Chemistry and Microbiology Option Courses for Biochemistry Honours Students:

CHEM: 2290, 3360, 3370, 3390, 3400, 3490, 3580, 3590, 4370, 4570, 4580, 4590, 4600, 4640, 4650, 4670, 4680, 4690, 4710 (6)

MBIO: 3000, 3010, 3030, 3280, 3430, 3470, 4010, 4020, 4410, 4440, 4480, 4520, 4530, 4570, 4580, 4600, 4610, 4670 (or 4672)

Option courses no longer offered that may be used if taken prior to their deletion: CHEM 3380, MBIO 2280, MBIO 3440, MBIO 3480, MBIO 4320, MBIO 4470,

and MBIO 4510. NOTE: Several of these courses may not be held with current course offerings found on the above option lists. Please refer to the calendar descriptions for more information about specific course restrictions.

Other options may be considered and approved by the program advisor.

Students must check with the Co-op office for the April application deadline information. Students will be notified of their provisional acceptance in the program by September. 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. 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 Degree Requirements

To enter the joint four year Major program, a student must have completed a minimum of 24 credit hours with a minimum GPA of 2.00, and also obtained a minimum grade of "C+" in CHEM 1310, and a minimum grade of "C" in BIOL 1020. BIOL 1030, PHYS 1020 (or PHYS 1050), PHYS 1030 (or PHYS 1070), MATH 1500, and MATH 1700 are required courses in the program and students are strongly encouraged to complete these courses in first year.

To continue in the Bachelor of Science Major degree program, students must maintain a minimum GPA of 2.00.

To graduate with the Bachelor of Science Major in Biochemistry, a student must complete 120 credit hours or more, with minimum grades of "C" on all Major Program Specific courses (see below), passing grades ("D" or better) on the remaining courses, and a minimum grade point average of 2.00 on the 120 credit hours that contribute to the degree.

Major Program Specific Courses

CHEM: 2210, 2220, 2280, 2360 (MBIO 2360), 2370 (MBIO 2370), 2400 (2380), 2470, 3570, 4630 and whichever one of 4620, 4360, 4370 is selected

MBIO: 1010, 2020, 3410, and whichever one of 3450, 3460 or 4540 is selected.

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) and MBIO 2020 should be taken in Year 2 as they are 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.

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).

Biochemistry Major Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their program may enter the Biochemistry Major Cooperative Option in April of their second 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 those required 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 graduate with the degree Bachelor of Science Major (Cooperative Option), a student must complete the equivalent of 120 credit hours or more, with minimum grades of "C" on Major Program Specific courses (see below), passing grades ("D" or better) on the remaining courses, and a minimum grade point average of 2.00 on the 120 credit hours that contribute to the degree.

Major Program Specific Courses

CHEM 2210, 2220, 2280, 2360 (MBIO 2360), 2370 (MBIO 2370), 2400 (2380), 2470, 3570, 4630 and whichever of 4620, 4360, 4370 is selected

MBIO 1010, 2020, 3410, and whichever one of 3450, 3460 or 4540 selected.

Students must check with the Co-op office for the April application deadline information. Students will be notified of their provisional acceptance in the program by September. 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. 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.

4.2.2 Biochemistry Programs (offered Jointly by the Departments of Chemistry and Microbiology)

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">JOINT HONOURS 120 CREDIT HOURS</td></tr>
<tr><td>CHEM 1300, CHEM 1310

BIOL 1020, BIOL 1030

PHYS 1050 (or PHYS 1020), PHYS 1070 (or PHYS 1030)

MATH 1500[1], MATH 1700[1]</td><td>CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2360, CHEM 2370, CHEM 2400, CHEM 2470

MBIO 1010, MBIO 2020</td><td>CHEM 3570

MBIO 3410, MBIO 3450, MBIO 3460</td><td>CHEM 4360, CHEM 4620, CHEM 4630, CHEM 4700

MBIO 4540</td></tr>
<tr><td colspan="2">In Year 1 or Year 2 the following must be completed:

6 credit hours from the Faculty of Arts including the University Written English "W" requirement[2]

3 credit hours chosen from COMP, MATH, or STAT[5]</td><td colspan="2">21 credit hours selected from the list of Microbiology and Chemistry optional courses (listed above).

12 credit hours selected from the Faculty of Science[5]</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS COOPERATIVE OPTION[3] 120 CREDIT HOURS			
CHEM 1300, CHEM 1310 BIOL 1020, BIOL 1030 PHYS 1050 (or PHYS 1020), PHYS 1070 (or PHYS 1030) MATH 1500[1], MATH 1700[1]	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2360, CHEM 2370, CHEM 2400, CHEM 2470 MBIO 1010, MBIO 2020	CHEM 3570 MBIO 3410, MBIO 3450, MBIO 3460	CHEM 4360, CHEM 4620, CHEM 4630 MBIO 4540
In Year 1 or Year 2 the following must be completed: 6 credit hours from the Faculty of Arts including the University Written English "W" requirement[2] 3 credit hours chosen from COMP, MATH, or STAT[5]		24 credit hours selected from the list of Microbiology and Chemistry Optional courses listed above. 12 credit hours selected from the Faculty of Science[5] Work Terms: MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990	
30 Hours	30 Hours	30 Hours	30 Hours
JOINT FOUR YEAR MAJOR (Including Cooperative Option)[3,4] 120 CREDIT HOURS			
CHEM 1300, CHEM 1310 BIOL 1020, BIOL 1030 PHYS 1050 (or 1020), PHYS 1070 (or PHYS 1030) MATH 1500[1], MATH 1700[1]	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2360, CHEM 2370, CHEM 2400, CHEM 2470 MBIO 1010, MBIO 2020	CHEM 3570 MBIO 3410 One of: MBIO 3450, MBIO 3460, MBIO 4540	CHEM 4630 One of: CHEM 4620, CHEM 4360, CHEM 4370
In Year 1 or Year 2 the following must be completed: 6 credit hours from the Faculty of Arts including the University Written English "W" requirement[2] 3 credit hours chosen from COMP, MATH, or STAT[5]		24 credit hours of Microbiology and Chemistry (minimum 6 credit hours from each dept.). Of these 24 credit hours, at least 12 hours must be 4000 level courses. 21 credit hours of approved electives[5] Work Terms (if Co-op Selected): MBIO 3980, MBIO 3990, MBIO 4980 and / or MBIO 4990	

NOTES:
1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.
2 As there are no open electives in Year 2 of the program, students should complete the university written English requirement in Year 1. If not completed in Year 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.
3 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.
4 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 MATH 1010, MATH 1020, MATH 1190, COMP 1260, COMP 1270 may not be chosen to satisfy this requirement
(Letters in brackets indicate minimum prerequisite standing for further study.)

4.3 Department of Biological Sciences

Head: Judy Anderson
Campus Address/General Office: 212 Biological Sciences Building
Telephone: 204 474 9245
Email Address: janders@ms.umanitoba.ca
Website: http://umanitoba.ca/science/biological_sciences/

4.3.1 Biological Sciences

Biology is one of the most rapidly evolving and diverse sciences in the modern world, exploring all aspects of life from biomolecules to ecosystems. The Department of Biological Sciences is committed to advancing our understanding of biological structure and function, and developing new tools and technologies to address current and emerging problems facing all living organisms. Connections will be forged between molecules, cells, tissues, organs, organisms, populations, communities, and ecosystems, highlighting the need to explore all levels of biological interactions. Programs emphasize the organism as the key element in studies of the development and evolution of form and function, and the role in adaptations to the environment. Based on a core of fundamental biological principles, our programs explore diverse areas such as organismal biology, environmental biology, genetics, cell biology and development, physiology, ecology, behaviour, and systematics and evolution. The Department focuses on the integration of research and teaching expertise to create opportunities for growth and novel synergisms in the training of future leaders in the field.

4.3.2 B.Sc. Honours: Biological Sciences

The Honours program is designed for students planning a professional career in Biological Sciences 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 Theme Advisor who may be contacted through the Biological Sciences Office (212 Biological Sciences Building). Students are encouraged to select a specific theme area of study as part of their Biological Sciences program. Should a student not opt for one of the five theme groups, they may design their own program by completing the core course requirements plus 30 credit hours of 3000 and/or 4000 level Biological Sciences courses. See the information below outlining the different theme areas offered by the Department of Biological Sciences.

To enter the Biological Sciences Honours program a student must have completed at least 24 credit hours with a minimum GPA of 3.00, and obtained a minimum grade of "B" BIOL 1030. CHEM 1300, CHEM 1310, STAT 1000 and the 3 credit hours of specified Mathematics, Physics or Statistics are program requirements and students are strongly urged to complete these courses in first year.

To continue in the Biological Sciences Honours program, students must maintain a minimum GPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum GPA of 3.00, and obtain a minimum grade of "C" on the courses that make up the 120 credit hours of the degree.

Four Year Honours Cooperative Option

Students interested in alternating academic terms and work terms of paid employment as part of their Honours Biological Sciences program may apply to enter the Cooperative Option in April of their second year in Honours Biological Sciences. 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.

There are several themes offered within the Biological Sciences Program and the Cooperative Option can be completed within any of these areas of study. See below for a description of the different themes and the course requirements of those themes offered by the Department of Biological Sciences.

Students may apply for openings in the Biological Sciences Honours Cooperative Option after completing at least two years (60 credit hours) in the Honours program, usually in April of their second year. Before the first employment term begins, the prerequisite courses listed below must be completed. Acceptance and continuation in the program is dependent upon the student receiving employment placements. Students are encouraged to check with the Co-op office (214 Buller Building) for application deadlines.

Prerequisite courses to be completed before employment terms begin: BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000, 3 credit hours of specified Mathematics or Physics, BIOL 2300, BIOL 2500, BIOL 2520, and BIOL 3100 *. In addition, students must complete 9 credit hours from program core courses as follows: students must select one course from Group A (BIOL 2200, BIOL 2210), plus one course from Group B (BIOL 2240, BIOL 2242, BIOL 2260), plus one additional course from either Group A or Group B. [* A Pre-Coop Workshop may be substituted for BIOL 3100 only to permit an employment term in September of Year 3, but BIOL 3100 must still be taken.]

Students should note that the course and grade requirements for the Biological Sciences Honours 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 Biological Sciences Honours Cooperative program a student must maintain a minimum DGPA of 3.00, and successfully complete all work term courses.

Students should refer to the general faculty regulations for B. Sc. (Honours) Cooperative Options in Section 3.6.

Work term positions available to the students will be approved by the department and may include positions within Biological Sciences, other University departments or positions with employers outside the University. 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. 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 program will include three employment terms, each of 4-months duration, two of which may be consecutive. A fourth work term is optional. Students are required to register in and pay tuition for each employment term prior to its commencement. Students will be required to submit an employment report 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.

4.3.3 B.Sc. (Major): Biological Sciences

The four year Major program is also designed for students planning a professional career in the Biological Sciences, but who may not be considering graduate training. It will provide intensive training in all areas of Biology comparable to that of the Honours program, but has less demanding performance requirements. Additionally, students may complete the Major degree requirements on a part-time basis if they so choose. Students who so wish, and have appropriate standing and course selection, may transfer to the Honours program at any time up to the commencement of Year 4.

Appropriate courses will be arranged in consultation with the Theme Advisor who may be contacted through the Biological Sciences Office, 212 Biological Sciences Building. Students are encouraged to select a specific theme area of study as part of their Biological Sciences program. See the information below outlining the different theme areas offered by the Department of Biological Sciences.

Course BIOL 4100 is not available to students in this program.

To enter the Biological Sciences four year Major program a student must have completed a minimum of 24 credit hours with a minimum DGPA of 2.00, and obtained a minimum grade of "C+" in BIOL 1030. CHEM 1300, CHEM 1310, STAT 1000 and the 3 credit hours of specified Mathematics, Physics or Statistics are program requirements and students are strongly encouraged to complete these courses in first year.

To continue in the Bachelor of Science Major degree, a student must maintain a minimum DGPA of 2.00.

To graduate with the Bachelor of Science (Major) in Biological Sciences, a student must obtain a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree, and a minimum grade of "C" or better in all required courses and required option courses.

Four Year Major Cooperative Option

Students interested in alternating academic terms and work terms as part of their Major Biological Sciences program may apply to enter the Cooperative Option in April of their second year in the Biological Sciences 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.

Students may apply for openings in the Biological Sciences Major Cooperative Option after completing at least two years (60 credit hours) in the Major program, usually in April of their second year. Before the first employment term begins, the prerequisite courses listed below must be completed. Acceptance and continuation in the program is dependent upon the student receiving employment placements. Students are encouraged to check application deadlines with the Co-op program office (214 Buller Building).

Prerequisite courses to be completed before employment terms begin: BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1000, 3 credit hours of specified Mathematics or Physics, BIOL 2300, BIOL 2500, BIOL 2520 and BIOL 3100 *. In addition, students must complete 9 credit hours from program core courses as follows: students must select one course from Group A (BIOL 2200, BIOL 2210), plus one course from Group B (BIOL 2240, BIOL 2242, BIOL 2260), plus one additional course from either Group A or Group B. [* A Pre-Coop Workshop may be substituted for BIOL 3100 only to permit an employment term in September of Year 3, but BIOL 3100 must still be taken.]

Students should note that the course and grade requirements for the Biological Sciences Major Cooperative Option are the same as those for the regular Major program (see above), with the addition of BIOL 3100 and the Work Term courses. To continue in the Biological Sciences Major Cooperative program, a student must have a Cumulative Grade Point Average of 2.00, and a pass on all work term courses.

Students should also refer to the general faculty regulations for B. Sc. (Major) Cooperative Options in Section 3.4.

Work term positions available to the students will be approved by the department and may include positions within Biological Sciences, other University departments or positions with employers outside the University. 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. 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 program will include three employment terms, each of 4-months duration, two of which may be consecutive. A fourth work term is optional. Students are required to register in and pay fees for each employment term prior to its commencement. Students will be required to submit an employ-

ment report 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.

4.3.4 Biological Sciences Theme Areas

I. Cell, Molecular and Developmental Biology: Students in the Department of Biological Sciences with an interest in the exciting field of cell and developmental biology can select the Cell, Molecular, and Developmental Biology theme for focus. This theme will provide students a selection of courses that highlight fundamental principles and many important advances in this rapidly growing area of contemporary biology. Students can concentrate on aspects that deal with the molecular structures and processes of cellular life and their roles in the function, reproduction, and development of living organisms. The theme is structured such that students can choose from a broad range of disciplines, including biochemistry, molecular biology, morphology, genetics, cell biology, and developmental biology. The organisms under study in this theme are equally diverse, ranging from microbes through to invertebrates, vertebrates, plants, and fungi. The Department collaborates with many other life sciences departments and this theme allows student to develop a highly flexibly course portfolio that includes courses from the Departments of Biological Sciences, Chemistry, Microbiology, or Plant Science.

Specific courses required for the Cell, Molecular, and Developmental Biology Theme in addition to the core course requirements: BIOL 2540 (3); Plus a minimum of 6 Credit hours of Biochemistry: CHEM 2770 (MBIO 2770) and CHEM 2780 (MBIO 2780); or CHEM 2210 and CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370).

II. Ecology and Environmental Biology: Ecology is the study of interactions between organisms and their environment, both in natural settings and human-influenced habitats. In our society ecology and environmental biology provides a scientific link to the living world. Ecologists study the lives of many organisms including animals, plants, fungi, protists, and bacteria. Interactions among these organisms are investigated at many scales ranging from the microscopic to the global. At the individual level, ecology investigates the impact of environmental factors on organisms through their physiology and behaviour. Ultimately, ecologists link these factors to survival and reproduction in variable environments. At the population level, ecology examines the causes of fluctuations in numbers and changes in distribution of a single species. This work is often the focus of agencies concerned with exploitation, extinction, and rehabilitation of both commercially and esthetically important species. At the community and ecosystem level, ecology considers many coexisting species. It examines the interactions between species within the communities (competition, predation, parasitism, mutualism, etc.) as well as broader investigations of community structure and composition. Ultimately, the skills developed within this theme prepare students for future careers in academia, government agencies, private consulting companies, or NGOs whose mandates encompass ecological and environmental concerns.

Specific courses required for the Ecology and Environmental Biology Theme in addition to the core course requirements: BIOL 3310 (3); BIOL 3312 (3); BIOL 3314 (3); STAT 2000 (3).

III. Environmental and Integrative Physiology: The Environmental and Integrative Physiology theme will be of interest to a wide array of students interested in pursuing employment opportunities in the Environmental, Consulting, Pharmaceutical, Healthcare, and Professional job markets. Based on the suggested courses and sub themes within this program students will be able to graduate with an all inclusive degree or specialize in particular disciplines ranging from molecular physiology to whole organism physiology and eco/environmental physiology, a subject area that is at the interface between ecology and physiology. Students will be exposed to modern research techniques in lab classes and will be taught by instructors and faculty with active research programs within the Department of Biological Sciences.

Specific courses required for the Environmental and Integrative Physiology Theme in addition to the core course requirements: 6 Credit hours of Biochemistry CHEM 2770 (MBIO 2770) and CHEM 2780 (MBIO 2780); or CHEM 2210 and CHEM 2360 (MBIO 2360) and CHEM 2370 (MBIO 2370); Plus: two of the following courses (one of which is already required in the four-year Biological Sciences Degree programs): BIOL 3470 (3), BIOL 3472 (3) BIOL 3450 (3), BIOL 3452 (3).

IV. Evolution and Biodiversity: Evolution is broadly defined as "descent with modification" and is the process that generates the earth's biodiversity. The theory of evolution provides a unifying framework for biology because all organisms are descended from a common ancestor. As a result, evolutionary principles permeate research and teaching throughout biology.

Evolutionary biology addresses two overarching questions. (1) What was the history of life? (2) What processes account for adaptation and diversification? Systematics reconstructs the history of life by studying relationships among species, and involves comparisons of physical appearance, development, biochemistry, genetics, behaviour, ecology and biogeography. Evolutionary Genetics investigates how processes such as natural selection, mutation, and migration interact to cause evolutionary change within populations. Evolutionary history, genetics, and ecological context are required to fully understand the evolution of traits, for example body size, wing shape or leaf structure. Thus evolution integrates knowledge from a wide spectrum of sub-disciplines within biology.

Evolutionary biology has wide-ranging practical applications. Principles of evolution are required to understand: the evolution of pathogens such as HIV and avian influenza; domestication of wild species and consequences of genetic modifications; the identification of natural products; long-term responses to environmental change; and human biology. Courses from this theme will prepare students for academia, medicine, and government agencies or NGO's that emphasize the cataloguing and conservation of biological diversity.

Specific course required for the Evolution and Biodiversity Theme in addition to the core course requirements:

List A: One of the following: BIOL 3360, BIOL 4240, BIOL 4242, BIOL 4362

List B: One of the following: BIOL 3200, BIOL 3242, BIOL 3250, BIOL 3270, BIOL 4212, BIOL 4214, BIOL 4216, BIOL 4218.

V. Integrative Biology: The Integrative Biology theme will be of interest to students planning to pursue careers in the various biology sub disciplines and who wish an undergraduate degree that is "interdisciplinary" within the life science departments that cuts across the traditional boundaries. This program will suit students who are interested in the "after degree" program in Education or who are intending to apply to a professional program (e.g. Medicine, Dentistry, Pharmacy, Medical Rehabilitation) and who would like a broad background in the Life Sciences. With the appropriate choice of Biological Science courses it would be possible to indicate the Integrative Biology theme along with a second theme from the department.

Specific courses required for the Integrative Biology Theme in addition to the core course requirements: All five of the following (three of which are already designated as core courses in the four-year Biological Sciences Degree programs): BIOL 2200 (3), BIOL 2210 (3), BIOL 2240 (3), BIOL 2242 (3), MBIO 1010 3); One of the following (one of which is already required in the four-year Biological Sciences Degree programs): BIOL 3450 (3), BIOL 3470; Plus: 18 credit hours in Biological Sciences (3000/4000 level courses) and 12 credit hours in Microbiology (3000/4000 level courses).

Note: a maximum of 15 credit hours of Biological Sciences and Microbiology courses at the 2000 level are permitted in the Integrative Theme for use toward the 3000/4000 level requirements of the degree.

4.3.5 B. Sc. General Degree: Biological Sciences

Courses taken as part of a General degree program provide an introduction to the major fields of study in the Biological Sciences. Commencing in Fall Term 2009, students will have two options for the General Degree under the Department of Biological Sciences.

Option A: 18 credit hours of 2000, 3000, and (or) 4000 level Biological Sciences courses (subject to the Faculty requirement that of the 36 credit hours in the two chosen advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level);

Option B: Students may choose 36 credit hours from the Biological Sciences provided they select the following courses: each of BIOL 2300, BIOL 2500, BIOL 2520; one of BIOL 2200 or BIOL 2210; one of BIOL 2240, BIOL 2242, or BIOL 2260; plus 21 additional credit hours (2000 level or higher) from the Biological Sciences including at least a minimum of 6 credit hours at the 3000 or 4000 level.

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 Departmental Program Advisor before registering.

4.3.6.1 Biological Science - Cell, Molecular and Developmental Biology Theme Charts

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS: Cell, Molecular and Developmental Biology Theme (incl. Co-op) 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000	BIOL 2300, BIOL 2500, BIOL 2520 Choose one course from each of: Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260 One additional course from either Group A or Group B Either both of CHEM 2770 and CHEM 2780; or all three of CHEM 2210, CHEM 2360, and CHEM 2370 (theme courses)	BIOL 3100, BIOL 3300 BIOL 2540 (theme course) Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 30 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor). Enough elective credit hours required to total 120 credit hours for the program.	BIOL 4100 (6)
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course		**Work Terms (if Co-op Selected):** BIOL 3980, BIOL 3990	**Work Terms (if Co-op Selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hours

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
4-YEAR MAJOR: Cell, Molecular and Developmental Biology Theme (incl. Co-op)[6] 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000	BIOL 2300, BIOL 2500, BIOL 2520 Choose one course from each of: Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260 One additional course from either Group A or Group B Either both of CHEM 2770 and CHEM 2780; or all three of CHEM 2210, CHEM 2360, and CHEM 2370 (theme courses)	BIOL 3300 BIOL 2540 (theme course) Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 30 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor). Enough elective credit hours required to total 120 credit hours for the program.	
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course		**Cooperative Option Requirements (if selected):** BIOL 3980, BIOL 3990	**Cooperative Option Requirements (if selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1. MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.
2. IMPORTANT**:** The programs need not be completed in the manner prescribed in the chart above. The charts indicate one possible arrangement of the 120 credit hours that make up the degree and are meant to be a guide around which students can plan their programs with a view to satisfying the prerequisites of the required courses. These 120 credit hours are a combination of the courses outlined in the charts above and elective courses chosen by the student in consultation with the program advisors.
3. For the Integrative Biology Theme only, a maximum of 15 credit hours of 2000 level Microbiology and Biological Sciences courses may be used towards the 30 hours of 3000/4000 level requirements.
4. Courses from other departments or faculties may be acceptable for use towards the 30 credit hours of 3000/4000 level Biological Sciences courses required in the Honours and Major Degree programs. Please consult with the department for permission to use alternate courses.
5. Students should confirm the new regulations of the B.Sc. General Degree with a Faculty of Science Academic Advisor if they wish to choose 36 hours of advanced level study from the Department of Biological Sciences.

(The number 6 in brackets indicates a six credit hour course.)

4.3.6.2 Biological Sciences - Ecology and Environmental Biology Theme Charts

HONOURS: Ecology and Environmental Biology Theme (incl. Co-operative Option) 120 CREDIT HOURS			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000, STAT 2000 (theme course)	BIOL 2300, BIOL 2500, BIOL 2520 Choose one course from each of: Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260 One additional course from either Group A or Group B	BIOL 3100, BIOL 3300 BIOL 3310, BIOL 3312, BIOL 3314 (theme courses) Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 21 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor). 15 credit hours of approved electives	BIOL 4100 (6)
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course 15 credit hours of approved electives		**Work Terms (if Co-op Selected):** BIOL 3980, BIOL 3990	**Work Terms (if Co-op Selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hours

YEAR 1	YEAR 2	YEAR 3	YEAR 4
4-YEAR MAJOR: Ecology and Environmental Biology Theme (incl. Co-op)[6] 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000, STAT 2000 (theme course)	BIOL 2300, BIOL 2500, BIOL 2520 Choose one course from each of: Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260 One additional course from either Group A or Group B	BIOL 3300 BIOL 3310, BIOL 3312, BIOL 3314 (theme courses). Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 21 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor). Enough elective credit hours required to total 120 credit hours for the program.	
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course		**Cooperative Option Requirements (if selected):** BIOL 3980, BIOL 3990	**Cooperative Option Requirements (if selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hour

NOTES:

1. MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.

2. IMPORTANT**:** The programs need not be completed in the manner prescribed in the chart above. The charts indicate one possible arrangement of the 120 credit hours that make up the degree and are meant to be a guide around which students can plan their programs with a view to satisfying the prerequisites of the required courses. These 120 credit hours are a combination of the courses outlined in the charts above and elective courses chosen by the student in consultation with the program advisors.

3. For the Integrative Biology Theme only, a maximum of 15 credit hours of 2000 level Microbiology and Biological Sciences courses may be used towards the 30 hours of 3000/4000 level requirements.

4. Courses from other departments or faculties may be acceptable for use towards the 30 credit hours of 3000/4000 level Biological Sciences courses required in the Honours and Major Degree programs. Please consult with the department for permission to use alternate courses.

5. Students should confirm the new regulations of the B.Sc. General Degree with a Faculty of Science Academic Advisor if they wish to choose 36 hours of advanced level study from the Department of Biological Sciences.

(The number 6 in brackets indicates a six credit hour course.)

4.3.6.3 Biological Sciences - Environmental and Integrative Physiology Theme Charts

<table>
<tr><td colspan="4"><u>HONOURS: Environmental and Integrative Physiology Theme (incl. Co-op)</u> 120 CREDIT HOURS (Courses listed in chart below and electives)</td></tr>
<tr><td>BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

STAT 1000</td><td>BIOL 2300, BIOL 2500, BIOL 2520

Choose one course from each of:
Group A: BIOL 2200, BIOL 2210
Group B: BIOL 2240, BIOL 2242, BIOL 2260

Plus one additional course from either Group A or Group B

Either both of CHEM 2770 and CHEM 2780; or all three of CHEM 2210, CHEM 2360, and CHEM 2370 (theme courses).</td><td>BIOL 3100, BIOL 3300

Choose one of the following:

BIOL 3450, BIOL 3470, BIOL 3472

Choose two of: BIOL 3470, BIOL 3472, BIOL 3450 (if not already taken), or BIOL 3452 (theme courses).</td><td>BIOL 4100 (6)</td></tr>
<tr><td colspan="4">24 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor).

Enough elective credit hours required to total 120 credit hours for the program.</td></tr>
<tr><td colspan="2">In Year 1 or Year 2 the following must be completed:

3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050

6 credit hours from the Faculty of Arts, including a required "W" course</td><td>Work Terms (if Co-op Selected):

BIOL 3980, BIOL 3990</td><td>Work Terms (if Co-op Selected):

BIOL 4980, BIOL 4990 (if necessary)</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

<table>
<tr><td colspan="4"><u>4-YEAR MAJOR: Environmental and Integrative Physiology Theme (incl. Co-op)</u>[6] 120 CREDIT HOURS (Courses listed in chart below and electives)</td></tr>
<tr><td>BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

STAT 1000</td><td>BIOL 2300, BIOL 2500, BIOL 2520

Choose one course from each of:

Group A: BIOL 2200, BIOL 2210

Group B: BIOL 2240, BIOL 2242, BIOL 2260

Plus one additional course from either Group A or Group B.

Either both of CHEM 2770 and CHEM 2780; or all three of CHEM 2210, CHEM 2360, and CHEM 2370 (theme courses).</td><td colspan="2">BIOL 3300

Choose one of the following:

BIOL 3450, BIOL 3470, BIOL 3472

Choose two of: BIOL 3470, BIOL 3472, BIOL 3450 (if not already taken), or BIOL 3452 (theme courses).

24 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor).

Enough elective credit hours required to total 120 credit hours for the program.</td></tr>
<tr><td colspan="2">In Year 1 or Year 2 the following must be completed:

3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050

6 credit hours from the Faculty of Arts, including a required "W" course</td><td>Cooperative Option Requirements

(if selected):

BIOL 3980, BIOL 3990</td><td>Cooperative Option Requirements

(if selected):

BIOL 4980, BIOL 4990 (if necessary)</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

NOTES:

1. MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.

2. IMPORTANT**:** The programs need not be completed in the manner prescribed in the chart above. The charts indicate one possible arrangement of the 120 credit hours that make up the degree and are meant to be a guide around which students can plan their programs with a view to satisfying the prerequisites of the required courses. These 120 credit hours are a combination of the courses outlined in the charts above and elective courses chosen by the student in consultation with the program advisors.

3. For the Integrative Biology Theme only, a maximum of 15 credit hours of 2000 level Microbiology and Biological Sciences courses may be used towards the 30 hours of 3000/4000 level requirements.

4. Courses from other departments or faculties may be acceptable for use towards the 30 credit hours of 3000/4000 level Biological Sciences courses required in the Honours and Major Degree programs. Please consult with the department for permission to use alternate courses.

5. Students should confirm the new regulations of the B.Sc. General Degree with a Faculty of Science Academic Advisor if they wish to choose 36 hours of advanced level study from the Department of Biological Sciences.

(The number 6 in brackets indicates a six credit hour course.)

4.3.6.4 Biological Sciences - Evolution and Biodiversity Theme Charts

HONOURS: Evolution and Biodiversity Theme (incl. Co-operative Option) 120 CREDIT HOURS			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000	BIOL 2300, BIOL 2500, BIOL 2520 Choose one course from each of: Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260 Plus one additional course from either Group A or Group B	BIOL 3100, BIOL 3300 Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 3 credit hours chosen from the Evolutionary Processes List (A) above. 3 credit hours chosen from the Biodiversity course List (B) above. 24 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor). 15 credit hours of approved electives	BIOL 4100 (6)
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course 18 credit hours of approved electives		**Cooperative Option Requirements (if Selected):** BIOL 3980, BIOL 3990	**Cooperative Option Requirements (if Selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hours

4-YEAR MAJOR: Evolution and Biodiversity Theme (incl. Co-op)[6] 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000	BIOL 2300, BIOL 2500, BIOL 2520 Choose one course from each of: Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260 Plus one additional course from either Group A or Group B	BIOL 3300 Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 3 credit hours chosen from the Evolutionary Processes List (A) above. 3 credit hours chosen from the Biodiversity course List (B) above. 24 credit hours of 3000 or 4000 level Biology courses[4] (courses from outside Biology may be approved by the theme advisor). Enough elective credit hours required to total 120 credit hours for the program.	
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course		**Cooperative Option Requirements (if selected):** BIOL 3980, BIOL 3990	**Cooperative Option Requirements (if selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1. MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.

2. IMPORTANT**:** The programs need not be completed in the manner prescribed in the chart above. The charts indicate one possible arrangement of the 120 credit hours that make up the degree and are meant to be a guide around which students can plan their programs with a view to satisfying the prerequisites of the required courses. These 120 credit hours are a combination of the courses outlined in the charts above and elective courses chosen by the student in consultation with the program advisors.

3. For the Integrative Biology Theme only, a maximum of 15 credit hours of 2000 level Microbiology and Biological Sciences courses may be used towards the 30 hours of 3000/4000 level requirements.

4. Courses from other departments or faculties may be acceptable for use towards the 24 credit hours of 3000/4000 level Biological Sciences courses required in the Honours and Major Degree programs. Please consult with the department for permission to use alternate courses.

5. Students should confirm the new regulations of the B.Sc. General Degree with a Faculty of Science Academic Advisor if they wish to choose 36 hours of advanced level study from the Department of Biological Sciences.

(The number 6 in brackets indicates a six credit hour course.)

4.3.6.5 Biological Sciences - Integrative Biology Theme Charts

HONOURS: Integrative Biology Theme (incl. Co-operative Option) 120 CREDIT HOURS			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000	BIOL 2300, BIOL 2500, BIOL 2520 Required Theme courses: BIOL 2200, BIOL 2210, BIOL 2240, BIOL 2242 MBIO 1010 CHEM 2770 and CHEM 2780 or CHEM 2210, CHEM 2360, CHEM 2370	BIOL 3100, BIOL 3300 Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 24 credit hours of 3000 or 4000 level Biological Sciences courses[3] 6 credit hours of 3000 or 4000 level Microbiology courses Enough elective credit hours required to total 120 credit hours for the program.	BIOL 4100 (6)
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course 12 credit hours of approved electives		**Work Terms (if Co-op Selected):** BIOL 3980, BIOL 3990	**Work Terms (if Co-op Selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hours

4-YEAR MAJOR: Integrative Biology Theme (incl. Co-op) 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1000	BIOL 2300, BIOL 2500, BIOL 2520 Required Theme course: BIOL 2200, BIOL 2210, BIOL 2240, BIOL 2242 MBIO 1010 CHEM 2770 and CHEM 2780; or CHEM 2210, CHEM 2360, CHEM 2370	BIOL 3300 Choose one of the following: BIOL 3450, BIOL 3470, BIOL 3472 24 credit hours of 3000 or 4000 level Biology courses[3] 6 credit hours of 3000 or 4000 level Microbiology courses Enough elective credit hours required to total 120 credit hours for the program.	
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH 1200, MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course		**Cooperative Option Requirements (if selected):** BIOL 3980, BIOL 3990	**Cooperative Option Requirements (if selected):** BIOL 4980, BIOL 4990 (if necessary)
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1. MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.

2. IMPORTANT**:** The programs need not be completed in the manner prescribed in the chart above. The charts indicate one possible arrangement of the 120 credit hours that make up the degree and are meant to be a guide around which students can plan their programs with a view to satisfying the prerequisites of the required courses. These 120 credit hours are a combination of the courses outlined in the charts above and elective courses chosen by the student in consultation with the program advisors.

3. Courses from other departments or faculties may be acceptable for use towards the 24 credit hours of 3000/4000 level Biological Sciences courses required in the Honours and Major Degree programs. Please consult with the department for permission to use alternate courses.

4. Students should confirm the new regulations of the B.Sc. General Degree with a Faculty of Science Academic Advisor if they wish to choose 36 hours of advanced level study from the Department of Biological Sciences.

(The number 6 in brackets indicates a six credit hour course.)

4.3.6.6 Biological Sciences - General Degree and Minor Requirements Charts

GENERAL DEGREE (90 credit hours)	
BIOL 1020, BIOL 1030	18 credit hours of 2000, 3000, and (or) 4000 level Biological Sciences courses (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level.); **or** Students may choose all 36 credit hours of advanced level courses from the Department of Biological Sciences as long as courses are selected following the provisions outlined below: Each of BIOL 2300, BIOL 2500, BIOL 2520; one of BIOL 2200 or BIOL 2210; one of BIOL 2240, BIOL 2242 or BIOL 2260; plus 21 additional credit hours from the Biological Sciences including at least 6 credit hours at the 3000 or 4000 level[5].
MINOR	
BIOL 1020 and BIOL 1030	12 credit hours from 2000, 3000, and/or 4000 level Biology courses.

NOTES:

1. MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300.
2. IMPORTANT**:** The programs need not be completed in the manner prescribed in the chart above. The charts indicate one possible arrangement of the 120 credit hours that make up the degree and are meant to be a guide around which students can plan their programs with a view to satisfying the prerequisites of the required courses. These 120 credit hours are a combination of the courses outlined in the charts above and elective courses chosen by the student in consultation with the program advisors.
3. For the Integrative Biology Theme only, a maximum of 15 credit hours of 2000 level Microbiology and Biological Sciences courses may be used towards the 30 hours of 3000/4000 level requirements.
4. Courses from other departments or faculties may be acceptable for use towards the 30 credit hours of 3000/4000 level Biological Sciences courses required in the Honours and Major Degree programs. Please consult with the department for permission to use alternate courses.
5. Students should confirm the new regulations of the B.Sc. General Degree with a Faculty of Science Academic Advisor if they wish to choose 36 hours of advanced level study from the Department of Biological Sciences.

(The number 6 in brackets indicates a 6 credit hour course.)

4.3.6.7 Translation Chart for Former BOTN and ZOOL Course Numbers

Translation of former BOTN and ZOOL course number to the BIOL Prefix

Note: BIOL courses introduced since Fall 2009 will not be found in this chart. Refer to the course description section

2008-2009 Course Number		Course Title	New Number - Fall 2009
BIOL 1000		Foundations of Life	BIOL 1000
BIOL 1010		Biological Diversity and Interaction	BIOL 1010
BIOL 1020		Biology 1 - Principles & Themes	BIOL 1020
BIOL 1030		Biology 2 - Biological Diversity, Function & Interactions	BIOL 1030
BIOL 1110		Health & Health Professions	BIOL 1110
BIOL 1340		State of the Earth's Environment	BIOL 1340
	ZOOL 1320	Anatomy of the Human Body	BIOL 1410
	ZOOL 1330	Physiology of the Human Body	BIOL 1412
BOTN 1010		Economic Plants	BIOL 1300
	ZOOL 2600	The Invertebrates	BIOL 2200
	ZOOL 2320	The Chordates	BIOL 2210
BOTN 2110		The Non-Flowering Plants	BIOL 2240
BOTN 2010		The Flowering Plants	BIOL 2242
BOTN 2210		Biology of Fungi & Lichens	BIOL 2260
BOTN 2370	ZOOL 2370	Principles of Ecology	BIOL 2300
BOTN 2180	ZOOL 2180	Introductory Toxicology	BIOL 2380
BOTN 2280	ZOOL 2290	Introductory Ecology	BIOL 2390
	ZOOL 2530	Human Physiology 1	BIOL 2410
	ZOOL 2540	Human Physiology 2	BIOL 2420
	ZOOL 2140	Human Reproductive Biology	BIOL 2440
BOTN 2460		Genetics 1	BIOL 2500
	ZOOL 2280	Cell Biology	BIOL 2520
	ZOOL 2150	Developmental Biology	BIOL 2540
BOTN 3570	ZOOL 3750	Skills in Biological Sciences	BIOL 3100
	ZOOL 3610	Advanced Invertebrate Biology	BIOL 3200
BOTN 3070		Vascular Flora of Manitoba	BIOL 3242
	ZOOL 3460	Introductory Parasitology	BIOL 3270
BOTN 3270		Forest Botany	BIOL 3280
BOTN 3280		Medicinal & Hallucinogenic Plants	BIOL 3290
BOTN 3000	ZOOL 3000	Evolutionary Biology	BIOL 3300
	ZOOL 3680	Foundations of Population Ecology	BIOL 3310
BOTN 3540		Community Ecology	BIOL 3312
BOTN 3420	ZOOL 3450	Field Ecology	BIOL 3314
	ZOOL 3380	Boreal Ecology	BIOL 3318
	ZOOL 3100	Animal Behaviour	BIOL 3360
	ZOOL 3500	Limnology	BIOL 3370
BOTN 3580	ZOOL 3580	Wetland Ecology	BIOL 3372
BOTN 2020		Plant Physiology	BIOL 3450
BOTN 3010		Environmental Plant Physiology	BIOL 3452
BOTN 3460		Genetics 2	BIOL 3500
	ZOOL 3070	Advanced Developmental & Cellular Biology	BIOL 3540
BOTN 3190		Plant Anatomy	BIOL 3550
	ZOOL 3060	Comparative Animal Histology	BIOL 3560
BOTN 3980	ZOOL 3980	Work Term 1	BIOL 3980
BOTN 3990	ZOOL 3990	Work Term 2	BIOL 3990
BOTN 4600	ZOOL 4110	Honours Thesis	BIOL 4100
	ZOOL 4170	Biology of Fishes	BIOL 4210
	ZOOL 4220	Systematics & Biogeography of Fishes	BIOL 4212
	ZOOL 4230	Biology of Amphibians & Reptiles	BIOL 4214
	ZOOL 4240	Biology of Birds	BIOL 4216
	ZOOL 4250	Biology of Mammals	BIOL 4218
	ZOOL 4260	Marine Biodiversity	BIOL 4220
BOTN 4040		Advanced Plant Systematics	BIOL 4240
BOTN 4130		Evolution of Plant Structure and Systems	BIOL 4242
BOTN 4210		Principles of Plant Pathology	BIOL 4250
	ZOOL 4730	Experimental Parasitology	BIOL 4260
	ZOOL 4720	Wildlife & Fisheries Parasitology	BIOL 4262
	ZOOL 4850	Applications of Population Ecology in Fisheries & Wildlife	BIOL 4310
BOTN 4650		Analysis of Biological Communities	BIOL 4312
	ZOOL 4820	Aquaculture	BIOL 4340
BOTN 4150		Plant Interactions	BIOL 4330
	ZOOL 4280	Behavioural Ecology and Cognitive Ethology	BIOL 4362
BOTN 4010		Aquatic Botany	BIOL 4374
	ZOOL 4840	Environmental Toxicology	BIOL 4380
	ZOOL 4710	Principles of Wildlife Management	BIOL 4390
BOTN 4120		Advanced Plant Stress Physiology	BIOL 4430
	ZOOL 4830	Comparative Animal Energetics	BIOL 4460
	ZOOL 4160	Sensory-Motor Physiology	BIOL 4470
	ZOOL 4600	Comparative Endocrinology	BIOL 4480
BOTN 4180		Molecular Genetics of Plant Development	BIOL 4500
	ZOOL 4150	Developmental Molecular Biology	BIOL 4540
	ZOOL 4270	Genes & Development	BIOL 4542
	ZOOL 4140	Microtechnique	BIOL 4560
BOTN 4800	ZOOL 4800	Special Topics in Field Biology	BIOL 4800
BOTN 4890	ZOOL 4890	Special Topics in Biology	BIOL 4890
BOTN 4980	ZOOL 4980	Work Term 1	BIOL 4980
BOTN 4990	ZOOL 4990	Work Term 2	BIOL 4990
		Courses no longer offered	
BOTN 2190	ZOOL 2190	Toxicological Principles	BIOL 2382
BOTN 3250		Fungal Ecology	BIOL 3330
	ZOOL 3530	Environmental Physiology of Animals 1	BIOL 3460
	ZOOL 3540	Environmental Physiology of Animals 2	BIOL 3462
	ZOOL 4200	Ecological Methods	BIOL 4320
	ZOOL 4210	Models for Behavioural Ecology	BIOL 4360
BOTN 4880	ZOOL 4880	Analysis of Ecological Problems	BIOL 4880

4.3.7 Biological Sciences Course Descriptions

Biological Sciences Course Descriptions-1000 Level

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 1001, BIOL 1020, BIOL 1021, the former 071.125, or 071.201. Prerequisite: Any grade 12 or 40S Mathematics course (50%), or equivalent.

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 1011, BIOL 1030, BIOL 1031, the former 071.125, or 071.201. Prerequisite: Any grade 12 or 40S Mathematics course (50%), or equivalent.

BIOL 1020 Biology 1: Principles and Themes Cr.Hrs. 3
(Lab Required) A laboratory-based course in unifying principles of biology including cell biology, bioenergetics, cell division, genetics and evolution. This course is intended for major and honours students in the Biological Sciences. Not to be held with BIOL 1021, BIOL 1000, BIOL 1001 (071.100), BIOE 2590 (034.259), or the former 071.125, 071.123 or 071.201. Prerequisite: Biology 40S (or equivalent) and any 40S Mathematics (or equivalent) and one of 40S Chemistry or 40S Physics (or equivalent); or BIOL 1000 (C). Students who complete BIOL 1000 as the prerequisite for BIOL 1020 will not be allowed to use both BIOL 1000 and BIOL 1020 towards their degree program as the two courses may not be held for credit with one another.

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 1031, BIOL 1010 or BIOL 1011 (071.101), BIOE 2590 (034.259), or the former 071.125, 071.123 or 071.201. Prerequisite: BIOL 1020 or BIOL 1021 (C). NOTE: BIOL 1030 is a prerequisite to further courses in Microbiology and to most courses in Biological Sciences. 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 1300 Economic Plants Cr.Hrs. 3
(Formerly BOTN 1010, 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.

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 (128.100).

BIOL 1410 Anatomy of the Human Body Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 1320, 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.

BIOL 1412 Physiology of the Human Body Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 1330, 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 of BIOL 2410 (or equivalent - ZOOL 2530, BIOL 2411, ZOOL 2531, 022.253) and BIOL 2420 (or equivalent - ZOOL 2540, BIOL 2421, ZOOL 2541, 022.254). Prerequisite: BIOL 1410 (ZOOL 1320, 022.132) (C); or one of BIOL 1030, BIOL 1031, or the former 071.125 (C). This prerequisite is waived for students in the Baccalaureate Program for Registered Nurses.

Biological Sciences Course Descriptions-2000 Level

BIOL 2200 The Invertebrates Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 2600, 022.260) Biology and phylogeny of invertebrates. Emphasis on common taxa and on those groups of particular phylogenetic significance. Not to be held with BIOL 2201 (ZOOL 2601). Prerequisite: one of BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 2210 The Chordates Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 2320, 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 with BIOL 2231 (ZOOL 2501, 022.250). Prerequisite: one of BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 2240 The Non-Flowering Plants Cr.Hrs. 3
(Lab Required) (Formerly BOTN 2110, 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 BOTN 2110, 001.211. Prerequisite: one of BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 2242 The Flowering Plants Cr.Hrs. 3
(Lab Required) (Formerly BOTN 2010, 001.201) A study of the structure and function of the flowering plants. Lecture topics are supplemented by laboratory exercises that focus on the anatomy and morphology of roots, stems, leaves and reproductive organs. Not to be held with the former 001.230. Prerequisite: one of BIOL 1010 (071.101) (B), BIOL 1011 (B), BIOL 1030 (C), BIOL 1031 (C), or the former 071.125 (C).

BIOL 2260 Biology of Fungi and Lichens Cr.Hrs. 3
(Lab Required)(Formerly BOTN 2210, 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 BIOL 2261 or the former 001.321. Prerequisite: one of BIOL 1010 (071.101) (B), BIOL 1011 (B), the former 071.123 (B), BIOL 1030 (C), BIOL 1031 (C), or the former 071.125 (C).

BIOL 2262 Biology of Algae Cr.Hrs. 3
(Lab Required) (Formerly BOTN 2290, 001.229, BIOL 3260) 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 courses BIOL 3260, 001.323, or 001.341. Prerequisite: One of BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 2300 Principles of Ecology Cr.Hrs. 3
(Lab Required) (Formerly BOTN 2370, 001.237, ZOOL 2370, 022.237) Principles of ecology at the individual, population, community, and ecosystems levels. This course is also offered as AGEC 2370. It is the normal prerequisite to other courses in ecology. Not to be held with BIOL 2301 (BOTN 2371, ZOOL 2371), BIOL 2390 (BOTN 2280, 001.228, ZOOL 2290, 022.229), AGEC 2370 (065.237). Prerequisite: one of BIOL 1030, BIOL 1031, or the former 071.125 (C). Prerequisite or concurrent requirement: STAT 1000 or STAT 1001 (005.100) (D).

BIOL 2380 Introductory Toxicology Cr.Hrs. 3
(Formerly BOTN 2180, 001.218, ZOOL 2180, 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 Environmental Science as ENVR 2180 (128.218), and in Agriculture as AGRI 2180 (065.218). Not to be held with BIOL 2381, BIOL 2382 (BOTN 2190, ZOOL 2190, 001.219, 022.219), ENVR 2190 (128.219), or AGRI 2190 (065.219). Prerequisites: one of BIOL 1030, BIOL 1031, or the former 071.125 (C); and one of CHEM 1310, CHEM 1311 (002.131), or CHEM 1320 (002.132) (C).

BIOL 2390 Introductory Ecology Cr.Hrs. 3
(Formerly BOTN 2280, 001.228, ZOOL 2290, 022.229) The course involves a study of the interrelationships of living organisms (including human) with each other and with their environment. It is not normally acceptable as a prerequisite to other courses in ecology. Not to be held with BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371), or AGEC 2370 (065.237). Prerequisite: one of BIOL 1010, BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 2410 Human Physiology 1 Cr.Hrs. 3
(Formerly ZOOL 2530, 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 BIOL 2411 (ZOOL 2531) or BIOL 3460 (ZOOL 3530, 022.353). Prerequisite: a "C" or better in one of BIOL 1030, BIOL 1031, the former 071.125, or BIOL 1412 (ZOOL 1330, 022.133); or a "C+" or better in both BIOL 1000 (or equivalent - BIOL 1001, 071.100) and BIOL 1010 (or equivalent - BIOL 1011, 071.101).

BIOL 2420 Human Physiology 2 Cr.Hrs. 3
(Formerly ZOOL 2540, 022.254) An examination of homeostatic regulation by the body's major effector organ systems (cardiovascular, respiratory, digestive, renal, and immune). Not to be held with BIOL 2421 (ZOOL 2541). Prerequisite: Completion of BIOL 2410 (ZOOL 2530, 022.253) (D), or BIOL 2411 (ZOOL 2531), or BIOL 3460 (ZOOL 3530, 022.353) (D); or consent of department.

BIOL 2440 Human Reproductive Physiology Cr.Hrs. 3
(Formerly ZOOL 2140, 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: BIOL 1410 (ZOOL 1320, 022.132) (C) and BIOL 1412 (ZOOL 1330, 022.133) (C); or consent of department. Check with the Department of Biological Sciences for course availability.

BIOL 2500 Genetics 1 Cr.Hrs. 3
(Lab Required) (Formerly BOTN 2460, 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 BIOL 2501 (BOTN 2461), or PLNT 2520 (039.252). Prerequisite: one of BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 2520 Cell Biology Cr.Hrs. 3
(Formerly ZOOL 2280, 022.228) The microscopic and submicroscopic aspects of cellular structure and function are considered with emphasis on the living cell as a dynamic system. Not to be held with BIOL 2521 (ZOOL 2281). Prerequisite: one of BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 2540 Developmental Biology Cr.Hrs. 3
(Formerly ZOOL 2150, 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: One of BIOL 1030, BIOL 1031, or the former 071.125 (C).

Biological Sciences Course Descriptions-3000 Level

BIOL 3100 Skills in Biological Sciences Cr.Hrs. 3
This course will introduce students to the concepts and skills necessary to succeed in a research directed Biology-based career, including: communication skills (scientific writing and oral presentations), critical thinking, strategies for employment and graduate training, familiarization with the range of biological research, and exposure to a variety of Biology-based careers. This course may not be held with the former BOTN 3570 (001.357) or ZOOL 3750 (022.375). Prerequisite: This course is restricted to Honours students in the Biological Sciences or departmental permission.

BIOL 3200 Advanced Invertebrate Biology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 3610, 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: BIOL 2200 (ZOOL 2600, 022.260) or BIOL 2201 (ZOOL 2601) (C).

BIOL 3242 Vascular Flora of Manitoba Cr.Hrs. 3
(Lab Required) (Formerly BOTN 3070, 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 Department of Biological Sciences office in the Spring/Summer prior to commencing the course. Prerequisite: BIOL 1010 (or equivalent - BIOL 1011, 071.101) (B); or one of BIOL 1030, BIOL 1031 or the former 071.125 (C).

BIOL 3250 Lichens and Bryophytes Cr.Hrs. 3
(Lab Required) The biology, evolution, and ecology of lichens and bryophytes. Emphasis is placed on the role of lichens and bryophytes in the ecosystem, gene flow, animal interactions, co-evolution, secondary compounds, and species identification. Not to be held with BIOL 3240 (BOTN 3260, 001.326) or BIOL 4246 (BOTN 4050, 001.405). Prerequisite: BIOL 1030 or BIOL 1031 or the former 071.125 (C).

BIOL 3270 Introductory Parasitology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 3460, 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: BIOL 2200 (ZOOL 2600, 022.260) (C), or BIOL 2201 (ZOOL 2601), or consent of department.

BIOL 3280 Forest Botany Cr.Hrs. 3
(Formerly BOTN 3270, 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: BIOL 2242 (BOTN 2010, 001.201) (C); and one of BIOL 2300 (BOTN 2370, 001.237, ZOOL 2370, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237) (C); or consent of the department.

BIOL 3290 Medicinal and Hallucinogenic Plants Cr.Hrs. 3
(Formerly BOTN 3280, 001.328) A botanical and historical survey of medicinal, hallucinogenic and poisonous plants used in various cultures. Not to be held with BIOL 3291. Prerequisite: a minimum of 30 hours of university credit, or consent of department.

BIOL 3300 Evolutionary Biology Cr.Hrs. 3
(Lab Required) (Formerly BOTN 3000, ZOOL 3000) 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. Not to be held with the former 022.400. Prerequisites: a "C" or better in one of BIOL 2500 (BOTN 2460, 001.246), BIOL 2501 (BOTN 2461), or PLNT 2520 (039.252); and any one of the following with a minimum grade of "C": BIOL 2200 (ZOOL 2600, 022.260), BIOL 2210 (ZOOL 2320, 022.232), BIOL 2231 (ZOOL 2501, 022.250F), BIOL 2240 (BOTN 2110, 001.211), BIOL 2260 (BOTN 2210, 001.221), BIOL 2261, BIOL 3260 (BOTN 2290, 001.229); or consent of department.

BIOL 3310 Foundations of Population Ecology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 3680) 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: a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); and STAT 2000 or STAT 2001 (005.200) (C); or consent of department.

BIOL 3312 Community Ecology Cr.Hrs. 3
(Formerly BOTN 3540, 001.354) Lectures and laboratories emphasizing the structure and function of terrestrial biotic communities with emphasis upon selected Manitoba situations. Prerequisite: a C or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); or consent of department.

BIOL 3314 Field Ecology Cr.Hrs. 3
(Formerly BOTN 3420, 001.342, ZOOL 3450, 022.345) 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. Prerequisites: a "C" or better in one of one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); and STAT 2000 or STAT 2001 (005.200) (D).

BIOL 3318 Boreal Ecology Cr.Hrs. 3
(Formerly ZOOL 3380, 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: a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); or BIOL 2390 (ZOOL 2290, 022.229, BOTN 2280, 001.228) (C); or consent of department.

BIOL 3340 Biology of Primitive Fungi and Allies Cr.Hrs. 3
(Lab Required) Studies on the Biology of primitive fungi and slime moulds including their evolution, life histories, development, structure, taxonomy, biochemistry, and importance to humans. Environmental collection, baiting, isolation and axenic culturing stressed in laboratories. Prerequisite: BIOL 1010 (B); or BIOL 1030 (BIOL 1031) (C).

BIOL 3350 Methods of Data Collection and Analysis in Ecology Cr.Hrs. 3
This course will consider methods of collection and analysis of ecological data, emphasizing experimental design of ecological studies, sampling, analysis of ecological data sets, and presentation techniques. This course may not be held for credit with BIOL 4320 (ZOOL 4200, 022.420). Prerequisites: BIOL 2300 (C) and STAT 2000 or STAT 2001 (D); or consent of department.

BIOL 3360 Animal Behaviour Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 3100, 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: a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); and BIOL 2210 (ZOOL 2320, 022.232) (C); or consent of department.

BIOL 3370 Limnology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 3500, 022.350) Lectures and laboratories providing an introduction to the physics, chemistry and biology of lakes. Prerequisite: a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237).

BIOL 3372 Wetland Ecology Cr.Hrs. 3
(Formerly BOTN 3580, 001.358, ZOOL 3580, 022.358) 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). Prerequisite: a C or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); or consent of department.

BIOL 3450 Plant Physiology Cr.Hrs. 3
(Lab Required) (Formerly BOTN 2020, 001.202) A study of the function of the flowering plants. The focus will be on photosynthesis, plant water relations, plant nutrition, and the role of hormonal and extrinsic factors in the regulation of plant development. Not to be held with PLNT 3500 or the former 001.230. Prerequisite: BIOL 2242 (BOTN 2010, 001.201) (C).

BIOL 3452 Environmental Plant Physiology Cr.Hrs. 3
(Lab Required) (Formerly BOTN 3010, 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 (039.350), 001.317, or 001.467. Prerequisite: BIOL 3450 (BOTN 2020, 001.202) (C); and CHEM 1310 or CHEM 1311 (002.131) (C).

BIOL 3470 Environmental Physiology of Animals 1 Cr.Hrs. 3
(Lab required) This course is intended to acquaint students with some of the major environmental challenges encountered by animals and stresses the diversity of physiological solutions to these problems in aquatic and terrestrial organisms. Areas covered may include thermal biology, circulation, gas exchange and buoyancy regulation. Laboratories explore related subjects in various animals. This course may not be held for credit with the former BIOL 3462, ZOOL 3540 (022.354). Prerequisite: BIOL 2200 (C) or BIOL 2210 (C); or consent of department.

BIOL 3472 Environmental Physiology of Animals 2 Cr.Hrs. 3
(Lab Required) This course is intended to acquaint students with the control and integration of organ systems and body functions of animals, and their biochemical and physiological adaptations to environmental perturbations. Areas covered may include neuroendocrinology, excretion, and water, salt, and acid-base balance. Laboratories explore related subjects in various animals. This course may not be held for credit with BIOL 3460, or the former ZOOL 3530, or the former 022.353. Prerequisites: BIOL 2200 (C) or BIOL 2210 (C) or consent of department.

BIOL 3500 Genetics 2 Cr.Hrs. 3
(Lab Required) (Formerly BOTN 3460, 001.346) The course complements Genetics I (BIOL 2500, BOTN 2460, 001.246, BIOL 2501, BOTN 2461) 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. Not to be held with BIOL 3501. Prerequisite: BIOL 2500 (BOTN 2460, 001.246) (C), or BIOL 2501 (BOTN 2461) or PLNT 2520 (039.252 or 039.209) (C). Prerequisite or concurrent requirement: One of CHEM 2370, CHEM 2371 (002.237), MBIO 2370, MBIO 2371 (060.237), CHEM 2780 (002.278), or MBIO 2780 (060.278); or consent of department.

BIOL 3540 Advanced Developmental and Cellular Biology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 3070, 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: BIOL 2540 (ZOOL 2150, 022.215) (C); or consent of department.

BIOL 3550 Plant Anatomy Cr.Hrs. 3
(Lab Required) (Formerly BOTN 3190, 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: BIOL 2242 (BOTN 2010, 001.201) (C).

BIOL 3560 Comparative Animal Histology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 3060, 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 BIOL 3561 (ZOOL 3061, 022.347). Prerequisite: One of BIOL 1030, BIOL 1031, or the former 071.125 (C). Recommended prerequisite: one of BIOL 2210 (ZOOL 2320, 022.232), BIOL 2231 (ZOOL 2501, 022.250), BIOL 2520 (ZOOL 2280, 022.228), or BIOL 2521 (ZOOL 2281).

BIOL 3600 Biological Diversity and Sustainability Cr.Hrs. 3
Anthropogenic drivers of change of many components of biological diversity; the resulting impacts on ecosystem capacity to provide on-going goods and services that are essential constituents of well-being and ultimately sustainability. Prerequisites: BIOL 2300 (C); or BIOL 1030 (C) and BIOL 2390 (C).

BIOL 3980 Work Term 1 Cr.Hrs. 0
(Formerly ZOOL 3980, 022.398, BOTN 3980, 001.398) Work assignment in business, industry, or government for students registered in the Biological Sciences Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

BIOL 3990 Work Term 2 Cr.Hrs. 0
(Formerly ZOOL 3990, 022.399, BOTN 3990, 001.399) Work assignment in business, industry, or government for students registered in the Biological Sciences Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only).

Biological Sciences Course Descriptions-4000 Level

BIOL 4100 Honours Thesis Cr.Hrs. 6
(Formerly BOTN 4600, 001.460, ZOOL 4110, 022.411) The student will conduct a research project, chosen in consultation with a Biological Sciences faculty member acting as an advisor, and produce a thesis in which the project, the results and conclusions are presented. The student will defend the thesis at an oral examination held on completion of the thesis. This course is restricted to final year Honours Biological Science students. Not to be taken concurrently with BIOL 4880 (ZOOL 4880, 022.488, BOTN 4880, 001.488).

BIOL 4210 Biology of Fishes Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4170, 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: BIOL 2210 (ZOOL 2320, 022.232) (C) or BIOL 2231 (ZOOL 2501, 022.250) (C).

BIOL 4212 Systematics and Biogeography of Fishes Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4220, 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: BIOL 2210 (ZOOL 2320, 022.232) (C) or BIOL 2231 (ZOOL 2501, 022.250) (C); or consent of department.

BIOL 4214 Biology of Amphibians and Reptiles Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4230, 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: BIOL 2210 (ZOOL 2320, 022.232) (C) or BIOL 2231 (ZOOL 2501, 022.250) (C); or consent of department.

BIOL 4216 Biology of Birds Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4240, 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: BIOL 2210 (ZOOL 2320, 022.232) (C) or BIOL 2231 (ZOOL 2501, 022.250) (C). Prerequisite or concurrent requirement: BIOL 3360 (ZOOL 3100).

BIOL 4218 Biology of Mammals Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4250, 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. Offered in 2009-2010 and alternate years thereafter. Prerequisites: BIOL 2210 (ZOOL 2320, 022.232) (C) or BIOL 2231 (ZOOL 2501, 022.250) (C); and one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237) (C); or consent of department.

BIOL 4220 Marine Biodiversity Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4260) 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: a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 022.237, 001.237), BIOL 2301 (BOTN 2371, ZOOL 2371) AGEC 2370 (065.237), or BIOL 2390 (BOTN 2280, ZOOL 2290, 001.228, 022.229); or consent of department.

BIOL 4250 Principles of Plant Pathology Cr.Hrs. 3
(Lab Required) (Formerly BOTN 4210, 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: BIOL 3450 (BOTN 2020, 001.202) (C) and BIOL 2260 (BOTN 2210, 001.221) (C) or BIOL 2261; or consent of department.

BIOL 4260 Experimental Parasitology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4730, 022.473) Principles of parasitology including immunology, ecology, biochemistry, and physiology. Students must carry out an experimental study. Prerequisite: BIOL 3270 (ZOOL 3460, 022.346) (C).

BIOL 4262 Wildlife and Fisheries Parasitology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4720, 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: BIOL 3270 (ZOOL 3460, 022.346) (C).

BIOL 4300 Evolution and Adaptation Cr.Hrs. 3
Lectures and discussion on advances in evolutionary research. Topics will include systematics, evolutionary genetics, evolution and development, co-evolution, mating systems, species ranges, eco-evolutionary dynamics, and evolution in society. This course may not be held for credit with either of BIOL 4240 or BIOL 4242. Prerequisite: BIOL 3300.

BIOL 4310 Applications of Population Ecology in Fisheries and Wildlife Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4850) The material introduced in BIOL 3310 (ZOOL 3680, 022.348) 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: BIOL 3310 (ZOOL 3680, 022.348).

BIOL 4312 Analysis of Biological Communities Cr.Hrs. 3
(Formerly BOTN 4650, 001.465) A survey of methods and approaches to the analysis of biological and environmental data containing many variables. Offered in alternate years. Not to be held with BIOL 7440 (BOTN 7440). Prerequisites: a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); and STAT 2000 or STAT 2001 (005.200) (C).

BIOL 4330 Plant Interactions Cr.Hrs. 3
(Formerly BOTN 4150, 001.415) This course examines the ecology of interactions between plants and their biotic environment - other plants, animals and soil microbes. This is a reading course. Students will participate in discussions of key papers, examine recent and historic literature, and write a term paper examining a selected topic. Prerequisite: a "C" or better in BIOL 2300; or consent of department.

BIOL 4340 Aquaculture Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4820, 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 (005.200) (D); and consent of instructor.

BIOL 4362 Behavioural Ecology and Cognitive Ethology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4280, 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: BIOL 3360 (ZOOL 3100, 022.310), or the former 022.343 (C); or consent of department.

BIOL 4374 Aquatic Botany Cr.Hrs. 3
(Formerly BOTN 4010, 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: a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); or consent of department.

BIOL 4380 Environmental Toxicology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4840, 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: a "C" or better in one of CHEM 2370, CHEM 2371 (002.237), MBIO 2370, MBIO 2371 (060.237), CHEM 2780 (002.278), or MBIO 2780 (060.278); plus a "C" or better in one of BIOL 2300 (BOTN 2370, ZOOL 2370, 001.237, 022.237), BIOL 2301 (BOTN 2371, ZOOL 2371) or AGEC 2370 (065.237); plus a "C" or better in one of BIOL 2410 (ZOOL 2530, 22.253), BIOL 2411 (ZOOL 2531) or BIOL 3460 (ZOOL 3530, 022.353); and BIOL 3462 (ZOOL 3540, 022.354, or 22.352) (C); or consent of department.

BIOL 4390 Principles of Wildlife Management Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4710, 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: BIOL 3310 (ZOOL 3680, 022.348) (C); or consent of department.

BIOL 4460 Comparative Animal Energetics Cr.Hrs. 3
(Formerly ZOOL 4830, 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: BIOL 2210 (ZOOL 2320, 022.232) (C) or BIOL 2231 (ZOOL 2501, 022.250) (C); and one of BIOL 2410 (ZOOL 2530, 022.253) (C), BIOL 2411 (ZOOL 2531), BIOL 3470 (BIOL 3462, ZOOL 3530, 022.353) (C), or BIOL 3472 (BIOL 3460, ZOOL 3540, 022.354) (C); or consent of department.

BIOL 4470 Sensory-Motor Physiology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4160, 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: a "C" or better in one of BIOL 2410 (ZOOL 2530, 022.253), BIOL 2411 (ZOOL 2531), BIOL 3472, the former BIOL 3460 (ZOOL 3530, 022.353), the former 022.245, 022.337, or 022.352; or consent of department.

BIOL 4480 Comparative Endocrinology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4600, 022.460) The structure, control, and function of vertebrate endocrine systems. BIOL 2520 (or equivalent - ZOOL 2280, 022.228, BIOL 2521, ZOOL 2281), and one of BIOL 2410 (or equivalent - ZOOL 2530, 022.253, BIOL 2411, ZOOL 2531), BIOL 3460 (ZOOL 3530, 022.353) or the former 022.245 or 022.352, and a course in biochemistry are strongly recommended as prerequisites. Prerequisite: one of BIOL 1030, BIOL 1031, or the former 071.125 (C).

BIOL 4500 Molecular Genetics of Plant Development Cr.Hrs. 3
(Formerly BOTN 4180, 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: BIOL 2500 (BOTN 2460, 001.246) or BIOL 2501 (BOTN 2461) (C).

BIOL 4540 Developmental Molecular Biology Cr.Hrs. 3
(Lab Required) (Formerly ZOOL 4150, 022.415) An examination of early development with emphasis on the molecular events. Sex determination, gametogenesis and early embryogenesis will be discussed. Prerequisite: BIOL 2540 (ZOOL 2150, 022.215) (C); or consent of department.

BIOL 4542 Genes and Development Cr.Hrs. 3
(Formerly ZOOL 4270, 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: BIOL 2520 (ZOOL 2280, 022.228) or BIOL 2521 (ZOOL 2281)(C); and BIOL 2540 (ZOOL 2150, 022.215) (C); or consent of department.

BIOL 4554 Molecular Biology Techniques for Eukaryotes - DNA Cr.Hrs. 3
(lab required) A techniques intensive course focusing on the understanding of molecular biology techniques, troubleshooting problems, writing reproducible laboratory experiments for publications, accurate recording of procedures in lab journals, and bioinformatics exercises from a DNA perspective. This course is designed for 4th year undergraduate and graduate students interested in understanding the theory and application of molecular methods specifically focusing on eukaryotic DNA. Students will learn essential and cutting-edge molecular biology techniques involved in gene structure, amplification, transformation, and sequencing among others. This course may not be held for credit with BIOL 4552. Prerequisite: BIOL 2520

BIOL 4556 Molecular Biology Techniques for Eukaryotes - RNA Cr.Hrs. 3
(lab required) This is a "hands-on" techniques course designed for the 3rd and 4th year undergraduate level. The purpose of this course is to train students in the current molecular biology techniques dealing with highly sensitive RNA molecules. The students will learn all essential steps involved to identify the messenger RNA expression of a particular target protein in plant or animal (invertebrates) systems. This course may not be held for credit with BIOL 4552. Prerequisite: BIOL 2520.

BIOL 4560 Microtechnique Cr.Hrs. 3
(Lab Required) This intensive course covers a spectrum of animal tissue and cell preparation techniques for microscopy and a survey of the variety of types of microscopy. These span all types of microscopy; live cell techniques, fixation and tissue processing methods for both paraffin embedding media and plastic media, sectioning and staining imaging and image processing, introduction to histochemistry and immunocytochemistry and electron microscopy. This is a practical course with a major hands-on laboratory emphasis. Prerequisites: BIOL 1030 or BIOL 1031 (C+); or consent of department. This course is restricted to students in year 3 or 4 of a Major or Honours degree program.

BIOL 4800 Special Topics in Field Biology Cr.Hrs. 3
(Formerly BOTN 4800, 001.480, ZOOL 4800, 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: consent of department.

BIOL 4890 Special Topics in Biology Cr.Hrs. 3
(Formerly BOTN 4890, 001.489, ZOOL 4890, 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. Prerequisite: Consent of department.

BIOL 4980 Work Term 3 Cr.Hrs. 0
(Formerly BOTN 4980, 001.498, ZOOL 4980, 022.498) Work assignment in business, industry, or government for students registered in the Biological Sciences Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only)

BIOL 4990 Work Term 4 Cr.Hrs. 0
(Formerly BOTN 4990, 001.499, ZOOL 4990, 022.499) Work assignment in business, industry, or government for students registered in the Biological Sciences Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only)

4.4 Biotechnology

Program Coordinators: Peter Loewen, Head, Department of Microbiology; Peter Budzelaar, Head, Department of Chemistry
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4.4.1 Program Information

Biotechnology Honours Degree Requirements

To enter the Biotechnology Joint Honours program a student must have completed at least 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in CHEM 1310 and a minimum grade of "C+" in BIOL 1020. CHEM 1300, BIOL 1030, MATH 1500, PHYS 1020 (or PHYS 1050), and STAT 1000 are required courses in the program and students are strongly encouraged to complete these courses in first year. Six credit hours of Arts electives, including the written English course should also be taken in Year 1.

Students will select one stream (Analytical, Environmental/Biosystems or Molecular Biotechnology). Students are also encouraged to select a Minor in a complementary area. There are enough free electives to cover the 18 credit hours required for a Minor. All students must complete a Common Core of required courses plus required Stream Specific courses. The remaining courses can be selected from the list of Recommended Electives. This list is meant to give students some idea of appropriate electives; however, students have the option to choose courses not on the list in consultation with the Program Advisors.

To continue in the Biotechnology Joint Honours program, students must maintain a minimum GPA of 3.00 and complete a minimum of 9 credit hours during each Fall and Winter Term. No more than 15 credit hours of F grades may be accumulated, regardless of whether any course has been repeated and a higher grade achieved. Research Project in Biotechnology (BTEC 4000) must be taken in the final year of the program.

To graduate from the Biotechnology Joint Honours program students must achieve a minimum GPA of 3.00 and obtain minimum grade of "C" on the courses that contribute to the 120 credit hours that make up the degree.

Students who do not meet these minimum requirements will be required to withdraw from the program and may be eligible to enter the 4-Year Major degree program in Biotechnology. Depending on course selection students may also be eligible to enter other Major Programs (e.g. Biochemistry, Biological Sciences, Chemistry, or Microbiology) and/or the 3-year B.Sc. General Degree program.

Biotechnology Honours Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Honours Biotechnology program may enter the Cooperative Option in April of their second year in Honours Biotechnology. This program provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and university units.

The course and grade requirements **for entry** to this option are the same as those required for entry to the regular Honours program, as indicated in the chart. Students are required to complete the first and second year requirements of the program; and MBIO 3410 before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Honours) Cooperative Options in Section 3.6.

To continue in the Honours Cooperative program a student must maintain a minimum GPA of 3.00, successfully complete each work term, and complete a minimum of 9 credit hours during each academic term. Students should note that the grade requirements for the Cooperative Option are the same ad that for the regular Honours program (see above).

Students must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. 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. 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.

Biotechnology 4-Year Major Degree Requirements

To enter the Biotechnology Joint Major program a student must have completed at least 24 credit hours with a minimum GPA of 2.00 and also obtained a minimum grade of "C+ in CHEM 1310 and a minimum grade of "C" in BIOL 1020. BIOL 1030, CHEM 1300, MATH 1500, PHYS 1020 or 1050, and STAT 1000 are required courses in the program and students are strongly urged to complete these courses in first year. Six credit hours of Arts electives, including the written English course should also be taken in Year 1.

Students will select one stream (Analytical, Environmental/Biosystems or Molecular Biotechnology). Students are also encouraged to select a Minor in a complementary area. There are enough free electives to cover the 18 credit hours required for a Minor. All students must complete a Common Core of required courses plus required Stream Specific courses. The remaining courses can be selected from the list of Recommended Electives. This list is meant to give students some idea of appropriate electives; however, students have the option to choose courses not on the list in consultation with the Program Advisors.

To continue in the Major program a student must maintain a minimum GPA of 2.00. No more than 18 credit hours of F grades can be accumulated regardless of whether any course has been repeated and a higher grade achieved.

To graduate from the Biotechnology Joint Major degree, students must maintain a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree. Students must also obtain a minimum grade of "C" on all common core and stream specific courses outlined below. There is no term registration load requirement in the Major degree.

Students who do not meet these minimum requirements will be required to withdraw from the program and will normally be eligible to enter the 3-Year B.Sc. General degree program.

Biotechnology 4 Year Major Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Major program in Biotechnology may enter the Cooperative Option in April of their second year in Biotechnology. 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. MBIO 3410 is 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. Students should refer to the general faculty regulations for B.Sc. (Major) Cooperative Options in Section 3.4.

Students must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. 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. 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.

Common Core Courses:

BIOL 2500, BIOL 2520, BIOL 4560, BIOL 4610, CHEM 2210, CHEM 2220, CHEM/MBIO 2360, CHEM /MBIO 2370, CHEM 2470, CHEM 3590, CHEM 4630, MBIO 1010, MBIO 2020, MBIO 3000, MBIO 3410, MBIO 4510, PLNT 2530, PLNT 4610

Program Stream Courses:

Analytical Biotechnology: MATH 17001, CHEM 4370, CHEM 4590, CHEM 4670, CHEM 4700

Environmental Biotechnology: MATH 17001, BIOE 3200, BIOE 3530, BIOE 4510, MBIO 4672

Molecular Biotechnology: BIOL 4550, MBIO 4600, MBIO 4610, MBIO 4672

Note: In some instances pre-requisites will be waived upon approval by the appropriate department.

Complementary Existing Minors that could satisfy the Recommended Electives (Minors require 18 cr hrs of prescribed courses):

Management, Animal Systems, Food Science, Plant Biotechnology, or Human Nutrition and Metabolism

Recommended General Electives if not required in Program stream:

All courses in above described Minors.

Appropriate pre-requisites must also be taken for all Electives.

BIOE 3200, BIOE 3530, BIOE 4510, BIOL 1300 (BOTN 1010), BIOL 2242 (BOTN 2010), BIOL 2380 (BOTN/ZOOL 2180), BIOL 2260 (BOTN 2210), BIOL 2300 (BOTN/ZOOL 2370), BIOL 3550 (BOTN 3190), BIOL 3290 (BOTN 3280), BIOL 3500 (BOTN 3460), BIOL 4500 (BOTN 4180), BIOL 4550 (BOTN 4460), BIOL 2540

(ZOOL 2150), BIOL 3540 (ZOOL 3070), BIOL 4540 (ZOOL 4150); CHEM 4360, CHEM 4370, CHEM 4590, CHEM 4620, CHEM 4670, CHEM 4700; COMP 1010, COMP 1020, COMP 1260, COMP 1270; ENG 1420; ENTR 2020; MATH 17001; MBIO 2110, MBIO 3280 (MBIO 2280), MBIO 3010, MBIO 3430, MBIO 4440 (MBIO 3440), MBIO 3450, MBIO 3460, MBIO 3470, MBIO 4480 (MBIO 3480), MBIO 4010, MBIO 4410, MBIO 4470, MBIO 4600, MBIO 4610, MBIO 4672; PHAC 4030, PHAC 4040; PHIL 2740, PHIL 2830; PLNT 3140, PLNT 3500, PLNT 3520, PLNT 3570, PLNT 4310, PLNT 4330, PLNT 4550, PLNT 4560, PLNT 4570, PLNT 4580, PLNT 4590, PLNT 4600; STAT 2000

Other suitable courses may be selected through consultation with the department heads.

4.4.2 Biotechnology Programs (incl. Co-operative Option if selected)

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS (incl. Co-operative Option if selected) 120 credit hours			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 PHYS 1020 (or PHYS 1050) MATH 1500[1] STAT 1000	CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), CHEM 2470 MBIO 1010, MBIO 2020 BIOL 2500, BIOL 2520	CHEM 3590 MBIO 3000, MBIO 3030, MBIO 3410 PLNT 2530	CHEM 4630 MBIO 4520 BIOL 4560, BTEC 4000 (6), PLNT 4610
The requirements listed below can be completed in U1 or Year 2: 6 credit hours from the Faculty of Arts including the required "W" course 6 credit hours of **Required Program Stream**[2] courses or electives[3]		The requirements listed below can be completed in 3rd or 4th year: 27 credit hours of **Required Program Stream** courses[2] and electives[3]. **Work Terms (if Co-op Selected):** BTEC 3980, BTEC 3990	**Work Terms (if Co-op Selected):** BTEC 4980 and /or BTEC 4990
30 Hours	30 Hours	30 Hours	30 Hours
JOINT 4-YEAR MAJOR (incl. Co-operative Option if selected) 120 credit hours			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 PHYS 1020 (or PHYS 1050) MATH 1500[1] STAT 1000	CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), CHEM 2470 MBIO 1010, MBIO 2020 BIOL 2500, BIOL 2520	CHEM 3590 MBIO 3000, MBIO 3030, MBIO 3410 PLNT 2530	CHEM 4630 MBIO 4520 BIOL 4560 PLNT 4610
The requirements listed below can be completed in U1 or Year 2: 6 credit hours from the Faculty of Arts including the required "W" course 6 credit hours of **Required Program Stream Courses**[2] and / or approved electives[3]		The requirements listed below can be completed during 3rd and 4th year: 33 credit hours of **Required Program Stream Courses**[2] and approved electives[3]. **Work Terms (if Co-op Selected):** BTEC 3980, BTEC 3990	**Work Terms (if Co-op Selected):** BTEC 4980 and /or BTEC 4990

NOTES:

1. MATH 1510 or 1520 may be used in place of MATH 1500; MATH 1710 may be used in place of MATH 1700.

2. Program stream courses requirements can be found above the Biotechnology program charts in section 4.4.1.

3. Refer to list of recommended elective courses and complementary Minor programs (listed above charts) prior to registration in your electives.

(The number 6 in brackets indicates a 6 credit hour course.)

4.4.3 Biotechnology Course Descriptions

BTEC 3980 Work Term 1 Cr.Hrs. 0
Work assignments in business, industry or government for students registered in the Biotechnology 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).

BTEC 3990 Work Term 2 Cr.Hrs. 0
Work assignments in business, industry or government for students registered in the Biotechnology 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).

BTEC 4000 Research Project in Biotechnology Cr.Hrs. 6
(Lab Required) Students can carry out independent biotechnology based research in their area of interest under the supervision of a faculty member or an approved external biotechnology professional. Results will be presented as an interim oral report and a written journal style paper. Registration restricted to Year 4 Honours Biotechnology students. Not to be held with any other Research Project courses such as MBIO 4530 or CHEM 4710.

BTEC 4980 Work Term 3 Cr.Hrs. 0
Work assignments in business, industry or government for students registered in the Biotechnology 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).

BTEC 4990 Work Term 4 Cr.Hrs. 0
Work assignments in business, industry or government for students registered in the Biotechnology 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).

4.5 Department of Chemistry

Head: Peter Budzelaar
Campus Address/General Office: 360 Parker Building
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Email Address: Chemistry_Dept@umanitoba.ca
Website: http://umanitoba.ca/chemistry

4.5.1 Department of Chemistry 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, a student must have completed at least 24 credit hours with a minimum DGPA of 3.00, and also obtained a minimum grade of "B" in CHEM 1310. CHEM 1300, MATH 1500, MATH 1700, PHYS 1020 (1050), and PHYS 1070 are required courses in this program and students are strongly encouraged to complete these courses in first year.

To continue in the Chemistry Honours program, students must maintain a minimum DGPA of 3.00 and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate from the Chemistry Honours program students must achieve a minimum GPA of 3.00 and obtain a minimum grade of "C" on the courses that make up 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 Chemistry program may enter the Cooperative Option in April of their second 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 a student must have a Degree Grade Point Average of 3.00. Each academic term while registered in Honours 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 courses that contribute to the degree.

Students must apply for and be accepted into the Co-op program. The April application deadline information can be obtained by contacting the Co-op office. Students will be notified of their provisional acceptance in the program by September. 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. 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 Chemistry Major program a student must have completed at least 24 credit hours with a minimum DGPA of 2.00 and also obtained a minimum grade of "C+ in CHEM 1310. CHEM 1300, MATH 1500, MATH 1700, PHYS 1020 (1050), and PHYS 1070 are required courses in this program and students are strongly encouraged to complete these courses in first year.

To continue in the Major program, a student must have a DGPA of 2.00 at each point of assessment.

To graduate with the Bachelor of Science (Major) in Chemistry, a student must obtain a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree, and a minimum grade of "C" or better in all required Chemistry and Focus Area courses.

Students who, at the end of Year 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 program requirements.

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 April of their second 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 Chemistry 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 work term. To continue in the Major program, a student must have a DGPA of 2.00 at each point of assessment.

To graduate with the Bachelor of Science (Major Cooperative Option) in Chemistry, a student must obtain a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree and a minimum grade of "C" or better in all required Chemistry and Focus Area courses.

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 by September. 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. 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.

Chemistry Program Focus Areas

Students may elect to take courses that, in combination, make up a Chemistry focus area. Currently, there are eight Chemistry focus areas. They are: Bio-analytical, Biopharmaceutical, Biophysical, Environmental, Materials Science, Organic, Physical, and Quantum / Computational. Each focus area has specific course requirements that students will satisfy in order to graduate and receive the focus area notation on their transcripts. Other focus areas may be selected with approval from the Department Head.

Required Courses for each Chemistry Focus Area (Note: Students are responsible for completing all prerequisite courses required for the completion of a specific Focus Area). The below course listings are not meant to be limiting. Plausible substitutions will be reviewed and approved by the Department of Chemistry on an individual basis.

Bioanalytical: 18 credit hours chosen from: CHEM 2550, CHEM 2370, CHEM 3570, CHEM 4550, CHEM 4590, CHEM 4630, CHEM 4660; plus a minimum of 9 credit hours from: BGEN 3020 (6), MBIO 2020, MBIO 3410, PHYS 2600, PHYS 2610, PHYS 2260, STAT 2000.

Biopharmaceutical: Each of: CHEM 3390, CHEM 3580, CHEM 4580, CHEM 4590, CHEM 4670, CHEM 4690; plus 9 credit hours chosen from: BIOL 2380, BIOL 2410, BIOL 2420, BIOL2520, BIOL 3290, BIOL 4470

Biophysical: 18 credit hours chosen from: CHEM 2370, CHEM 3360, CHEM 3370, CHEM 3490, CHEM 3570, CHEM 4590, CHEM 4620, CHEM 4630, CHEM 4640, CHEM 4700; plus 9 credit hours chosen from: BIOL 2500, BIOL 2520, MBIO 2410, MBIO 3460, MBIO 4540

Environmental: Each of: CHEM 2370, CHEM 2550, CHEM 4550, CHEM 4590, and 6 credit hours of 3000 or 4000 level Chemistry courses; plus at least 9 credit hours chosen from: ENVR 1000, ENVR 2000, ENVR 2180 (BIOL 2380), ENVR 3180, BIOL 4380.

Materials Science: Each of: CHEM 3360, CHEM 3370, CHEM 3490, CHEM 4570, CHEM 4590, CHEM 4680; plus 9 credit hours from: BIOE 3320, ECE 3600, PHYS 2600, PHYS 2610. (MATH 1300 is highly recommended but does not count toward the 9 credit hour of non-Chemistry requirements).

Organic: 27 credit hours from: CHEM 3390, CHEM 3580, CHEM 4580, CHEM 4590, CHEM 4620, CHEM 4630, CHEM 4660, CHEM 4670, CHEM 4680, CHEM 4690. (**Note**: There are no non-Chemistry courses in the Organic Chemistry Focus Area)

Physical: Each of: CHEM 3360, CHEM 3370, CHEM 3490, CHEM 4640, CHEM 4650, CHEM 4660; plus 9 credit hours from: MATH 2750 (6), MATH 2800, PHYS 2390, PHYS 2490, PHYS 2600, PHYS 2610, PHYS 3680. (MATH 1300 is highly recommended but does not count toward the 9 credit hour of non-Chemistry requirements).

Quantum/Computational: Each of: CHEM 3360, CHEM 3370, CHEM 3580, CHEM 4640, CHEM 4660, CHEM 4670; plus 9 credit hours from: COMP 2160, COMP 2190, MATH 2300, MATH 2600, PHYS 2380, PHYS 4250, PHYS 4520.

Three Year Requirements

Courses taken as part of a three-year degree program provide an introduction to the major fields of study in Chemistry. Commencing in Fall Term 2010, students will have two options for a three year Degree under the Department of Chemistry.

Option A – Three Year General: As prescribed with all other faculty regulations in Section 3.2, students in this program must select 18 credit hours of 2000, 3000, and (or) 4000 level courses from each of **two** Science areas. To satisfy the requirement in the area of Chemistry, students must select a minimum of 18 credit hours from the following list of advanced level courses: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360, CHEM 2370, CHEM 2400 (CHEM 2380), CHEM 2470, CHEM 3360, CHEM 3370, CHEM 3390, CHEM 3400 (CHEM 3380), CHEM 3570, CHEM 3580, CHEM 3590, CHEM 4360, CHEM 4370, CHEM 4570, CHEM 4580, CHEM 4590, CHEM 4620, CHEM 4630, CHEM 4640, CHEM 4660, CHEM 4670, CHEM 4680, CHEM 4690 (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level).

Courses **not allowed** for use as advanced level courses in the 3-Year General Degree are: CHEM 2240, CHEM 2550, CHEM 2560, CHEM 2770, CHEM 2780, CHEM 2860, CHEM 4550, CHEM 4600, CHEM 4650, CHEM 4700, and CHEM 4710.

Option B - Three Year B.Sc. – Chemistry Focus: Students that choose this path for their three-year degree program will follow the program chart below. The 24 credit hours of introductory courses and 36 credit hours of advanced level requirements have been prescribed in such a way so that students that follow the chart can seamlessly transfer to a 4-year Chemistry Honours or Major degree program should they choose to do so after the completion of the 90 credit hours listed in the chart.

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 Departmental Program Advisor before registering.

Laboratory Exemption Regulations

- 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 tests and examinations
- students must earn a minimum of 60% on the laboratory to be eligible for an exemption.

Biochemistry and Biotechnology Programs

The Department of Chemistry, in conjunction with the Department of Microbiology, offers Joint Honours programs, Joint Honours Cooperative Options, Joint four year Major programs and a Joint four year Major Cooperative Options in Biochemistry and Biotechnology. See sections 4.2 Biochemistry Program and 4.4 Biotechnology Program for full details.

4.5.2 Chemistry Honours Degree Program Chart

<table>
<tr><th>YEAR 1</th><th>YEAR 2</th><th>YEAR 3</th><th>YEAR 4</th></tr>
<tr><td colspan="4">HONOURS[4] (incl. Co-operative Option if selected) 120 CREDIT HOURS</td></tr>
<tr><td>CHEM 1300, CHEM 1310 (B)
PHYS 1050 (or PHYS 1020) and PHYS 1070
MATH 1500[1] , MATH 1700[1]</td><td>CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2400, CHEM 2470, CHEM 2860 (CHEM 2360)</td><td>CHEM 3400, CHEM 3590</td><td>CHEM 4600, CHEM 4710 (6)</td></tr>
<tr><td colspan="2">In Year 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 credit hours from Mathematics, Statistics or Computer Science courses[3]
12 credit hours of approved electives in years one and two[6]</td><td colspan="2">Sufficient credit hours (18) from the 2000, 3000 and 4000 level Chemistry[4] courses not yet taken to total a minimum of 60 credit hours. These credit hours may make up part of a focus area.
9 credit hours of non-Chemistry courses which are part of a designated focus area[4].
If no Focus Area is selected, students must choose 9 credit hours of Chemistry courses.
18 credit hours of approved electives in years three and four[6]</td></tr>
<tr><td colspan="2"></td><td>Work Terms (if Co-op selected):
CHEM 3980, CHEM 3990</td><td>Work Terms (if Co-op selected):
CHEM 4980 and/or CHEM 4990</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

NOTES:
1. MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.
2. PHYS 1020 may be used in place of PHYS 1050; and, in the 3-year degree only - PHYS 1030 may be used in place of PHYS 1070. Students planning on completing a 4-year degree in Chemistry are required to complete PHYS 1070.
3. MATH 1010, MATH 1020, MATH 1190, MATH 1191, COMP 1260 and COMP 1270 may not be used to satisfy this requirement.
4. Students may elect to complete the requirements set out in one of the Chemistry focus areas. If a student opts for one of the focus areas, they should consult with the Department of Chemistry and a Science Academic Advisor for information regarding specific course requirements for each focus area.
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.
6. Elective courses should be selected in consultation with the Department of Chemistry and/or a Faculty of Science Academic Advisor.

4.5.3 Chemistry Major Degree Program Chart

<table>
<tr><td colspan="4">4-YEAR MAJOR[4,5] (incl. Co-operative Option if selected) 120 CREDIT HOURS (comprising courses listed in chart below, and electives)</td></tr>
<tr><td>CHEM 1300, CHEM 1310 (C+)
PHYS 1050 (or PHYS 1020 (C+)) and PHYS 1070
MATH 1500[1], MATH 1700[1]</td><td>CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2400, CHEM 2470, CHEM 2860 (CHEM 2360)</td><td>CHEM 3400, CHEM 3590</td><td>CHEM 4600</td></tr>
<tr><td colspan="2">In Year 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 credit hours from Mathematics, Statistics or Computer Science courses[3]</td><td colspan="2">Sufficient credit hours (18) from the 2000, 3000 and 4000 level Chemistry[4] courses not yet taken to total a minimum of 54 credit hours. These credit hours may make up part of a focus area.
9 credit hours of non-Chemistry courses which are part of a designated focus area[4]. (Note: If no Focus Area is selected, students must choose 9 credit hours of Chemistry courses.)</td></tr>
<tr><td colspan="2"></td><td>Work Terms (if Co-op selected):
CHEM 3980, CHEM 3990</td><td>Work Terms (if Co-op selected):
CHEM 4980 and/or CHEM 4990</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

NOTES:
1. MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.
2. PHYS 1020 may be used in place of PHYS 1050; and, in the 3-year degree only - PHYS 1030 may be used in place of PHYS 1070. Students planning on completing a 4-year degree in Chemistry are required to complete PHYS 1070.
3. MATH 1010, MATH 1020, MATH 1190, MATH 1191, COMP 1260 and COMP 1270 may not be used to satisfy this requirement.
4. Students may elect to complete the requirements set out in one of the Chemistry focus areas. If a student opts for one of the focus areas, they should consult with the Department of Chemistry and a Science Academic Advisor for information regarding specific course requirements for each focus area.
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.
6. Elective courses should be selected in consultation with the Department of Chemistry and/or a Faculty of Science Academic Advisor.
(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.5.4 Chemistry General Degree and Minor Requirements

<table>
<tr><td colspan="2">THREE YEAR B.Sc. General – Chemistry Focus 90 CREDIT HOURS</td></tr>
<tr><td>CHEM 1300, CHEM 1310 (C)</td><td>21 hours of required 2000 level Chemistry courses: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2400 (CHEM 2380), CHEM 2470, CHEM 2360</td></tr>
<tr><td>BIOL 1020, BIOL 1030
MATH 1500[1], MATH 1700[1]
PHYS 1050[2], PHYS 1070[2]</td><td>15 credit hours of 2000 level or higher CHEM: Excluding the Chemistry service courses (2240, 2560, 2770, 2780), Co-op courses (3980, 3990, 4980, 4990) and specialized courses (4600, 4700, 4710). A minimum of 6 credit hours must be chosen from the 3000 / 4000 level.</td></tr>
<tr><td rowspan="2">6 credit hours from the Faculty of Arts. (Should include the student's "W" requirement.)</td><td>6 credit hours of electives to be chosen from outside the Faculty of Science</td></tr>
<tr><td>18 credit hours of open electives</td></tr>
<tr><td colspan="2">THREE YEAR GENERAL 90 CREDIT HOURS</td></tr>
<tr><td>CHEM 1300, CHEM 1310 (C)</td><td>a minimum of 18 credit hours from the following list of advanced level courses: CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2360, CHEM 2370, CHEM 2400 (CHEM 2380), CHEM 2470, CHEM 3360, CHEM 3370, CHEM 3400 (CHEM 3380), CHEM 3390, CHEM 3570, CHEM 3580, CHEM 3590, CHEM 4360, CHEM 4370, CHEM 4570, CHEM 4580, CHEM 4590, CHEM 4620, CHEM 4630, CHEM 4640, CHEM 4660, CHEM 4670, CHEM 4680, CHEM 4690 (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level).</td></tr>
<tr><td colspan="2">MINOR</td></tr>
<tr><td>CHEM 1300, CHEM 1310 (C)</td><td>Normally CHEM 2210 and CHEM 2220, plus an additional 6 credit hours of Chemistry</td></tr>
</table>

NOTES:
1. MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.
2. PHYS 1020 may be used in place of PHYS 1050; and, in the 3-year degree only - PHYS 1030 may be used in place of PHYS 1070. Students planning on completing a 4-year degree in Chemistry are required to complete PHYS 1070.
3. MATH 1010, MATH 1020, MATH 1190, MATH 1191, COMP 1260 and COMP 1270 may not be used to satisfy this requirement.
4. Students may elect to complete the requirements set out in one of the Chemistry focus areas. If a student opts for one of the focus areas, they should consult with the Department of Chemistry and a Science Academic Advisor for information regarding specific course requirements for each focus area.
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.
6. Elective courses should be selected in consultation with the Department of Chemistry and/or a Faculty of Science Academic Advisor.
(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.5.5 Chemistry - Physics Joint Honours Program

4.5.5 Chemistry - Physics Joint Honours Program			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS[2] 120 CREDIT HOURS			
CHEM 1300 (B), CHEM 1310 (B) PHYS 1050 (B) (or PHYS 1020 (B+)), PHYS 1070 (B) MATH 1500[1] (B), MATH 1700[1] (B) 6 credit hours from the Faculty of Arts, which should include the required "W" course 6 credit hours of electives	CHEM 2210, CHEM 2220, CHEM 2280, CHEM 2290, CHEM 2400 or CHEM 2470 PHYS 2390, PHYS 2380, PHYS 2490, PHYS 2600, PHYS 2650	12 credit hours from whichever of CHEM 2400 or 2470 not taken and any of CHEM 2860 (CHEM 2360 /MBIO 2360), CHEM 2370 (MBIO 2370) or 3000 / 4000 level Chemistry courses PHYS 2260, PHYS 2610, PHYS 3380, PHYS 3630, PHYS 3670, PHYS 3680	CHEM 4600 CHEM 4710 (6) or both PHYS 4672 and PHYS 4674 PHYS 4390 6 credit hours of 3000 / 4000 level Physics courses 3 credit hours of 3000 / 4000 level Chemistry courses 9 credit hours of approved electives
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1. MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.

2. PHYS 1020 may be used in place of PHYS 1050; and, in the 3-year degree only - PHYS 1030 may be used in place of PHYS 1070. Students planning on completing a 4-year degree in Chemistry are required to complete PHYS 1070.

3. MATH 1010, MATH 1020, MATH 1190, MATH 1191, COMP 1260 and COMP 1270 may not be used to satisfy this requirement.

4. Students may elect to complete the requirements set out in one of the Chemistry focus areas. If a student opts for one of the focus areas, they should consult with the Department of Chemistry and a Science Academic Advisor for information regarding specific course requirements for each focus area.

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.

6. Elective courses should be selected in consultation with the Department of Chemistry and/or a Faculty of Science Academic Advisor.

(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.5.6 Chemistry Course Descriptions

Chemistry Course Descriptions-0 Level

CHEM 0900 Preparatory Chemistry Cr.Hrs. 0
(Formerly 002.090) A course designed for students with little, or no background in chemistry who wish to achieve the prerequisites for advanced courses, or for students who require a refresher course in basic chemistry. 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: Any grade 12 or 40S Mathematics course or equivalent.

Chemistry Course Descriptions-1000 Level

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 (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 2000 level university Chemistry course.

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: One of CHEM 1000, CHEM 1001 (002.100) (C), CHEM 1300, CHEM 1301 (002.130) (C), Chemistry 40S (or equivalent), or CHEM 0900 (002.090).

CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry Cr.Hrs. 3
(Lab Required) (Formerly 002.130) Atomic and molecular models and their applications to chemistry, including a discussion of solid, liquid, and gaseous states, and of mixtures. Not to be held with CHEM 1301. Prerequisites: Applied Mathematics 40S or Pre-calculus Mathematics 40S, or the former Mathematics 40S (300); and Chemistry 40S (or equivalent) or CHEM 0900 (002.090) (P), or a minimum grade of "B" in CHEM 1000 or CHEM 1001 (002.100).

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 (002.130) (C).

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 (002.221) Prerequisite: CHEM 1300 or CHEM 1301 (002.130) (C).

4.5.6 Chemistry Course Descriptions-2000 Level

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 (002.132) or CHEM 2211. Prerequisite: CHEM 1310 or CHEM 1311 (002.131) (C).

CHEM 2220 Introductory Organic Chemistry 2: Reactivity and Synthesis Cr.Hrs. 3
(Lab Required) (Formerly 002.222) An introduction to the reactivity of organic compounds and organic spectroscopy. The application of functional group interconversions to syntheses. Not to be held with CHEM 2221. Prerequisite: CHEM 2210 or CHEM 2211 (002.221) (C).

CHEM 2240 Applied Chemistry for Engineers Cr.Hrs. 3
(Formerly 002.224) Bonding, surface chemistry, phase rule, electrochemistry, materials and descriptive inorganic chemistry of selected elements. Prerequisite: CHEM 1300 or CHEM 1301 (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(002.131) (C); PHYS 1030 or PHYS 1031 (016.103) (C) or PHYS 1070 or PHYS 1071 (016.107) (C); plus six credit hours of 1000 level mathematics (preferably calculus) with the exception of the former 136.100, MATH 1010 (136.101), MATH 1190, MATH 1191 (136.119), FA 1020 (054.102), or MATH 1020 (136.102).

CHEM 2290 Chemical Energetics and Dynamics: Macroscopic Descriptions Cr.Hrs. 3
(Lab Required) (Formerly 002.229) Chemical energetics, entropy and the second law of thermodynamics, chemical dynamics. Not to be held with CHEM 2291. Prerequisites: CHEM 1310 or CHEM 1311 (002.131) (C); PHYS 1030 or PHYS 1031 (016.103) (C) or PHYS 1070 or PHYS 1071 (016.107) (C); plus six credit hours of 1000 level mathematics (preferably calculus) with the exception of the former 136.100, MATH 1010 (136.101), MATH 1190, MATH 1191 (136.119), MATH 1020 (136.102), or FA 1020 (054.102).

CHEM 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy Cr.Hrs. 3
(Lab Required) (Formerly 002.236) An introductory course dealing with kinds of molecules encountered in biochemistry, and the concept of metabolic energy as a product of catabolism and a requirement for biosynthesis. This course is also given in Microbiology as MBIO 2360. Not to be held with CHEM 2361, CHEM 2770 (002.277), MBIO 2360, MBIO 2361 (060.236), or MBIO 2770 (060.277). Prerequisites: CHEM 1310 or CHEM 1311 (002.131) (C); and one of BIOL 1030, BIOL 1031, or the former 071.125 (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 (pre-September 2008 regulations). Those students following the new General Degree regulations (effective 2008-09) are able to use this course as part of the 18 credit hours of advanced level Chemistry or Microbiology.

CHEM 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways Cr.Hrs. 3
(Lab Required) (Formerly 002.237) An introductory course dealing with the basic metabolic processes that occur in living cells, including the production and use of metabolic energy, the breakdown and synthesis of biomolecules; the synthesis of DNA, RNA and proteins; and the regulation of these processes. This course is also given in Microbiology as MBIO 2370. Not to be held with CHEM 2371, CHEM 2780 (002.278), MBIO 2370, MBIO 2371 (060.237), or MBIO 2780 (060.278). Prerequisites: one of CHEM 2360, CHEM 2361 (002.236), MBIO 2360, or MBIO 2361 (060.236); and CHEM 2210 or CHEM 2211(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 (pre-September 2008 regulations). Those students following the new General Degree regulations (effective 2008-09) are able to use this course as part of the 18 credit hours of advanced level Chemistry or Microbiology.

CHEM 2400 Inorganic chemistry: Structure and Applications Cr.Hrs. 3
(Lab Required) Overview of chemical bonding, structure and reactivity across the Periodic Table, illustrated by examples linking Inorganic Chemistry with e.g. materials science and biochemistry. The lab component involves synthesis and analysis of simple inorganic compounds. Not to be held with CHEM 2380, CHEM 2381 or CHEM 2401. Prerequisite: CHEM 1310 or CHEM 1311 (C).

CHEM 2470 Introductory Analytical Chemistry Cr.Hrs. 3
(Lab Required) (Formerly 002.247) A course in quantitative analysis provides training useful for nearly all scientists. It equips the students with the theoretical principles on which the analytical methods are based, with the ability to plan and perform experimental work, to interpret the results. Not to be held with CHEM 2471. Prerequisites: CHEM 1310 or CHEM 1311 (002.131) (C); and three credit hours of mathematics with the exception of the former 136.100, MATH 1010, MATH 1190, MATH 1191, MATH 1020, or FA 1020.

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 (002.131) (C).

CHEM 2560 Water Quality Analysis for Engineers Cr.Hrs. 3
(Lab Required) Principles and applications of chemical and instrumental methods for the analysis of water quality. This course is restricted to students in Civil Engineering.

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 Four Year Biological Sciences programs in Science. May not be used as part of an Honours, Major, General, or Minor program in Chemistry or in Microbiology. This course is also given in Microbiology as MBIO 2770. Not be held with CHEM 2360, CHEM 2361 (002.236), MBIO 2360, MBIO 2361 (060.236), CHEM 2860 (002.286), or MBIO 2770 (060.277). Prerequisites: one of CHEM 1310, CHEM 1311 (002.131) (C), or CHEM 1320 (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 MBIO 2770, dealing with nitrogen and lipid metabolism, representative biosynthetic pathways, and synthesis and importance of DNA, RNA and proteins. For students in Agricultural and Food Sciences, Human Ecology, and four-year Biological Science programs in Science. May not be used as part of an Honours, Major, General, or Minor program in Chemistry or Microbiology. This course is also given in Microbiology as MBIO 2780. Not to be held with CHEM 2370, CHEM 2371 (002.237), MBIO 2370, MBIO 2371 (060.237), MBIO 2780 (060.278) or the former courses 002.235, 002.240, 060.235, 060.240. Prerequisites: one of CHEM 2770 (002.277), MBIO 2770 (060.277) (C), CHEM 2360, CHEM 2361 (002.236), MBIO 2360, or MBIO 2361(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, CHEM 2361 (002.236), CHEM 2770 (002.277), MBIO 2360, MBIO 2361 (060.236), MBIO 2770 (060.277), or the former courses 002.240 060.240, 002.235 or 060.235. Prerequisite: one of CHEM 1310, 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.

Chemistry Course Descriptions-3000 Level

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 (002.228) or CHEM 2281 or the former 002.230 (C).

CHEM 3370 Symmetry, Spectroscopy and Structure Cr.Hrs. 3
(Lab Required) (Formerly 002.337) Applications of symmetry in chemistry; molecular spectroscopy; structure of solids. Prerequisite: CHEM 2280 or CHEM 2281 (002.228) or the former 002.230 (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: one of CHEM 2220, CHEM 2221 (002.222), or the former 002.220 (C). CHEM 2290 or CHEM 2291(002.229) is recommended.

CHEM 3400 Inorganic Chemistry: Reactivity and Properties Cr.Hrs. 3
(Lab Required) Advanced chemistry of the elements with emphasis on chemical reactivity, electronic structure and physical properties of inorganic compounds. The laboratory focuses on the preparation, structure determination and spectroscopic characterization of inorganic compounds. This course may not be held for credit with CHEM 3380. Prerequisite: CHEM 2400 or CHEM 2380 (C).

CHEM 3490 Introduction of Polymers Cr.Hrs. 3
(Formerly 002.349) An introduction to the formation, structure, physical properties, and degradation of polymers. Prerequisites: one of CHEM 2220, CHEM 2221 (002.222) or the former 002.220 (C); and CHEM 2290 or CHEM 2291 (002.229), or the former 002.230 (C).

CHEM 3570 Biophysical Chemistry Cr.Hrs. 3
The application of physical chemistry to biological problems, with an emphasis on quantitative interpretation. Topics include enzyme kinetics, bioenergetics, transport processes and spectroscopy. Prerequisites: CHEM 2360 and MATH 1500 (or equivalent). CHEM 2280 is recommended.

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: one of CHEM 2220, CHEM 2221 (002.222) or the former 002.220 (C). Prerequisite or concurrent registration: CHEM 2290 or CHEM 2291(002.229).

CHEM 3590 Instrumental Analysis Cr.Hrs. 3
(Lab Required) A course dealing with the theory and use of standard instruments used for chemical and biochemical analyses. An introduction to the interpretation of data obtained from such analyses. This course is designed to follow a classical analytical chemistry course. Not to be held with ENVR 3550 (128.355) or the former 002.347 or the former 002.355. Prerequisite: CHEM 2470 (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).

Chemistry Course Descriptions-4000 Level

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. Not to be held with CHEM 4361. Prerequisite: a "C" or better in one of CHEM 2370, CHEM 2371 (002.237), MBIO 2370, MBIO 2371(060.237), the former 002.235, or the former 060.235.

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 CHEM 4371 or the former 002.449. Prerequisite: a "C" or better in one of CHEM 2370, CHEM 2371 (002.237), MBIO 2370, MBIO 2371(060.237), the former 002.235, or the former 060.235.

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 (128.455). Prerequisite: A grade of "C" or better in one of CHEM 3590, the former 002.347, the former 002.355, or ENVR 3550 (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. This is an advanced 4000 level course. Registration requires departmental permission. This course may not be offered every year - check with department for availability.

CHEM 4580 Topics in Organic Chemistry Cr.Hrs. 3
(Formerly 002.458) Selected topics dealing with the structure and reactivity of organic compounds. This is an advanced 4000 level course. Registration requires departmental permission. This course may not be offered every year - check with department for availability.

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" or better in CHEM 3590, or ENVR 3550 (128.355), or the former 002.355.

CHEM 4600 Advanced Chemical Techniques Cr.Hrs. 3
(Lab required) (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 (002.336) (C), CHEM 3400 (C), CHEM 3380 (002.338) (C), CHEM 3390 (002.339) (C), or CHEM 3580 (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. Not to be held with CHEM 4621. Prerequisite: a "C" or better in one of CHEM 2370, CHEM 2371 (002.237), MBIO 2370, MBIO 2371 (060.237), the former 002.235, or the former 060.235.

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. Not to be held with CHEM 4631. Prerequisite: a "C" or better in one of CHEM 2370, CHEM 2371 (002.237), MBIO 2370, MBIO 2371 (060.237), the former 002.235, or the former 060.235.

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. Prerequisite: CHEM 3370 (002.337) (C) or permission of the Instructor.

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 (002.337) (C).

CHEM 4660 Computational Chemistry Cr.Hrs. 3
An overview of modern computational methods employed in the study of chemical systems, combining theoretical understanding with practical applications. Prerequisite: CHEM 3360

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, CHEM 2361, MBIO 2360, MBIO 2361, 002.236, 060.236 (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 3400 (C), or CHEM 3380 (002.338) (C), or CHEM 3390 (002.339) (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 (002.339) (C).

CHEM 4700 Advanced Biochemistry Laboratory Cr.Hrs. 3
(Lab required) (Formerly 002.470) A laboratory and workshop consisting of lectures, problem solving, and advanced instrumental techniques such as magnetic resonance spectroscopy, mass spectrometry, circular dichroism, x-ray crystallography, fluorescence spectroscopy and computer analysis of protein sequences. This course is required for all final year Honours students in Biochemistry. 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
(Lab required) (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 CHEM 4711 or MBIO 4530 (060.453). Prerequisite: Permission of the course administrator.

CHEM 4800 Topics in Physical/Theoretical Chemistry Cr.Hrs. 3
Selected topics related to physical chemistry properties of matter, their measurement, and computational methods for studying them. This is an advanced 4000 level course, registration only by Departmental permission. This course may not be offered every year - check with department for availability.

CHEM 4802 Topics in Analytical Chemistry Cr.Hrs. 3
Selected topics on the most recent and sensitive techniques described in the literature in the Analytical, Bioanalytical and Environmental areas. A selection of topics among separation, surface, ionization, spectroscopy, voltammetry and spectrometry techniques will be covered. This is an advanced 4000 level course, registration only by Department permission. This course may not be offered every year - check with department for availability.

CHEM 4804 Topics in Biochemistry Cr.Hrs. 3
Selected advanced topics relevant to the study of biomolecules. This is an advanced 4000 level course, registration only by Departmental permission. This course may not be offered every year - check with department for availability.

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).

4.6 Department of Computer Science

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4.6.1 Program Information

Computer technology continues to advance and computer applications are found in all fields and disciplines. 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 prior to registration for each Fall/Winter Term. 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, and the Software Engineering area of specialization, 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 Honours program in Computer Science, a student must have completed at least 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in COMP 1020. Students are strongly encouraged to complete MATH 1300 and MATH 1500 (or equivalents) with at least a "C" average prior to entering the Computer Science Honours program. Failure to complete these first year Mathematics requirements will result in the inability to register for certain 2000 level required courses.

To continue in the Computer Science Honours program, students must maintain a minimum GPA of 3.00 and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate from the Computer Science Honours program students must achieve a minimum GPA of 3.00 and obtain a minimum grade of "C" on the courses that make up the 120 credit hours of the degree.

Students can take a maximum of 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 programs 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 second 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 nine (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 GPA of 3.00.

Students can take a maximum of 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 nine (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

To enter the Major Degree program in Computer Science, a student must have completed at least 24 credit hours with a minimum GPA of 2.00, and also obtained a minimum grade of "C+" in COMP 1020. Students are strongly encouraged to complete MATH 1300 and MATH 1500 (or equivalents) with at least a "C" average prior to entering the Computer Science Honours program. Failure to complete these first year Mathematics requirements will result in the inability to register for certain 2000 level required courses.

To continue in the Major program a student must maintain a minimum GPA of 2.00.

To graduate with the Computer Science Major degree, a student must present a minimum grade of "C" in: 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 21 credit hours of 3000 and 4000 level Computer Science courses that apply to the Computer Science component of their degree program. Additionally, students must achieve a minimum GPA of 2.00 on the courses that contribute to the 120 credit hours of the degree.

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 Year 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 Year 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 a maximum of 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 nine (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 maintain a minimum GPA of 2.00.

To graduate with the Major degree, a student must present a minimum grade of "C" in: 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 21 credit hours of 3000 and 4000 level Computer Science courses that apply to the Computer Science component of their degree program. Students must also obtain a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree.

Students can take a maximum of 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 and 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 18 credit hours of 2000, 3000, and (or) 4000 level courses from each of two Science areas. To satisfy the requirement in the area of Computer Science, students must select a minimum of 18 credit hours from the 2000, 3000, and (or) 4000 level courses offered by the department (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level.).

Area Specializations

Students who obtain a grade of "C" or better in the courses listed for an area of specialization will receive a notation on their transcript stating that they have met the requirements of that specialization. Students may obtain such a notation for more than one area.

Theoretical Computer Science
Requires: COMP 3170, COMP 3030, and COMP 4420; and two of COMP 4340, 4140, and/or COMP 4510.

Networks and Security
Requires: COMP 3720, COMP 4140, COMP 4580, and COMP 4720.

Artificial Intelligence
Requires: COMP 3190; and two of COMP 4180, COMP 4190, COMP 4200, and/or COMP 4360.

Human-Computer Interaction and Computer Graphics
Requires: COMP 3020, and COMP 3490; one of COMP 4020 or COMP 4490.

Databases
Requires: COMP 3380 and COMP 4380; and one of COMP 4710 or COMP 4740.

Software Engineering
Requires: COMP 3010, COMP 3020, COMP 3040, COMP 3380, COMP 3620, COMP 4050, and COMP 4350.

Computer Systems
Requires: One of COMP 3010, or COMP 3290; and two of COMP 4430, COMP 4550, COMP 4510, and/or COMP 4690.

Web Based Systems
Requires: COMP 3010, COMP 3020, COMP 3380, COMP 4350, COMP 4580

4.6.2 Computer Science

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS [3,4,6] **(Including Cooperative Option if selected)**[3] 120 CREDIT HOURS			
COMP 1010, COMP 1020 (B) MATH 1300[1] and MATH 1500[1]	COMP 2080, COMP 2130[1], COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3030, COMP 3170, COMP 3350, COMP 3370, COMP 3430 3 credit hours of 3000 level Computer Science courses	21 credit hours of 4000 level Computer Science courses
In Year 1 and / or Year 2 the following must be completed: STAT 1000 (C) 6 credit hours from the Faculty of Arts, which should include the required 3 credit hour "W" course. 21 credit hours of approved elective courses [2,4,6]		21 credit hours of approved electives [2,4,6] **Work Terms (if Co-op Selected):** 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 [3,4,5,6] **(Including Cooperative Option if Selected)**[3] 120 CREDIT HOURS			
COMP 1010, COMP 1020 (C+) MATH 1300[1] and MATH 1500[1]	COMP 2080, COMP 2130[1], COMP 2140, COMP 2150, COMP 2160, COMP 2280	COMP 3350, COMP 3370, COMP 3430 21 credit hours of 3000 or 4000 level Computer Science courses of which 6 credit hours must be at the 4000 level	
In Year 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 3 credit hour "W" course. 21 credit hours of approved electives [4,6]		30 credit hours of approved electives [4,6] **Work Terms (if Co-op Selected):** COMP 2980, COMP 3980, COMP 4980 must be completed prior to the last academic term	
THREE YEAR GENERAL (90 CREDIT HOURS)			
COMP 1010, COMP 1020	18 credit hours of 2000, 3000, and (or) 4000 level Computer Science courses (subject to the Faculty requirement that of the 36 credit hours to in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level.)		
MINOR			
COMP 1010, COMP 1020	COMP 2140 Plus a minimum of 9 credit hours from 2000 and (or) 3000 level Computer Science courses.		

NOTES:

1 MATH 1210 or MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520, or MATH 1690 (6) may be taken in place of MATH 1500. A "C" average is required in the 6 credit hours of Mathematics used as prerequisite to COMP 2130.
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 at the end of second 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 Additional information on how students may select their courses can be found at the beginning of this section.
5 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.
6 IMPORTANT: a maximum of 90 credit hours of computer science, statistics and mathematics courses can be included in a Major or Honours program

4.6.3 Computer Science - Mathematics Joint Honours Program (Including Co-op if selected)

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 as an elective.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS (Including Cooperative Option if selected) 120 CREDIT HOURS			
COMP 1010 and COMP 1020 (B) MATH 1300[1] (B), MATH 1690 (6) (B) (or MATH 1500[1] and MATH 1700[1](B)) STAT 1000 (C) 6 credit hours from the Faculty of Arts, which should include the required 3 credit hour "W" course[2] 6 credit hours of electives	COMP 2080[3], COMP 2140, COMP 2160, COMP 2280 MATH 2202, MATH 2352 (6), MATH 2750 (6) 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 (6) or MATH 3760 (6); and MATH 3350 (or MATH 3300 and MATH 3310) (6); and MATH 3400; and whichever of MATH 2600 or MATH 2800 not yet taken 12 credit hours of 3000 or 4000 level Mathematics courses, of which at least 3 credit hours must be 4000 level	15 credit hours of 3000 and 4000 level Honours Mathematics courses, with at least 6 credit hours at the 4000 level 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 3 credit hours of approved electives
	Work Term (if Co-op Selected)[4]: COMP 2980	Work Term (if Co-op Selected)[4]: COMP 3980	Work Term (if Co-op Selected)[4]: COMP 4980
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700.
2 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.
3 Students in this program will not take COMP 2130 or COMP 3130. COMP 2130 is waived as a prerequisite for students in this program.
4 When chosen, the Cooperative Option work terms (2980, 3980, 4980) will normally be completed during the Summer Terms following years 2, 3, and 4 respectively. (Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.6.4 Computer Science – Physics & Astronomy Joint Honours 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 1500, MATH 1700 (or any equivalent), COMP 1010 and COMP 1020. Students must complete a minimum of 9 credit hours per team in each Fall and Winter term.

To graduate with the Honours degree, a student must obtain a minimum GPA of 3.00 and 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.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS (Including Cooperative Option if selected) 120 CREDIT HOURS			
PHYS 1050 (B) (or PHYS 1020 (B+)) and PHYS 1070[1] (B) COMP 1010, COMP 1020 (B) MATH 1300[2] (B), MATH 1500[2] (B), MATH 1700[2] (B) 6 credit hours from the Faculty of Arts, which must include the required 3 credit hour "W" course[3] 3 credit hours of electives	PHYS 2260, PHYS 2380, PHYS 2390, PHYS 2490, PHYS 2650 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 6 credit hours of 3000 and / or 4000 level Computer Science courses	15 credit hours of 3000 and 4000 level Honours Physics courses, with at least 6 credit hours at the 4000 level 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 3 credit hours of approved electives
	Work Term (if Co-op Selected): COMP 2980[4]	Work Term (if Co-op Selected): COMP 3980[4]	Work Term (if Co-op Selected): COMP 4980[4]
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1 PHYS 1030 is not suitable for entry to the Honours or the 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.

2 MATH 1310 may be taken in place of MATH 1300; MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 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 Year 1. If not completed in Year 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.
4 When chosen, the Cooperative Option work terms (2980, 3980, 4980) will normally be completed during the Summer Terms following years 2, 3, and 4 respectively.

4.6.5 Computer Science – Statistics Joint Honours Program

The departments of Computer Science and Statistics offer a joint Honours program for in-depth study in both Computer Science and Statistics.

To enter the Joint Honours Computer Science-Statistics Program, the student must have a "B" or better in COMP 1020 and in STAT 2400 and a "C+" or better in MATH 1300, MATH 1500 and MATH 1700 or any equivalent courses.

To graduate with the Honours degree a student must present a minimum grade of "C" in each course that contributes to the degree. In addition, the student must achieve a minimum DGPA of 3.00 and a minimum grad of "C+" in each of the program specific courses in Statistics.

Both departments must approve a student's Honours program each session. Students must also obtain approval from both departments for any and all revisions to the program.

4.6.5 Computer Science – Statistics Joint Honours Program			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS[2] 120 credit hours (comprising courses listed in chart below, and electives			
MATH 1300[1] (C+),MATH 1500[1] (C+), MATH 1700[1] (C+) COMP 1010, COMP 1020 (B) STAT 1000, STAT 2000 (B) Plus 6 credit hours from the Faculty of Arts, which must include the required 3 credit hour "W" course plus 3 credit hours of electives.	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2190, STAT 2400 MATH 2300, MATH 2720, MATH 2730	COMP 3170, COMP 3380 STAT 3050, STAT 3400, STAT 3470, STAT 3480, STAT 3800 9 credit hours of electives[4] including 3 credit hours from 3rd year COMP	STAT 4100, STAT 4520, STAT 4530 21 credit hours of electives including 6 credit hours from 4th year COMP[3], 3 credit hours from 3rd year COMP and 6 credit hours from 4th year STAT courses
30 Hours	30 Hours	30 Hours	30 Hours
JOINT HONOURS COOPERATIVE OPTION[2] 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1300[1] (C+),MATH 1500[1] (C+), MATH 1700[1] (C+) COMP 1010, COMP 1020(B) STAT 1000, STAT 2000 (B) Plus 6 credit hours from the Faculty of Arts, which must include the required 3 credit hour "W" course plus 3 credit hours of electives.	COMP 2080, COMP 2130, COMP 2140, COMP 2150, COMP 2160, COMP 2190, STAT 2400, MATH 2300, MATH 2720, MATH 2730	COMP 3170, COMP 3380 STAT 3050, STAT 3400, STAT 3470, STAT 3480, STAT 3800 9 credit hours of electives[4] including 3 credit hours from 3rd year COMP	STAT 4100, STAT 4520, STAT 4530 21 credit hours of electives including 6 credit hours from 4th year COMP[3], 3 credit hours from 3rd year COMP and 6 credit hours from 4th year STAT courses.
	COMP 2980[5]	COMP 3980[5]	COMP 4980[5]
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] MATH 1310 may be taken inplace of MATH 1300; math 1510, MATH 1520 may be taken in place of MATH 1500. MATH 1690 may be taken in place of the combination of MATH 1500 and MATH 1700. MATH 1710 may be taken in place of MATH 1700.

[2] The courses required in this program will satisfy the university mathematics requirement.

[3] COMP 4710 and COMP 4380 are suggested if offered.

[4] The following courses are suggested: COMP 3350, COMP 3020, COMP 3490, MBIO 2410, STAT 3490, STAT 4630, STAT 4690.

[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 and must be completed by the last academic term.

4.6.6 Computer Science Course Descriptions

Computer Science Course Descriptions-1000 Level

COMP 1010 Introductory Computer Science 1 Cr.Hrs. 3
(Lab Required) (Formerly 074.101) An introduction to computer programming using a procedural high level language. Not to be held with COMP 1011 or COMP 1012. Prerequisite: any grade 12 or 40S Mathematics, or equivalent.

COMP 1012 Computer Programming for Scientists and Engineers Cr.Hrs. 3
(Lab Required) An introduction to computer programming suitable for solving problems in science and engineering. Students will implement algorithms for numerical processing, statistical analysis and matrix operations. Not to be held with COMP 1010. Prerequisite: Mathematics 40S or equivalent. Co-requisite: MATH1500 (or equivalent).

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. Prerequisite: COMP 1010 or COMP 1011 (074.101) (C); or COMP 1012 (C) or High School Computer Science 40S (75%) and any grade 12 or 40S Mathematics, or equivalent.

COMP 1260 Introductory Computer Usage 1 Cr.Hrs. 3
(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 hold with COMP 1261. May not be taken within the Computer Science Honours or Major program.

COMP 1270 Introductory Computer Usage 2 Cr.Hrs. 3
(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 hold with COMP 1271. May not be taken within the Computer Science Honours or Major program. Recommended Prerequisite: COMP 1260, COMP 1261 (074.126) or equivalent knowledge is strongly recommended.

Computer Science Course Descriptions-2000 Level

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 (074.213) (C); and one of COMP 2140 (074.214), the former 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 1210, MATH 1300, MATH 1301 (136.130), MATH 1310 (136.131); and one of: MATH 1500, MATH 1501(136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or MATH 1690 (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: one of COMP 1020, COMP 1021 (074.102), or the former 074.123 (C).

COMP 2150 Object Orientation Cr.Hrs. 3
(Formerly 074.215) Design and development of object-oriented software. Topics will include inheritance, polymorphism, data abstraction and encapsulation. Examples will be drawn from several programming languages. Not to be held with the former 074.215 or 074.227. Prerequisite: COMP 2160 (074.216); and one of COMP 2140 (074.214), the former 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 (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. May not hold with COMP 2191. Prerequisites: One of COMP 1020 or COMP 1021 (074.102), or COMP 1012 (C); and one of MATH 1500, MATH 1501 (136.150) (C), MATH 1510 (136.151) (C), MATH 1520 (136.152) (C), the former 136.153 (C), or MATH 1690 (136.169) (C). Prerequisite or concurrent registration: One of MATH 1300, MATH 1301, or MATH 1310.

COMP 2280 Introduction to Computer Systems Cr.Hrs. 3
(Lab Required) (Formerly 074.228) Data representation and manipulation, machine-level representation of programs, assembly language programming, and basic computer architecture. Not to be held with the former 074.222 or 074.240; also not available to students who have previously completed ECE 3610. Prerequisites: COMP 2140 (074.214) (C), COMP 2160 (074.216) (C), and COMP 2130 (074.213) (C).

COMP 2980 Workterm 1 Cr.Hrs. 0
(Formerly 074.298) Work assignment in business, industry, or government for students registered in the Computer Science Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail)

Computer Science Course Descriptions-3000 Level

COMP 3010 Distributed Computing Cr.Hrs. 3
(Formerly 074.301) An introduction to the development of client server and peer-to-peer systems through web applications, distributed programming models, and distributed algorithms. Prerequisite: COMP 2150 (074.215) (C).

COMP 3020 Human-Computer Interaction 1 Cr.Hrs. 3
(Formerly 074.302) Human-computer interaction: human factors and usability, user-centered design, prototyping, usability evaluation. Not to be held with the former 074.371. Prerequisite: one of COMP 2140 (074.214), the former 074.206, or COMP 2061 (C). A course in cognitive psychology, such as PSYC 2480 (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: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C); and COMP 2080 (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 ECE 2200, or the former 074.342, 074.447 or 024.422. Prerequisite: COMP 2280 (074.228) (C); or both of the former 074.222 and 074.223(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: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C); and COMP 2080 (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: one of COMP 2140 (074.214), the former 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 (074.228 or 074.222 or ECE 3610)(C). COMP 2160 (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 (074.215) (C), or COMP 2061(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 (074.228 or 074.222)(C) or ECE 3610 (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: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C).

COMP 3430 Operating Systems Cr.Hrs. 3
(Lab Required) (Formerly 074.343) Operating systems, their design, implementation, and usage. Not to be held with the former 074.450 or 074.460. Prerequisites: one of COMP 2140 (074.214 or 074.206 or COMP 2061)(C); and COMP 2280 (C) or ECE 3610 (C). COMP 2160 (074.216) is recommended.

COMP 3440 Programming Language Concepts Cr.Hrs. 3
(Formerly 074.344) An introduction to major concepts involved in the design of modern programming languages. The imperative, functional, and logical families and differences between them. Facilities for high level data and control structures, modular programming, data typing, and other topics will be covered. Not to be held with the former 074.310 or 074.348. Prerequisite: one of COMP 2140 (074.214), the former 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 2140 (C); and either COMP 2190 (C), or both MATH 1300 (C) and MATH 1500 (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: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C).

COMP 3720 Computer Networks 1 Cr.Hrs. 3
(Lab Required) (Formerly 074.372) This courses examines the principles of computer networks, including network architectures, algorithms, and performance. Not to be held with ECE 3700 or the former 074.430. Prerequisites: COMP 2140 (074.214) (C) and COMP 2280 (074.228) (C).

COMP 3820 Introduction to Bioinformatics Algorithms Cr.Hrs. 3
An introduction to problems in molecular biology and computational solutions. Focus on design and analysis of efficient algorithms. Prerequisites: COMP 2080 (074.208) and MBIO 2410 (C); or permission of instructor. Suggested concurrent requirement: COMP 3170.

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 (074.298) (P).

Computer Science Course Descriptions-4000 Level

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 (074.302) (C). A course in cognitive psychology such as PSYC 2480 (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 (074.335) (C).

COMP 4060 Topics in Computer Science Cr.Hrs. 3
(Formerly 074.406) This course will examine topics of interest at the fourth-year level. Specific topics will vary from year to year. Topics will be selected from current research in computer science. Prerequisite: Departmental permission.

COMP 4140 Introduction to Cryptography and Cryptosystems Cr.Hrs. 3
(Formerly 074.414) Description and analysis of cryptographic methods used in the authentication and protection of data. Classical cryptosystems and cryptoanalysis, the Advanced Data Encryption Standard (ADES) and Public-key cryptosystems. Prerequisite: COMP 2130 (074.213) (C). Students must be registered in fourth year of a Major or Honours programme in the Department of Computer Science.

COMP 4180 Intelligent Mobile Robotics Cr.Hrs. 3
Topics include artificial intelligence, computer vision, human-robot interaction, and multi-robot systems. These abstract components are grounded in the problem of developing a team of intelligent mobile robots. All topics are covered with specific emphasis on applied problems, e.g. real-time performance. Not to be held with the former COMP 4060 –"Mobile Robotics". Prerequisites: COMP 2160 (074.216) and COMP 3190 (074.319) (C).

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 (074.319) (C).

COMP 4200 Expert Systems Cr.Hrs. 3
Organization of expert systems; knowledge representation in expert systems; inference; knowledge engineering; tools for building expert systems; limitations of expert systems. Prerequisite: COMP 3190 (074.319) (C).

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 (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 (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 (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 (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 (074.317) (C); and STAT 1000 or STAT 1001 (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 (074.216) (C) and COMP 3430 (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 (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 ECE 4530 or the former 024.446. Prerequisites: COMP 3370 (074.337) (C) and COMP 3430 (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 4th Year students only. Prerequisite: departmental permission.

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. This course may not be held for credit if a student has previously completed both of ECE 4240 and ECE 3760. Prerequisites: COMP 3430 (074.343) (C) and COMP 3370 (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 (074.335) (C) and departmental permission.

COMP 4580 Computer Security Cr.Hrs. 3
(Lab Required) (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 (074.343) (C); and one of COMP 3010 (074.301) or COMP 3720 (074.430) (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 (074.337) (C).

COMP 4710 Introduction to Data Mining Cr.Hrs. 3
Introduction to data mining concepts and their applications. Prerequisite: COMP 3380 (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 (074.372) or the former 074.430 (C). Corequisite: COMP 3430 (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 (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 (074.398) (P).

4.7 Interdisciplinary Courses in Forensic Science

FORS 2000 Introductory Forensic Science Cr.Hrs. 3

Survey course which introduces forensic science via a series of guest lectures provided by experts from within the university and from the community (e.g., Winnipeg Police, RCMP, Chief Medical Examiner, etc.). Multidisciplinary topics will be covered including how a case is studied, use of scientific techniques in investigations, collection of evidence, the role of the expert witness, and presentation of evidence in court. Prerequisites: BIOL 1030 (C+), CHEM 1310 (C+).

FORS 3000 Forensics Processing and Analysis Cr.Hrs. 3

(Lab Required) Theory and practice of processing and analysis of various types of forensic evidence. Lectures will be given by experts from within the university and within the community. Topics covered in lecture and lab exersises include protocols to identify, document and protect visible and latent forensic scientific evidence, analytical methods with forensic applications, rules and prodecures governing the collection of evidence and the use of scientific data in court. Prerequisite: FORS 2000.

4.8 Genetics Program

Program Director: Gary Anderson
Campus Address/General Office: 212 Biological Sciences Building
Telephone: 204 474 9245
Email Address: andersow@cc.umanitoba.ca

Website: umanitoba.ca/science/biological_sciences

4.8.1 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, Continuation, and Graduation requirements

Honours

To enter the Honours program in Genetics, a student must have completed at least 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in BIOL 1030, and a minimum grade of "C+" in CHEM 1310. STAT 1000, MATH 1500 and the additional 3 credit hours of specified Mathematics courses are program requirements and students are strongly encouraged to complete these courses in first year.

* Students interested in studying Genetics should note that Grade 12 mathematics and chemistry are prerequisite to CHEM 1300. Effective 2009-2010, students will also require Biology 40S (or equivalent) and any Grade 12 mathematics course (or equivalent) for entry to BIOL 1020 (the required prerequisite for BIOL 1030).

To continue in the Genetics Honours program, students must maintain a minimum GPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must maintain a minimum 3.00 GPA and achieve a minimum grade of "C" on all courses that make up 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 Genetics program may enter the Cooperative Option in April of their second 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 nine (9) credit hours. Students should refer to the general faculty regulations for B. Sc. (Honours) Cooperative Options in Section 3.6.

Students must apply for openings in the Cooperative Option and should check with the Co-op office for the April deadline information. They will be notified of their provisional acceptance in the program by September. 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. 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.

Major

To enter the Major Degree program in Genetics, a student must have completed at least 24 credit hours with a minimum GPA of 2.00, and also obtained a minimum grade of "C+" in BIOL 1030, and a minimum grade of "C" in CHEM 1310. STAT 1000, MATH 1500 and the additional 3 credit hours of specified Mathematics courses are program requirements and students are strongly encouraged to complete these courses in first year.

* Students interested in studying Genetics should note that Grade 12 mathematics and chemistry are prerequisite to CHEM 1300. Effective 2009-2010, students will also require Biology 40S (or equivalent) and any Grade 12 mathematics course (or equivalent) for entry to BIOL 1020 (the required prerequisite for BIOL 1030).

To continue in the Genetics Major Degree program, students must maintain a minimum GPA of 2.00.

To graduate with the Bachelor of Science (Major) in Genetics, a student must obtain passing grades on all courses, obtain a minimum GPA of 2.00 on the 120 credit hours that make up the degree, and a minimum grade of C in all required and optional courses that contribute to the Major.

Major Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Genetics Major program may enter the Cooperative Option in April of their second year. 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 Major Degree 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. Students should refer to the general faculty regulations for B. Sc. (Major) Cooperative Options in Section 3.6.

Students must apply for openings in the Cooperative Option and should check with the Co-op office for the April deadline information. They will be notified of their provisional acceptance in the program by September. 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 student(s) they wish to employ. 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.

4.8.2 Genetics Program Charts

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS (Including Cooperative Option[3,4,5] if selected) 120 CREDIT HOURS			
CHEM 1300, CHEM 1310 BIOL 1020, BIOL 1030 STAT 1000 MATH 1500[1] One of: MATH 1200, MATH 1300[1], or MATH 1700[1]	BIOL 2500, BIOL 2520 CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370) MBIO 1010, MBIO 2020 STAT 2000	BIOL 3500 MBIO 3410 PLNT 3140 BGEN 3020 (6) One of: ANTH 2240, ANTH 2560, ANTH 2860, or ANTH 2890 42 credit hours from list of optional courses (a minimum of 18 of these credit hours must be 4000 level)	
In Year 1 or Year 2: 3 credit hours from the Faculty of Arts 3 credit hour "W" course[2] 6 credit hours of electives		**Work Terms (if Co-op Selected)[3,4,5]:** MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990	
30 Hours	30 Hours	30 Hours	30 Hours
YEAR 1	YEAR 2	YEAR 3	YEAR 4
MAJOR (Including Cooperative Option if selected)[1] 120 CREDIT HOURS			
CHEM 1300, CHEM 1310 BIOL 1020, BIOL 1030 STAT 1000 MATH 1500[1] One of: MATH 1200, MATH 1300[1], or MATH 1700[1]	BIOL 2500, BIOL 2520 CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370) MBIO 1010, MBIO 2020 STAT 2000	BIOL 3500 MBIO 3410 PLNT 3140 BGEN 3020 (6) One of: ANTH 2240, ANTH 2560, ANTH 2860, or ANTH 2890 33 credit hours from list of optional courses (a minimum of 15 of these credit hours must be 4000 level) 9 credit hours of approved elective courses	
In Year 1 or Year 2: 3 credit hours from the Faculty of Arts 3 credit hour "W" course[2] 6 credit hours of electives		**Work Terms (if Co-op Selected)[3,4,5]:** MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990	

NOTES:

1 MATH 1310 may be taken in place of MATH 1300; MATH 1510, or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.
2 As there are no electives in Year 2 of the program, students should complete the University written English requirement in Year 1. If not completed in Year 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.
3 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.
4 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.

[5] MBIO 4530 and BGEN 4010 are not available to students in the Cooperative Option.

(The number 6 in brackets indicates a 6 credit hour course.)

The optional courses are:

Biological Sciences: BIOL 2410, BIOL 2420, BIOL 2540, BIOL 3290, BIOL 3300, BIOL 3560, BIOL 4500, BIOL 4540, BIOL 4542, BIOL 4560

Chemistry: CHEM 2280, CHEM 2290, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630

Microbiology: MBIO 3000, MBIO 3010, MBIO 3030, MBIO 3430, MBIO 3440, MBIO 3450, MBIO 3460, MBIO 4010, MBIO 40202, MBIO 4410, MBIO 45301 (6), MBIO 4540, MBIO 4670 (or the former MBIO 4570), MBIO 46722, MBIO 4600, MBIO 4610.

Forensic Science: FORS 2000 (satisfies the University "W" requirement)

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

Pharmacology: PHAC 4030, PHAC 4040

Plant Science: PLNT 2530, PLNT 3500, PLNT 3520, PLNT 4330, PLNT 4610

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.

NOTES:

1 MBIO 4530 (6) and BGEN 4010 are project courses. A research project is chosen in consultation with the Microbiology department (MBIO 4530) or Biochemistry and Medical Genetics (BGEN 4010) and the Genetics program committee, and is supervised by a staff member. Only one of MBIO 4530 or BGEN 4010 may be elected in this program.

2 MBIO 4020 and MBIO 4672 are not available options for students in the Genetics Honours Degree program.

4.9 Department of Mathematics

Head: Julien Arino
Campus Address/General Office: 342A Machray Hall
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Email Address: mathematics_dept@umanitoba.ca
Website: http://www.math.umanitoba.ca/

4.9.1 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, or statistics.

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.

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 Academic 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 completed at least 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in the following courses: MATH 1300; and one of MATH 1700 or MATH 1690 (or equivalent).

To continue in the Mathematics Honours program, students must maintain a minimum GPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must maintain a minimum 3.00 GPA and achieve a minimum grade of "C" on all courses that make up the 120 credit hours of the degree.

The program for students who elect Honours in Mathematics is as follows:

Year 2 Mathematics courses as indicated in the chart below and nine (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 or forth 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 third or forth year 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 2400, STAT 3470, STAT 3480, STAT 3400 (STAT 3500), STAT 3800 (STAT 3600), STAT 4100 (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 chosen with permission of the department. Students are required to obtain the approval of the department concerning their choice of electives.

Double Honours: 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 continue in the Mathematics Major degree program students must maintain a minimum DGPA of 2.00.

To graduate with the B. Sc. Major degree, a student must achieve a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree, 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, (or MATH 1690 in place of MATH 1500 and MATH 1700), MATH 2202, 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, 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, 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 three 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 continue in the Applied Mathematics Major degree programs, students must maintain a minimum DGPA of 2.00.

To graduate with the B. Sc. Major degree, a student must achieve a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree, and a minimum grade of "C" in each of the Major Program Specific courses (see below).

Applied Mathematics Major Program Specific Courses

MATH 1200, MATH 1300, MATH 1500, MATH 1700 (or MATH 1690 in place of MATH 1500 and MATH 1700), 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 2552, the former 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 18 credit hours of 2000, 3000, and (or) 4000 level courses from each of two Science areas. To satisfy the requirement in the area of Mathematics, students must select a minimum of 18 credit hours of 2000, 3000, and (or) 4000 level Mathematics courses (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level).

See a Science Academic Advisor or a Faculty Advisor in the department for information regarding entry to or completion of any of the programs outlined.

4.9.2 Charts

4.9.2.1 Mathematics Honours Program Chart

YEAR 1	YEAR 2	YEAR 3	YEAR 4
MATHEMATICS HONOURS[4] 120 CREDIT HOURS			
MATH 1300[1] (B) MATH 1690 (6) (B) (or MATH 1500[1] and MATH 1700[1] (B))	MATH 2202, MATH 2352 (6), MATH 2600, MATH 2750 (6), MATH 2800	**48 credit hours[3] of 3000 and 4000 level Mathematics[4]** courses, which must include the following: MATH 3230, MATH 3400, MATH 3760 (6), MATH 3800; and one of the two concentrations listed below: **Applied and Computational Mathematics Concentration:** MATH 3300 or MATH 3350 (6); MATH 3700 or MATH 3710; and at least 12 credit hours from the former 136.351, MATH 3600, MATH 3810, MATH 3820, MATH 4310, MATH 4610, MATH 4800 or MATH 4810 **Pure Mathematics Concentration:** MATH 3350 (6), MATH 3710 and at least 12 credit hours from MATH 3240, MATH 4200, MATH 4350 (6), MATH 4410 or MATH 4420, MATH 4710, MATH 4750 (6)	
The following can be completed in Year 1 or Year 2: STAT 1000[2], COMP 1010[2] 6 credit hours from the Faculty of Arts, which should include the required "W" course			
18 credit hours of electives (review above list for acceptable electives)		12 credit hours of approved electives (review above list for acceptable electives)	
30 credit hours	30 credit hours	30 credit hours	30 credit hours

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1500 and 1700).

2 STAT 1000 and COMP 1010 must be completed 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 MATH 3200, MATH 3210, MATH 3740 and MATH 3910 cannot be used in an Honours program.

5 **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. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.2 Mathematics Double Honours Program Chart

MATHEMATICS HONOURS DOUBLE[4] MINIMUM 120 CREDIT HOURS (comprising courses listed in chart below, and the required courses from the other department)			
MATH 1300[1] (B), MATH 1690 (6) (B) (or MATH 1500[1] and MATH 1700[1] (B)) STAT 1000[2] COMP 1010[2] Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course	MATH 2202, MATH 2352 (6), MATH 2600, MATH 2750 (6), MATH 2800	MATH 3230, MATH 3350 (6), MATH 3710, MATH 3760 (6)	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

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1500 and 1700).

2 STAT 1000 and COMP 1010 must be completed 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 MATH 3200, MATH 3210, MATH 3740 and MATH 3910 cannot be used in an Honours program.

5 **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. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.3 Mathematics Major Program Chart

MATHEMATICS FOUR YEAR MAJOR[5] 120 CREDIT HOURS		
MATH 1300[1], MATH 1500[1] , MATH 1700[1]	MATH 2202, MATH 2352 (6), MATH 2600, MATH 2750 (6), MATH 2800	MATH 3300 or MATH 3350 (6), MATH 3400, MATH 3700 or MATH 3710, MATH 3740 (6) or MATH 3760 (6), 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**
The following can be completed in Year 1 or Year 2: STAT 1000[2], COMP 1010[2] 6 credit hours from the Faculty of Arts, which should include the required "W" course 18 credit hours of approved electives		12 credit hours of approved electives

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1500 and 1700).

2 STAT 1000 and COMP 1010 must be completed 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 MATH 3200, MATH 3210, MATH 3740 and MATH 3910 cannot be used in an Honours program.

5 **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. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.4 Applied Mathematics with Computer Science Option Program Chart

APPLIED MATHEMATICS FOUR YEAR MAJOR with COMPUTER SCIENCE OPTION[5] 120 CREDIT HOURS		
MATH 1200, MATH 1300[1], MATH 1500[1], MATH 1700[1] COMP 1010, COMP 1020	MATH 2300, MATH 2600, MATH 2720, MATH 2730, MATH 2800 COMP 2140	MATH 2400, MATH 3600, MATH 3700, MATH 3740 (6), MATH 3800, MATH 3810, MATH 3820
6 credit hours from the Faculty of Arts, which should include the required "W" course 6 credit hours of approved electives	STAT 1000 and STAT 2000 6 credit hours chosen from: MATH 2450 (6), MATH 2500, MATH 2552 (6), or any 3000 / 4000 level MATH course One of the following patterns (9 credit hours): **Graphics**: COMP 2190, COMP 3490, COMP 4490 **Software:** COMP 2150, COMP 3440; and one of: COMP 2160, COMP 3380, or COMP 3020 **Theoretical Computer Science:** COMP 2080, COMP 2130; and one of: COMP 3170 or COMP 4530 **Hardware:** COMP 2160, COMP 2280; and one of: COMP 3370 or COMP 3430 **Artificial Intelligence:** COMP 3190; and two of: COMP 4180, COMP 4190, COMP 4200, COMP 4360	
	27 credit hours of electives taken during years 2, 3 and 4	

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1500 and 1700).

2 STAT 1000 and COMP 1010 must be completed 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 MATH 3200, MATH 3210, MATH 3740 and MATH 3910 cannot be used in an Honours program.

5 **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. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.5 Applied Mathematics with Economics Option Program Chart

APPLIED MATHEMATICS FOUR YEAR MAJOR with ECONOMICS OPTION[5] 120 CREDIT HOURS		
MATH 1200, MATH 1310[1], MATH 1500[1], MATH 1700[1] ECON 1010, ECON 1020 (or ECON 1210, ECON 1220)	MATH 2300, MATH 2600, MATH 2720, MATH 2730, MATH 2800	MATH 2400, MATH 3600, MATH 3700, MATH 3740 (6), MATH 3800, MATH 3810, MATH 3820, MATH 4310
9 credit hours of electives	STAT 1000, STAT 2000 COMP 1010 ECON 2530, ECON 3730 **3 credit hours from:** MATH 2450 (6), MATH 2500, MATH 2552 (6), or any 3000 / 4000 level MATH course **6 credit hours from:** ECON 2450, ECON 2460, ECON 2470 and ECON 2480	
	24 credit hours of approved electives taken during years 2, 3 and 4	
3 credit hour "W" course must be taken in Year 1 or Year 2		

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1500 and 1700).

2 STAT 1000 and COMP 1010 must be completed 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 MATH 3200, MATH 3210, MATH 3740 and MATH 3910 cannot be used in an Honours program.

5 **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. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.6 Applied Mathematics with Statistics Option Program Chart

APPLIED MATHEMATICS FOUR YEAR MAJOR with STATISTICS OPTION[5] 120 CREDIT HOURS		
MATH 1200, MATH 1300[1], MATH 1500[1], MATH 1700[1] STAT 1000	MATH 2300, MATH 2600, MATH 2720, MATH 2730, MATH 2800 STAT 2000	MATH 2400, MATH 3600, MATH 3700, MATH 3740 (6), MATH 3800, MATH 3810, MATH 3820 STAT 2400, STAT 3400, STAT 3470, STAT 3480, STAT 3800
6 credit hours from the Faculty of Arts, which should include the required "W" course	COMP 1010 6 credit hours from: MATH 2450 (6), MATH 2500, MATH 2552 (6), or any 3000 / 4000 level MATH course 6 credit hours of 3000 or 4000 level Statistics courses	
9 credit hours of electives	18 credit hours of approved electives taken during years 2, 3 and 4	

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1500 and 1700).

2 STAT 1000 and COMP 1010 must be completed 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 MATH 3200, MATH 3210, MATH 3740 and MATH 3910 cannot be used in an Honours program.

5 **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. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.7 Mathematics General Degree and Minor Requirements

THREE YEAR GENERAL (90 CREDIT HOURS)	
	18 credit hours of 2000, 3000, and (or) 4000 level Mathematics courses (subject to the Faculty requirement that of the 36 credit hours to be completed in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level.)"
MINOR	
MATH 1300[1], MATH 1500[1], MATH 1700[1] plus a minimum of 9 credit hours from: MATH 1200 and 2000 and (or) 3000 level Mathematics courses	

4.9.2.8 Mathematics – Physics and Astronomy Joint Honours Program

Honours Requirements

To enter the Joint Honours Mathematics – Physics Honours program the student must have a minimum grade of "B" in: MATH 1300[1], MATH 1510[1] , MATH 1710[1] (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 129 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.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 129 CREDIT HOURS (129 credit hours)			
MATH 1300[1] (B), MATH 1510[1](B), MATH 1710[1] (B) PHYS 1050 (B) (or PHYS 1020 (B+))[2] and PHYS 1070 (B) STAT 1000 COMP 1010 6 credit hours from the Faculty of Arts, which should include the required "W" course[4]	PHYS 2260, PHYS 2380, PHYS 2600, PHYS 2610, PHYS 2650[3] MATH 2202, MATH 2352 (6), MATH 2750 (6), MATH 2800	MATH 3230, MATH 3350 (6) (or MATH 3300 and MATH 3310), MATH 3700 or MATH 3710, MATH 3760 (6) PHYS 3670, PHYS 3680, PHYS 3650, PHYS 3630, PHYS 3380 3 credit hours from 3000 and 4000 level Physics Honours courses	MATH 3800, MATH 4810[6] 9 credit hours of 3000 or 4000 level Mathematics courses, of which 3 credit hours must be at the 4000 level PHYS 3430 (6), PHYS 3640[5], PHYS 3660, PHYS 4390 3 credit hours from 3000 and 4000 level Physics Honours courses
27 Hours	33 Hours	36 Hours	33 Hours

NOTES:

1 MATH 1310 may be taken in place of MATH 1300; MATH 1500, or MATH 1520 may be taken in place of MATH 1510; MATH 1700 may be taken in place of MATH 1710. MATH 1690 may be taken in place of both MATH 1510 and 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 As there are no electives in Year 2 of the program, students should complete the university written English requirement in University I. If not completed in University I, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

5 The prerequisite of PHYS 2490 is waived.

6 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. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.9 Mathematics – Economics Joint Honours Program

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 1010 and ECON 1020 (or ECON 1210 and ECON 1220), MATH 1300[1], MATH 1700[1] and have satisfied the Faculty of Science requirements for entry to the honours program.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS			
ECON 1010, ECON 1020 (or ECON 1210 and ECON 1220) MATH 1300[1], MATH 1500 [1,2], MATH 1700 [1,2] STAT 1000[3] COMP 1010[3]	ECON 2700, ECON 2800 MATH 2202, MATH 2352 (6), MATH 2750 (6), MATH 2800	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) (6) 24 credit hours of approved Economics courses[4] 6 credit hours of Mathematics courses at the 3000 or 4000 level, which must include at least one of MATH 3510, MATH 3600, MATH 3810, MATH 3820, MATH 4310, or any Mathematics course at the 4000 level.	
9 credit hours of electives[6], including the required "W" course.	6 credit hours of approved electives[6]		
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1 MATH 1310 may be taken in place of MATH 1300; MATH 1510, or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place MATH 1700.

2 The combination of MATH 1500[1] and MATH 1700[1] 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 Students 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. (The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.10 Mathematics - Computer Science Joint Honours Program

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 as an elective.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS (Including Cooperative Option if selected) 120 CREDIT HOURS			
COMP 1010 and COMP 1020 (B) MATH 1300[1] (B), MATH 1690 (6) (B), (or MATH 1500[1] and MATH 1700[1](B)) STAT 1000 (C) 6 credit hours from the Faculty of Arts, which should include the required 3 credit hour "W" course[2] 6 credit hours of electives	COMP 2080[3], COMP 2140, COMP 2160, COMP 2280 MATH 2202, MATH 2352 (6), MATH 2750 (6) 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 (6) or MATH 3760 (6); and MATH 3350 (or MATH 3300 and MATH 3310) (6); and MATH 3400; and whichever of MATH 2600 or MATH 2800 not yet taken 12 credit hours of 3000 or 4000 level Mathematics courses, of which at least 3 credit hours must be 4000 level	
	Work Term (if Co-op Selected)[4]: COMP 2980	**Work Term (if Co-op Selected)[4]:** COMP 3980	**Work Term (if Co-op Selected)[4]:** COMP 4980
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1 MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1310 may be taken in place of MATH 1300; MATH 1710 may be taken in place of MATH 1700.

2 As there are no electives in Year 2 of the program, students should complete the written English requirement in Year 1. If not completed in Year 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

3 Students in this program will not take COMP 2130 or COMP 3130. COMP 2130 is waived as a prerequisite for students in this program.

4 When chosen, the Cooperative Option work terms (2980, 3980, 4980) will normally be completed during the Summer Terms following years 2, 3, and 4 respectively. (Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.9.2.11 Mathematics - Statistics Joint Honours Program

The departments of Statistics and Mathematics offer a joint Honours program for students wishing in depth study in Statistics and Mathematics.

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.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1300[1] (B), MATH 1690 (6) (B) (or MATH 1500[1] and MATH 1700[1](B))	STAT 2000[2], STAT 2400 MATH 2202, MATH 2352 (6), MATH 2600, MATH 2750 (6), MATH 2800	STAT 3050, STAT 3470, STAT 3480, STAT 3400, STAT 3800	STAT 4100, STAT 4520, STAT 4530
The following courses must be taken in Year 1 or Year 2: STAT 1000 (B), COMP 1010 6 credit hours from the Faculty of Arts, which should include the required "W" course 12 credit hours of approved electives		Plus a total of 30 credit hours from: MATH 2400 and any 3000 / 4000 level Mathematics courses, which must include at least 3 credit hours at the 4000 level and must also include MATH 3230, MATH 3740 (6)(or MATH 3760 (6)), MATH 3350 (6) (or MATH 3300), MATH 3700 (or MATH 3710), MATH 3400 and MATH 3800 6 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 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700.

2 STAT 2000 may be taken in Year 1.

(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.9.3 Mathematics Course Descriptions

Mathematics Course Descriptions-0 Level

MATH 0500 Preparing for University Mathematics Cr.Hrs. 0
A voluntary non-credit mathematics course for students, holding credit in Pre-Calculus 40S or Applied Mathematics 40S or equivalent, who would benefit from improving their knowledge and skills concerning topics included in the Manitoba secondary school mathematics curriculum.
This course may be taken prior to or concurrently with MATH 1200, 1210, 1300, 1310, 1500, 1510, 1520, 1700, 1710 or 1690. Students participating in this course should purchase the set of notes "Preparing for University Mathematics" from the University of Manitoba Bookstore.
Prerequisite: a grade of 60% in Pre-Calculus 40S, 70% in Applied Mathematics 40S or a grade of 60% or better in the Math Skills course offered by Extended Education. (NOTE: The fee for this course is non-refundable upon withdrawal).

Mathematics Course Descriptions-1000 Level

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. This is a terminal course and may not be used as a prerequisite for other Mathematics courses. This course cannot 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 Mathematics course with the exception of MATH 1020 (136.102), FA 1020 (054.102), MATH 1190, MATH 1191 (136.119). Not to be taken concurrently with any other Mathematics course with the exception of MATH 1020, FA 1020, MATH 1190, or MATH 1191. 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 is a terminal course and may not be used as a prerequisite for other Mathematics courses. This course cannot 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 Mathematics course with the exception of MATH 1010 (136.101), MATH 1190, MATH 1191 (136.119). Not to be taken concurrently with any other Mathematics course with the exception of MATH 1010, MATH 1190, or MATH 1191. Not to be held with FA 1020 (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 mathematics. Topics are taken from number systems, geometry, and combinatorics. This is a terminal course and may not be used as a prerequisite for other Mathematics courses. This course cannot be used as part of an Honours, Major, General or Minor program in the mathematical sciences. May not hold with MATH 1191. Not available to any student already holding a grade of "C" or better in any Mathematics course with the exception of MATH 1010 (136.101), MATH 1020 (136.102), or FA 1020 (054.102). Not to be taken concurrently with any other Mathematics course with the exception of MATH 1010, MATH 1020, or FA 1020. No prerequisite.

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 1210, or MATH 1201. Not available to any student holding credit in any Mathematics course numbered 2000 or higher, unless MATH 1200 is a required course in a student's program. Prerequisite: a minimum grade of 60% in Pre-calculus 40S or the former Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills course taught by Extended Education.

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 (136.120), MATH 1201, MATH 1300 (136.130), MATH 1301, or MATH 1310 (136.131). Prerequisites: a minimum grade of 60% in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills course taught by Extended Education.

MATH 1300 Vector Geometry and Linear Algebra Cr.Hrs. 3
(Lab Required) (Formerly 136.130) An introduction to vectors, matrices, systems of linear equations and three-dimensional geometry. Not to be held for credit with MATH 1210, MATH 1310 (136.131), MATH 1301, or the former MATH 1680 (136.168). Prerequisite: a minimum grade of 60% in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills course taught by Extended Education. NOTE: A minimum grade of 70% in Applied Mathematics 40S may be used as a prerequisite to this course.

MATH 1310 Matrices for Management and Social Sciences Cr.Hrs. 3
(Lab Required) (Formerly 136.131) Matrix methods with examples relevant to the Management and Social Sciences. Topics include vectors, matrices, systems of linear equations, and determinants; applications include economic models, the simplex method for linear programming, Markov chains, and game theory. Not to be held with MATH 1210, MATH 1300 (136.130), MATH 1301, or the former MATH 1680 (136.168). Prerequisite: a minimum grade of 60 % in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills course taught by Extended Education. NOTE: A minimum grade of 70% 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 (136.151), MATH 1520 (136.152), the former 136.153, the former MATH 1680 (136.168), or MATH 1690 (136.169). Prerequisite: a minimum grade of 60% in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills course taught by Extended Education.

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 (136.150), MATH 1520 (136.152), the former 136.153, the former MATH 1680 (136.168), or MATH 1690 (136.169). Prerequisite: a minimum grade of 60% in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills course taught by Extended Education; and Physics 40S (300) or a "P" in PHYS 0900 (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 (136.150), MATH 1510 (136.151), the former 136.153, the former MATH 1680 (136.168), or MATH 1690 (136.169). Prerequisite: a minimum grade of 60% in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a minimum grade of 60% in the Mathematical Skills course taught by Extended Education.

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 (136.150) and MATH 1700 (136.170) together, but in greater depth. Exposure to high school calculus (45S) is desirable, but not essential. This course is mathematically challenging and is intended for students planning to enter an Honours or 4 year Major program in Mathematics. Not to be held with MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, the former MATH 1680 (136.168), MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171), or the former 136.173. Prerequisite: a minimum grade of 80 % 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 (136.169), MATH 1701, MATH 1710 (136.171), or the former 136.173. Prerequisite: A grade of "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or the former MATH 1680 (136.168).

MATH 1710 Applied Calculus 2 Cr.Hrs. 3
(Lab Required) (Formerly 136.171) Applications of integration to volumes, centres of mass, moments of inertia, work and fluid pressure; differentiation of trigonometric, inverse trigonometric, exponential, and logarithmic functions; techniques of integration; polar coordinates. Physical applications in this course make it especially suitable for students intending to take programs in engineering. Not to be held with MATH 1690 (136.169), MATH 1700 (136.170), MATH 1701, or the former 136.173. Prerequisite: A grade of "C" or better in one of MATH 1500 (136.150), MATH 1501, MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or the former MATH 1680 (136.168). Prerequisite or concurrent Requirement: PHYS 1050 or PHYS 1051.

Mathematics Course Descriptions-2000 Level

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 and Geophysics students only. Not to be held with MATH 2600 (136.260) or MATH 2601. Prerequisites: one of COMP 1010, COMP 1011 (074.101), the former 074.111, or the former 074.112 (C); and MATH 2132 or the former MATH 2100 (136.210) (C).

MATH 2130 Engineering Mathematical Analysis 1 Cr.Hrs. 3
(Lab required) Multivariable differential and integral calculus up to and including multiple integrals in cylindrical and spherical coordinates. For Engineering and Geophysics students only. This course may not be held for credit with MATH 2720 (136.272, 136.270), MATH 2750 (136.275), or the former MATH 2110 (136.211). Prerequisites: MATH 1210 and MATH 1710 (136.171) (C).

MATH 2132 Engineering Mathematical Analysis 2 Cr.Hrs. 3
(Lab required) Infinite series, Taylor and Maclaurin Series; ordinary differential equations including Laplace transforms. For Engineering and Geophysics students only. This course may not be held for credit with MATH 2800 (136.280), MATH 2730 (136.273, 136.271), or the former MATH 2100 (136.210). Prerequisites: MATH 1210 (C) and MATH 1710 (136.171) (C).

MATH 2202 Fundamentals of Mathematical Analysis Cr.Hrs. 3
(Formerly MATH 2200) The language of mathematics: logic, methods of proof, elementary set theory. Foundations of calculus: the real numbers, continuity. This course is mathematically challenging and is intended primarily for students registered in Honours, Joint Honours or the Four-Year Major program. Registration for this course requires approval of the department. Not to be held with the former MATH 2200 (136.220). Prerequisites: a grade of C+ or better in one of MATH 1300, 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), or MATH 1710 (136.171).

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 2301, MATH 2352, the former MATH 2350 (136.235), or MATH 3130 (136.313). Prerequisites: a grade of "C" or better in one of MATH 1300, MATH 1301 (136.130), or MATH 1310 (136.131); and a grade of "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or MATH 1690 (136.169).

MATH 2352 Advanced Linear Algebra Cr.Hrs. 6
(Formerly MATH 2350 or 136.235) Vector spaces, linear transformations, inner product spaces, eigenvalues and eigenvectors, orthogonal and Hermitian matrices, and applications. This course is mathematically challenging and is intended primarily for students registered in Honours, Joint Honours or the Four-Year Major program. Registration in this course requires approval of the department. Not to be held with MATH 2300, MATH 2301 (136.230), the former MATH 2350 (136.235), or MATH 3130 (136.313). Prerequisites: a grade of "C+" or better in one of MATH 1300, 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 the former 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: one of MATH 1300 (C), MATH 1301(136.130) (C) or MATH 1310 (136.131) (C). Not available to students already holding credit for, or are currently registered in COMP 4340 (074.434).

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 not normally offered every year. May not hold with MATH 2451. Prerequisite: An average of "C" or better in six credit hours of Year 1 Math courses with the exception of the former 136.100, MATH 1010 (136.101), MATH 1020 (136.102), FA 1020 (054.102), MATH 1190 (136.119), or MATH 1191; or consent of department.

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. This course may not be held with MATH 2501. Prerequisite: An average of "C" or better in six credit hours of Year 1 Mathematics courses with the exception of the former 136.100, MATH 1010 (136.101), MATH 1020 (136.102), FA 1020 (054.102), MATH 1190 (136.119) and MATH 1191; or consent of department.

MATH 2552 Geometry of the Plane Cr.Hrs. 6
A modern approach to geometry through the use of geometric transformations. Topics may include isometries, symmetries, similarities, circular inversion and groups. Not to be held with MATH 2551 or the former MATH 2550 (136.255). Prerequisites: MATH 1690 (136.169) (C); or a grade of "C" or better in one of MATH 1500 (136.150), MATH 1501, MATH 1510 (136.151), MATH 1520 (136.152), or the former 136.153, and a grade of "C" or better one of MATH 1300 (136.130), MATH 1301, MATH 1310 (136.131), MATH 1700 (136.170), MATH 1701, MATH 1710 (136.171), or the former 136.173.

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. This course may not be held for credit with MATH 2120 (136.212) or MATH 2601. Prerequisites: One of MATH 1300 (136.130), MATH 1301, or MATH 1310 (136.131) (C); and one of MATH 1690 (136.169), MATH 1700 (136.170), MATH 1701, MATH 1710 (136.171), or the former 136.173 (C); and COMP 1010 (074.101) or COMP 1011 (C); or consent of instructor.

MATH 2720 Multivariable Calculus Cr.Hrs. 3
(Formerly 136.272) Calculus of several variables. Not to be held with MATH 2721 (136.272, 136.270), MATH 2750 (136.275), the former MATH 2110 (136.211), or MATH 2130. Prerequisites: A grade of "C" or better in one of MATH 1300 (136.130), MATH 1301, or MATH 1310 (136.131) (C); and a grade of "C" or better in one of MATH 1690 (136.169), MATH 1700 (136.170), MATH 1701, MATH 1710 (136.171), or the former 136.173.

MATH 2730 Sequences and Series Cr.Hrs. 3
(Formerly 136.273) Introductory analysis, sequences and series. Not to be held with MATH 2132, the former MATH 2100 (136.210), MATH 2731 (136.273, 136.271), MATH 2750 (136.275). Prerequisite: a grade of "C" or better in one of MATH 1690 (136.169), MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171) or the former 136.173. Prerequisite or concurrent requirement: one of MATH 1300 (136.130), MATH 1301, or MATH 1310 (136.131).

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 2130, MATH 2132, the former MATH 2100 (136.210), the former MATH 2110 (136.211), MATH 2701, MATH 2720, MATH 2721 (136.272, 136.270), MATH 2730, MATH 2731 (136.273, 136.271). This course is mathematically challenging and is intended primarily for students registered in an Honours, Joint Honours or Four-Year Major program. Registration in this course requires approval of the department. Prerequisites: a grade of "C+" or better in one of MATH 1300, 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 the former 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. Not to be held with MATH 2801 (136.280), MATH 2132, or the former MATH 2100 (136.210). Prerequisite: a grade of "C" or better in MATH 1300, MATH 1301 (136.130), or MATH 1310 (136.131) (C). Prerequisite or concurrent requirement: MATH 2720, MATH 2721 or MATH 2750.

Mathematics Course Descriptions-3000 Level

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 (074.213), or the former 074.212. Prerequisites: ECE 2220 (C) and MATH 2130 (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) vector spaces; linear transformations; eigenvalues and eigenvectors; inner product spaces; additional topics as time permits. Not to be held with MATH 2300, MATH 2301 (136.230), MATH 2352, or the former MATH 2350 (136.235). Prerequisites: MATH 2750 (136.275) (C); or both of MATH 2720 (or equivalent - MATH 2721, 136.270, 136.272) (C) and PHYS 2490 (or the former 016.237) (C).

MATH 3132 Engineering Mathematical Analysis Cr.Hrs. 3
Vector integral calculus; series of Ordinary differential equations; Fourier series and Partial differential equations. For Engineering and Geophysics students only. Not to be held with MATH 3740 (136.374), MATH 3800 (136.380), or the former MATH 3100 (136.310). Prerequisites: MATH 2130 (C) and MATH 2132 (C).

MATH 3142 Engineering Mathematical Analysis 4 Cr.Hrs. 3
Introduction to discrete mathematics; systems of linear differential equations; complex function theory and applications. For Engineering and Geophysics students only. Not to be held with MATH 3110 (136.311), MATH 3700 (136.370), MATH 3710 (136.371), or MATH 3800 (136.380). Prerequisites: MATH 2130 (C); and MATH 2132 or the former MATH 2110 (136.211) (C). NOTE: MATH 3132 is highly recommended.

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 2202 or the former MATH 2200 (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 (136.321) Prerequisites: MATH 2750 (136.275) (C); and MATH 2202 or the former MATH 2200 (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 (136.321). Prerequisite: MATH 3230 (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 (136.335). Prerequisites: one of MATH 2300 (C), MATH 2301 (136.230) (C), MATH 2352 (C), or the former MATH 2350 (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. 3
(Formerly 136.331) Continuation of MATH 3300. Further study of rings and fields: integral domains, polynomial rings; ideals and quotient rings; rational function fields. Lattices and Boolean algebras may be included. Not to be held with MATH 3350 (136.335). Prerequisite: MATH 3300 (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 (136.330) or MATH 3310 (136.331). Prerequisites: MATH 2352 or the former MATH 2350 (136.235) (C); and MATH 2202 or the former MATH 2200 (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 2202 or the former MATH 2200 (136.220) (C); and MATH 2352 or the former MATH 2350 (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 (136.275) (C); and MATH 2352 or the former MATH 2350 (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 (136.275) (C); and MATH 2202 or the former MATH 2200 (136.220) (C); or consent of department.

MATH 3530 Mathematical Problems in the Biological Sciences Cr.Hrs. 3
(Formerly 136.353) Circulatory system, flow of blood. Enzyme kinetics. Cell populations. Diffusion in biology. Some ecological systems. Prerequisites: MATH 2300 or MATH 2301 (136.230) (C); and MATH 2730 (136.273) (C); and MATH 3800 (136.380) (C); or consent of department.

MATH 3600 Numerical Mathematics 2 Cr.Hrs. 3
(Formerly 136.360) Numerical differentiation and Gaussian quadrature; curve-fitting by splines; numerical methods for initial-value problems, boundary-value problems, and transforms; problems involving large, sparse or ill-conditioned linear systems. Not to be held with MATH 3601 (136.360). Prerequisites: MATH 2600 or MATH 2601 (136.260) (C); MATH 2800 or MATH 2801 (136.280) (C); MATH 2720 or MATH 2721 (136.272, 136.270) (C) and MATH 2730 (MATH 2731, 136.273, 136.271) (C), or MATH 2750 (136.275) (C); and either COMP 1010 or COMP 1011 (074.101) (C); or consent of department.

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 3142, the former MATH 3110 (136.311), or MATH 3710 (136.371). Prerequisites: MATH 2720 or MATH 2721 (136.272, 136.270) (C); and one of MATH 2730, MATH 2731 (136.273, 136.271) (C), MATH 2750 (136.275) (C), or PHYS 2490 (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 3142, the former MATH 3110 (136.311), or MATH 3700 (136.370) Prerequisite: MATH 3230 (136.323).

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 (136.376). Prerequisites: MATH 2300 or MATH 2301 (136.230) (C); MATH 2720 or MATH 2721 (136.272, 136.270) (C); MATH 2730 or MATH 2731 (136.273, 136.271) (C); or consent of department.

MATH 3760 Advanced Calculus Cr.Hrs. 6
(Formerly 136.376) Vector analysis; The Riemann and Rieman-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 3740 (136.375). Prerequisites: MATH 2750 (136.275) (C); and MATH 2352 or the former MATH 2350 (136.235) (C); and MATH 2202 or the former MATH 2200 (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 (136.280) (C); and one of MATH 2730 (136.273, 136.271), MATH 2731, or MATH 2750 (136.275) (C).

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 (136.272, 136.270) (C) and MATH 2730 or MATH 2731 (136.273, 136.271) (C), or MATH 2750 (136.275) (C); and MATH 2800 or MATH 2801 (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 (136.260) (C); and MATH 2800 or MATH 2801 (136.280) (C). Prerequisite or concurrent requirement: STAT 1000 or STAT 1001.

Mathematics Course Descriptions-4000 Level

MATH 4200 Topology 2 Cr.Hrs. 3
(Formerly 136.420) Topics include Tychonoff spaces, ordered spaces, arbitrary products, the Stone-Cech compactification, various types of disconnectedness, generalizations of compactness, paracompactness, and introductory homotopy theory. Prerequisite: MATH 3240 (136.324) (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 (136.324) (this course may be taken concurrently with the consent of the department) (C); and MATH 3300 (136.330) (or MATH 3350 may be taken concurrently in place of MATH 3300) (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 (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 decomopositions; 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. Not to be held with MATH 3500 (136.350). Prerequisite: A grade of "C" or better in one of MATH 2300, MATH 2301 (136.230), MATH 2352, or the former 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 (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 (136.275) (C), MATH 3400 (136.340) (C), and MATH 3350 (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 (136.340) (C) and MATH 3350 (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 (136.335) (C) and MATH 3400 (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 (136.250) (C); and MATH 2352 or the former MATH 2350 (136.235) (C); and either MATH 3300 (136.330) (C) and MATH 3310 (136.331) (C), or MATH 3350 (136.335) (C).

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 (136.360) (C); and either MATH 3740 (136.375) (C) or MATH 3760 (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 3740 (136.375) or MATH 3760 (136.376) (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 (136.324) (C), MATH 3710 (136.371) (C), and MATH 3760 (136.376) (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 (136.280) (C); or consent of department. Prerequisite or concurrent requirement: MATH 3740 (136.375) or MATH 3760 (136.376).

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 the former MATH 2350 (136.235) (C); and MATH 3230 (136.323) (C); and MATH 3760 (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. Prerequisites: MATH 3600 or MATH 3601 (136.360) (C) and MATH 3800 (136.380) (C).

MATH 4810 Partial Differential Equations 2 Cr.Hrs. 3
(Formerly 136.481) Partial differential equations and their classification. Special functions and generalized Eigen function expansions. Solution by separation of variables, and transform methods. Prerequisite: MATH 3800 (136.380) and MATH 3810 (136.381) (C).

MATH 4910 Project Course in Mathematics Cr.Hrs. 3
A research project 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 the end of the term. An oral examination may required. This course is restricted to students in the fourth year of the Honours or Major program in Mathematics and is not available to Gruaduate Students. This course may not be held for credit with MATH 4900. Prerequisite: Consent of Department.

MATH 4920 Topics in Mathematics 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.

4.10 Department of Microbiology

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4.10.1 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 joint Honours programs (including Co-op) and joint Four Year Major programs (including Co-op) in biochemistry and biotechnology (See Sections 4.2 and 4.4).

The department must approve a student's Honours or Major program prior to registration in 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 in the charts below; 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 the Honours program in Microbiology, a student must have completed at least 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in MBIO 1010, and a minimum grade of "C+" in CHEM 1310. BIOL 1020, BIOL 1030, STAT 1000 and the 3 credit hours of specified Mathematics or Physics are program requirements and students are strongly encouraged to complete these courses in first year.

* Students interested in studying Microbiology should note that Grade 12 mathematics and chemistry are prerequisite to CHEM 1300. Effective 2009-2010, students will also require Biology 40S (or equivalent) and any Grade 12 mathematics course (or equivalent) for entry to BIOL 1020 (the required prerequisite for BIOL 1030).

To continue in the Microbiology Honours program, students must maintain a minimum GPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate from the Microbiology Honours program students must achieve a minimum GPA of 3.00 and obtain a minimum grade of "C" on the courses that make up 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 April of their second 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 3010 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 continue in the Honours Cooperative program a student must maintain a minimum GPA of 3.00, successfully complete each work term, and complete a minimum of 9 credit hours during each academic term. Students should note that the grade requirements for the Cooperative Option are the same as that for the regular Honours program (see above).

Students must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. 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. 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

To enter the Major Degree program in Microbiology, a student must have completed at least 24 credit hours with a minimum GPA of 2.00, and also obtained a minimum grade of "C+" in MBIO 1010, and a minimum grade of "C" in CHEM 1310. BIOL 1020, BIOL 1030, STAT 1000 and the 3 credit hours of specified Mathematics or Physics are program requirements and students are strongly urged to complete these courses in first year.

* Students interested in studying Microbiology should note that Grade 12 mathematics and chemistry are prerequisite to CHEM 1300. Effective 2009-2010, students will also require Biology 40S (or equivalent) and any Grade 12 mathematics course (or equivalent) for entry to BIOL 1020 (the required prerequisite for BIOL 1030).

To continue in the Microbiolgy Major Degree, students must maintain a minimum GPA of 2.00.

To graduate from, the 4-year Major degree program in Microbiology, students are required to obtain a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree.

Potential entrants to this program should also 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 equivalents in the four year Major program.

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 program in Microbiology may enter the Cooperative Option in April of their second 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. 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 must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. 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. 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:

Biological Sciences:

BIOL 2242 (BOTN 2010), BIOL 2260 (BOTN 2210), BIOL 2261, BIOL 2300 (BOTN 2370, ZOOL 2370), BIOL 2301 (BOTN 2371, ZOOL 2371), BIOL 2380 (BOTN 2180, ZOOL 2180), BIOL 2381, BIOL 2410 (ZOOL 2530), BIOL 2411 (ZOOL 2531), BIOL 2420 (ZOOL 2540), BIOL 2421 (ZOOL 2541), BIOL 2540 (ZOOL 2150), BIOL 3260 (BOTN 2290), BIOL 3290 (BOTN 3280), BIOL 3291, BIOL 3330 (BOTN 3250), BIOL 3370 (ZOOL 3500), BIOL 3450 (BOTN 2020), BIOL 3452 (BOTN 3010), BIOL 3460 (ZOOL 3530), BIOL 3462 (ZOOL 3540), BIOL 3470, BIOL 3472, BIOL 3500 (BOTN 3460), BIOL 3501, BIOL 3540 (ZOOL 3070), BIOL 3560 (ZOOL 3060), BIOL 3561, BIOL 4242 (BOTN 4130), BIOL 4244 (BOTN 4160), BIOL 4246 (BOTN 4050), BIOL 4250 (BOTN 4210), BIOL 4430 (BOTN 4120), BIOL 4480 (ZOOL 4600), BIOL 4540 (ZOOL 4150), BIOL 4542 (ZOOL 4270), BIOL 4560 (ZOOL 4140)

Chemistry:

CHEM 2280, CHEM 2290, CHEM 2380, CHEM 2400, CHEM 2470, CHEM 3390, CHEM 3590, CHEM 3570, CHEM 4590, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630 CHEM 4670

Environmental Science: ENVR 2180

Food Sciences: FOOD 4150, FOOD 4280

General Agriculture: AGEC 2180, AGEC 2370

Pharmacology: PHAC 4030, PHAC 4040

Statistics: STAT 2000

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 18 credit hours of 2000, 3000 and (or) 4000 level courses from each of two Science areas. To satisfy the requirement in the area of Microbiology, students must take a minimum of 18 credit hours of Microbiology courses as prescribed in the chart below (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level.).

Students wishing to elect courses in Microbiology in fulfilment of the requirements for the B.Sc. (General) degree should note the following:

- Students must obtain a grade of "C" or better in the following: MBIO 1010, BIOL 1020, BIOL 1030, CHEM 1300 and CHEM 1310.
- Students are 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 MBIO 1010, CHEM 1300, CHEM 1310, BIOL 1020, BIOL 1030, plus 12 credit hours of Microbiology courses at the 2000 and (or) 3000 level.

Biochemistry and Biotechnology Programs

The Department of Microbiology, in conjunction with the Department of Chemistry, offers Joint Honours programs, Joint Honours Cooperative Option programs, Joint four year Major programs and Joint four year Major Cooperative Option programs in Biochemistry and Biotechnology. See Sections 4.2 Biochemistry Program and 4.4 Biotechnology Program for full details.

4.10.2 Microbiology Program Charts

4.10.2 Microbiology			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS[6] 120 CREDIT HOURS			
MBIO 1010[5] BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310	MBIO 2020, MBIO 2360 (CHEM 2360), MBIO 2370 (CHEM 2370) BIOL 2500, BIOL 2520 CHEM 2210, CHEM 2220	MBIO 3010, MBIO 3030, MBIO 3280, MBIO 3410, MBIO 3470	MBIO 4010, MBIO 4440, MBIO 4480, MBIO 4530 (6), MBIO 4600, MBIO 4610
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen 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. 9 credit hours of approved electives 3 credit hours from Microbiology or from the option list		15 credit hours of Microbiology courses[3] 9 credit hours chosen from Microbiology courses[3] or from the option list (see below)	
30 Hours	30 Hours	30 Hours	30 Hours

HONOURS COOPERATIVE OPTION[6] 120 CREDIT HOURS			
MBIO 1010[5] BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310	MBIO 2020, MBIO 2360 (CHEM 2360), MBIO 2370 (CHEM 2370) BIOL 2500, BIOL 2520 CHEM 2210, CHEM 2220	MBIO 3010, MBIO 3030, MBIO 3280, MBIO 3410, MBIO 3470	MBIO 4010, MBIO 4440, MBIO 4480, MBIO 4600, MBIO 4610
In Year 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 9 credit hours of approved electives 3 credit hours chosen from Microbiology courses[3] or from the option list (see below)		21 credit hours of Microbiology courses[3] 9 credit hours chosen from Microbiology courses[3] or from the option list (see below) **Work Terms:** MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990	
30 Hours	30 Hours	30 Hours	30 Hours
FOUR –YEAR MAJOR (Including Co-op)[4,6] 120 CREDIT HOURS			
MBIO 1010[5] BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310	MBIO 2020, MBIO 2360 (CHEM 2360), MBIO 2370 (CHEM 2370) BIOL 2500, BIOL 2520 CHEM 2210, CHEM 2220	MBIO 3010, MBIO 3030, MBIO 3410	
In Year 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. 12 credit hours of approved electives		24 credit hours of Microbiology courses[2] including 15 credit hours at the 4000 level 9 credit hours of Microbiology courses[2] or courses chosen from the option list (see below) 18 credit hours of approved electives **Work Terms:** MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990	
THREE YEAR GENERAL (90 CREDIT HOURS)			
MBIO 1010	18 credit hours of 2000, 3000, and (or) 4000 level Microbiology courses (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level.)		
MINOR			
MBIO 1010 (C) CHEM 1300, CHEM 1310 (C) BIOL 1020, BIOL 1030 (C)	12 credit hours of Microbiology at the 2000 and (or) 3000 level		
BIOCHEMISTRY - Joint Microbiology and Chemistry Programs: See Section 4.2 Biochemistry			
BIOTECHNOLOGY – Joint Microbiology and Chemistry Programs: See Section 4.4 Biotechnology			

NOTES:

[1] MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 or MATH 1690 may be taken in place of MATH 1500.
[2] MBIO 4010, MBIO 4530 and MBIO 4670 may be selected only by special permission.
[3] MBIO 4020 and MBIO 4762 cannot be selected.
[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.
[5] MBIO 1010 may be completed in either year 1 or year 2. It is recommended that it be completed in first year.
[6] MBIO 1220 and MBIO 2410 cannot be used to satisfy course requirements in a Major or Honours program.
(The number 6 in brackets indicates a 6 credit hour course.)

Option List for All Microbiology Programs:
Biological Sciences:
BIOL 2242 (BOTN 2010), BIOL 2260 (BOTN 2210), BIOL 2261, BIOL 2300 (BOTN 2370, ZOOL 2370), BIOL 2301 (BOTN 2371, ZOOL 2371), BIOL 2380 (BOTN 2180, ZOOL 2180), BIOL 2381, BIOL 2410 (ZOOL 2530), BIOL 2411 (ZOOL 2531), BIOL 2420 (ZOOL 2540), BIOL 2421 (ZOOL 2541), BIOL 2540 (ZOOL 2150), BIOL 3260 (BOTN 2290), BIOL 3290 (BOTN 3280), BIOL 3291, BIOL 3330 (BOTN 3250), BIOL 3370 (ZOOL 3500), BIOL 3450 (BOTN 2020), BIOL 3452 (BOTN 3010), BIOL 3460 (ZOOL 3530), BIOL 3462 (ZOOL 3540), BIOL 3470, BIOL 3472, BIOL 3500 (BOTN 3460), BIOL 3501, BIOL 3540 (ZOOL 3070), BIOL 3560 (ZOOL 3060), BIOL 3561, BIOL 4242 (BOTN 4130), BIOL 4244 (BOTN 4160), BIOL 4246 (BOTN 4050), BIOL 4250 (BOTN 4210), BIOL 4430 (BOTN 4120), BIOL 4480 (ZOOL 4600), BIOL 4540 (ZOOL 4150), BIOL 4542 (ZOOL 4270), BIOL 4554, BIOL 4556, BIOL 4560 (ZOOL 4140)
Chemistry:
CHEM 2280, CHEM 2290, CHEM 2380, CHEM 2400, CHEM 2470, CHEM 3390, CHEM 3590, CHEM 3570**,** CHEM 4590, CHEM 4360, CHEM 4370, CHEM 4620, CHEM 4630, CHEM 4670
Environmental Science: ENVR 2180
Food Sciences: FOOD 4150, FOOD 4280
General Agriculture: AGEC 2180, AGEC 2370
Pharmacology: PHAC 4030, PHAC 4040
Statistics: STAT 2000
NOTE: Other suitable options may be selected with permission of the department.

4.10.3 Microbiology Course Descriptions

Microbiology Course Descriptions-1000 Level

MBIO 1010 Microbiology I Cr.Hrs. 3
(Lab Required) Topics will include the definition and history of microbiology, concepts of practical microbiology, prokaryotic cell structure, prokaryotic specialization in gene expression and transfer of genetic information, the role of microbes in environments including the human body, and applications of microbiology to food production and biotechnology. Not to be held with MBIO 1011 or the former MBIO 2100 (MBIO 2101) or MBIO 2110 (MBIO 2111). Prerequisite or concurrent requirement: BIOL 1020.

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 1010 or MBIO 1011 (or the former MBIO 2100 or MBIO 2101). Prerequisite: any grade 12 or 40S Mathematics, or equivalent. This prerequisite is waived for students in the Baccalaureate Program for Registered Nurses. NOTE: MBIO 1220 is intended for students planning to enter the Faculty of Nursing or other health care or related programs. Students that have completed MBIO 1010 but wish to take MBIO 1220 to satisfy Faculty of Nursing entrance requirements must obtain departmental permission prior to registering for MBIO 1220. MBIO 1220 cannot be used to satisfy the requirements of the Microbiology Honours or Major degree programs. MBIO 1220 can be used as an elective course in any Science program.

Microbiology Course Descriptions-2000 Level

MBIO 2020 Microbiology II Cr.Hrs. 3
(Lab Required) Topics will include bacterial growth, chromosome replication, the specifics of transcription and translation and their application to the regulation of microbial gene expression. Families of bacterial and animal viruses, their modes of reproduction and pathogenicity will be discussed. Mutation and gene transfer in bacteria will be introduced. Not to be held with MBIO 2021 or MBIO 2110 (60.211), MBIO 2111. Prerequisites: MBIO 1010 or MBIO 1011 and one of CHEM 1310, CHEM 1311 or CHEM 1320 (C).

MBIO 2230 Introductory Biogeochemistry Cr.Hrs. 3
(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. Not available to students who have previously obtained credit in MBIO 4320 (060.432) or MBIO 4440 (060.444) or are currently registered in MBIO 4440. Prerequisite: one of MBIO 1010, MBIO 1011, BIOL 1030, BIOL 1031 or the former 071.125(C); and CHEM 1310 or CHEM 1311 (002.131) (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 2361, MBIO 2770 (060.277), CHEM 2360, CHEM 2361 (002.236), CHEM 2860 (002.286), or CHEM 2770 (002.277) Prerequisites: CHEM 1310 or CHEM 1311 (002.131); and one of BIOL 1030, 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 (pre-September 2008 regulations). Those students following the new B.Sc. General Degree regulations (effective 2008-09) are able to use this course as advanced level credit in both Microbiology and Chemistry.

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 2371, MBIO 2780 (060.278), CHEM 2370, CHEM 2371 (002.237), or CHEM 2780 (002.278). Prerequisites: CHEM 2210 (002.221) (C); and one of MBIO 2360 (060.236), MBIO 2361, CHEM 2360 (002.236), or CHEM 2361 (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 (pre-September 2008 regulations). Those students following the new B.Sc. General Degree regulations (effective 2008-09) are able to use this course as advanced level credit in both Microbiology and Chemistry.

MBIO 2410 Essentials of Molecular Biology Cr.Hrs. 3
An introduction to the mechanisms, themes and patterns that are present in the molecular biology of both eukaryotic and prokaryotic organisms. The applications of molecular biology to disciplines such as genomics, applied bioinformatics and medical microbiology will be discussed. Not available to students who have previously obtained credit in, or are currently enrolled in the following courses: BIOL 2500, BIOL 2501, MBIO 2020, MBIO 2021, the former MBIO 2100 (MBIO 2101), MBIO 3410 or MBIO 3411. Prerequisite: one of grade 12 Biology, grade 12 Chemistry, BIOL 1000, CHEM 1000, or any higher level Chemistry or Biology course; or consent of department. NOTE: MBIO 2410 is intended for students outside of Microbiology and Biological Sciences who require an introduction to molecular biology, such as those with interests in bioinformatics, biophysics, or bioengineering. 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 for an Honours or Major program in Microbiology.

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 four-year Biological Sciences 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 be held with CHEM 2770 (002.277), MBIO 2360, MBIO 2361 (060.236), CHEM 2360, CHEM 2361 (002.236), or CHEM 2860 (002.286). Prerequisites: CHEM 1310 or CHEM 1311 (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 four-year Biological Sciences 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 (002.278), MBIO 2370, MBIO 2371 (060.237), CHEM 2370, or CHEM 2371 (002.237). Prerequisite: A grade of "C" or better in one of MBIO 2770 (060.277), CHEM 2770 (002.277), MBIO 2360, MBIO 2361 (060.236), CHEM 2360, or CHEM 2361 (002.236).

Microbiology Course Descriptions-3000 Level

MBIO 3000 Applied Biological Safety Cr.Hrs. 3
A comprehensive overview of (i) applied biological safety in research and industrial environments and (ii) the disease-causing features of relevant infectious agents and considerations for their containment. The course consists of lectures and demonstration components. Prerequisite: MBIO 1010 (MBIO 1011)(C) or the former MBIO 2100 (or equivalent MBIO 2101, 060.210) (C); and one of CHEM 1310, CHEM 1311 (002.131), CHEM 1320 (002.132) or permission of instructor. Check with department for availability.

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. Not to be held with MBIO 3011. Prerequisites: MBIO 2020 (MBIO 2021)(C) or the former MBIO 2100 (or equivalent MBIO 2101, 060.210) (C). Co-requisite: one of MBIO 2360, MBIO 2361 (060.236), CHEM 2360 or CHEM 2361 (002.236).

MBIO 3030 Microbiology III Cr.Hrs. 3
(Lab Required) The course will include an introduction to microbial growth and genomics approaches used for the analysis of microbial metabolism. Using these tools, the physiology of microbial cell walls, transport, and motility, as well as microbial metabolism as related to ATP production, respiration, fermentation and carbon fixation will be discussed. Not to be held with MBIO 3031 or the former MBIO 2100 (60.210). Prerequisites: MBIO 2020 (MBIO 2021)(C); and one of MBIO 2370, MBIO 2371, CHEM 2370, CHEM 2371 (C); or consenct of instructor.

MBIO 3280 Microbial Communities Cr.Hrs. 3
(Lab Required) This course will examine microbial communities, which will be discussed in terms of their composition, physiological adaptations and their effects on their abiotic and biological surroundings. Topics will include nutrient cycling, biodegradation and adaptation to extreme environments, and the applications arising from these microbial functions. Methods for quantitation of microbial biomass and biological activity will be discussed. This course may not be held for credit with MBIO 2280. Prerequisites: both MBIO 1010 (MBIO 1011)(C) and CHEM 1310 (CHEM 1311, 002.131)(C); or MBIO 2100 (MBIO 2101, 060.210)(C). MBIO 2020 (MBIO 2020, MBIO 2110) and MBIO 2410 are recommended prerequisites.

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. Not to be held with MBIO 3411. Prerequisites: One of MBIO 2370, MBIO 2371 (060.237), CHEM 2370, CHEM 2371 (002.237), MBIO 2780 (060.278), or CHEM 2780 (002.278) (C); and a C or better in one of MBIO 2020 (MBIO 2021), MBIO 2110 (MBIO 2111), BIOL 2520 (BIOL 2521, ZOOL 2280, ZOOL 2281) or BIOL 2500 (BIOL 2501, BOTN 2460, BOTN 2460).

MBIO 3430 Molecular Evolution Cr.Hrs. 3
(Formerly 060.343) An analysis starting with prebiotic evolution, progressing through the elaboration of macromolecules and examining their adaptation to their function as cellular components. Proteins, carbohydrates, and nucleic acids as structural, catalytic, and genetic elements in evolution of living systems. Prerequisite: MBIO 2410 (C) or MBIO 3410 (C) or permission of instructor. MBIO 2020 (MBIO 2021) and one of MBIO 2370, MBIO 2371, CHEM 2370, CHEM 2371, MBIO 2780 or CHEM 2780 are strongly recommended for students who have not completed MBIO 3410.

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. Not to be held with MBIO 3451. Prerequisites: MBIO 2020 (MBIO 2021) or MBIO 2110 (MBIO 2111) (C); and one of MBIO 2370, MBIO 2371, CHEM 2370, or CHEM 2371 (C); or consent of the department.

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. Not to be held with MBIO 3461. Prerequisites: One of MBIO 2370, MBIO 2371 (060.237), CHEM 2370, or CHEM 2371 (002.237) (C).

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 3030 (MBIO 3031) or MBIO 2110 (MBIO 2111) (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). Prerequisite: MBIO 2370 (MBIO 2371) or CHEM 2370 (CHEM 2371).

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).

Microbiology Course Descriptions-4000 Level

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 4011, MBIO 4020 (060.402), or the former 060.444. Prerequisite: MBIO 3010 or MBIO 3011 (060.301) (C).

MBIO 4020 Immunology Cr.Hrs. 3
(Formerly 060.402) Topics will include antigens, antibodies, antigen-antibody reactions, immunogenetics, regulation of immune reactions, complement, hypersensitivities, autoimmunity, immunodeficiencies, transplantation and tumour immunology. Not to be held with MBIO 4010, MBIO 4011 (060.401). Prerequisite: MBIO 3010 or MBIO 3011 (060.301) (C).

MBIO 4410 Virology Cr.Hrs. 3
(Formerly 060.441) A comprehensive examination of fundamental properties of viruses, virus taxonomy, and the different ways in which viruses replicate. The ways viruses cause disease and experimental methods used in virology also will be examined. Not to be held with MBIO 4411, or for credit by students who have already taken MMIC 7010 (097.701). Prerequisites: MBIO 3010 or MBIO 3011 (060.301) (C); and MBIO 3410 or MBIO 3411(060.341) (C).

MBIO 4440 Systems Microbiology: from Genomes to Life Cr.Hrs. 3
(Lab Required) The purpose of this course is to use knowledge of the components of the bacterial cell to synthesize an understanding of the growth of microbes and their adaptation to their environments. The most recent research tools and systems biology approaches will be discussed. This course may not be held for credit with MBIO 3440. Prerequisites: MBIO 3030 (MBIO 3031)(C); or the former MBIO 2110 (MBIO 2111, 60.211)(C); and one of MBIO 2370, MBIO 2371, CHEM 2370, CHEM 2371(C).

MBIO 4480 Microbes in our Environment Cr.Hrs. 3
(Lab Required) A course investigating the diversity of roles microbes play in our immediate environment, and how they affect it. Environments to be examined may include the human body, waste treatment facilities and extreme environments. Molecular tools to study the community structure and roles of individual organisms will also be discussed. This course may not be held for credit with MBIO 3480 or MBIO 4320. Prerequisites: MBIO 3030 (MBIO 3031)(C); or the former MBIO 2110 (MBIO 2111, 60.211)(C); and one of MBIO 2370, MBIO 2371, CHEM 2370, CHEM 2371(C).

MBIO 4520 Industrial Bioprocesses Cr.Hrs. 3
(Lab Required) Bioprocesses for a range of commercially important healthcare and industrial products including antibiotics, vaccines, steroids, therapeutic recombinant proteins, monoclonal antibodies, and ethanol will be discussed. Other topics will include bioreactor design, metabolic engineering, applied genetic engineering and animal cell technology. This course may not be held for credit with MBIO 4510. Prerequisites: MBIO 3030 (or one of MBIO 2100 or MBIO 2101) (C); and one of MBIO 2370, MBIO 2371, CHEM 2370, CHEM 2371 (C).

MBIO 4530 Project in Microbiology Cr.Hrs. 6
(Lab Required) (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 (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. Not to be held with MBIO 4541. Prerequisite: MBIO 2020 (MBIO 2021) or MBIO 2110 (MBIO 2111) (C); and one of MBIO 2370, MBIO 2371, CHEM 2370, or CHEM 2371(C); or consent of the department. MBIO 3030 (MBIO 3031) is recommended as a prerequisite to this course.

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 and Majors students. Check with department for availability. Not to be held with MBIO 4601, MBIO 4602 or the former 060.452 or 060.456. Prerequisites: MBIO 2020 (MBIO 2021) or MBIO 2110 (MBIO 2111) (C); and one of MBIO 2370, MBIO 2371, CHEM 2370, or CHEM 2371 (C). BIOL 2500, (BIOL 2501, BOTN 2460, BOTN 2461) is recommended.

MBIO 4602 Molecular Genetics of Prokaryotes - Lectures Cr.Hrs. 3
A detailed examination of replication, expression, mutability, repair and transposition of DNA in bacteria and their viruses. Lecture material will be identical to that of MBIO 4600, but MBIO 4602 lacks the laboratory component. Honours and Major students must register in MBIO 4600. Check with the department for availability. Not to be held with MBIO 4600, MBIO 4601 or the former 060.460, 060.452 or 060.456. Prerequisites: MBIO 2020 (MBIO 2021) or the former MBIO 2110 (MBIO 2111) (C); and one of MBIO 2370, MBIO 2371, or CHEM 2370, CHEM 2371(C). BIOL 2500 (BOTN 2460, BOTN 2461) is recommended.

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 diseases such as cancer. Priority will be given to Science Honours and Majors students. Check with the department for availability. Not to be held with MBIO 4612. Prerequisites: MBIO 2020 (MBIO 2021) or MBIO 2110 (MBIO 2111) (C); and MBIO 3410 or MBIO 3411. BIOL 2500 (BIOL 2501, BOTN 2460, BOTN 2461) is recommended.

MBIO 4612 Molecular Genetics of Eukaryotes - Lectures Cr.Hrs. 3
A comprehensive study dealing with replication and expression of DNA, genome structure, and the involvement of genes in diseases such as cancer. Lecture material will be identical to that of MBIO 4610, but MBIO 4612 lacks the laboratory component. Honours and Majors students must register in MBIO 4610. Check with the department for availability. Not to be held with the MBIO 4610. Prerequisites: MBIO 2020 (MBIO 2021) or MBIO 2110 (MBIO 2111) (C); and MBIO 3410 or MBIO 3411 (C). BIOL 2500 (BIOL 2501, BOTN 2460, BOTN 2461) is recommended.

MBIO 4670 Applied Molecular Biology H Cr.Hrs. 3
(Lab Required) The overall objective of this course is to introduce and describe current molecular techniques and their application to biological problems. These include, but are not limited to basic gene cloning, mutagenesis, and over-expression. Priority will be given to Science Honours students. Not to be held with MBIO 4672, or the former MBIO 4570 (60.457), MBIO 4581 or the former MBIO 4580 (60.458). Prerequisites: MBIO 3410 or MBIO 3411 (60.341) (C).

MBIO 4672 Applied Molecular Biology Cr.Hrs. 3
The overall objective of this course is to introduce and describe the current molecular techniques and their application to biological problems. These include, but are not limited to, basic gene cloning, mutagenesis and over-expression. Not to be held with MBIO 4670, the former MBIO 4570 (060.457), MBIO 4581 or the former MBIO 4580 (060.458). Prerequisite: MBIO 3410 or MBIO 3411 (060.341) (C).

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 ony).

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).

4.11 Department of Physics and Astronomy

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4.11.1 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. 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 prior to registration in each session. Students must also obtain approval for any and all revisions to their program.

The Department of Physics and Astronomy and the Department of Electrical and Computer Engineering have defined focus areas of study within their own programs. Students taking the courses recommended for these focus areas will find it easier to transfer between programs in Physics and Astronomy and Electrical and Computer Engineering programs. Students interested in obtaining more information about transferring to a Physics program from Electrical Engineering should consult with the Head of the Physics department.

Honours

To enter the Honours programs in Physics and Astronomy, a student must have completed at least 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in PHYS 1070, or a "B+" in PHYS 1030. Students are strongly encouraged to complete MATH 1300, MATH 1500, and MATH 1700 in Year 1. Not only are these courses required in the Physics and Astronomy programs, they are required prerequisites to several second year Physics and Astronomy required courses.

To continue in the Physics and Astronomy Honours program, students must maintain a minimum GPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum GPA 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 joint honours programs in conjunction with the Departments of Mathematics, Computer Science, and Chemistry.

To enter the Joint Honours Mathematics-Physics program the student must have a minimum grade of "B" in: MATH 1300, MATH 1510, 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 1500 (or equivalent), MATH 1700 (or equivalent), and COMP 1020.

To enter the Joint Honours Chemistry-Physics program, the student must have a minimum grade of "B" in: PHYS 1050 (or "B+" in PHYS 1020), PHYS 1070, CHEM 1300, CHEM 1310, MATH 1500 and MATH 1700.

Double Honours

The Department of Physics and Astronomy offers a double honours degree in conjunction with the Biochemistry program.

Four Year Major

The goal of this program is to provide an excellent physics education for a student with broad interests. It provides more control over the degree program, permitting significantly more electives and scheduling flexibility.

To enter the four year Major program in Physics and Astronomy, a student must have PHYS 1070 (C+) or PHYS 1030 (B). In addition, students must have satisfied the faculty requirements for entry to the four year Major program. Students are strongly encouraged to complete MATH 1300, MATH 1500, and MATH 1700 in Year 1. Not only are they required courses in the Physics and Astronomy programs, these courses are required prerequisites to several required second year Physics and Astronomy courses.

Three Year General

As prescribed with all other faculty regulations in Section 3.2, students in this program must select 36 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 18 credit hours from the list in the chart below.

Variations in any of the programs listed above may be possible, but must be approved by the head of the department and the Science general office.

4.11.2 Physics and Astronomy Program Charts

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS Option A: Astronomy[1] 120 CREDIT HOURS			
PHYS 1050 (or PHYS 1020) and PHYS 1070 (B) (or PHYS 1030 B+) MATH 1300[2], MATH 1500[2], MATH 1700[2] 6 credit hours of ARTS including the "W" requirement.	PHYS 2070 (6), PHYS 2260, PHYS 2380, PHYS 2390, PHYS 2490, PHYS 2600, PHYS 2610, PHYS 2650	PHYS 3180, PHYS 3380, PHYS 3430 (6), PHYS 3630, PHYS 3650, PHYS 3670 MATH 3130	PHYS 3680, PHYS 3640, PHYS 4230, PHYS 4240 (6), PHYS 4390 A 3 credit hour, 4000 level Physics and Astronomy course
		9 credit hours of 3000 and/or 4000 level Physics and Astronomy courses.	
9 credit hours of open electives (PHYS 1810 and PHYS 1820 are highly recommended).	3 credit hours of open electives[3].	3 credit hours of open electives[3].	3 credit hours of open electives[3].
HONOURS Option B: Physics[1] 120 CREDIT HOURS			
PHYS 1050 (or PHYS 1020) and PHYS 1070 (B) (or PHYS 1030 B+) MATH 1300[2], MATH 1500[2], MATH 1700[2] 6 credit hours of ARTS including the "W" requirement.	PHYS 2260, PHYS 2380, PHYS 2390, PHYS 2490, PHYS 2600, PHYS 2610, PHYS 2650	PHYS 3380, PHYS 3430 (6), PHYS 3650, PHYS 3670, PHYS 3680, PHYS 3630 PHYS 3660 MATH 3130	PHYS 3640, PHYS 4250, PHYS 4390, PHYS 4510, PHYS 4520, PHYS 4590 6 credit hours[4] chosen from: PHYS 4672, PHYS 4674, PHYS 4676, PHYS 4678
9 credit hours of open electives	9 credit hours of open electives[3]	3 credit hours of open electives[3]	6 credit hours of open electives[3]
HONOURS Option C: Medical and Biological[1] 120 CREDIT HOURS			
PHYS 1050 (or PHYS 1020), PHYS 1070[2] (B) (or PHYS 1030 B+) MATH 1300[2], MATH 1500[2], MATH 1700[2]	PHYS 2260, PHYS 2380, PHYS 2390, PHYS 2490, PHYS 2600, PHYS 2610, PHYS 2650	PHYS 3380, PHYS 3430 (6), PHYS 3650, PHYS 3670, PHYS 3680, PHYS 3630, PHYS 3220 MATH 3130	PHYS 3640, PHYS 4250, PHYS 4560 6 credit hours[4] chosen from: PHYS 4672, PHYS 4674, PHYS 4676, PHYS 4678
The following can be completed in Year 1 or Year 2: 6 credit hours of ARTS including the "W" requirement 6 credit hours chosen from: BIOL 1410, BIOL 1412 , BIOL 2520 12 credit hours of open electives[3]		3 credit hours chosen from: PHYS 4360, PHYS 4400, ECE 3780 15 credit hours of open electives[3]	
30 Hours	30 Hours	30 Hours	30 Hours
FOUR YEAR MAJOR 120 CREDIT HOURS			
PHYS 1050 (or PHYS 1020), PHYS 1070[2] (C+) (or PHYS 1030 (B)) MATH 1300[2], MATH 1500[2], MATH 1700[2] 6 credit hours from the Faculty of Arts including the required "W" course	PHYS 2260, PHYS 2380, PHYS 2390, PHYS 2490, PHYS 2600 MATH 1200	PHYS 2610, PHYS 2650, PHYS 3380, PHYS 3630, PHYS 3670, PHYS 3680 MATH 3130	PHYS 3640, PHYS 3430 (6), PHYS 3650 3 credit hours of 3000 level Physics and Astronomy 3 credit hours of 4000 level Physics and Astronomy
9 credit hours of open electives	12 credit hours of open electives[3]	9 credit hours of open electives[3]	12 credit hours of open electives[3]
30 Hours	30 Hours	30 Hours	30 Hours
THREE YEAR GENERAL (90 CREDIT HOURS)			
	A minimum of 18 credit hours must be chosen from this list: PHYS 2070, PHYS 2210 (or the former PHYS 2200), PHYS 2250, PHYS 2260, PHYS 2270, PHYS 2280, PHYS 2350, PHYS 2380, PHYS 2700, PHYS 2710, PHYS 3180, PHYS 3380, PHYS 3800, PHYS 4230. (Subject to the Faculty requirement that of the 36 hours of advanced level courses, at least 6 credit hours must be chosen from the 3000 and (or) 4000 level.)		
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 2210 (or the former PHYS 2200), PHYS 2250, PHYS 2260, PHYS 2270, PHYS 2280, PHYS 2350, PHYS 2380, PHYS 2700, PHYS 2710, PHYS 3180, PHYS 3380, PHYS 3800.		

JOINT HONOURS: PHYSICS – CHEMISTRY refer to section 4.5.3

JOINT HONOURS: PHYSICS – COMPUTER SCIENCE (including Co-operative Option) refer to section 4.6.4

JOINT HONOURS: PHYSICS – MATHEMATICS refer to section 4.9.3

NOTES:

1 Students must achieve a minimum grade of "C" in all courses contributing to the Honours program.
2 MATH 1310 may be taken in place of MATH 1300; MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700. MATH 2750 may be taken as a recommended course in lieu of MATH 2720 and MATH 2730.
3 Although they are not required courses in the Physics programs, MATH 2720[3], MATH 2730[3], MATH 2800, and MATH 3700 are highly recommended electives for the Physics Honours and Four Year Major degrees, and should be taken when possible.
4 The selection of these 6 credit hours must be made in consultation with the Departmental Program Advisor.
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. The number 6 in brackets indicates a 6 credit hour course).

4.11.3 Physics and Astronomy Course Descriptions

Physics and Astronomy Course Descriptions-0 Level

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.

Physics and Astronomy Course Descriptions-1000 Level

PHYS 1020 General Physics 1 Cr.Hrs. 3
(Lab Required) (Formerly 016.102) It's a crazy world; come and find out why objects fall, slide, bounce, stick, go in circles or stay straight, float or sink, glide or crash. Why don't satellites fall to the ground? What exactly does weightlessness mean anyway? Find answers to these and other questions as you get to know Newton's and other basic laws of nature and see what makes the world go round. 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 1021, PHYS 1050, PHYS 1051 (016.105), PHYS 1410 (016.141), PHYS 1420 (016.142), or the former 016.127. Prerequisites: Either Physics 40S, PHYS 0900 (016.090) (P), or equivalent; and either Pre-calculus Mathematics 40S, Applied Mathematics 40S (with 70% or better), or equivalent. It is strongly recommended that students attain a minimum of 70% as the average of their marks in Physics 40S and Pre-calculus Mathematics 40S.

PHYS 1030 General Physics 2 Cr.Hrs. 3
(Lab Required) (Formerly 016.103) Discover how physics is the basis of the hi-tech world we live in and how we live in it. Learn how to use simple, intuitive physics concepts that are described using little math and no calculus to understand a diversity of topics including how electricity is made, what drives the greenhouse effect, what makes a diamond sparkle, lasers, LASIC eye surgery and the workings of the human eye. This course, together with its prerequisite PHYS 1020 (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 1031, PHYS 1410 (016.141), PHYS 1420 (016.142), or the former 016.120. Prerequisite: One of PHYS 1020, PHYS 1021 (016.102) (C), PHYS 1050, or PHYS 1051 (016.105) (C).

PHYS 1050 Physics 1: Mechanics Cr.Hrs. 3
(Lab Required) (Formerly 016.105) It's rocket science! Mechanics is the science of describing (Kinematics) and explaining (Dynamics) motion. The basic concepts of calculus together with laws of conservation of momentum and energy are used to develop the tools required to describe, analyze and predict the outcomes of linear and rotational motion in simple mechanical systems. A brief introduction to the Einstein theory of special relativity provides a taste of modern approaches to this subject. This course develops a strong scientific foundation for students considering a program of study in engineering or the physical sciences. Not to be held with PHYS 1020, PHYS 1021 (016.102), PHYS 1051, PHYS 1410 (016.141), PHYS 1420 (016.142), or the former courses 016.118, 016.120, or 016.127. Prerequisites: Pre-calculus Mathematics 40S (300) (or equivalent) and Physics 40S (300) (or equivalent); or PHYS 0900 (016.090) (Pass). 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, MATH 1501, MATH 1510, MATH 1520, the former 136.153 or MATH 1690.

PHYS 1070 Physics 2: Waves and Modern Physics Cr.Hrs. 3
(Lab Required) (Formerly 016.107) At the heart of modern communications, waves and oscillations are key to understanding the world around us from subatomic scales to biology, traffic flow, the stock market, climate change and the cosmos itself. Learn about the mysterious quantum world, the basis of the latest nanotechnology, where particles are waves and waves are particles. Explore Bohr's model of the atom and discover Heisenberg's Uncertainty Principle. This calculus based course addresses the underlying concepts for all modern science and engineering. 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 1071, PHYS 1410 (016.141), PHYS 1420 (016.142). Prerequisites: PHYS 1050 (or equivalent - PHYS 1051, 016.105, 016.118) (C) or PHYS 1020 (or equivalent - PHYS 1021, 016.102) (B); and "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), or the former 136.153. Prerequisite or concurrent requirement: one of MATH 1700, MATH 1701, MATH 1690, MATH 1710, or the former 136.173.

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. Not to be held with PHYS 1301. This course cannot be used as a part of a Major or Minor in Physics.

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.

PHYS1820 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, 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.

Physics and Astronomy Course Descriptions-2000 Level

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 Heath as RTT 2060. Restricted to students in the Radiation Therapy program. Prerequisite: PHYS 1030 or PHYS 1031 (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 (016.103) (B); or PHYS 1070 or PHYS 1071 (016.107) (C); or one of PHYS 1810 (016.181) (C) or PHYS 1830 (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 Heath as RTT 2090. Restricted to students in the Radiation Therapy program. Prerequisites: RTT 2100 (163.210) (C), RTT 2060 (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 Heath as RTT 2150. Restricted to students in the Radiation Therapy program. Prerequisite: PHYS 1030 or PHYS 1031 (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 or PHYS 1071 (016.107). Prerequisites: a "C" or better in one of PHYS 1050, PHYS 1051 (016.105), or the former 016.118; or a "B" or better in PHYS 1020 or PHYS 1021 (016.102); and a "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), or the former 136.153; and a "C" or better in one of MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171), the former 136.173, or MATH 1690 (136.169). Prerequisite or concurrent requirement: MATH 2130.

PHYS 2210 Understanding Electricity and Magnetism Cr.Hrs. 3
An introduction ranging from its history to connections with real-world phenomena in engineering and biology, and common sense on the understanding of the phenomena. The student is carefully guided through mathematical derivations. Physics is used to develop the theory and the applications of such things as motors, radios, magnetic resonance imaging (MRI) systems and computers. Not to be held with PHYS 2200, PHYS 2201, PHYS 2600 (016.260) or PHYS 2610 (016.261). Prerequisites: A "C" or better in PHYS 1070 (or equivalent - PHYS 1071, 016.107, 016.106, 016.120), or a "C+" or better in both of PHYS 1020 (or equivalent - PHYS 1021, 016.102) and PHYS 1030 (or equivalent - PHYS 1031, 016.103); and a "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or MATH 1690 (136.169). Prerequisite or concurrent requirements: MATH 1200 or MATH 1201; and one of MATH 1690, MATH 1700, MATH 1701, MATH 1710, or the former 136.173.

PHYS 2250 Introductory Modern Physics Cr.Hrs. 3
(Formerly 016.225) Come join us as we explore the ground breaking discoveries in physics during the last 100 years that have laid the foundation for our modern high-tech world and brought us nuclear power, computers, nanotechnology and new energy technologies (to name a few). Then, finish off with a look into the future, at the 21st century physics frontier. Not available to students who have previously obtained credit in, or are currently registered in PHYS 2251, PHYS 2380 (016.238) or the former 016.250. Not available to students in Honours or Major programs in Physics. Prerequisites: a "C" or better in PHYS 1070 (or equivalent – PHYS 1071, 016.107, 016.127), or a "C+" or better in both of PHYS 1020 (or equivalent – PHYS 1021, 016.102) and PHYS 1030 (or equivalent – PHYS 1031, 016.103); and a "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or MATH 1690 (136.169). Prerequisite or concurrent requirements: MATH 1200 or MATH 1201; and one of MATH 1690, MATH 1700, MATH 1701, MATH 1710 or the former 136.173 (D).

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. Not to be held with PHYS 2261. Prerequisites: A "C" or better in PHYS 1070 (or equivalent - PHYS 1071, 016.107) or PHYS 2152, or a "C+" or better in both of PHYS 1020 (or equivalent - PHYS 1021, 016.102) and PHYS 1030 (or equivalent - PHYS 1031, 016.103); and a "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or MATH 1690 (136.169). Prerequisite or concurrent requirements: One of MATH 1300, MATH 1301 (136.130), or MATH 1310 (136.131); and one of MATH 1690, MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171), or the former 136.173.

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. Not to be held with PHYS 2271. Prerequisite: a grade of "C" or better in one of PHYS 1050, PHYS 1051 (016.105), PHYS 1020, or PHYS 1021 (016.102); or consent of department.

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. Not to be held with PHYS 2281. Prerequisite: a grade of "C" or better in one of PHYS 1070, PHYS 1071 (016.107), PHYS 1030, or PHYS 1031 (016.103); or consent of department.

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: a grade of "C" or better in one of PHYS 1070, PHYS 1071 (016.107), PHYS 1030, or PHYS 1031 (016.103); 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 (016.107) or PHYS 2152 (C); and one of MATH 1690 (136.169) (C), MATH 1700, MATH 1701 (136.170) (C), MATH 1710 (136.171) (C), or the former 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, PHYS 1071 (016.107) (C); 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 the former 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 (016.220). Prerequisites: a "C" or better in one of PHYS 1070, PHYS 1071 (016.107), PHYS 2152, the former 016.106, or the former 016.120; and a "C" or better in one of MATH 1690 (136.169), MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171) or the former 136.173.

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 (016.220). Prerequisite: PHYS 2600 (016.260) (C).

PHYS 2650 Classical Mechanics 1 Cr.Hrs. 3
(Formerly 016.265) The first in a sequence of three courses on intermediate to advanced level mechanics. Topics include dynamics of a particle, conservation theorems, rotation, rolling motion, oscillations, gravitation and central force motion, and associated mathematical methods. Prerequisite: one of PHYS 1070, PHYS 1071 (016.107), or the former 016.106, or PHYS 2152 (C). Prerequisite or concurrent requirements: PHYS 2490 or MATH 3132.

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 in 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 (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.

Physics and Astronomy Course Descriptions-3000 Level

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 (016.107) or PHYS 2152 (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. Prerequisite: one of PHYS 2600 (016.260) (C) or PHYS 2210 (or the former PHYS 2200 or 016.220) (C), or ECE 3580, 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 (016.225) (C).

PHYS 3380 Quantum Physics 2 Cr.Hrs. 3
(Formerly 016.338) This course is the sequel to PHYS 2380 (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 (016.464), PHYS 4650 (016.465), the former 016.358, or the former 016.370. Prerequisite: PHYS 2380 (016.238), or the former 016.250 (C).

PHYS 3430 Honours Physics Laboratory Cr.Hrs. 6
(Lab Required) (Formerly 016.343) Six hours per week. Prerequisites: PHYS 2260 or PHYS 2261 (016.226) (C); and one of PHYS 2610 (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 (016.260) (C); and PHYS 2490 or the former 016.237 or MATH 3132 (C); or consent of department.

PHYS 3640 Electro - and Magnetodynamics and Special Relativity Cr.Hrs. 3
Topics covered will include time dependent Maxwell's equations, Ohm's and Faraday's Law, electromagnetic waves, potential and fields, radiation, and special relativity including the Lorentz transformations. Not to be held with the former 016.369. Prerequisite: PHYS 3630 or ECE 3590(C).

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 (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 (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 or MATH 3132 (C).

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 (016.238) (C) and PHYS 3670 (C).

PHYS 3800 Topics in Astronomy Cr.Hrs. 6
(Lab Required) (Formerly 016.380) An assignment and conference course to be taken only through consultation with the head of the department. The topics will vary depending upon student needs and interests, and will include specialized topics not available in regular course offerings.

Physics and Astronomy Course Descriptions-4000 Level

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 (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 (016.207) (C) and PHYS 3180 (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 or the former 016.237 (C); or consent of department.

PHYS 4300 Topics in Physics Cr.Hrs. 3
(Formerly 016.430) Topics will vary depending upon student needs and interests, and will include specialized topics not available in regular course offerings. Prerequisite: a "C" or better in one of PHYS 3380 (016.338), the former 016.370, or the former 016.358; or consent of department.

PHYS 4360 Medical Radiation Physics Cr.Hrs. 3
The relevant physics of the production and interaction of radiation beams used in both diagnostic and therapeutic medicine will be covered. Such beams included X- and g-rays, particle beams, visible and I.R. radiation, microwaves, and ultrasound. Prerequisite: PHYS 4560 (016.456) or consent of instructor.

PHYS 4390 Quantum Physics 3 Cr.Hrs. 3
Sequel to PHYS 3380 (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 (C); and PHYS 3380 (016.338) (C).

PHYS 4400 Medical Imaging Cr.Hrs. 3
Fundamental principles of image formation, analysis of the characteristics of medical images, parametric description of image quality; application to transmission radiography. Prerequisite: Consent of instructor.

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: a "C" or better in one of PHYS 3380 (016.338), the former 016.370, or the former 016.358.

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: a "C" or better in one of PHYS 3380 (016.338), the former 016.370, or the former 016.358.

PHYS 4560 Applied Nuclear Science Cr.Hrs. 3
(Formerly 016.456) Review of nuclear physics, radioactive decay, nuclear reactions, interaction of radiation with matter, stopping powers, radiation dosimetry, radiation hazards; applications of nuclear science in medicine, nuclear reactors, chain reaction, moderators, neutron transport theory, nuclear fusion. Prerequisite: PHYS 4510 (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 (016.226) (C); 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 (016.226) and PHYS 3380 (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 (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 (016.357) (C).

PHYS 4672 Physics Laboratory A Cr.Hrs. 3
(Lab Required) For students in term 1 of 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. First part of a two course series. Not to be held with the former PHYS 4670, 016.444 or PHYS 4570 (016.457). Prerequisites: PHYS 3430 (016.343) (C) or consent of department.

PHYS 4674 Physics Laboratory B Cr.Hrs. 3
(Lab Required) For students in term 2 of 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. Second part of a two course series. Not to be held with the former PHYS 4670, 016.444 or PHYS 4570 (016.457). Prerequisites: PHYS 3430 (016.343) (C); and one of PHYS 4672 (C) or PHYS 4676 (C).

PHYS 4676 Honours Thesis - Proposal and Preparation Cr.Hrs. 3
For students in term 1 of their final year in Honours. The student will prepare a proposal for the undergraduate thesis and demonstrate the feasibility of the project under the supervision of a faculty member. The results of the study will be presented (in written and oral form) to an examining committee during the term. Both experimental and theoretical topics are acceptable. A grade of C (based on the presentations) is required to proceed to the next course which forms the final stage of the honours thesis. Not to be held with the former PHYS 4670, the former 016.444, the former PHYS 4570 (016.457), or PHYS 4672. Prerequisites: PHYS 3430 (016.343) (C) and consent of department.

PHYS 4678 Honours Thesis - Dissertation Cr.Hrs. 3
For students in term 2 of their final year in Honours. The student will complete the work needed and produce an undergraduate thesis under the supervision of a faculty member. The grade will be based on the examining committee's evaluation of a progress report (presented mid-term) and an evaluation of the thesis manuscript and oral presentation at the end of term. Both experimental and theoretical topics are acceptable. Not to be held with the former PHYS 4670 (016.444), PHYS 4570 (016.457), PHYS 4672, or PHYS 4674.

4.12 Psychology Program

Head: Todd Mondor
Campus Address/General Office: P404 Duff Roblin Bldg.
Telephone: 204 474 9338
Email Address: psychugadvisor@umanitoba.ca; psychughead@umanitoba.ca
Website: http://www.umanitoba.ca/psychology/

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 Biological Sciences 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 obtain 120 credit hours of courses with grades of "C" or better in each course and with a minimum 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 Biological Sciences, Chemistry, Computer Science, Mathematics, or Statistics 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 GPA 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 graduate with the degree of Bachelor of Science (Major), a student must complete 120 credit hours of courses with passing grades (D or better) in each course, with a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree. In addition, the student must complete the program of study as listed in the program chart below.

NOTE: Psychology cannot be used to fulfill either the introductory or advanced level Science requirements in the 3-year B.Sc. General Degree.

4.12.2 Psychology,

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS[8] 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
PSYC 1200 (B+) (or PSYC 1211 (B+) and PSYC 1221 (B+)) (6) 6 credit hours Science[1](B)	PSYC 2250, PSYC 2260 6 credit hours 2000 or 3000 level[2] Psychology 15 credit hours Science[5] 3 credit hours options[6]	PSYC 3200, PSYC 3340, PSYC 3630 3 credit hours from PSYC 3520, PSYC 3560, PSYC 3590 or a 4000 level PSYC course 9 credit hours Psychology[3] 9 credit hours Science[5]	PSYC 4520 (6) 18 credit hours Psychology[4] 6 credit hours Science[5]
30 Hours	30 Hours	30 Hours	30 Hours

FOUR YEAR MAJOR[8,9] 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
PSYC 1200 (C+) (or PSYC 1211 (C+) and PSYC 1221(C+)) (6) 6 credit hours Science[1](C+)	PSYC 2250, PSYC 2260 6 credit hours 2000 or 3000 level Psychology[7]	18 credit hours 2000 or 3000 level Psychology[7]	18 credit hours 2000 or 3000 level Psychology[7]
	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[5].		
A "W" course must be taken in Year 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		

NOTES:

[1] Introductory courses in Biological Sciences, Chemistry, Computer Science, Mathematics, or Statistics are highly recommended.
[2] These 6 credit hours must include 3 credit hours from each of two different lettered categories of Psychology courses below.
[3] These 9 credit hours must include 3 credit hours from each of two different lettered categories of Psychology courses below and not sampled in Year 2.
[4] 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.
[5] 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.
[6] 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.
[7] 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.
[8] The courses required in this program satisfy the university mathematics requirement.
[9] 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. The number 6 in brackets indicates a 6 credit hour course.)

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
Category D:	Cognitive	PSYC 2480, PSYC 3160 PSYC 3170, PSYC 3441 PSYC 3580, PSYC 3610
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 Université de Saint-Boniface can be used to satisfy degree requirements

4.13 Department of Statistics

Head: Xikui Wang
Campus Address/General Office: 338 Machray Hall
Telephone: 204 474 8172
Email Address: Stats_Dept@umanitoba.ca
Website: umanitoba.ca/statistics/

4.13.1 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 Year 2 and enter Honours in Year 3.

To enter the Honours program in Statistics, a student must have completed at least 24 credit hours with a minimum GPA of 3.00, and also obtained a minimum grade of "B" in STAT 2400. STAT 1000, MATH 1300, MATH 1500, and MATH 1700 are all requirements of the Statistics Honours degree program and students are strongly encouraged to take these courses in Year 1.

To continue in the Statistics Honours program, students must maintain a minimum GPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum GPA of 3.00 and minimum grade of "C" in each course that contributes to the 120 credit hours of the degree.

Statistics Honours Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Honours Statistics program may enter the Cooperative Option in April of their second year in Honours Statistics. This program provides students with a minimym 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 STAT 3470 and STAT 3480 before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Honours) Cooperative Option in Section 3.6.

To continue in the Honours Cooperative program a student must maintain a minimym GPA of 3.00, successfully complete each work term and complete a minimum of 9 credit hours during each academic term. Students should note that the grade requirements for the Cooperative Option are the same as that for the regular Honours program (see above).

Students must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. 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. 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 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

Students will normally take STAT 2000 and STAT 2400 in Year 2 and enter the four year Major in Year 3.

To enter the Major Degree program in Statistics, a student must have completed at least 24 credit hours with a minimum GPA of 2.00, and also obtained a minimum grade of "C+" in STAT 2400. STAT 1000, MATH 1300, MATH 1500, and MATH 1700 are all requirements of the Statistics Honours degree program and students are strongly encouraged to take these courses in Year 1.

To continue in the four year Major program a student must maintain a minimum GPA of 2.00.

To graduate from the four year Major program a student must obtain a minimum GPA of 2.00 on the 120 credit hours that contribute to the degree and also a minimum grade of "C" in each of the Major Program Specific courses (see below).

Statistics Four Year Major Cooperative Option

Students interested in alternating academic terms and terms of paid employment as part of their Major program in Statistics may enter the Cooperative Option in April of their second year in Statistics. This program provides students with a minimym 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 the first and second year requirements of the program; and STAT 3470 and STAT 3480 before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Major) Cooperative Option in Section 3.4.

To continue in the four year Major program a student must maintain a minimum GPA of 2.00. Students should note that the grade requirements for the Cooperative Option are the same as that for the regular Major program (see above).

Students must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. 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. 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 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.

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.

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 1010, ECON 1020, 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 18 credit hours of 2000, 3000, or 4000 level courses from each of two Science areas. To satisfy the requirement in the area of Statistics, students must take a minimum of 18 credit hours of 2000, 3000 and (or) 4000 level Statistics courses.

4.13.2 Statistics Program Charts

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">HONOURS (Including Co-operative Option) 120 CREDIT HOURS (comprising courses listed in chart below, and electives)</td></tr>
<tr><td>STAT 1000

MATH 1500[1], MATH 1700[1], MATH 1300[1]</td><td>STAT 2400 (B)

MATH 2300, MATH 2720[1], MATH 2730[1]</td><td>STAT 3050, STAT 3400[4], STAT 3470, STAT 3480, STAT 3800[4]</td><td>STAT 4100, STAT 4200, STAT 4520, STAT 4530</td></tr>
<tr><td colspan="2">The following courses must be taken in Year 1 or Year 2:

COMP 1010, STAT 2000, MATH 1200

6 credit hours from the Faculty of Arts, which should include the required "W" course</td><td colspan="2">15 credit hours chosen from:

STAT 3170, STAT 3380, STAT 3490, STAT 4170, STAT 4580, STAT 4590, STAT 4600, STAT 4630, STAT 4690, STAT 4700 with at least 9 credit hours at the 4000 level.

6 credit hours chosen from:

MATH 2202, MATH 2600, MATH 2800, MATH 3230, MATH 3540, MATH 3600, MATH 3700, MATH 3740 (6), MATH 3800, MATH 3810

12 credit hours of approved elective courses - including courses to be chosen from an area of application outlined in note 2 below.[2]</td></tr>
<tr><td colspan="2">21 credit hours of elective courses - including courses to be chosen from an area of application outlined in note 2 below.[2]</td><td>Co-op Requirements:

STAT 3980</td><td>Co-op Requirements:

STAT 3990, STAT 4980, STAT 4990 (if a 4th work term selected)</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
<tr><td colspan="4">HONOURS DOUBLE MINIMUM 120 CREDIT HOURS By arrangement with the departments concerned</td></tr>
</table>

FOUR YEAR MAJOR[5] **(Including Co-operative Option)** 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
STAT 1000 MATH 1500[1], MATH 1700[1], MATH 1300[1]	STAT 2400 (C+) MATH 2300, MATH 2720[1], MATH 2730[1]	STAT 3050, STAT 3400[4], STAT 3470, STAT 3480, STAT 3800[4]	STAT 4100, STAT 4200, STAT 4520, STAT 4530
The following courses must be taken in Year 1 or Year 2: COMP 1010, STAT 2000, MATH 1200 6 credit hours from the Faculty of Arts, which should include the required "W" course 21 credit hours of elective courses - including courses to be chosen from an area of application outlined in note 3 below.[3]		15 credit hours chosen from: STAT 3170, STAT 3380, STAT 3490, STAT 4170, STAT 4580, STAT 4590, STAT 4600, STAT 4630, STAT 4690, STAT 4700 6 credit hours chosen from: MATH 2202, MATH 2600, MATH 2800, MATH 3230, MATH 3540, MATH 3600, MATH 3700, MATH 3740 (6), MATH 3800, MATH 3810 12 credit hours of elective courses - including courses required for the chosen area of application outlined in note 3 below.[3]	
		Co-op Requirements: STAT 3980	**Co-op Requirements:** STAT 3990, STAT 4980, STAT 4990 (if a 4th work term is selected)
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

1 MATH 1310 may be taken in place of MATH 1300; MATH 1510, or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1700 and 1500. MATH 2750 may be taken in place of MATH 2720 and 2730.

2 Of the electives chosen as part of the Honours Degree, 18 credit hours are to be selected from one department which represents a field of application such as: Actuarial Mathematics, Biological Sciences, Microbiology, 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.

3 Of the electives chosen as part of the Major Degree, 15 credit hours must be selected from either, Computer Science and Mathematics, or from one of the following departments: Actuarial Mathematics, Biological Sciences, Microbiology, Economics, Psychology, or Sociology.

4 STAT 3400 and STAT 3800 have corequisites of MATH 2720 and MATH 2730. Therefore students who wish to take STAT 3400 and STAT 3800 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.

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.

(The number 6 in brackets indicates a six credit hour course)

THREE YEAR GENERAL (90 CREDIT HOURS)	
STAT 1000 and STAT 2000	A minimum of 18 credit hours of 2000, 3000, and (or) 4000 level Statistics courses (in addition to STAT 2000)[4]
MINOR	
STAT 1000	STAT 2000, STAT 3000 9 additional credit hours of 2000, 3000, or 4000 level Statistics courses[4]

NOTES:

1 MATH 1310 may be taken in place of MATH 1300; MATH 1510, or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700. MATH 1690 may be taken in place of both MATH 1700 and 1500. MATH 2750 may be taken in place of MATH 2720 and 2730.

2 Of the electives chosen as part of the Honours Degree, 18 credit hours are to be selected from one department which represents a field of application such as: Actuarial Mathematics, Biological Sciences, Microbiology, 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.

3 Of the electives chosen as part of the Major Degree, 15 credit hours must be selected from either, Computer Science and Mathematics, or from one of the following departments: Actuarial Mathematics, Biological Sciences, Microbiology, Economics, Psychology, or Sociology.

4 STAT 3400 and STAT 3800 have corequisites of MATH 2720 and MATH 2730. Therefore students who wish to take STAT 3400 and STAT 3800 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.

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.

(The number 6 in brackets indicates a six credit hour course)

4.13.3 Statistics - Actuarial Mathematics Joint Honours Program

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 Joint Honours program, students must have completed 24 credit hours with a minimum DGPA of 3.00. Students must also obtain a minimum grade of "B" in one of the following courses: an approved Written English course, (both of) ECON 1010 and ECON 1020, MATH 1300, MATH 1500, MATH 1700 or STAT 1000; and must also obtain a minimum grade of "B" in STAT 2000.

To graduate with the B. Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" on all required Actuarial Mathematics (ACT) courses and a grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree.

NOTE: In order to receive course credit for, and examination exemptions from, future Society of Actuaries (SoA) and VEE courses, students must obtain a minimum grade of "B" in the following courses: ECON 1010, ECON 1020, ACC 1100, FIN 2200, STAT 3470, and STAT 3490. Contact the Warren Centre for Actuarial Studies and Research for further information.

Recommended Electives:

ACT 4000, ACT 4150, ACT 4240; FIN 3410; COMP 1010; STAT 4630

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS			
STAT 1000, STAT 2000 (B) ECON 1010[3], ECON 1020[3] MATH 1300[1], MATH 1500[1], MATH 1700[1] 3 credit hour "W" course	STAT 2400, STAT 3400 ACT 2020, ACT 2120 ACC 1100[2,3], FIN 2200[2,3] MATH 2720[1], MATH 2730[1] MATH 2300[1]	STAT 3050, STAT 3480, STAT 3800 ACT 2210, ACT 3130, ACT 3230, ACT 3340, ACT 4140 MSCI 2150	STAT 3470[3], STAT 3490[3], STAT 4100, STAT 4200, STAT 4520, STAT 4530 ACT 4060, ACT 4340
6 credit hours of electives	3 credit hours of approved electives	3 credit hours of approved electives	6 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, or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of both of MATH 1500 and MATH 1700; MATH 2750 may be taken in place of both of MATH 2720 and MATH 2730; MATH 2352 (6) may be taken in place of MATH 2300.

[2] Students are strongly urged to complete ACC 1100 in Year 1 when possible FIN 2200 may be taken in Year 2, 3 or 4; however, it is strongly recommended that it be completed in Year 2. Note that ACC 1100 is a prerequisite for FIN 2200.

[3] In order to receive course credit for, and examination exemptions from, future Society of Actuaries (SoA) and VEE courses, students must obtain a minimum grade of "B" in these courses.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.13.4 Statistics - Mathematics Joint Honours Program

The departments of Statistics and Mathematics offer a joint Honours program for students wishing in depth study in Statistics and Mathematics.

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.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
MATH 1300[1] (B), MATH 1690 (6) (B) (or MATH 1500[1] and MATH 1700[1](B))	STAT 2000[2], STAT 2400 MATH 2202, MATH 2352 (6), MATH 2600, MATH 2750 (6), MATH 2800	STAT 3050, STAT 3470, STAT 3480, STAT 3400, STAT 3800	STAT 4100, STAT 4520, STAT 4530
The following courses must be taken in Year 1 or Year 2: STAT 1000 (B), COMP 1010 6 credit hours from the Faculty of Arts, which should include the required "W" course 12 credit hours of approved electives		Plus a total of 30 credit hours from: MATH 2400 and any 3000 / 4000 level Mathematics courses, which must include at least 3 credit hours at the 4000 level and must also include MATH 3230, MATH 3740 (6)(or MATH 3760 (6)), MATH 3350 (6) (or MATH 3300), MATH 3700 (or MATH 3710), MATH 3400 and MATH 3800 6 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 or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place of MATH 1700.

2 STAT 2000 may be taken in Year 1.

(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.13.5 Statistics - Economics Joint Honours Program

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 both of ECON 1010 and ECON 1020 (or ECON 1210 and ECON 1220) 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.

YEAR 1	YEAR 2	YEAR	YEAR 4
JOINT HONOURS 120 CREDIT HOURS			
ECON 1010 (B) and ECON 1020[2] (B) STAT 1000 MATH 1300[1], MATH 1500[1], MATH 1700[1] COMP 1010	ECON 2700, ECON 2800 STAT 2000, STAT 2400 MATH 2202, MATH 2352 (6), MATH 2750 (6)	ECON 3700, ECON 3800 STAT 3470, STAT 3480, STAT 3490, STAT 3400, STAT 3800 One of: MATH 3740 (6) or MATH 3760 (6)	ECON 4120, ECON 4130 STAT 4100, STAT 4520, STAT 4530, STAT 4580
9 credit hours of electives including the required "W" course.	3 credit hours of approved Economics electives[3]	3 credit hours of approved Economics electives[3]	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, or MATH 1520 may be taken in place of MATH 1500; MATH 1710 may be taken in place MATH 1700.

2 ECON 1210 and ECON 1220 may be used in place of ECON 1010 and ECON 1020.

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.

(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.13.6 Statistics Course Descriptions

Statistics Course Descriptions-1000 Level

STAT 1000 Basic Statistical Analysis 1 Cr.Hrs. 3
(Formerly 005.100) An introduction to the basic principles of statistics and procedures used for data analysis. Topics to be covered include: gathering data, displaying and summarizing data, examining relationships between variables, sampling distributions, estimation and significance tests, inference for means. Not to be held with STAT 1001, STAT 2220 (005.222). Prerequisite: Any grade 12 or 40S Mathematics, or equivalent.

Statistics Course Descriptions-2000 Level

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. Prerequisite: STAT 1000 (005.100) (C), or STAT 1001 (C).

STAT 2220 Contemporary Statistics for Engineers Cr.Hrs. 3
(Lab Required) (Formerly 005.222) Descriptive statistics, basic probability concepts, special statistical distributions, statistical inference-estimation and hypothesis testing, regression, reliability, statistical process control. Not to be held with STAT 1000, STAT 1001, or 005.100. Prerequisite: a "C" or better in one of MATH 1690 (136.169), the former MATH 1680 (136.168), MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171), or the former 136.173.

STAT 2400 Introduction to Probability I Cr.Hrs. 3
(Lab Required) Basic probability, discrete distributions including binomal, hypergeometric, geometric and Poisson, joint distributions, continuous distributions, statistical inference and applications involving discrete random variables. This course is not available to any student who has previously obtained credit for STAT 3500. Prerequisites: STAT 1000 or STAT 1001 (005.100) (C); and one of MATH 1700, MATH 1701 (136.170), or MATH 1690 (136.169) (C).

Statistics Course Descriptions-3000 Level

STAT 3000 Applied Linear Statistical Models Cr.Hrs. 3
Applied Linear regression and analysis of variance for designed experiments. This course is not for use in the Honours or Major degree programs in Statistics. Not to be held with STAT 3470 (005.347), STAT 3480 (005.348), the former STAT 3120 (005.312) or the former STAT 3130 (005.313). Prerequisite: STAT 2000 (005.200) or STAT 2001 (005.201) (C).

STAT 3050 Introduction to Probability Theory and Its Aplications Cr.Hrs. 3
(Formerly 005.305) Development of the basic concepts of probability theory and application in areas of biostatistics, actuarial science, reliability theory, queuing theory. Prerequisites: STAT 3400 or the former STAT 3500 (005.350) (C); and MATH 2720 or MATH 2721(136.272, 136.270) (C); and MATH 2730 or MATH 2731 (136.273, 136.271) (C).

STAT 3120 Topics in Regression Analysis Cr.Hrs. 3
(Formerly 005.305) Development of the basic concepts of probability theory and application in areas of biostatistics, actuarial science, reliability theory, queuing 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 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 (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 (005.200) (C).

STAT 3400 Introduction to Probability II Cr.Hrs. 3
(Lab Required) Continuation of STAT 2400. Continuous distributions, properties of common distributions, distributions of functions of random variables. Not to be held with the former STAT 3500 (005.350). Prerequisite: STAT 2400(C). Prerequisite or Concurrent requirement: one of MATH 2720, MATH 2721, MATH 2730, or MATH 2731.

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 3000 or the former STAT 3120 (005.312). Prerequisite: STAT 2000, STAT 2001 (005.200) (C). Prerequisite or Concurrent Requirement: STAT 3400 or the former STAT 3500 (005.350).

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 3000 or the former STAT 3130 (005.313). Prerequisite: STAT 3470 (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: a grade of "C" or better in one of: STAT 3470 (005.347), STAT 3000 or the former STAT 3120 (005.312).

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). Prerequisite or concurrent requirement : 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 3800 Mathematical Statistics Cr.Hrs. 3
(Lab Required) Multivariate distributions and transformations, order statistics, sampling distributions, convergence, introduction to statistical inference. Not to be held with the former STAT 3600 (005.360). Prerequisite: STAT 3400 or the former STAT 3500 (005.350) (C). Prerequisite or Concurrent requirement: Whichever of MATH 2720 (MATH 2721) or MATH 2730 (MATH 2731) not yet taken.

STAT 3980 Work Term I Cr.Hrs. 0
Work assignment in business, industry, or government for students registered in the Statistics Honours or Major Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail grade only). Prerequisites: STAT 3470 (C) and STAT 3480 (C).

STAT 3990 Work Term II Cr.Hrs. 0
Work assignments in business, industry or government for students registered in the Statistics Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail). Prerequisite: STAT 3980 (Pass).

Statistics Course Descriptions-4000 Level

STAT 4100 Statistical Inference 1 Cr.Hrs. 3
Introduction to methods of estimation, including asymptotic and Bayesian methods. Not to be held with the former STAT 4140 (005.414). Prerequisite: STAT 3800 or the former STAT 3600 (005.360).

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 3480 (005.348) (C); and either STAT 3800 or the former STAT 3600 (005.360) (C); or consent of department.

STAT 4200 Statistical Inference 2 Cr.Hrs. 3
Introduction to methods of hypothesis testing, including asymptotic and Bayesian methods. Not to be held with the former STAT 4140 (005.414). Prerequisite: STAT 4100.

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 3800 or the former STAT 3600 (005.360) (C); and STAT 3480 (005.348); 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 3800 or the former STAT 3600 (005.360) (C); and STAT 3480 (005.348) (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 (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 (005.453) and more advanced designs; construction of designs. Prerequisite: STAT 4530 (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 3800 or the former STAT 3600 (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 (005.305) (C); and STAT 3800 or the former STAT 3600 (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 (005.348) (C); and a "C" or better in one of MATH 2300 (136.230), MATH 2301, MATH 2352, or the former MATH 2350 (136.235); or consent of instructor.

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 3800 or the former STAT 3600 (005.360) (C); and STAT 3480 (005.348); or consent of department. Prerequisites or concurrent requirements: STAT 4520 and STAT 4530.

STAT 4980 Work Term III Cr.Hrs. 0
Work assignments in business, industry or government for students registered in the Statistics Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail). Prerequisite: STAT 3990 (Pass).

STAT 4990 Work Term IV Cr.Hrs. 0
Work assignments in business, industry or government for students registered in the Statistics Honours or Major Cooperative program. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail). Prerequisite: STAT 4980 (Pass).

4.14 Courses Offered in Other Faculties and Schools

All courses acceptable for credit in any degree program at the University of Manitoba are acceptable for credit in Science (excluding 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.

Students are reminded that normally a maximum of 30 credit hours (General Degree) or 36 credit hours (Major Degree) from courses offered by Faculties or Schools other than the Faculty of Science can contribute to degree requirements.

4.15 Resources for Students Interested in Science Related Professional Schools or Faculties

Program	University	Website	Phone Number
U of Manitoba Admissions Office		umanitoba.ca/student/admissions/	204.474.8808
Agriculture and Food Science	Manitoba	umanitoba.ca/faculties/afs/	204.474.7525
Dental Hygiene	Manitoba	umanitoba.ca/faculties/dentalhygiene/	204.789.3683
Dentistry	Manitoba	umanitoba.ca/faculties/dentistry/	204.789.3631
Education	Manitoba	umanitoba.ca/faculties/education/	204.474.9004
Engineering	Manitoba	umanitoba.ca/faculties/engineering/	204.474.9807
Environment	Manitoba	umanitoba.ca/faculties/environment/	204.474.7252
Human Ecology	Manitoba	umanitoba.ca/faculties/human_ecology/	204.474.8508
Kinesiology	Manitoba	umanitoba.ca/faculties/kinrec/	204.474.9747
Management	Manitoba	umanitoba.ca/management/	204.474.9353
Medical Rehabilitation	Manitoba	umanitoba.ca/medrehab/	204.789.3897
Medicine	Manitoba	umanitoba.ca/medicine/	204.789.3557
Nursing	Manitoba	umanitoba.ca/nursing/	204.474.7452
Pharmacy	Manitoba	umanitoba.ca/pharmacy/	204.474.9306
Graduate Studies	Manitoba	umanitoba.ca/faculties/graduate_studies/	204.474.9377
Related Programs not offered at the U of Manitoba			
Optometry	Waterloo	http://optometry.uwaterloo.ca/	519.888.4567
Veterinary Medicine	Saskatchewan	http://www.usask.ca/wcvm/	306.966.7447
Meteorology	http://www.msc-smc.ec.gc.ca/		

FACULTY OF SOCIAL WORK

Dean: James Mulvale
Associate Dean(s): Dr. Denis Bracken-Undergraduate Program; Dr. Lyn Ferguson-Research and Graduate Program
Campus Address/General Office: 521 Tier Building, Fort Garry Campus
Telephone: (204) 474-7050
Fax: (204) 474-7594
Email Address: social_work@umanitoba.ca

Website: umanitoba.ca/faculties/social_work

Academic Staff: Please refer to the Faculty's website umanitoba.ca/faculties/social_work

Chapter Contents

SECTION 1: DEGREE OFFERED

Historically, the social work profession has focused on the well-being of people as well as the social structures and conditions that prevent a just and equal society. The Bachelor of Social Work Program is a professional program that is designed to prepare generalists who are knowledgeable of social work theories, and who can demonstrate skills related to practice, research, and social policy analysis. Students and graduates undertake these activities in accordance with the Canadian Association of Social Workers' Code of Ethics. The program is accredited by the Canadian Association for Social Work Education.

Graduates have competence for entry- level social work positions in a variety of different practice areas. The program is based on the principles of social justice, human rights, and anti-oppression, with an emphasis on critical thinking and understanding the structural roots of social problems. Foundation courses are grounded in critical theoretical frameworks including Indigenous worldviews, feminism, and anti-racism.

The program is offered at multiple geographic sites including the Fort Garry Campus, the William Norrie Centre (Inner-city), the Université de Saint-Boniface, and Thompson, Manitoba as well as by Distance Delivery.

1.1 Program

Degree	*Years to Complete	*Total Credit Hours
Bachelor of Social Work (Full-Time)	4	123
Bachelor of Social Work (Concentrated)**	2	123
Bachelor of Social Work (Part-Time)	Up to 9	123

*This includes one year (30 credit hours) of prior university study.

**Please see 4.1 B

1.2 Concentration in Child and Family Services

The Faculty offers the Concentration in Child and Family Services. Students are required to complete prescribed electives and core courses related to child and family services. For more information and a detailed list of concentration requirements please refer to the Faculty's website.

Upon the successful completion of these requirements, a notation will be added to the student's transcript.

1.3 Interfaculty Option in Aging

The Interfaculty Option in Aging is offered by the following faculties: Arts, Human Ecology, Nursing, Kinesiology and Recreation Management, and Social Work. To complete the option, students will complete each of the following requirements: a) 2610* Health and Physical Aspects of Aging; b) 2650* The Social Aspects of Aging; c) one field placement SWRK 3150 or SWRK 4120 in aging d) one Field Focus of Social Work Practice course (SWRK 4200 or SWRK 4300) in aging. 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 the successful completion of these requirements, a notation will be added to the student's transcript. For further information on the Interfaculty Option in Aging, please refer to the Faculty's website umanitoba.ca/faculties/social_work

SECTION 2: ADMISSION REQUIREMENTS

The following is a summary of the admission requirements to the Bachelor of Social Work program. 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.

2.1 Admission to the Fort Garry Social Work Program

Admission Requirements

Completion of 30 credit hours of university level courses which are acceptable to the University of Manitoba.

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 for all applicants (including Educational Equity applicants): 2.5

A Criminal Record Statement and a Child Abuse Registry (CAR) check (for a record of those registered as an offender) must be completed following selection.

Selection criteria: Two applicant pools are created; 60% of all spaces are allocated to applicants with the highest grades, and 40% of all spaces are allocated to applicants based on the Education Equity initiative.

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 (which are acceptable to the University of Manitoba) prior to admission to the BSW 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 deadline for submission of applications in March 1st (for September start date).

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 two categories as described below.

Academic Achievement Category: 60% of all available positions are awarded on the basis of highest Adjusted Grade Point Average.

Educational Equity Initiative: 40% of all available positions are allocated to those eligible for inclusion in one or more of the Educational Equity Priority Groups and awarded on the basis of highest Adjusted Grade Point Average.

The purpose of the Educational Equity initiative is to achieve equality in professional education so that no person shall be denied educational opportunities or benefits for reasons unrelated to ability. In the fulfillment of this goal, the aim is to correct the conditions of disadvantage in professional education experienced by Aboriginal peoples, persons with disabilities, gender and sexual minorities, 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.

Students in the Fort Garry Social Work Program must successfully meet the graduation criteria set for all BSW students in the Faculty of Social Work.

2.2 Admission to the Inner City Social Work Program

The Inner City Social Work (B.S.W.) ACCESS Program at the William Norrie Centre is an inner-city extension of the Faculty of Social Work. Students admitted to the centre are accepted directly into a four-year B.S.W. program, and do not require prior 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.

All students complete a total of 123 credit hours of university study. Full time or part-time study is offered.

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 successfully meet the graduation criteria set for all BSW students in the Faculty of Social Work. For further information, contact: Inner City Social Work Program, 485 Selkirk Avenue, Winnipeg, Manitoba, R2W 2M6; telephone: (204) 668-8160.

2.3 Admission to the Northern Social Work Program

The Northern 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 and remote location. 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 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 successfully meet the graduation criteria set for all BSW students in the Faculty of Social Work. For further information, contact the Faculty of Social Work at Thompson, 3 Station Road, Thompson, Manitoba, R8N 0N3; telephone: (204) 677-1450

2.4 Admission to the Distance Delivery Social Work Program

The Faculty of Social Work is 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 online study program and (2) to community-based groups using the cohort method.

The Distance Delivery B.S.W. program is intended to encourage 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.

All students complete a total of 123 credit hours of university study. Full time or part-time study is offered.

Delivery methods for the online study component of the program include a combination of webconferences and online courses. Access to high speed internet is required.

All course examinations are scheduled and arranged by the university's Registrar's Office to take place in the student's community.

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, webconferences, and online study.

Applicants to the Distance Delivery B.S.W. program must meet all three of the following requirements to be admitted into the program:

- Minimum of 30 credit hours of university level courses which are acceptable to the University of Manitoba, with a minimum GPA of 2.5 for consideration of all applicants, including Educational Equity applicants; and

- 1 year (1750 hours) of work experience, within the last 5 years, in the social services; and

- Residency outside of the city of Winnipeg.

Complete and detailed admissions information is available on our web site at umanitoba.ca/faculties/social_work or by calling the Faculty of Social Work Distance Delivery BSW Student Advisor at (204) 474-6070.

The deadline for submission of applications is March 1st (for September start date).

Students in the Distance Delivery B.S.W. program must successfully meet the graduation criteria set for all BSW students in the Faculty of Social Work.

2.5 The Université de Saint-Boniface

The Université de Saint-Boniface, in conjunction with the University of Manitoba, now offers a French language Bachelor of Social Work program. Please contact Program Coordinator at 237-1818 ext. 447 for more information.

2.6 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 which are acceptable to the University of Manitoba;

and

- Adjusted Grade Point Average of 2.5 (C+).

Students are reminded they must submit an official transcript (one bearing the university seal) to the BSW Student Advisor along with the application form on their appointment day (University of Manitoba students need only provide a student history). An application fee applies. Once admitted as a Special Student, students will:

- Be limited to completion of 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 Aurora Student for specific dates).

- Have all courses classified as "SS," which means that grades for these courses may 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 completion of SWRK 1310 and SWRK 2080 plus nine credit hours of required social work courses.

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 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 4050	Selected Topics in Social Work
SWRK 4080	Current Issues in Social Welfare

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 3: FACULTY ACADEMIC REGULATIONS

All students are asked to note that some academic policies and regulations are under review and are subject to change.

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.

3.1 Prerequisite and 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.

If a student successfully completes a course for which a pre/co-requisite requirement has not been satisfied, the grade from this course will be changed to RW-Required to Withdraw from the course.

3.2 Residence Requirements for a Degree Program

The general university residence requirement applies to the Faculty of Social Work.

3.3 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 term. 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. Students wishing to do so may consult the policy governing scholastic progress as written in the B.S.W. 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.

3.4 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.). The bylaw is 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.

3.5 Dean's Honour List

BSW student eligibility for the Dean's Honour List is considered on a term by term basis. To qualify for the Dean's Honour List a student must:

- Have completed a minimum of 9 credit hours in the term under consideration, of which a minimum 6 credit hours must be with a standard grade.

and

- Have achieved a minimum Term GPA of 3.6

Pass/Fail courses are included in the credit hour count.

3.6 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 outlined in the B.S.W. Student Handbook. The Faculty Council has established the Academic Standing Appeals Committee to deal with these matters.

3.7 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 Delivery. The following courses are excluded: SWRK 2080, SWRK 3100, SWRK 3140, SWRK 4200 and SWRK 4300. If any Fort Garry Campus or Inner City Social Work program students are enrolled in the above mentioned practice courses they will be withdrawn.

3.8 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.
- Successfully complete all Social Work courses required by the end of Winter term prior to opt-in year (except for SWRK 4210 Feminist Perspectives on Social Work Practice, SWRK 4220 Aboriginal People and Social Work Practice, SWRK 4200 Field Focus of Social Work Practice 1, SWRK 4300 Field Focus of Social Work Practice 2, SWRK 3150 Field Instruction 1 and SWRK 4120 Field Instruction 2) and
- Successfully complete all elective courses (including written English and mathematics requirements) by the end of Winter term prior to opt-in year.
- Achieve a minimum Degree Grade Point Average of 3.00 at point of opting in.
- Achieve a minimum Subject Grade Point Average of 3.00 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 Session; space availability in SWRK 4200 Field Focus of Social Work Practice 1 and SWRK 4300 Field Focus of Social Work Practice 2 courses in Fall and Winter terms; and the availability of concentrated field placements.

3.9 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.

3.10 Credit for Social Work Courses Taken at Other Universities

The Faculty of Social Work supports the principle of granting credit for social work courses taken within the last nine years in accredited programs leading to professional social work qualification. Information on granting credits for social work courses is available in the B.S.W. Student Handbook.

The Faculty of Social Work has articulated agreements with specific diploma and certificate programs. Please consult the B.S.W. Student Handbook for detailed information.

SECTION 4: PROGRAM AND GRADUATION REQUIREMENTS

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.

4.1 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 which are acceptable to the University of Manitoba may also register for this program 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 1	6	2
SWRK 4120	Field Instruction 2	12	3
SWRK 4300	Field Focus of Social Work Practice 2	6	3
SWRK 2110 or SWRK 2130	Emergence of the Canadian Welfare State / 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) All students must take the foundation courses very early in the program. Failure to do so may restrict progression through the program.

3) See course descriptions (Section5) for a complete list of pre-/corequisites.

4) Students must take SWRK 1310 before proceeding to SWRK 2110, , SWRK 2130, and SWRK 3130. In addition, SWRK 1310, SWRK 2080 and SWRK 2090 are pre- or corequisite to SWRK 3140.

4) All foundation courses (SWRK 1310, SWRK 2080, SWRK 2090 and SWRK 3140) are pre-requisite to SWRK 4200, SWRK 4300, SWRK 4210, SWRK 4220, SWRK 3150 and SWRK 4120. In addition, SWRK 3150 Field Instruction 1 is pre-requisite to SWRK 4120 Field Instruction 2.

6) See Aurora Class Schedule for a list of SWRK 4200 and SWRK 4300 courses.

7) Students must take one section of SWRK 4200 and one section of SWRK 4300. Each section is anchored in a different field or focus of social work practice. It is recommended that students take SWRK 4200 and SWRK 4300 courses that corresponds with their field placement area of practice.

8) Students must take SWRK 4200 concurrently with SWRK 3150 and SWRK 4300 concurrently with SWRK 4120. If a student withdraws from SWRK 4200, he/she must also withdraw from SWRK 3150 and if a student withdraws from SWRK 4300, he/she must also withdraw from SWRK 4120. As well, if a student withdraws from SWRK 3150 he/she must withdraw from SWRK 4200 and if a student withdraws from SWRK 4120 he/she must withdraw from SWRK 4300. 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 3 credit hours of mathematics 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

Planning Chart for Elective Courses 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

Fort Garry Campus students who have completed 51 credit hours of general university study prior to admission to the B.S.W. program, and have maintained a minimum Adjusted Grade Point Average (A.G.P.A.) 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 which are acceptable to the University of Manitoba, 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.

Students eligible to register for the concentrated program may choose to do so at point of initial registration following admission only.

If any of the required social work courses were part of 51 credit hours completed prior to admission to the BSW program, they will have to be substituted with elective courses after admission to the BSW program. Any outstanding elective courses, including written English and mathematics requirements, must be completed by the end of Winter term in the first year of the BSW Concentrated Program.

Students must maintain a Degree Grade Point Average (D.G.A.P.) and Subject Grade Point Average (S.G.P.A.) of a minimum 3.00 at the end of each term to remain in the Concentrated Program. In an instance where one or both of these requirements are not met, the student's status will be changed from Concentrated to Regular.

Students planning on completing their program in two years must follow the structure outlined below (which requires completing at least 12 credit hours, including SWRK 4210 and SWRK 4220, during the summer).

Two-Year Plan

Course No.	Course Name	Credit Hours
Year 1 (September - August)		
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 or SWRK 2130	Emergence of the Canadian Welfare State / 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
SWRK 4210	Feminist Perspectives on Social Work Practice	6
SWRK 4220	Aboriginal People and Social Work Practice	6
Year 2 (September - May)		
SWRK 3150	Field Instruction 1	12
SWRK 4200	Field Focus of Social Work Practice 1	6
SWRK 4120	Field Instruction 2	12
SWRK 4300	Field Focus of Social Work Practice 2	6
Total credit hours		**72**

Note: See course descriptions (Section 5) for a complete list of pre/co requisties.

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 required social work and elective courses within nine years of their admission to the faculty.

4.2 Field Instruction

Field instruction provides students with an opportunity to engage, as beginning practitioners, in the processes of social work assessment, planning, intervention, evaluation and integration of theory from classroom to placement setting. Field students are placed in a variety of programs and agencies. These include school settings, policy placements, probation services, child and family services, immigrant and refugee services and health and disability settings.

B.S.W. students are required to register for two field placement courses, SWRK 3150 and SWRK 4120. Both courses are graded on a pass/fail basis. Students must successfully complete all prerequisite courses, have a Subject Grade Point Average (SGPA) of 2.50 and be in the appropriate year of their degree plan prior to commencing in field practicum. Students wishing to divert from their degree plan should consult with their Academic Advisor and/or the Coordinator of Student Services and Admissions/Advising Office before February 1. Both field practicum courses have a corequisite course, which is SWRK 4200: Field Focus of Social Work Practice 1 for SWRK 3150: Field Instruction 1. SWRK 4300: Field Focus of Social Work Practice 2 is the corequisite course for SWRK 4120: Field Instruction 2. The Field Focus course selected should correspond as closely as possible to the field placement's area of practice.

Field Instruction is provided by university-appointed, agency-based field instructors who have knowledge, skills, and expertise in social work practice. Field liaisons are also appointed and available to provide support to field students and field instructors throughout the academic session, as required. Students must meet all field requirements prior to commencing field placement, such as immunization policies, Child Abuse Registry Checks, Vulnerable Sector Record Check and Criminal Record Checks, as determined and specified by the respective field agency. Students are expected to demonstrate initiative and participate actively in all aspects of field placement. If a student is unable to attend field placement due to illness or agency closure, he/she must make up the field hours for that particular day.

The Field Coordinator is the Instructor of Record for SWRK 3150 and SWRK 4120. While the Faculty is responsible for assisting in securing a reasonable placement for the student (with the exception of Distance Delivery students who secure their own placements), it is important to note that a student is not guaranteed placement in a field setting on the basis of completion of prerequisite courses and/or submission of a Field Placement Request form. Students must demonstrate readiness for practice in the process of securing a placement. If concerns are raised regarding the student's behaviour, judgment or practice and/or if the student demonstrates difficulty in his or her attempts to attain confirmation as a result of his or her performance in the field interview process, the Field Coordinator and Associate Dean of Undergraduate Programs will determine what additional steps may be taken to resolve this matter, or may determine the student is unprepared for meeting the requirements of field placement at this time.

Students are allowed one voluntary withdrawal from the course SWRK 3150: Field Instruction 1 and one voluntary withdrawal from the course SWRK 4120: Field Instruction 2. If a student withdraws from SWRK 3150, he/she must withdraw from the corequisite SWRK 4200 and if a student withdraws from SWRK 4120, he/she must withdraw from corequisite SWRK 4300. A student with more than one voluntary withdrawal from SWRK 3150 or SWRK 4120 shall be required to withdraw from the Faculty.

Fort Garry and Inner City Social Work Programs

Prior to applying for field placement, students are expected to participate in the Everything you wanted to know about Field workshop and The Resumé and Interview Preparation workshop offered at Fort Garry and Inner City programs prior to Field Information Day. Field Placement Request forms are available during the winter term at Field Information Day and/or by contacting the Field Program Assistant or Field Coordinator. Students requesting field placement during the regular academic session (September – April) or summer session (May to August) must submit a Field Placement Request form and resumé by March 1st. Field placements will not be secured for students who do not submit their request, along with all required documentation, by the aforementioned deadline date.

Fort Garry students in the regular, three-year program who are registered in SWRK 3150 or SWRK 4120 attend field placement two days per week (15 hours) during Fall and Winter terms. Inner City campus students registered in SWRK 3150 or SWRK 4120 attend field placement two days per week during first term and three days per week during second term. Fort Garry campus students in the Concentrated Program attend field placement four days per week (30 hours) during Fall and Winter terms, participating in one field placement only. Students contemplating switching to a concentrated field placement are required to make themselves aware of eligibility requirements of the Concentrated Program and to contact the Coordinator of Student Services and Admissions/Advising Office for confirmation of their eligibility no later than February 1.

Students deemed eligible for field are referred by the Field Coordinator to an appropriate field placement agency for consideration of an interview. Students who are accepted and offered field placement will receive e-mail placement confirmation, including key dates and relevant field information, prior to term commencement. Every effort will be made to place students registering in SWRK 4120, final field placement, in a setting related to one of their field focus areas of interest. However, final authority for field placement

referral and confirmation rests with the Field Coordinator. Decisions may be based on availability of agency openings as well as the educational needs of students.

All students registered in Field Instruction courses (SWRK 3150 and SWRK 4120) are required to attend field orientation on Tuesday, September 3, 2013 and Wednesday, September 4, 2013. As attendance at field orientation is mandatory, field students are not required to attend classes on September 3rd and 4th. Information regarding field orientation will be e-mailed to each field student in their placement confirmation letter. Students requiring additional information may contact the Field Program Assistant at 204-474-6171 or the Field Coordinator at 204-474-8300.

Northern Bachelor of Social Work Program

Students in the Northern Bachelor of Social Work program in Thompson work closely with the Field Coordinator in preparing for and securing an appropriate field placement. Students are required to complete a total of 490 field hours including 450 hours in placement and 40 hours of integrated seminar in order to successfully complete SWRK 3150 and SWRK 4120. Students requiring additional information may contact the Field Coordinator at 204-677-1456.

Distance Delivery Social Work Program

Students in the Distance Delivery BSW degree program are responsible for securing their own field placements.

Field Application Forms are available online at the Faculty of Social Work website.

Students requesting field placement during:

a) Fall/Winter (September to April) Students must attend an Orientation to Field: Are You Thinking About Field? Adobe Session offered throughout the months of November, December or January and must submit Part A of the Field Application Form (Notice of Intent) by Feb 1st and Complete Part B of the Field Application form by June 1st ;

b) Winter/Summer 1 (January to July) Students must attend an Orientation to Field: Are You Thinking About Field? Adobe Session offered throughout the months of November, December or January and must submit Part A of the Field Application Form (Notice of Intent) by Feb 1st and Complete Part B of the Field application Form Field Application by October 1st; and

c) Summer (May to August) Students must attend an Orientation to Field: Are You Thinking About Field? Adobe Session offered throughout the months of November, December Or January and must submit a completed Field Application Form including Part A (Notice of Intent) and Part B by Feb 1st.

Field placements will not be approved for students who do not submit the completed Field Application Form by the deadline date.

Students completing registered in SWRK 3150 or SWRK 4120 in Fall/Winter terms (September to April) and Winter/Summer 1 terms (January to July) attend field placement two days or 15 hours per week for a total of 420 hours. Students registered in SWRK 3150 or SWRK 4120 in the Summer term (May to August) attend field placement four days or 30 hours per week for a total of 420 hours.

Final approval for field placement rests with the Distance Delivery Field Coordinator. Decisions may be based on availability of agency openings as well as the educational needs of students.

All students registered in Field Instruction courses (SWRK 3150 and SWRK 4120) are required to attend Field Instruction Sessions offered through AdobeConnect. Attendance at Field Instruction Sessions is mandatory. Students requiring information may contact the Distance Delivery Administrative Assistant at 204-474-9112 or the Distance Delivery Field Coordinator at 204-474-6812.

Accelerated Field – Inner City Social Work Program and Distance Delivery Social Work Program

Accelerated Field allows eligible students to undertake Field Instruction I (SWRK 3150) and Field Instruction 2 (SWRK 4120) in one field placement between September and April. Field Instruction includes four days of placement per week for a total of 840 hours. Students who are approved to take Accelerated Field must also register for two corequisite Field/Focus of Social Work Practice (SWRK 4200 and SWRK 4300) courses.

Inner City Social Work Program students and Distance Delivery Program students who have completed 75 credit hours including the four foundation courses (SWRK 1310, SWRK 2080, SWRK 2090 and SWRK 3140) and have maintained a minimum Degree Grade Point Average (DGPA) of 3.0 and Subject Grade Point Average (SGPA) of 3.0 are eligible to apply for Accelerated Field. Inner City Social Work Program (ICSWP) students in request of Accelerated Field must submit a written request to the Director of ICSWP requesting a transfer from regular to Accelerated Field placement. If approved, written documentation from the Director must be attached to the student's Field Request Form, due on March 1st. Distance Delivery Program students in request of Accelerated Field must attach to their Field Placement Request Form, a written request to the Coordinator of Distance Delivery Program. Requests and approvals must be handed in on time and are due at least 90 calendar days prior to the term that the student will commence.

All students registered in Distance Delivery Accelerated Field Instruction courses (SWRK 3150 and SWRK 4120) are required to attend Field Instruction Sessions offered through AdobeConnect. Attendance at Field Instruction Sessions is mandatory. Students requiring information may contact the Distance Delivery Administrative Assistant at 204-474-9112 or the Distance Delivery Field Coordinator at 204-474-6812.

4.3 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 (S.G.P.A.) of 2.50 (C+).

The successful completion of 51 credit hours of electives. 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 (D.G.P.A.) required for graduation is also 2.50 (C+).

Total credit hours required for a B.S.W. are 123 (51 credit hours of electives + 72 credit hours of required Social Work courses).

Student Responsibilities

It is the student's responsibility to be familiar with all the requirements of the B.S.W. degree, to ensure compliance with degree program requirements, including prerequisite requirements, and to understand all relevant regulations, policies and practices. The final completion of degree requirements is the student's responsibility.

SECTION 5: COURSE DESCRIPTIONS

Course Descriptions-1000 Level

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.

Course Descriptions-2000 Level

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.

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.

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) Students are introduced to a broad range of theories and will develop an understanding of how people and environments reciprocally affect each other. Particular emphasis is placed on understanding how gender, race, ethnicity, socioeconomic factors, age, ability, and sexual orientation contribute to and influence human behaviour throughout the lifespan.

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 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)

Course Descriptions-3000 Level

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 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. While Access Programs may require additional field hours, 420 hours is the minimum required for all BSW students. 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), and consent by course instructor (Field Coordinator). Corequisite: 6 credit hours of SWRK 4200 (or 047.420).

SWRK 3152 Field Instruction 1 Cr.Hrs. 12
PLAR(SWRK 3152) is a self-study course in which the student (upon acceptance) will have the opportunity to demonstrate basic knowledge as required of all studenmts in first field placement. Students will be required to demonstrate learning in social work engagement, assessment, planning, intervention and evaluation, as well as integration of values and ethics and theoretical frameworks as attained in pre-requisite foundation courses. Applicants who have been accepted and register in SWRK 3152 in lieu of first field placement, SWRK 3150, will be required to complete workbook assignments on or before designated due dates and to contact PLAR Assessor when additional claification or support is required. Subject to satisfactory completion of assignments and reports, students will be evaluated and graded on a pass/fail basis. Prerequisites: SWRK 1310, SWRK 2080, SWRK 2090, SWRK 3140. Corequisites: SWRK 4200. Students may not hold credit for both SWRK 3152 and SWRK 3150.

Course Descriptions-4000 Level

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. While Access Programs may require additional field hours, 420 hours is the minimum required for all BSW students. 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), and consent by course instructor (Field Coordinator). Corequisite: 6 credit hours. of SWRK 4300.

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 for the critical examination of social work theory, values, policy and skills in the context of a field or focus of practice. The course integrates policy with practice at micro, meso and macro levels. Course seminar topics may vary from year to year and are organized to cover various fields or focus of practice. Prerequisite: SWRK 1310 (or 047.131), SWRK 2080 (or 047.208), SWRK 2090 (or 047.209), and SWRK 3140 (or 047.314). Prerequisites: SWRK 1310 (or 047.131), SWRK 2080 (or 047.208), SWRK 2090 (or 047.209), and SWRK 3140 (or 047.314). Corerequisite: SWRK 3150 (047.315). 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. The course emphasizes the linkage between practice and policy and overlays concepts such as colonization, decolonizatino, and approaches to practices which include cross culture, structure, and anti-oppression in the context of Aboriginal world views, experience and helping practices. 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).

SWRK 4250 Family Group Conferences Cr.Hrs. 3
This course provides an overview of the research, theory and application of Family Group Conferencing within the context of child and family services and the implications for intervention. Emphasis is on experiential learning of Family Group Conferencing process and techniques.

SWRK 4260 Addiction and CFS Practice Cr.Hrs. 3
The focus of this course is to increase the student's knowledge about addictions as well as to develop student's skills for intervention with families affected by addiction within the context of child and family services. Emphasis is on experiential learning of knowledge, process and techniques.

SWRK 4270 Crisis Intervention Cr.Hrs. 3
This course provides an overview of the research, theory and application of crisis intervention, methods and techniques within the context of child and family services. Emphasis will be on expanding existing knowledge through experiential learning of crisis intervention processes and techniques.

SWRK 4300 Field Focus of Social Work Practice 2 Cr.Hrs. 6
A seminar for the critical examination of social work theory, values, policy and skills in the context of a field or focus of practice. The course integrates policy with practice at micro, meso and macro levels. Course seminar topics may vary from year to year and are organized to cover various fields or focus of practice. For students admitted after 1993-1994. Prerequisite: SWRK 4200 (0r 047.420), SWRK 3150 (or 047.315). Corerquisite: SWRK 4120.