Senate
Senate Chamber
Room E3-262 Engineering Building
WEDNESDAY, December 4, 2019
1:30 p.m.

A G E N D A

I MATTERS TO BE CONSIDERED IN CLOSED SESSION

1. Report of the Senate Committee on Honorary Degrees [November 18, 2019]

The report will be distributed to members of Senate at the meeting. Documentation will be available for examination by eligible members of Senate the day preceding the Senate meeting in the Office of the University Secretary.

II MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE

III MATTERS FORWARDED FOR INFORMATION

V QUESTION PERIOD

Senators are reminded that questions shall normally be submitted in writing to the University Secretary no later than 10:00 a.m. on the Friday preceding the meeting.

VI CONSIDERATION OF THE MINUTES OF THE MEETING OF NOVEMBER 6, 2019

VII **BUSINESS ARISING FROM THE MINUTES** - none

VIII **REPORTS OF THE SENATE EXECUTIVE COMMITTEE AND THE SENATE PLANNING AND PRIORITIES COMMITTEE**

1. **Report of the Senate Executive Committee** Page 345

2. **Report of the Senate Planning and Priorities Committee**

The Chair will make an oral report of the Committee's activities.

IX **REPORTS OF OTHER COMMITTEES OF SENATE, FACULTY AND SCHOOL COUNCILS**

1. **Report of the Senate Committee on Admissions RE: Revised Advanced Entry Admission Requirements, Bachelor of Kinesiology, Bachelor of Kinesiology – Athletic Therapy, and Bachelor of Physical Education, Faculty of Kinesiology and Recreation Management** Page 346

2. **Report of the Senate Committee on Instruction and Evaluation RE: Modification of Regulations for the Co-operative Education and Industrial Internship Program, Faculty of Engineering** Page 350

3. **Report of the Faculty Council of the Faculty of Agricultural and Food Sciences RE: Major Curriculum Revisions** Page 352

a) **Report of the Senate Committee on Curriculum and Course Changes** Page 352

4. **Undergraduate Course Changes Beyond Nine Credit Hours RE: Desautels Faculty of Music**

a) **Report of the Senate Committee on Curriculum and Course Changes** Page 472

b) **Report of the Senate Planning and Priorities Committee** Page 474

5. **Reports of the Faculty Council of the Faculty of Science**

a) **RE: Modified Curriculum and Academic Regulations, Bachelor of Science (Major) in Psychology** Page 515

i) **Report of Senate Committee on Curriculum and Changes** Page 515

ii) **Report of Senate Committee on Instruction and Evaluation** Page 517

Please call regrets to 204-474-6892 or send to shannon.coyston@umanitoba.ca.

November 22, 2019

Report of the Senate Committee on Curriculum and Course Changes Submitted to Senate for Concurrence Without Debate

Preamble:

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are available on the University Governance website. The SCCCC is "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".
2. Since last reporting to Senate, the Committee met on October 8, 10, 17, 22, 25, 29, and 30, 2019, and participated in one electronic poll (November 19 - 22, 2019), to consider curriculum and course changes from Faculties, Colleges, and Schools.
3. The Report outlines course and curriculum changes endorsed by the SCCCC at the meetings noted above. Proposed course deletions, introductions, and modifications, and program modifications are described in detail in the attachments to the Report.

Observations:

1. **General**

   In keeping with past practice, most changes for departments totalling less than 10 credit hours are forwarded to Senate for concurrence without debate. This is in accordance with the Senate's recommendation approved July 3, 1973, that course changes would cease to go to the SPPC when the resource implications are intra-faculty. Deans and Directors are to assess the resource implications to the respective units when course changes are proposed. Major changes in existing programs are to be referred to the SPPC for assessment of resource implications.

2. **Courses to be Removed from the List of Written English Courses**

   POLS 1506 Survey of Political Studies (3)
   POLS 2302 Introduction to Political Theory (3)
   POLS 2502 Introduction to World Affairs (3)
   POLS 2504 Introduction to International Relations (3)
   POLS 2602 Introduction to Comparative Politics (3)
   POLS 2702 Introduction to Canadian Politics (3)
   POLS 2802 Introduction to Indigenous Politics (3)
   POLS 2902 How Government Works (3)
   RLGN 2760 Rabbinic Judaism (3)

3. **Courses Recommended for the Written English Requirement**

   LABR 1290 Introduction to the Canadian Labour Movement (3)
   RLGN 2032 Introduction to the Study of Religion (3)
   RLGN 2052 Conservative Christianity in the United States (3)
   RLGN 2116 Cognitive Science and Religion (3)
   RLGN 2162 Great Jewish Books (3)

RLGN 3102 Myth and Mythmaking: Narrative, Ideology, Scholarship (3)

4. **Courses Recommended for the Mathematics Requirement**

AGRI 2400 Experimental Methods in Agricultural and Food Sciences (3)[1]

5. **Courses Recommended for the Recommended Introductory Course (RIC) List**

AGRI 1600 Introduction to Agrifood Systems (3)[1]
PHIL 1300 Introduction to Logic (3)
PHIL 1420 Philosophy as a Way of Life (3)
STAT 1150 Introduction to Statistics and Computing (3)
STAT 2150 Statistics and Computing (3)

6. **Courses to be Removed from the Recommended Introductory Course (RIC) List**

AGRI 1500 Natural Resources and Primary Agricultural Production (3) [1]
AGRI 1510 Production, Distribution and Utilization of Agricultural Products (3) [1]
LING 1340 Semantics (3)
PHIL 1320 Introductory Logic (6)

7. **Faculty of Agricultural and Food Sciences**

Major curriculum revisions, including course and program modifications, proposed by the faculty are reported to Senate under item IX (3).[1]

8. **Faculty of Arts**

Faculty of Arts

The faculty is proposing modifications to the programs listed below:

- **Interfaculty Option in Aging**

  A requirement for HMEC 2650, REC 2650, or SWRK 2650 – The Social Aspects of Aging, will be modified to replace HMEC 2650 with FMLY 2650, to reflect recent course changes (Senate, May 15, 2019).

  The description of the program will be revised in order to standardize the description of the Interfaculty Option in Aging across the Academic Calendar.

- **Bachelor of Arts (Single Advanced Major) in Mathematics**

  The program will be modified to reflect the proposed deletion of MATH 2140 – Modelling.

- **Bachelor of Arts Science Requirement**

  The list of courses acceptable for use toward the Bachelor of Arts Science Requirement will be revised to reflect the proposed deletion of AGRI 1500 – Natural Resources and Primary Agricultural Production and AGRI 1510 – Production, Distribution and Utilization of Agricultural Products, and the proposed introduction of

[1] See the *Report of the Senate Committee on Curriculum and Course Changes, Major Curriculum Revisions, Faculty of Agricultural and Food Sciences – Submitted to Senate for Ordinary Debate* [dated October 17, 2019; Senate, December 4, 2019, item IX (3)].

AGRI 1600 – Introduction to Agrifood Systems. The changes affect all Bachelor of Arts degrees, with the exception of the Bachelor of Arts in Integrated Studies.

Asian Studies

The programs listed below will be modified. List A Courses Acceptable for Asian Studies Credit will be revised to remove FILM 2390 - The International Cinema 2, which is to be deleted.

- **Bachelor of Arts (General Major) in Asian Studies**
- **Minor (Concentration) in Asian Studies**

Canadian Studies

The programs listed below will be modified. Several changes will be made to the List of Approved Courses in Canadian Studies to reflect recent or proposed course changes in other units.

- **Bachelor of Arts (General Major) in Canadian Studies**
- **Bachelor of Arts (Single Honours) in Canadian Studies**
- **Bachelor of Arts (Double Honours) in Canadian Studies**
- **Minor (Concentration) in Canadian Studies**

Catholic Studies

The **Minor (Concentration) in Catholic Studies** will be modified. The List of Approved Courses in Catholic Studies will be revised to remove PHIIL 2780 - Thomas Aquinas, which is to be deleted.

Central and East European Studies

The programs listed below will be modified. The List of Approved Courses in Central and East European Studies will be revised to add JUD 3010 - Topics in Jewish Studies (when its focus is on Central and Eastern European Studies).

- **Bachelor of Arts (General Major) in Central and East European Studies**
- **Bachelor of Arts (Single Advanced Major) in Central and East European Studies**
- **Bachelor of Arts (Double Advanced Major) in Central and East European Studies**
- **Bachelor of Arts (Double Honours) in Central and East European Studies**
- **Minor (Concentration) in Central and East European Studies**

Classics

The department is proposing the modification of one (1) course. There would be no change to the overall number of credit hours offered by the department.

The programs listed below will be modified. List A Approved List of Courses Offered by Other Departments Acceptable for Credit in a Major/Minor (Concentration) in Classical Studies will be revised to remove RLGN 2730 - Jews and Judaism in Antiquity, which is to be deleted.

- **Bachelor of Arts (General Major) in Classical Studies**
- **Bachelor of Arts (Single Advanced Major) in Classical Studies**
- **Bachelor of Arts (Double Advanced Major) in Classical Studies**
- **Minor (Concentration) in Classical Studies**

Economics

The programs listed below will be modified to reflect course changes proposed by the Departments of Mathematics and Statistics, Faculty of Science, as detailed in the attachments to the Report.

- **Bachelor of Arts (Joint Honours) in Economics and Mathematics**
- **Bachelor of Arts (Joint Honours) in Economics and Statistics**

English, Theatre, Film & Media

The department is proposing the deletion of six (6) courses, the introduction of one (1) course, and the modification of thirteen (13) courses. The overall number of credit hours offered by the department would decrease by 15 credit hours.

The English programs listed below will be modified. Revisions to the various Major and Honours programs will permit students to complete additional FILM and THTR courses, including at the 1000 level or higher. This would facilitate students' movement between programs offered by the department and encourage the development of a stronger cohort across programs in English, Film Studies, and Theatre.

- **Bachelor of Arts (General Major) in English**
- **Bachelor of Arts (Single Advanced Major) in English**
- **Bachelor of Arts (Double Advanced Major) in English**
- **Bachelor of Arts (Single Honours) in English**
- **Bachelor of Arts (Double Honours) in English**
- **Minor (Concentration) in English**

The Film Studies programs listed below will be modified. Editorial changes would be made to each of the program charts, to improve clarity. With regard to the Single Advanced Major, a requirement to complete 12 credit hours from Lists A and B that comprise courses in several disciplines, will be replaced by requirements for 6 credit hours of ENGL or THTR courses at or above the 1000 level and 6 credit hours at or above the 2000 level, with some restrictions. The change will facilitate students' movement between programs offered by the department.

- **Bachelor of Arts (General Major) in Film Studies**
- **Bachelor of Arts (Single Advanced Major) in Film Studies**
- **Bachelor of Arts (Double Advanced Major) in Film Studies**
- **Minor (Concentration) in Film Studies**

The Theatre programs listed below will be modified. In addition to a number of editorial changes to improve clarity, the programs would be revised to give students the option to complete additional ENGL or FILM courses, with some restrictions. The changes will facilitate students' movement between programs offered by the department and encourage students to explore courses in the different disciplines.

- **Bachelor of Arts (General Major) in Theatre**

- **Bachelor of Arts (Single Advanced Major) in Theatre**

French, Spanish and Italian

The department is proposing the introduction of one (1) course. The overall number of credit hours offered by the department would increase by 3 credit hours.

The programs listed below will be modified. In the Single Honours and Double Honours programs, specific French course requirements will be removed and replaced by unspecified French courses at the same levels. The changes will give students in four-year degree programs the option of taking more 2000-level and 3000-level courses in Years 3 and 4 and greater flexibility in fulfilling course requirements.

- **Bachelor of Arts (General Major) in French**
- **Bachelor of Arts (Single Advanced Major) in French**
- **Bachelor of Arts (Double Advanced Major) in French**
- **Bachelor of Arts (Single Honours) in French**
- **Bachelor of Arts (Double Honours) in French**
- **Minor (Concentration) in French**

German and Slavic Studies

The department is proposing modifications to the programs listed below. One change is to give students, who enter the programs with superior language ability in German, the option to complete YDSH 1220 – Yiddish in place of either GRMN 1120 – Beginning German (A) or GRMN 2100 – Intermediate German (A). Yiddish, which is regarded as its own language, is derived from Middle High German and is closely related to German. The change may also lead to increased enrolment in YDSH 1220.

- **Bachelor of Arts (General Major) in German**
- **Bachelor of Arts (Single Honours) in German**
- **Bachelor of Arts (Double Honours) in German**

Global Political Economy

The program is proposing modifications to the programs listed below. Program Note 1, Program Note 4, and List A will be revised to remove POLS 2504 -Introduction to International Affairs and add POLS 2502 - Introduction to World Affairs, which is a better fit for the program.

- **Bachelor of Arts (General Major) in Global Political Economy**
- **Bachelor of Arts (Single Advanced Major) in Global Political Economy**

History

The department is proposing minor modifications to the programs listed below, to increase clarity.

- **Bachelor of Arts (General Major) in History**
- **Bachelor of Arts (Single Advanced Major) in History**
- **Bachelor of Arts (Single Honours) in History**
- **Minor (Concentration) in History**

Program proposals:

The department is proposing to introduce the programs listed below.

The introduction of a Bachelor of Arts (Double Advanced Major) in History would allow students to pursue an Advanced Major and to acquire specialized knowledge in two disciplines in the Faculty of Arts. It would give students greater flexibility and choice in their undergraduate studies. Following a structure for Double Advanced Major programs previously approved by Senate (May 14, 2014), students would be required to complete 42 credit hours in each of two disciplines and 36 credit hours of electives.

The introduction of Co-operative Education Options for the Bachelor of Arts (Single Advanced Major) in History and the Bachelor or Arts (Single Honours) in History, will provide students with opportunities for paid employment experience that will reinforce the marketability and transferability of skills and knowledge gained in a humanities degree and prepare graduates for entry to the job market. Following a structure for Co-operative Education Options previously approved by Senate (May 16, 2018), for the Faculty of Arts, students would be required to complete 120 credit hours of course work required for either the Single Advanced Major or Single Honours, including 3 credit hours of work placements (ARTS 3010 – Arts Co-operative Option 1, ARTS 3020 – Arts Co-operative Option 2, ARTS 3030 – Arts Co-operative Option 3), totalling a minimum of 12 months, that would replace 3 credit hours of electives.

Additional costs associated with administration of the Co-operative Options, including the coordination of co-op placements, would be covered by the Faculty of Arts. A portion of these costs would be offset by tuition and co-operative education program fees.

- **Bachelor of Arts (Double Advanced Major) in History**
- **Bachelor of Arts (Single Advanced Major) in History, Co-operative Education Option**
- **Bachelor of Arts (Single Honours) in History, Co-operative Education Option**

<u>Judaic Studies</u>

The program is proposing modifications to the programs listed below, involving revisions to List A Courses Acceptable for Judaic Studies Credit. RLGN 2162 - Great Jewish Books will be added to the list and RLGN 2760 - Rabbinic Judaism will be removed. The changes follow from course changes made by the Department of Religion.

- **Bachelor of Arts (General Major) in Judaic Studies**
- **Bachelor of Arts (Single Advanced Major) in Judaic Studies**
- **Minor (Concentration) in Judaic Studies**

<u>Labour Studies</u>

The program is proposing one (1) course modification. LABR 1290 - Introduction to the Canadian Labour Movement is recommended for the Written English requirement. See observation 3 above. There would be no change to the overall number of credit hours offered by the program.

Linguistics

The department is proposing one (1) course deletion and three (3) course introductions. The overall number of credit hours offered by the department would increase by 6 credit hours.

Medieval and Early Modern Studies

The program is proposing modifications to the programs listed below. The list of courses that would satisfy the Group 1 requirement would be revised to remove PHIL 2780 - Thomas Aquinas, RLGN 2730 – Jews and Judaism in Antiquity, RLGN 2760 – Rabbinic Judaism, and RLGN 2780 – Classical Islam, which are to be deleted.

- **Bachelor of Arts (General Major) in Medieval and Early Modern Studies**
- **Bachelor of Arts (Single Advanced Major) in Medieval and Early Modern Studies**
- **Minor (Concentration) in Medieval and Early Modern Studies**

Native Studies

The department is proposing revisions to the program information in the Academic Calendar, for the programs listed below, to clarify that students in the Bachelor of Arts (General Major) in Native Studies, who complete the Minor (Concentration) in Indigenous Languages, may not use the 6 credit hours required in the General Major toward the 18 credit hours of Indigenous languages courses required for the Minor.

- **Bachelor of Arts (General Major) in Native Studies**
- **Minor (Concentration) in Indigenous Languages**

Philosophy

The department is proposing the deletion of five (5) courses, the introduction of two (2) courses, and the modification of twenty-two (22) courses. The overall number of credit hours offered by the department would decrease by 12 credit hours.

Political Studies

The department is proposing the modification of eight (8) courses. In particular, the department is proposing that the courses be removed from the List of Written English Courses. See details in Observation 2 above. There would be no change to the overall number of credit hours offered by the department.

Program proposals:

The department is proposing to introduce the programs listed below.

The introduction of Co-operative Education Options for the Bachelor of Arts (Single Advanced Major) in Political Studies and the Bachelor or Arts (Single Honours) in Political Studies, would follow a structure for Co-operative Education Options previously approved by Senate (May 16, 2018), for the Faculty of Arts. Students would be required to complete 120 credit hours of course work required for either the Single Advanced Major or Single Honours, including 3 credit hours of work placements (ARTS 3010,

ARTS 3020, ARTS 3030), totalling a minimum of 12 months, that would replace 3 credit hours of electives.

Additional costs associated with administration of the Co-operative Options, including the coordination of co-op placements, would be covered by the Faculty of Arts. A portion of these costs would be offset by tuition and co-operative education program fees.

- **Bachelor of Arts (Single Advanced Major) in Political Studies, Co-operative Education Option**
- **Bachelor of Arts (Single Honours) in Political Studies, Co-operative Education Option**

Psychology

The department is proposing the modification of one (1) course. There would be no change to the overall number of credit hours offered by the department.

Religion

The department is proposing the deletion of six (6) courses, the introduction of six (6) courses, and the modification of three (3) courses. There would be no change to the overall number of credit hours offered by the department.

The programs listed below will be modified. The various Religious Traditions course lists would be revised to reflect proposed course changes. Minor adjustments to the number of 3000- and 4000- level RLGN credit hours required would give students more flexibility to count upper level courses toward lower level credit hour requirements.

- **Bachelor of Arts (General Major) in Religion**
- **Bachelor of Arts (Single Advanced Major) in Religion**
- **Bachelor of Arts (Single Honours) in Religion**
- **Bachelor of Arts (Double Honours) in Religion**

Sociology and Criminology

The department is proposing the deletion of one (1) course and the introduction of (1) course. There would be no change to the overall number of credit hours offered by the department.

Women's and Gender Studies

The program is proposing modifications to the programs listed below. List A would be revised to remove SOC 2740 – Courtship and Marriage, which is to be deleted, and the former HIST 3811 – Famille, amour et marriage dans la société occidentale, 1500 – 1800 (E).

- **Bachelor of Arts (General Major) in Women's and Gender Studies**
- **Bachelor of Arts (Single Advanced Major) in Women's and Gender Studies**
- **Bachelor of Arts (Single Honours) in Women's and Gender Studies**
- **Bachelor of Arts (Double Honours) in Women's and Gender Studies**
- **Minor (Concentration) in Women's and Gender Studies**

9. **College of Dentistry**

The college is proposing a program modification to the **Diploma in Dental Hygiene**. In Year 1, a requirement for ENGL 1400 – Thematic Approaches to the Study of Literature or ENGL 1340 – Introduction to Literary Analysis would be replaced by a requirement for any 3 credit hours of ENGL at the 1000 level or higher.

10. **Faculty of Education**

Curriculum, Teaching and Learning

The department is proposing the introduction of one (1) course. The overall number of credit hours offered by the department would increase by 3 credit hours.

Educational Administration, Foundations and Psychology

The department is proposing the deletion of seven (7) courses and the introduction of six (6) courses. There would be no change to the overall number of credit hours offered by the department.

11. **Faculty of Engineering**

Faculty of Engineering

A proposal to modify the **Co-operative Education and Industrial Internship Program** was reviewed by the Senate Committee on Instruction and Evaluation (October 17, 2019) and is reported under item IX (2) on the December 4, 2019 Senate agenda.

Biosystems Engineering

The department is proposing the modification of one (1) course.[2] There would be no change to the overall number of credit hours offered by the department.

The programs listed below will be modified. In both cases the modifications involve revisions to elective lists; in the first instance to reflect a change in the professional qualifications of the instructor for BIOE 4650 – Textiles in Healthcare and Medical Applications and, in the second instance, to reflect proposed course deletions.

- **Bachelor of Science in Engineering (Biosystems), Biomedical Specialization**
- **Bachelor of Science in Engineering (Biosystems), Bioresource Specialization**

Civil Engineering

The department is proposing the modification of four (4) courses. There would be no change to the overall number of credit hours offered by the department.

[2] The Faculty of Agricultural and Food Sciences is also proposing course changes for Biosystems Engineering. See the *Report of the Senate Committee on Curriculum and Course Changes, Major Curriculum Revisions, Faculty of Agricultural and Food Sciences – Submitted to Senate for Ordinary Debate* [dated October 17, 2019; Senate, December 4, 2019, item IX (3)]

Mechanical Engineering

The department is proposing to modify the **Bachelor of Science in Engineering (Mechanical)**, to introduce a **Manufacturing Stream (Concentration)**. Establishing the Stream would ensure students receive recognition for completing technical specialization courses in manufacturing engineering.

12. **Faculty of Health Sciences**

Interdisciplinary Health Program

The program is proposing the deletion of one (1) course, HMEC 4090 – Practicum in Human Ecology. The overall number of credit hours offered by the program would decrease by 6 credit hours.

The programs listed below would be modified. Various elective lists would be revised to reflect course changes made by other units.

- **Bachelor of Health Sciences**
- **Bachelor of Health Studies**
    - **Health Policy, Planning, and Evaluation Concentration**
    - **Family Health Concentration**

13. **Faculty of Kinesiology and Recreation Management**

The faculty is proposing the modification of six (6) courses. There would be no change to the overall number of credit hours offered by the faculty.

The programs listed below would be modified.

- **Bachelor of Kinesiology**
- **Bachelor of Kinesiology (Athletic Therapy)**
- **Bachelor of Physical Education**
- **Bachelor of Recreation Management and Community Development**

Of note, the Year 1 requirements for the first three programs would be revised to permit students to substitute BIOL 2410 – Human Physiology I and BIOL 2420 – Human Physiology II, with a minimum average grade of "C," for BIOL 1412 – Physiology of the Human Body. The change is in alignment with proposed changes to the Advanced Entry admission requirements for these programs.[3] The change would formalize current practice.

The programs that currently require STAT 1000 – Basic Statistical Analysis 1 would be modified to also allow students to complete STAT 1150 – Introduction to Statistics and Computing toward their degree.

[3] See the *Report of the Senate Committee on Admissions RE: Revised Advanced Entry Admission Requirements, Bachelor of Kinesiology, Bachelor of Kinesiology – Athletic Therapy, and Bachelor of Physical Education, Faculty of Kinesiology and Recreation Management* [dated June 24, 2019; Senate, December 4, 2019, item IX (1)]

- **Interfaculty Option in Aging**

  A requirement for HMEC 2650, REC 2650, or SWRK 2650 – The Social Aspects of Aging, will be modified to replace HMEC 2650 with FMLY 2650, to reflect recent course changes (Senate, May 15, 2019).

  The description of the program will be revised in order to standardize the description of the Interfaculty Option in Aging across the Academic Calendar.

14. **Faculty of Management**

Accounting and Finance

The department is proposing the introduction of one (1) course, MIS 3010 – Business Data Analytics. The overall number of credit hours offered by the department would increase by 3 credit hours.

Business Administration

Program proposal:

The department is proposing to introduce a **Minor in Leadership for Business and Organizations**. The Minor would be open to undergraduate students in other faculties and schools registered in a program that permits a Minor. Students would be required to complete 12 credit hours of required courses and 6 credit hours of restricted electives, as detailed in the attachments to the Report. A minimum grade of "C" in both GMGT 1010 – Business and Society and GMGT 2060 – Management and Organizational Theory would be required for entrance to the Minor. Enrolment would be capped at 35 students in the first two years and at 65 students in Years 3 and 4.

The proposal responds to demand for graduates who combine their subject knowledge with conceptual organizational knowledge and competencies in leading teams, conflict resolution, organizational change, negotiations, corporate social responsibility and other leadership components that contribute to organizational success.

15. **College of Medicine**

Community Health Sciences

The department is proposing the modification of three (3) courses. There would be no change to the overall number of credit hours offered by the department.

The programs listed below will be modified.

- **Bachelor of Human Ecology in Family Social Sciences**
  - **Aging and Developmental Health Option**
  - **Social Development Option**
- **Bachelor of Human Ecology in Family Social Sciences, After Degree**

  Lists of required and elective courses in these programs will be revised to reflect recent course changes, including the introduction of FMLY 2650 to replace HMEC 2650, and course changes made by other units.

- **Interfaculty Option in Aging**

  A requirement for HMEC 2650, REC 2650, or SWRK 2650 – The Social Aspects of Aging, will be modified to replace HMEC 2650 with FMLY 2650, to reflect recent course changes (Senate, May 15, 2019).

  A requirement for at least 6 credit hours from FMLY 4300, HMEC 4090, or HNSC 4362 will be revised to remove HMEC 4090 – Practicum in Human Ecology, which is proposed for deletion by the Faculty of Health Sciences.

  The description of the program will be revised in order to standardize the description of the Interfaculty Option in Aging across the Academic Calendar.

16. **Faculty of Science**

Faculty of Science

Modifications to the Academic Regulations for the Bachelor of Science (Major) and Bachelor of Science (Honours) Co-operative Education Options are reported under item IX(5)(b) on the December 4, 2019 Senate agenda.

Actuarial Mathematics

The program is proposing modifications to the **Bachelor of Science (Honours) in Actuarial Mathematics**, including a new requirement in Year 4 for ACT 4010 - Regression Modelling in Actuarial Science (replacing 3 credit hours of electives), which would meet an accreditation requirement of the Society of Actuaries (SOA) and prepare students for the SOA exams following graduation. Other modifications follow from courses changes proposed by the Department of Statistics, which were made in response to recommendations in an external undergraduate program review.

Biochemistry

The program is proposing modifications to the programs listed below. In particular, program-specific co-op work term courses (MBIO 3980, MBIO 3990, MBIO 4980, MBIO 4990) will be replaced by recently introduced faculty-level Co-operative Education Work Term courses (Senate, December 5, 2018), including SCI 3980 – Co-operative Education Work Term 1, SCI 3990 - Co-operative Education Work Term 2, SCI 4980 - Co-operative Education Work Term 3, SCI 4990 - Co-operative Education Work Term 4.

- **Bachelor of Science (Major) in Biochemistry, Co-operative Option**
- **Bachelor of Science (Honours), in Biochemistry, Co-operative Option**

Biological Sciences

The department is proposing the introduction of one (1) course and the modification of sixteen (16) courses. The overall number of credit hours offered by the department would increase by 3 credit hours.

The programs listed below will be modified. The revisions follow from course changes proposed by the Departments of Mathematics and Statistics and the recent introduction of faculty-level Co-operative Education Work Term courses (SCI 3980, SCI 3990, SCI 4980, SCI 4990) (Senate, December 5, 2018). Of note, (i) where STAT 1000 – Basic Statistical Analysis 1 is currently required, STAT 1000 or STAT 1150 – Introduction to

Statistics and Computing would be required moving forward and (ii) where STAT 1000 and STAT 2000 - Basic Statistical Analysis 2 are currently required, either (STAT 1150 and STAT 2150 – Statistics and Computing) or (STAT 1000 and STAT 2000) would be required moving forward.

- **Bachelor of Science (Honours) in Biological Sciences**
- **Bachelor of Science (Honours) in Biological Sciences, Co-operative Option**
- **Bachelor of Science (Major) in Biological Science**
- **Bachelor of Science (Major) in Biological Sciences, Co-operative Option**
  - **including the following Themes, for both Honours and Major programs:**
    - **Cell, Molecular and Biology Theme**
    - **Ecology and Environmental Biology Theme**
    - **Environmental and Integrative Physiology Theme**
    - **Evolution and Biodiversity Theme**
    - **Integrative Biology**

Chemistry

The department is proposing modifications to the programs listed below. In particular, program-specific co-op work term courses (CHEM 3980, CHEM 3990, CHEM 4980, CHEM 4990) will be replaced by recently introduced faculty-level Co-operative Education Work Term courses, SCI 3980, SCI 3990, SCI 4980, SCI 4990.

- **Bachelor of Science (Honours) in Chemistry, Co-operative Option**
- **Bachelor of Science (Major) in Chemistry, Co-operative Option**

Computer Science

The department is proposing modifications to the programs listed below, including to reflect the recent introduction of faculty-level Co-operative Education Work Term courses (SCI 3980, SCI 3990, SCI 4980, SCI 4990).

A requirement for departmental approval of Major and Honours students' program electives each term will be removed, as students have increased access to advisors and for consistency with other programs across the faculty. This proposal was also reviewed by the Senate Committee on Instruction and Evaluation (October 17, 2019) and is reported under item IX(5)(c) on the December 4, 2019 Senate agenda.

- **Bachelor of Science (Major) in Computer Science**
- **Bachelor of Science (Major) in Computer Science, Co-operative Option**
- **Bachelor of Computer Science (Honours)**
- **Bachelor of Computer Science (Honours), Co-operative Option**
- **Bachelor of Science (Joint Honours) in Computer Science and Mathematics**
- **Bachelor of Science (Joint Honours) in Computer Science and Mathematics, Co-operative Option**
- **Bachelor of Science (Joint Honours) in Computer Science and Physics and Astronomy**
- **Bachelor of Science (Joint Honours) in Computer Science and Physics and Astronomy, Co-operative Option**

Genetics

The program is proposing program modifications to the following programs, to reflect the recent introduction of faculty-level Co-operative Education Work Term courses (SCI 3980, SCI 3990, SCI 4980, SCI 4990).

- **Bachelor of Science (Major) in Genetics, Co-operative Option**
- **Bachelor of Science (Honours) in Genetics, Co-operative Option**

Mathematics

The department is proposing the deletion of one (1) course, the introduction of one (1) course, and the modification of two (2) courses. There would be no change to the overall number of credit hours offered by the department.

The programs listed below will be modified to reflect the deletion of MATH 2140 – Modelling and the introduction of MATH 3610 – Introduction to Mathematical Modelling. MATH 3322 – Algebra 3 will no longer be required in the Bachelor of Science (Major) in Mathematics.

A revision to the graduation requirements for the Bachelor of Science (Honours) programs was also reviewed by the Senate Committee on Instruction and Evaluation (October 17, 2019), as reported under item IX(5)(c) on the December 4, 2019 Senate agenda.

- **Bachelor of Science (Honours) in Mathematics**
- **Bachelor of Science (Honours) in Mathematics, Co-operative Option**
- **Bachelor of Science (Double Honours) in Mathematics**
- **Bachelor of Science (Double Honours) in Mathematics, Co-operative Option**
- **Bachelor of Science (Major) in Mathematics**
- **Bachelor of Science (Major) in Mathematics, Co-operative Option**
- **Bachelor of Science (Major) in Applied Mathematics with Computer Science Option**
- **Bachelor of Science (Major) in Applied Mathematics with Computer Science Option, Co-operative Option**
- **Bachelor of Science (Major) in Applied Mathematics with Economics Option**
- **Bachelor of Science (Major) in Applied Mathematics with Economics Option, Co-operative Option**
- **Bachelor of Science (Major) in Applied Mathematics with Statistics Option**
- **Bachelor of Science (Major) in Applied Mathematics with Statistics Option, Co-operative Option**
- **Bachelor of Science (Joint Honours) in Mathematics and Economics**

Microbiology

The department is proposing the deletion of three (3) courses, the introduction of three (3) courses, and the modification of three (3) courses. There would be no change to the overall number of credit hours offered by the department.

The programs listed below will be modified, including to reflect the recent introduction of faculty-level Co-operative Education Work Term courses (SCI 3980, SCI 3990, SCI 4980, SCI 4990). A new laboratory course, MBIO 3600 – Molecular Microbiology

Techniques would be added as a requirement, to build on laboratory skills developed at the 2000- level.

- **Bachelor of Science (Honours) in Microbiology**
- **Bachelor of Science (Honours) in Microbiology, Co-operative Option**
- **Bachelor of Science (Major) in Microbiology**
- **Bachelor of Science (Major) in Microbiology, Co-operative Option**

Physics and Astronomy

The department is proposing the modification of five (5) courses. There would be no change to the overall number of credit hours offered by the department.

Psychology

Modifications to the **Bachelor of Science (Major) in Psychology**, including a proposal to introduce a **Co-operative Option**, are reported under item IX(5)(a)(i) on the December 4, 2019 Senate agenda.[4] Revisions to the academic regulations for the program were also reviewed by the Senate Committee on Instruction and Evaluation (October 17, 2019), and are reported under item IX(5)(a)(ii).

Statistics

The department is proposing the deletion of nine (9) courses, the introduction of eleven (11) courses, and the modification of fourteen (14) courses. The overall number of credit hours offered by the department would increase by 6 credit hours.

The programs listed below will be modified, to respond to recommendations made in an external program review to: (i) de-emphasize classical and theoretical statistics, (ii) modernize course offerings, (iii) increase students' exposure to statistical computing and the use of specialized statistical software, (iv) offer a greater variety of optional courses, (v) have shorter sequences of prerequisites and reduced course dependencies, (vi) add flexibility in how students can satisfy degree requirements.

The department has provided a transition plan, as detailed in the attachments to this Report.

- **Bachelor of Science (General)**
- **Bachelor of Science (Honours) in Statistics**
- **Bachelor of Science (Honours) in Statistics, Co-operative Option**
- **Bachelor of Science (Major) in Statistics**
- **Bachelor of Science (Major) in Statistics, Co-operative Option**
- **Minor in Statistics, Option 1 and Option 2**
- **Bachelor of Science (Joint Honours) in Statistics and Actuarial Mathematics**
- **Bachelor of Science (Joint Honours) in Statistics and Computer Science**
- **Bachelor of Science (Joint Honours) in Statistics and Computer Science, Co-operative Option**
- **Bachelor of Science (Joint Honours) in Statistics and Economics**

[4] See the *Report of the Senate Committee on Curriculum and Course Changes RE: Modification of Bachelor of Science (Major) in Psychology, including a Proposal for a Co-operative Education Option, Faculty of Science* [dated October 30, 2019; Senate, December 4, 2019, item IX (5)(a)(i).]

- **Bachelor of Science (Joint Honours) in Statistics and Mathematics**

17. **Faculty of Social Work**

The faculty is proposing the modification of one (1) course. There would be no change to the overall number of credit hours offered by the faculty.

The **Interfaculty Option in Aging** would be modified to spell out the specific courses that can be completed toward the program requirements. The description of the program will be revised in order to standardize the description of the Interfaculty Option in Aging across the Academic Calendar

18. **Université de Saint-Boniface**

Faculté d'éducation et des études professionnelles

École d'administration des affaires

The Université is proposing the modification of nine (9) courses. There would be no change to the overall number of credit hours offered by the school.

The Université is proposing modifications to the **Baccalauréate en administration des affaires** as detailed in the attachments to this Report.

Faculté d'éducation

The Université is proposing the deletion of three (3) courses and the introduction of three (3) courses. There would be no change to the overall number of credit hours offered by the faculty.

The Université is proposing modifications to the **Baccalauréate en éducation**. One objective is to reallocate credit hour requirements, to address what has been an intensive course load in in the second year, because of the practicum, and provide students with a more balanced workload through the course of the program.

École de traduction

The Université is proposing the introduction of one (1) course in the École de traduction. The overall number of credit hours offered by the school would increase by 3 credit hours.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends that curriculum and course changes from the units listed below, including the program proposals indicated, be approved by Senate:

Faculty of Agricultural and Food Sciences

Faculty of Arts

Program proposals:

- **Bachelor of Arts (Double Advanced Major) in History**
- **Bachelor of Arts (Single Advanced Major) in History, Co-operative Education Option**
- **Bachelor of Arts (Single Honours) in History, Co-operative Education Option**
- **Bachelor of Arts (Single Advanced Major) in Political Studies, Co-operative Education Option**
- **Bachelor of Arts (Single Honours) in Political Studies, Co-operative Education Option**

College of Dentistry

Faculty of Education

Faculty of Engineering

Program proposal: Manufacturing Stream

Faculty of Health Sciences

Faculty of Kinesiology and Recreation Management

Faculty of Management

Program proposal: Minor in Leadership for Business and Organizations

College of Medicine

Faculty of Science

Faculty of Social Work

Université de Saint-Boniface

Respectfully submitted,

Professor Greg Smith, Chair
Senate Committee on Curriculum and Course Changes

Faculty of Arts

Faculty of Arts

Program modification:

The faculty is proposing modifications to the **Interfaculty Option in Aging**, as outlined on the next page.

Interfaculty Option in Aging
- Modification of preamble

Added Material

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Program Coordinator:

Program Office:

Telephone: 204

E-mail:

~~The Interfaculty Option in Aging Concentration is available to students in all B.A. degree programs.~~

~~This Concentration is offered by: Arts, Nursing, Kinesiology and Recreation Management, and Social Work~~ An Interfaculty Option in Aging is offered by the following faculties and colleges: Agricultural and Food Sciences, Arts, Kinesiology and Recreation Management, Medicine, Nursing, 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~~ FMLY 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:

English, Theatre, Film & Media		
FILM 3420	Film Theory	3
Psychology		
PSYC 2360	Brain and Behaviour	3
PSYC 2490	Abnormal Psychology	3
PSYC 3070	Adult Development	3
PSYC 3350	Behaviour Neuroscience	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	3
Sociology and Criminology		
SOC 2310	Selected Social Problems (acceptable for credit only when topic is "Canadian Social Issues")	3
SOC 2490	Sociology of Health and Illness	3
SOC 2620	Sociology of Aging	3
SOC 3540	The Sociology of Health Care Systems	3

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.

Program modification:

Modifications to the **Bachelor of Arts (Single Advanced Major) in Mathematics** are outlined on the next page.

Mathematics

- Modification to the Single Advanced Major in Mathematics

<u>Added Material</u>

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9.3.1 Mathematics

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240[1]	18 credit hours of 2000, 3000 and/or 4000 level Mathematics courses (of these a minimum of 3 credit hours must be at the 3000 or 4000 level)		
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240[1]	MATH 2080, MATH 2090, MATH 2150	• MATH 2020, MATH 2180, MATH 3470 • MATH 2160 or MATH 3440 • 15 credit hours from the following list of which at least 3 credit hours must be at the 3000 or 4000 level: MATH 2030, MATH 2040, MATH 2070, ~~MATH 2140,~~ MATH 2160, MATH 2170, or any 3000 or 4000 level Mathematics course	
MINOR TOTAL: 18 CREDIT HOURS			
• MATH 1220[1], MATH 1230[1], MATH 1232[1] • 9 credit hours from: MATH 1240[1] and 2000 and/or 3000 level Mathematics courses			

NOTES:

[1] MATH 1500 or MATH 1510 may be taken in place of MATH 1230; MATH 1300 or MATH 1310 may be taken in place of MATH 1220; MATH 1700 or MATH 1710 may be taken in place of MATH 1232; MATH 1200 may be taken in place of MATH 1240, but these courses are not equivalent, i.e., students should note that MATH 1240 is a prerequisite to some 2nd year Mathematics courses for which MATH 1200 is not a prerequisite.

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.

Program modification:

Bachelor of Arts Science Requirement

Modifications to the list of courses acceptable for use toward the Bachelor of Arts Science Requirement are outlined on the next page. The changes affect all Bachelor of Arts degrees, with the exception of the Bachelor of Arts in Integrated Studies.

Faculty of Arts

- Modification of Bachelor of Arts Science Requirement

Added Material

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5.1.1 Five-subject Field Requirement and Humanities/Social Science/Science Requirement

...

Sciences

4) Students may complete any combination of the courses listed below adding up to six credit hours to satisfy the Bachelor of Arts Science requirement.

Faculty of Science

All courses offered by the Faculty of Science

or courses taught by other faculties that can be used toward the Bachelor of Arts Science requirement:

Faculty of Agricultural and Food Sciences

~~AGRI 1500, AGRI 1510~~ AGRI 1600

ENTM 1000, ENTM 2050

PLNT 1000, PLNT 2500

SOIL 3060, SOIL 3520, SOIL 3600

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

ENVR 1000, ENVR 2000

GEOG 1290, GEOG 2200, GEOG 2272, GEOG 2520, GEOG 2540, GEOG 2541, GEOG 2550, GEOG 2700, GEOG 3390

GEOL 1340, GEOL 1400, GEOL 1410, GEOL 1420, GEOL 2390, GEOL 2440, GEOL 2500, GEOL 2570, GEOL 3310

Faculty of Engineering

ENG 1440, ENG 1450, ENG 1460

For course titles and descriptions see the relevant faculty entries in this *Calendar*.

Asian Studies

Program modifications:

Modifications to the following programs are detailed on the next 2 pages:

- **Bachelor of Arts (General Major) in Asian Studies**
- **Minor (Concentration) in Asian Studies**

Asian Studies

- Modification to List A due to the deletion of FILM 2390.

Added Material
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List A
Courses Acceptable for Asian Studies Credit
Course No.

		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 2750	Intermediate Korean	6
ASIA 2760	Intermediate Chinese (Mandarin)	6
ASIA 2770	Intermediate Japanese	6
ASIA 2780	Intermediate Sanskrit	6
ASIA 3750	Advanced Korean	6
ASIA 3760	Advanced Chinese (Mandarin)	6
ASIA 3770	Advanced Japanese	6
ASIA 3780	Advanced Reading in Japanese	3
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 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 2610	Modern Chinese Literature in Translation	3
ASIA 2620	Japanese Civilization	3
ASIA 2630	Chinese Civilization	3
ASIA 2650	Premodern Chinese Literature in Translation	3
ASIA 2662	Chinese Diaspora Literature	3
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 3520	The Japanese Theatre	3
ASIA 3560	Themes and Genres in Asian Literature	3
ASIA 3600	Japanese Popular Culture	3
English, Theatre, Film & Media		
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 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 [Acceptable for credit only when the topic is Asia related]	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

Religion

RLGN 1322	Introduction to Eastern Religions	3
RLGN 2010	Introduction to Hinduism	3
RLGN 2020	Introduction to Buddhism	3
RLGN 2570	Indian Religious Art and Architecture	3
RLGN 2700	Religions of China and Japan	6
RLGN 3150	Buddhism in East Asia	3
RLGN 3160	Tibetan Religious Traditions	3
RLGN 3210	Indian Philosophy	3
RLGN 3220	Indian Religion and Society	3
RLGN 3260	Indian Buddhism	3
RLGN 3266	Readings in Buddhist Texts	3
RLGN 3270	Guru and Disciple	3
RLGN 3750	Topics in Indian Religious Art and Architecture	3
RLGN 4060	The Yoga Tradition	3
RLGN 4100	Advanced Studies in Buddhism	3
RLGN 4190	Advanced Studies in Hinduism	3

School of Art

FAAH 1100	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

Canadian Studies

Program modifications:

Modifications to the following programs are detailed on the next 7 pages:

- **Bachelor of Arts (General Major) in Canadian Studies**
- **Bachelor of Arts (Single Honours) in Canadian Studies**
- **Bachelor of Arts (Double Honours) in Canadian Studies**
- **Minor (Concentration) in Canadian Studies**

Canadian Studies

-modification of the List of Approved Courses in Canadian Studies used in the General Major, Minor (Concentration), Single Honours, Double Honours

Added Material

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List of Approved Courses in Canadian Studies

Courses designated (USB) are offered in French at Université de Saint-Boniface.

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	6
Anthropology		
ANTH 2040	Native North America: A Sociocultural Survey	3
ANTH 2041	Les Amérindiens de l'Amérique du nord: une étude socioculturelle (USB)	3
ANTH 2640	Manitoba Prehistory	3
ANTH 3461	Ethnologie des Amérindiens de l'Amérique du Nord (USB)	3
ANTH 3500	Peoples of the Arctic	3
ANTH 3501	Peuples de l'Arctique (USB)	3
ANTH 3550	Canadian Subcultures	3
ANTH 3551	Sous-cultures canadiennes (USB)	3
ANTH 3910	Archaeological Field Training	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 2310	Canadian Economic Problems	6
ECON 2311	Les problèmes économiques du Canada (USB)	6
ECON 2350	Community Economic Development	3

ECON 2362	Economics of Gender	3
ECON 3301	Histoire économique du Canada (USB)	6
ECON 3690	Economic Issues of Health Policy	3
ECON 3720	Urban and Regional Economics and Policies	3
English, Theatre, Film & Media		
ENGL 2270	Canadian Literature	6
ENGL 3270	Studies in Canadian Literature	3
ENGL 3271	Studies in Canadian Literature	3
FILM 2430	The Canadian Film	3
Français (USB)		
FRAN 2881	Civilisation canadienne-française (USB)	3
FRAN 3531	Le théâtre québécois (USB)	3
FRAN 3541	Le théâtre de l'Ouest (USB)	3
FRAN 3851	Le théâtre de l'Ouest: poésie, nouvelles (USB)	3
FRAN 3861	Le théâtre de l'Ouest: romans (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
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 economique e sociale canadienne du XIXe siècle USB~~	~~6~~
HIST 2200	Labour History: Canada and Beyond (C) (Cross-listed with Labour Studies LABR 2200)	3
HIST 2010	Indigenous History in Canada (C)	6
HIST 2020	The Métis in Canada (C)	3

HIST 2282	Inventing Canada (C)	3
HIST 2286	Modern Canada (C)	3
HIST 2288	History of Social Movements in Canada (C)	3
~~HIST 2971~~	~~Le Canada modern: de 1921 a 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 3214	Canada's Left: Rebellion and Repression (C) (Cross-listed with Labour Studies LABR 3214)	3
HIST 3250	Canada and the World, 1867 to the Present (C)	6
~~HIST 3271~~	~~Histoire du Manitoba (C) USB~~	~~6~~
HIST 3272	The Métis Nation: The Modern Era (C)	3
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 3730	A History of Western Canada (C)	6
HIST 3780	Studies in Canadian History 1 (C)	3
~~HIST 3781~~	~~Etudes choisies en histoire du Canada 1 USB~~	~~3~~
~~HIST 3791~~	~~Etudes choisies en histoire du Canada 2 USB~~	~~3~~
HIST 3910	The Ukrainians in Canada (C)	3
HIST 4060	Gender History in Canada (C)	6
HIST 4280	Topics in the Cultural History of Canada (C)	6
HIST 4340	Introduction to Archival Science (G)	6
HIST 4680	Social History of Health and Disease in Modern Canada (C)	6
HIST 4890	Canadian Social History (C)	6
Icelandic		
ICEL 2230	Contemporary Icelandic-Canadian Literature	3
ICEL 4440	The Icelanders in Canada	3
Labour Studies		

LABR 2200	Labour History: Canada and Beyond (C) (Cross-listed with History HIST 2200)	3
LABR 3214	Canada's Left: Rebellion and Repression (C) (Cross-listed with History HIST 3214)	3
LABR 3510	Industrial Relations (Cross-listed with Economics ECON 3510)	6
Linguistics		
LING 1360	Languages of Canada	3
Native Studies		
NATV 1200	Indigenous Peoples in Canada	6
NATV 1220	Indigenous Peoples in Canada, Part 1	3
NATV 1240	Indigenous Peoples in Canada, Part 2	3
NATV 1250	Introductory Cree 1	3
NATV 1260	Introductory Cree 2	3
NATV 1270	Introductory Anishinaabemowin (Ojibwe) 1	3
NATV 1280	Introductory Anishinaabemowin (Ojibwe) 2	3
NATV 1290	Introductory Inuktitut	3
NATV 1300	Selected Topics in Introductory Indigenous Language	3
NATV 2012	Indigenous History in Canada	6
NATV 2020	The Métis in Canada	3
NATV 2040	The Dakota, Lakota, and Nakota Nations	3
NATV 2060	Eastern Woodlands Encounters Columbus to Confederation	3
NATV 2070	Cree, Innu, and Dene Nations	3
NATV 2080	Inuit Society and Culture	3
NATV 2220	Indigenous Societies and the Political Process	3
NATV 2250	Intermediate Cree	6
NATV 2272	Intermediate Anishinaabemowin (Ojibwe) 1	3
NATV 2274	Intermediate Anishinaabemowin (Ojibwe) 2	3
NATV 2300	Cree Literature	3
NATV 2410	Indigenous Literature in Canada	3

NATV 2420	Inuit Literature in Translation	3
NATV 2450	Images of the "Indian" in North American Society	3
NATV 3000	Selected Topics	3
NATV 3222	Structure of the Anishinaabemowin (Ojibwe) Language	3
NATV 3224	Structure of the Cree Language	3
NATV 3240	Native Medicine and Health	3
NATV 3270	The Métis Nation	3
NATV 3280	Indigenous People and the Canadian Justice System	3
NATV 3300	Indigenous Language Planning and Development	3
NATV 3310	Canadian Law and Indigenous Peoples	3
NATV 3340	Circumpolar Cultures and Lifestyles	3
NATV 3370	Political Development in the North	3
NATV 3380	Gender and Indigenous 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 Indigenous Studies Research	3
NATV 4240	Arctic Lifestyles	3
NATV 4250	Indigenous Identities	3
NATV 4280	Missionaries, Colonialism and Indigenous People	3
Political Studies		
POLS 1502	Introduction to Political Studies	3
POLS 1506	Survey of Political Studies	3
POLS 2073	Introduction à la politique canadienne 1: État et société (USB)	3
POLS 2075	Introduction à la politique canadienne II: Institutions et politiques publiques (USB)	3
POLS 2561	Questions d'actualité en politique Canadienne (USB)	6
POLS 2571	Initiation à l'administration publique (USB)	6
POLS 2702	Introduction to Canadian Politics	3

POLS 2802	Introduction to Indigenous Politics	3
POLS 3100	Gender and Politics in Canada	3
POLS 3171	La Charte canadienne des droits et libertés	
POLS 3470	Canadian Public Management	3
POLS 3512	Canadian Foreign and Defence Policy I	3
POLS 3514	Canadian Foreign and Defence Policy II	3
POLS 3670	Canadian Political Parties	3
POLS 3680	Indigenous Governance	3
POLS 3730	Canadian Constitutional Politics	3
POLS 3740	Provincial Politics	3
POLS 3750	City Politics	3
POLS 3860	Canadian Federalism	3
POLS 3940	Canadian Public Policy	3
POLS 4070	Advanced Seminar: Canadian Government	3
POLS 4080	Advanced Seminar: Canadian Democracy	3
POLS 4140	Canadian Political Ideas	3
POLS 4190	Manitoba Politics and Government	3
POLS 4560	Canada and the Arctic	3
POLS 4640	Comparative Indigenous Politics	3
Religion		
RLGN 2590	Religion and Social Issues	3
RLGN 2591	La religion et les problèmes sociaux (USB)	3
Slavic Studies		
UKRN 2410	Ukrainian Canadian Cultural Experience	3
Sociology and Criminology		
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 3471	Sociologie politique (USB)	3
SOC 3700	Sociology of Law	3
SOC 3762	Law, Justice, and Indigenous Peoples	3
Ukrainian Canadian Heritage Studies		
UCHS 3100	The Ukrainian Arts in Canada	3
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
Clayton H. Riddell Faculty of Environment, Earth, and Resources		
Geography		
GEOG 2570	Geography of Canada (A)	3
GEOG 2900	Geography of Canadian Prairie Landscapes (A)	3
GEOG 3431	Géographie du Canada (USB)	3
GEOG 3481	Particularités de la géographie du Canada (USB)	3
Geological Sciences		
GEOL 2350	Canada Rocks: The Geology of Canada	3

Catholic Studies

Program modification:

A modification to the **Minor (Concentration) in Catholic Studies** is detailed on the next page.

Catholic Studies

-Modification of the List of Approved Courses in Catholic Studies used in the Minor (Concentration)

Added Material

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List of Approved Courses in Catholic Studies		
Faculty of Arts		
Catholic Studies		
CATH 1190	Introduction to Catholic Studies	3
CATH 2000	Special Topics in Catholic Studies	3
CATH 2010	Literature and Catholic Culture 1	3
CATH 2020	Literature and Catholic Culture 2	3
CATH 2100	Field Studies in Catholic Culture	6
CATH 2200	Catholicism and Human Sexuality	3
CATH 2300	The Jesuits: Their Legacy and Influence	3
CATH 2400	Mystics, Saints and Sinners: The Quest for Holiness in the Catholic Church	3
CATH 2500	Reshaping the Catholic Landscape in Canada	3
CATH 2600	Pilgrimage and the Localization of Catholic Devotion	3
CATH 2700	Catholicism and the Paranormal	3
CATH 3900	Catholic Social Teaching	3
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
~~Philosophy~~		
~~PHIL 2780~~	~~Thomas Aquinas~~	~~3~~
Religion		
RLGN 2840	The Second Vatican Council	3
RLGN 2850	Contemporary Issues in Roman Catholicism	3
RLGN 3870	The Thought of Bernard Lonergan	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

Central and East European Studies

Program modifications:

Modifications to the following programs are detailed on the next 2 pages:

- **Bachelor of Arts (General Major) in Central and East European Studies**
- **Bachelor of Arts (Single Advanced Major) in Central and East European Studies**
- **Bachelor of Arts (Double Advanced Major) in Central and East European Studies**
- **Bachelor of Arts (Double Honours) in Central and East European Studies**
- **Minor (Concentration) in Central and East European Studies**

Central and East European Studies

-Modification of the List of Approved Courses in Central and East European Studies used in the General Major, Single Advanced Major, Double Advanced Major, Minor (Concentration), Double Honours

Added Material

~~Deleted Material~~

List of Approved Courses in Central and East European Studies
Faculty of Arts

Anthropology		
ANTH 2060	European Archaeology	3
Economics		
ECON 2510	The Economy of Ukraine	3
German and Slavic Studies		
GRMN 1300	Masterpieces of German Literature in English Translation (C)	3
GRMN 1310	Love in German Culture in English Translation (C)	3
GRMN 2120	Introduction to German Culture from 1918 to the Present (C)	3
GRMN 2130	Introduction to German Culture from the Beginnings to 1918 (C)	3
GRMN 2510	German Fairy Tales from the Brothers Grimm to Hollywood (C)	3
GRMN 3260	Representations of the Holocaust (B)	3
GRMN 3262	Representations of the Holocaust in English Translation (C)	3
GRMN 3270	Studies in Contemporary German Cinema (C)	3
GRMN 3280	Sex, Gender and Cultural Politics in the German-Speaking World (B)	3
GRMN 3282	Sex, Gender and Cultural Politics in the German-Speaking World in English Translation (C)	3
GRMN 3290	History in Literature in German-Speaking Countries (B)	3
GRMN 3390	German Representations of War (C)	3
GRMN 3392	German Representations of War (B)	3
GRMN 3530	Special Topics in Comparative German and Slavic Studies (C)	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 1410	Love in Russian Culture in English Translation	3
RUSN 2280	Russian Culture until 1900	3
RUSN 2290	Russian Culture from 1900 to the Present	3
RUSN 2310	Exploring Russia through Film	3
RUSN 2410	Russian Literature after Stalin	3
RUSN 2600	Special Topics in Russian Culture in English Translation	3
RUSN 2740	Literature and Revolution	3
RUSN 3770	Tolstoy	3
RUSN 3780	Dostoevsky	3
SLAV 3530	Special Topics in Comparative German and Slavic Studies	3
SLAV 3920	Gogol	3
UKRN 2200	Ukrainian Myth, Rites and Rituals	3
UKRN 2600	Special Topics in Ukrainian Studies	3
UKRN 2770	Ukrainian Culture until 1900	3
UKRN 2780	Ukrainian Culture from 1900 to the Present	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
History		
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 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 4300	Problems in Modern Russian and Soviet History	6
Judaic Studies		
JUD 3010	Topics in Jewish Studies (when its focus is on Central and Eastern European Studies)	3
YDSH 2320	Yiddish Literature and Language	6
Political Studies		
POLS 3720	Politics, Government and Society in Ukraine	3
POLS 3810	Introduction to Marxism	3
Religion		
RLGN 1350	The History of Eastern Christianity	6
RLGN 2530	Eastern Christianity in the Contemporary World	3
RLGN 3280	Hasidism	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

Students are advised to consult the respective departmental *Calendar* entries for specific information on prerequisites and restrictions.

Classics

Modification:

CLAS 3270 The World of Late Antiquity: History and Archaeology Cr.Hrs. 3 0.0
This course examines the later Roman Empire, beginning with the reign of Constantine in the early fourth century and ending in the mid sixth century. It combines historical and archaeological sources for the study of political, religious and social developments within the period. Prerequisite: [a grade of "C" or better in one of: CLAS 1270, CLAS 1280, CLAS 2170, CLAS 2680, FAAH 1030, HIST 1200, the former HIST 1201, HIST 1203, HIST 1350] or written consent of department head.

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are detailed on the next page:

- **Bachelor of Arts (General Major) in Classical Studies**
- **Bachelor of Arts (Single Advanced Major) in Classical Studies**
- **Bachelor of Arts (Double Advanced Major) in Classical Studies**
- **Minor (Concentration) in Classical Studies**

Classics

- Modification of List A used in the General Major, Single Advanced Major, Double Advanced Major and Minor (Concentration)

Added Material

~~Deleted Material~~

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
Philosophy		
PHIL 2650	Plato	3
PHIL 2660	Aristotle	3
Religion		
RLGN 2112	Medicine, Magic, and Miracle in the Ancient World	3
~~RLGN 2730~~	~~Jews and Judaism in Antiquity~~	~~3~~
RLGN 3640	Religion in the Hellenistic and Roman Mediterranean	3

For course descriptions, see the departmental listings in this *Calendar*.

Economics

Program modifications:

Modifications to the following programs are detailed on the next 2 pages:

- **Bachelor of Arts (Joint Honours) in Economics and Mathematics**
- **Bachelor of Arts (Joint Honours) in Economics and Statistics**

Economics

-Modification of Economics-Mathematics Joint Honours Program chart and Economics-Statistics Joint Honours Program chart

Added Material

~~Deleted Material~~

Economics-Mathematics Joint Honours Program

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS TOTAL: 120 CREDIT HOURS			
• Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220 MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240[1] • STAT 1150[1, 2] • COMP 1010[2] • 6 credit hours of electives, which should include the required "Written English" course	• ECON 2010, ECON 2020 • MATH 2020, MATH 2080, MATH 2090, MATH 2150, MATH 2180 • 9 credit hours of approved electives	• ECON 3010, ECON 3020, ECON 3040[2] • MATH 2030, MATH 2160, MATH 3320, MATH 3340, MATH 3440, MATH 3470, MATH 3472 • 24 credit hours of approved Economics courses[3] • 3 credit hours from ~~MATH 2140,~~ MATH 3420, MATH 3460, MATH 3610, MATH 4370, or any Mathematics course at the 4000 level • 3 credit hours of Mathematics courses at the 3000 or 4000 level	
30 HOURS	30 HOURS	60 HOURS	

NOTES:

[1] Students in this program must achieve a minimum grade of "B" in MATH 1230, MATH 1232, MATH 1220, and MATH 1240. Students are strongly advised to take MATH 1220, MATH 1230, and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (A) in place of MATH 1220, MATH 1500 (A) in place of MATH 1230, MATH 1700 (A) in place of MATH 1232, MATH 1690 (B) in place of MATH 1230 and MATH 1232. With permission from the department, students may be able to substitute STAT 1000 and STAT 2000 in place of STAT 1150.

[2] Some courses may be taken in a different year than indicated; STAT 1150, COMP 1010, ECON 3040 may be taken in Year 2. The normal prerequisite for ECON 3040 is ECON 2040, which will be waived for students in this program who have completed Year 1.

[3] 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 and at least 6 credit hours must be at the 4000 level. Students are encouraged to take ECON 4010, ECON 4020 and ECON 4040.

Economics

- Modification of the Joint Economics-Statistics program
- Changes result from changes proposed by the Department of Statistics (no changes to Economics requirements)

Added material

~~Deleted Material~~

8.9.6 Economics-Statistics Joint Honours Program

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS TOTAL: 120 CREDIT HOURS			
• Both ECON 1010 and ECON 1020, or both ECON 1210 and ECON 1220 • MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240[1] • STAT 1150[1] • COMP 1010 • Plus 6 credit hours of electives which should include the required "Written English" course	• ECON 2010, ECON 2020 • ~~STAT 2150, STAT 2400~~ • STAT 2150, STAT 2300, STAT 2400, STAT 2800 ~~MATH 2030, MATH 2080, MATH 2140~~ ~~• MATH 2150 or MATH 2720~~ • MATH 2080, MATH 2150[1] • Plus 6 credit hours of approved Economics electives[2]	• ECON 3010, ECON 3020 • ~~STAT 3400, STAT 3470, STAT 3480, STAT 3490, STAT 3800~~ • STAT 3100, STAT 3150, STAT 3450 • MATH 2160, ~~MATH 3360~~ MATH 3610 • Plus 3 credit hours of approved Economics electives[2] • 6 credit hours of approved Statistics electives[3]	• ECON 4040, ECON 4042 • STAT 4100~~, STAT 4200, STAT 4520, STAT 4530~~ • Plus 12 credit hours of approved Economics electives[2] • 9 credit hours of approved Statistics electives[3]
30 HOURS	30 HOURS	30 HOURS	30 HOURS

NOTES:

[1] The following substitutions are allowed: MATH 1300 in place of MATH 1220, MATH 1500 in place of MATH 1230, MATH 1700 in place of MATH 1232, MATH 2720 in place of MATH 2150; STAT 1000 ~~(C)~~ and STAT 2000 (B) in place of STAT 1150. Students must attain specific grade requirements in order to meet the upper level course prerequisites. Consult course descriptions for further information.

[2] Of the 21 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 2030 and ECON 3040 are recommended in Year 2 or 3. The normal prerequisite for ECON 3040 is ECON 2040, which will be waived for students in this program who have completed Year 1.

3 The 15 credit hours of electives in Statistics in Years 3 and 4 must all be at the 3000 level or higher, at least 9 of which must be at the 4000 level. The following courses are recommended: STAT 3030, STAT 3490, STAT 3550, STAT 3690, STAT 4150, STAT 4250, STAT 4630.

English, Theatre, Film & Media

Deletions:

ENGL 4640 Honours Seminar 2 Cr.Hrs. 3 -3.0
FILM 2390 The International Cinema 2 Cr.Hrs. 3 -3.0
FILM 2420 Realism in Film Cr.Hrs. 3 -3.0
FILM 3260 Special Topics in Film 2 Cr.Hrs. 3 -3.0
FILM 3410 The Director's Cinema 2 Cr.Hrs. 3 -3.0
THTR 3620 Special Studies 4 Cr.Hrs. 3 -3.0

Introduction:

FILM 2040 Documentary Film Cr.Hrs. 3 +3.0
Theories and forms of the non-fiction film as an art form, an information carrier and a propaganda tool. Students may not hold credit for both FILM 2040 and the former FILM 2420.

Modifications:

ENGL 2940 Short Fiction Cr.Hrs. 3 0.0
Representative writers. Prerequisite: [a grade of "C" or better in ENGL 1200 or ENGL 1201 or ENGL 1300 or ENGL 1301] or [a grade of "C" or better in each of ENGL 1400 (or the former ENGL 1310) and ENGL 1340].

ENGL 2960 Drama Cr.Hrs. 3 0.0
An introduction to dramatic forms and conventions. Students may not hold credit for both ENGL 2960 and ENGL 2961. Prerequisite: [a grade of "C" or better in ENGL 1200 or ENGL 1201 or ENGL 1300 or ENGL 1301] or [a grade of "C" or better in each of ENGL 1400 (or the former ENGL 1310) and ENGL 1340].

ENGL 2980 Poetry Cr.Hrs. 3 0.0
Introduction to poetic language and forms. Prerequisite: [a grade of "C" or better in ENGL 1200 or ENGL 1201 or ENGL 1300 or ENGL 1301] or [a grade of "C" or better in each of ENGL 1400 (or the former ENGL 1310) and ENGL 1340].

ENGL 3800 Special Studies Cr.Hrs. 3 0.0
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, Theatre, Film & Media website for detailed course descriptions. Students can earn multiple credits for this course only when the topic subtitle is different.

ENGL 3960 Special Topics in Drama Cr.Hrs. 3 0.0
Advanced study of selected topics. Students may not hold credit for both ENGL 3960 and ENGL 3961. 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, Theatre, Film & Media website for detailed course descriptions. Students can earn multiple credits for this course only when the topic subtitle is different.

ENGL 3970 Special Topics in Poetry Cr.Hrs. 3 0.0
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, Theatre, Film & Media website for detailed course descriptions. Students can earn multiple credits for this course only when the topic subtitle is different.

ENGL 4630 Honours Seminar Cr.Hrs. 3 0.0
This course may vary from year to year depending on the needs and interests of instructors and students. Prerequisite: written consent of department head. Students can earn multiple credits for this course only when the topic subtitle is different.

FILM 3250 Special Topics in Film Cr.Hrs. 3 0.0
An intensive examination of selected topics in film. Students are asked to consult the English, Theatre, Film & Media website for detailed course descriptions. Prerequisite: [a grade of "C" or better in each of FILM 1290 and FILM 1310 (or the former FILM 1300)] or written consent of instructor. Students can earn multiple credits for this course only when the topic subtitle is different.

FILM 3400 The Director's Cinema Cr.Hrs. 3 0.0
An intensive critical look at the career of one or two major filmmakers. Students are asked to consult the English, Theatre, Film & Media website for detailed course descriptions. Prerequisite: [a grade of "C" or better in each of FILM 1290 and FILM 1310 (or the former FILM 1300)] or written consent of instructor. The course content may vary. Students can earn multiple credits for this course only when the topic subtitle is different.

FILM 3440 Filmmaking Cr.Hrs. 3 0.0
Digital filmmaking equipment is used to understand the rudiments of cinematography, editing, lighting, and directing. Students will make at least one short film. Students may not hold credit for both FILM 3440 and any of FILM 3250, FILM 3260, or FILM 3270 when titled “Filmmaking.” Prerequisite: [a grade of "C" or better in each of FILM 1290 and FILM 1310 (or the former FILM 1300)] or written consent of instructor.

THTR 2150 Theatrical Techniques: Onstage Cr.Hrs. 6 0.0
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 Theatre Program season. Prerequisite: [a grade of "C" or better in THTR 1220] and written consent of instructor.

THTR 2160 Theatrical Techniques: Backstage Cr.Hrs. 6 0.0
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 Theatre Program season, the nature of the projects to be determined by the student's interests and the needs of the Program. Prerequisite: [a grade of "C" or better in THTR 1220] and written consent of instructor.

THTR 3610 Special Studies Cr.Hrs. 3 0.0
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. Students can earn multiple credits for this course only when the topic subtitle is different.

NET CHANGE IN CREDIT HOURS: -15.0

Program modifications:

Modifications to the following programs are outlined on the next 6 pages:

- **Bachelor of Arts (General Major) in English**
- **Bachelor of Arts (Single Advanced Major) in English**
- **Bachelor of Arts (Double Advanced Major) in English**
- **Bachelor of Arts (Single Honours) in English**
- **Bachelor of Arts (Double Honours) in English**
- **Minor (Concentration) in English**

English

-Modification to General Major, Single Advanced Major, Double Advanced Major, Minor (Concentration), Single Honours programs to separate out requirements for clarification
-Modification to General Major to allow for 3 cr hrs of 1000 level FILM to be used as part of the 6 cr hrs of FILM or THTR courses students may take
-Modification to Single/Double Advanced Major to increase to maximum of 12 hrs of FILM and THTR courses and allow up to 6 cr hrs at the 1000 level
-Modification to General, Single/Double Advanced and Single/Double Honours removing the CLAS and ICEL courses from being used for literature in translation courses. General degree students will no longer be able to count CLAS/ICEL courses. Single/Double Advanced Major students can now take up to 12 hrs of FILM or THTR rather than 6 of FILM or THTR and 6 of CLAS or ICEL

Added Material
~~Deleted Material~~

8.10.2 English

<table>
<tr><th>YEAR 1</th><th>YEAR 2</th><th>YEAR 3</th><th>YEAR 4</th></tr>
<tr><td colspan="4">GENERAL MAJOR [1, 4, 5] TOTAL: 30 CREDIT HOURS</td></tr>
<tr><td>ENGL 1200 (6) or

ENGL 1300 (6) or

both ENGL 1400 and
ENGL 1340</td><td colspan="2"><s>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].</s>

• 6 credit hours of ENGL or FILM or THTR at or above the 2000 level[1]
• 12 credit hours of ENGL at or above the 2000 level
• 6 credit hours of ENGL at or above the 3000 level

Of the 2000 and 3000 level ENGL courses taken above, a minimum of 9 credit hours must be selected from the Literature Prior to 1900 list[4].</td><td></td></tr>
<tr><td colspan="4">SINGLE ADVANCED MAJOR[<s>1</s>, 2, 4, 5, 6, <s>9</s>] TOTAL: 48 CREDIT HOURS</td></tr>
<tr><td>ENGL 1200 (6) or

ENGL 1300 (6) or

both ENGL 1400 and
ENGL 1340</td><td colspan="3"><s>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].</s>

• 6 credit hours of ENGL or FILM or THTR at or above the 1000 level[2]
• 6 credit hours of ENGL or FILM or THTR at or above the 2000 level[2]
• 21 credit hours of ENGL at or above the 2000 level
• 9 credit hours of ENGL at or above the 3000 level</td></tr>
</table>

	Of the 2000 and 3000 level ENGL courses taken above, a minimum of 15 credit hours must be selected from the Literature Prior to 1900 list[4].
DOUBLE ADVANCED MAJOR[~~1~~, 2, 4, 5, 6, ~~9~~] TOTAL: 42 CREDIT HOURS	
ENGL 1200 (6) or ENGL 1300 (6) or both ENGL 1400 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].~~ • 6 credit hours of ENGL or FILM or THTR at or above the 1000 level[2] • 6 credit hours of ENGL or FILM or THTR at or above the 2000 level[2] • 15 credit hours of ENGL at or above the 2000 level • 9 credit hours of ENGL at or above the 3000 level Of the 2000 and 3000 level ENGL courses taken above, a minimum of 12 credit hours must be selected from the Literature Prior to 1900 list[4].

MINOR (CONCENTRATION) [~~2~~, 4, 5, 8] TOTAL: 18 CREDIT HOURS		
ENGL 1200 (6) or ENGL 1300 (6) or both ENGL 1400 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 to satisfy the requirements of the Minor (Concentration).~~ • 9 credit hours of ENGL at or above the 2000 level • 3 credit hours of ENGL at or above the 3000 level Of the 2000 and 3000 level ENGL courses taken above, a minimum of 6 credit hours must be selected from the Literature Prior to 1900 list[4].	

SINGLE HONOURS ~~1~~, 3, 4, 5, ~~8~~	
ENGL 1200 (6) or ENGL 1300 (6) or both ENGL 1400 and ENGL 1340	• ENGL 2640 (6)~~10~~ 7 • 9 credit hours in ENGL at the 2000 level and above ~~[of the credit hours listed above, at least 9 credit hours must be at the 3000 level]~~ ~~• 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~~[5] 9 • 12 credit hours of ENGL selected from the Literature prior to 1900 list[4] • 12 credit hours of literature prior to 1700 selected from: ENGL 2070(6), ENGL 2080(6), ENGL 2090(6), ENGL 3000(6), ENGL 3010(6), ENGL 3020(6), ENGL 3030, ENGL 3050(6), ENGL 3080, ENGL 3090, ENGL 3180[5] 9 • 12 credit hours in other literature after 1900, selected from ~~the following~~: ENGL 2160(6), ENGL 2180(6), ENGL 2830, ENGL 3980, ENGL 3990 [5] 9 • 6 credit hours in Canadian literature selected from: ENGL 2270(6), ENGL 3270[5] 9 Of the courses selected above, a minimum of 9 credit hours must be at or above the 3000 level. • 9 credit hours ~~in Honours courses (~~ of 4000 level ENGL ~~) in Years 3 and 4~~ • 24 credit hours in ancillary options ~~6~~ 10

DOUBLE HONOURS ~~2,~~ 4, 5, 8	
ENGL 1200 (6) or ENGL 1300 (6) or both ENGL 1400 and ENGL 1340	• ENGL 2640 (6)~~10~~ 7 ~~(in Year 2)~~ • 18 credit hours ~~of literature prior to 1900~~ of ENGL selected from the Literature prior to 1900 list[4] • 6 credit hours in ENGL 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 (~~ of 4000 level ENGL ~~)~~ • 36 credit hours in second honours field • 6 credit hours in ancillary options~~6~~10 • 12 credit hours in free options~~7~~11

NOTES:

1. Students in the General Major program in English may use up to 6 credit hours in Film Studies or Theatre courses toward the completion of their Major requirements, with the exception of THTR 1220, THTR 2170, THTR 2180 and THTR 2490. Additionally, students may use up to 3 credit hours of FILM at the 1000 level toward this requirement. Any FILM or THTR courses so applied may not also be used toward a Minor (Concentration) in Film Studies or Theatre respectively.

2. Students in the Single Advanced Major and Double Advanced Major programs in English may use up to 12 credit hours in Film Studies or Theatre courses toward the completion of their Major requirements, with the exception of THTR 1220, THTR 2170, THTR 2180 and THTR 2490. Any FILM or THTR courses so applied may not also be used toward a Minor (Concentration) in Film Studies or Theatre respectively.

3. ~~1.~~ Students in the Single Honours program may use ~~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 the General Major, Single Advanced Major, Double Advanced Major and Single Honours in English.~~ Any Film Studies or Theatre courses so applied may not also be used ~~offered~~ toward a Minor (Concentration) in Film Studies or Theatre respectively.

4. Students may use ~~offer up to 6 credit hours of literature in translation courses (~~ENGL 2490 Literature in Translation~~, CLAS 2612, CLAS 2622, ICEL 3320, ICEL 3330)~~ (maximum 3 credit hours) to satisfy requirements for ~~a~~ the 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 use ~~offer literature in translation courses~~ ENGL 2490 to satisfy the requirements for a Minor (Concentration).

5. ~~3~~ Credit in ENGL 2000 may be used ~~offered~~ toward the 48 hours in general courses required for a Single Advanced Major only.

6. ~~9~~ It is recommended that students in the Single and Double Advanced Major programs complete a six credit hour theory course, specifically ENGL 2640.

7. ~~10~~ Single Honours and Double Honours students should attempt to complete ENGL 2640 (required year 2 course) as early as possible, as it may not be offered every year.

8. ~~2 Film Studies course~~ FILM 2280 may be used as an English course to satisfy ~~the English course~~ requirements in the English Minor and Double Honours programs. 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 the Film Studies Single Honours program.

~~8 Honours courses: all 4000 level courses.~~

9. ~~5~~ 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.

10. ~~6~~ Ancillary options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding English courses).

11. ~~7~~ Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including English courses).

Literature Prior to 1900

~~Students declaring a four-year~~ Single ~~Advanced Major in English must take at least 15 credit hours from the courses listed below. Students declaring a four-year Double Advanced Major must take at least 12 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~~ courses ~~listed below. Students declaring a Minor (Concentration) in English must take at least 6 credit hours from~~ courses ~~listed below. 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		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 2190	Special Topics (when the topic relates to Literature prior to 1900)	3
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
ENGL 3190	Studies in Special Topics (when the topic relates to Literature prior to 1900)	6
ENGL 3660	Special Studies (when the topic relates to Literature prior to 1900)	6

ENGL 3800	Special Studies (when the topic relates to Literature prior to 1900)	6

~~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~~

~~Icelandic~~

~~ICEL 3320~~	~~Old Norse Mythology (taught with ENGL 2490)~~	~~3~~
~~ICEL 3330~~	~~Icelandic Sagas in Translation (taught with ENGL 2490)~~	

Modifications to the following programs are outlined on the next 3 pages:

- **Bachelor of Arts (General Major) in Film Studies**
- **Bachelor of Arts (Single Advanced Major) in Film Studies**
- **Bachelor of Arts (Double Advanced Major) in Film Studies**
- **Minor (Concentration) in Film Studies**

Film Studies

- Modification to General Major, Single Advanced Major, Double Advanced Major, and Minor programs.

Added Material

~~Deleted Material~~

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~~ • 21 credit hours in Film Studies courses at or above the 2000 level • FILM 3420		
SINGLE ADVANCED MAJOR[1, 3] 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~~ • 33 credit hours in Film Studies at or above the 2000 level • FILM 3420 • 6 credit hours in Film Studies at or above the 3000 level ~~• 12 credit hours from List A and B of which at least 6 credit hours must be from List A~~ • 6 credit hours of ENGL or THTR at or above the 1000 level (restrictions apply see note 3) • 6 credit hours of ENGL or THTR at or above the 2000 level (restrictions apply see note 3)		
DOUBLE ADVANCED MAJOR[1] TOTAL: 42 CREDIT HOURS			
FILM 1290 And FILM 1310	• FILM 2280 (6) • FILM 2380 ~~or FILM 2390~~ or FILM 2430 • FILM 3420[2] ~~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)~~ • 18 credit hours in Film Studies at or above the 2000 level • 6 credit hours in Film Studies at or above the 3000 level		
MINOR (CONCENTRATION)[1] TOTAL: 18 CREDIT HOURS			
FILM 1290 and FILM 1310	12 credit hours in Film Studies courses at or above the 2000 level		
NOTE:			

1 The content of topics courses (FILM 2380, ~~FILM 2390,~~ FILM 2460, FILM 3250, ~~FILM 3260~~, FILM 3270, FILM 3400, ~~FILM 3410~~) will vary ~~very~~ from term to term and may be taken more than once for credit.

2 Students may use ENGL 2640 (6) in place of FILM 3420 to satisfy the theory requirement in the Double Advanced Major program in Film Studies.

3 Students shall not use the following courses to satisfy the ENGL / THTR requirements in the Single Advanced Major program: ENGL 0930, ENGL 2000, THTR 2170, THTR 2180, THTR 2490. Any English or Theatre course(s) used to satisfy this requirement may not also be used to satisfy a Minor (Concentration) in Film Studies or Theatre respectively.

~~List A~~

~~Classics~~

~~CLAS 2612~~	~~Greek Literature in Translation~~	~~3~~
~~CLAS 2622~~	~~Latin Literature in Translation~~	~~3~~
~~CLAS 3680~~	~~Studies in a Classical Literary Genre 1~~	~~3~~

~~English, Theatre, Film & Media~~

~~ENGL 1200~~	~~Representative Literary Works~~	~~6~~
~~ENGL 1300~~	~~Literature since 1900~~	~~6~~
~~ENGL 2170~~	~~American Literature to 1900~~	~~6~~
~~ENGL 2180~~	~~American Literature since 1900~~	~~6~~
~~ENGL 2270~~	~~Canadian Literature~~	~~6~~
~~ENGL 2960~~	~~Drama 1~~	~~3~~
~~ENGL 3010~~	~~Shakespeare~~	~~6~~
~~ENGL 3270~~	~~Studies in Canadian Literature~~	~~3~~
~~ENGL 3500~~	~~Creative Writing~~	~~6~~
~~ENGL 3670~~	~~Studies in the Novel~~	~~6~~
~~ENGL 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~~

~~Judaic Studies~~

~~HEB 2210~~	~~Modern Hebrew Literature~~	~~6~~

~~List B~~

~~Faculty of Arts~~

~~English, Theatre, Film & Media~~

~~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~~

Modifications to the following programs are outlined on the next 3 pages:

- **Bachelor of Arts (General Major) in Theatre**
- **Bachelor of Arts (Single Advanced Major) in Theatre**

Theatre

-Modification to General Major, Single Advanced Major, Double Advanced Major programs to separate out requirements for clarification
-Modification to General Major to allow for 3 cr hrs of 1000 level (or higher) FILM or ENGL to be used to satisfy program requirements.
-Modification to Single Advanced Major to allow for up to 12 cr hrs of FILM or ENGL (minimum 6 credit hours at the 2000 level or higher) to be used to satisfy program requirements.
-remove references to deleted course THTR 3620

Added Material
~~Deleted Material~~

8.10.10 Theatre

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR[1] TOTAL: 30 CREDIT HOURS			
THTR 1220 (6)	• THTR 2160 (6) • THTR 2470 • 6 credit hours selected from: THTR 2150 (6), THTR 2170, THTR 2180, THTR 2490 • 6 credit hours from THTR 2480, THTR 2600, THTR 3460, THTR 3470, THTR 3610, ~~THTR 3620~~, THTR 3630, THTR 3640 (6) • 3 additional credit hours from ~~Theatre~~ THTR courses specified above ~~and/~~or ~~from List A~~ ENGL or FILM courses (excluding both of ENGL 0930 and ENGL 2000)		

SINGLE ADVANCED MAJOR[1, 2, 4] TOTAL: 54 CREDIT HOURS	
THTR 1220 (6); ENGL 1200 (6) or ENGL 1300 (6) or both ENGL 1400 and ENGL 1340	• THTR 2160 (6) • THTR 2470 • 6 credit hours selected from: THTR 2150 (6), THTR 2170, THTR 2180, THTR 2490 • 12 credit hours from THTR 2480, THTR 2600, THTR 3460, THTR 3470, THTR 3610, ~~THTR 3620~~, THTR 3630, THTR 3640 (6) • 15 additional credit hours from the ~~Theatre~~ THTR courses specified above.[4] ~~and/or from List A~~

DOUBLE ADVANCED MAJOR[1, 2, 3] TOTAL: 42 CREDIT HOURS	
THTR 1220 (6)	• THTR 2470 • 9 credit hours selected from: THTR 2150 (6), THTR 2160 (6), THTR 2170, THTR 2180, THTR 2490, THTR 3470 • 24 additional credit hours ~~from Theatre courses~~ of THTR at the 2000 level and above

NOTES:

1 The content of topics courses (THTR 2600, 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 (6).

4 In addition to the first year required ENGL courses in the Single Advanced Major program, students may use up to 6 credit hours in English or Film courses at the 2000 level or higher with the exception of ENGL 2000. Any English or Theatre courses so applied may not also be used toward a Minor in English or Film.

~~List A~~

~~English, Theatre, Film & Media~~

~~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 3960~~	~~Drama 2~~	~~3~~
~~ENGL xxxx~~	~~English, Theatre, Film & Media Department Special Studies courses approved in advance by the chair of the Theatre Program.~~	

~~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.~~

~~English, Theatre, Film & Media~~

~~FILM 1290~~	~~The Art of the Film 1~~	~~3~~
~~FILM 1310~~	~~Film History~~	~~3~~
~~FILM 2280~~	~~Film and Literature~~	~~6~~

~~FILM 2300~~	~~The Popular Film~~	~~3~~
~~FILM 2330~~	~~Film and Contemporary Thought~~	~~3~~
~~FILM 2370~~	~~Experimental Cinema~~	~~3~~
~~FILM 2380~~	~~The International Cinema 1~~	~~3~~
~~FILM 2390~~	~~The International Cinema 2~~	~~3~~
~~FILM 2400~~	~~The American Film to 1950~~	~~3~~
~~FILM 2410~~	~~The American Film from 1950~~	~~3~~
~~FILM 2420~~	~~Realism and Film~~	~~3~~
~~FILM 2430~~	~~The Canadian Film~~	~~3~~
~~FILM 2460~~	~~Film Genres~~	~~3~~
~~FILM 3250~~	~~Selected Topics in Film 1~~	~~3~~
~~FILM 3260~~	~~Selected Topics in Film 2~~	~~3~~
~~FILM 3270~~	~~Special Topics in Film 3~~	~~6~~
~~FILM 3400~~	~~The Director's Cinema 1~~	~~3~~
~~FILM 3410~~	~~The Director's Cinema 2~~	~~3~~
~~FILM 3420~~	~~Film Theory~~	~~3~~
~~FILM 3430~~	~~Screenwriting~~	~~3~~
~~FILM 3440~~	~~Filmmaking~~	~~3~~
~~FILM 3450~~	~~The Animated Film~~	~~3~~
~~FILM 3460~~	~~Acting for the Camera~~	~~3~~

French, Spanish and Italian

Introduction:

FREN 4426 Initiation à la recherche Cr.Hrs. 3 +3.0
Ce cours qui s'étendra sur toute la durée des deux trimestres, consiste en la préparation d'un travail de recherche et d'analyse en plus d'une bibliographie. Chaque étudiant-e sera encadré-e par un-e professeur-e du département. Prerequisite: written consent of department head. Students can earn multiple credits for this course only when the topic subtitle is different.

NET CHANGE IN CREDIT HOURS: +3.0

Program modifications:

Modifications to the following programs are outlined on the next 5 pages:

- **Bachelor of Arts (General Major) in French**
- **Bachelor of Arts (Single Advanced Major) in French**
- **Bachelor of Arts (Double Advanced Major) in French**
- **Bachelor of Arts (Single Honours) in French**
- **Bachelor of Arts (Double Honours) in French**
- **Minor (Concentration) in French**

French

-Modification of the General Major, Single Advanced Major, Double Advanced Major, Minor (Concentration), Single Honours, Double Honours and Program Notes.

Added Material

~~Deleted Material~~

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
FREN 1190 (6) or FREN 1200 (6)	~~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~~	
	• 3 credit hours of French language at or above the 2000 level • 3 credit hours of French literature at or above the 2000 level • 6 credit hours of French at or above the 2000 level • 3 credit hours of French language at or above the 3000 level • 3 credit hours of French literature at or above the 3000 level • 6 credit hours of French at or above the 3000 level.		
SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS			
FREN 1190 (6) or FREN 1200 (6)	~~• 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~~ • 3 credit hours of French language at or above the 2000 level • 3 credit hours of French literature at or above the 2000 level • 12 credit hours of French at or above the 2000 level		

	• 3 credit hours of French language at or above the 3000 level • 3 credit hours of French literature at or above the 3000 level • 18 credit hours of French at or above the 3000 level.		
YEAR 1	YEAR 2	YEAR 3	YEAR 4
DOUBLE ADVANCED MAJOR TOTAL: 42 CREDIT HOURS			
FREN 1190 (6) or FREN 1200 (6)	~~• 15 credit hours of French courses numbered at the 2000 level, including at least 3 credit hours in language and 3 credit hours in literature~~ ~~• 15 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~~ • 3 credit hours of French language at or above the 2000 level • 3 credit hours of French literature at or above the 2000 level • 9 credit hours of French at or above the 2000 level • 3 credit hours of French language at or above the 3000 level • 3 credit hours of French literature at or above the 3000 level • 15 credit hours of French at or above the 3000 level		
MINOR (CONCENTRATION)[1] TOTAL: 18 CREDIT HOURS			
FREN 1190 (6) or FREN 1200 (6)	~~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~~	
	• 3 credit hours of French language at or above the 2000 level • 3 credit hours of French literature at or above the 2000 level		

	• 3 credit hours of French language at or above the 3000 level • 3 credit hours of French literature at or above the 3000 level	

YEAR 1	YEAR 2	YEAR 3	YEAR 4
SINGLE HONOURS ~~1, 2, 4~~			
FREN 1190 (6) or FREN 1200 (6)	• ~~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[2]~~	• ~~FREN 3100, FREN 3500, FREN 3870, FREN 3910~~ • ~~FREN 2680 or FREN 2720~~ • ~~3 credit hours of French language or civilization courses numbered at the 2000 or 3000 level~~ • ~~6 credit hours of free options[3]~~ • ~~6 credit hours of ancillary options[2]~~	• ~~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 free options[3]~~ • ~~6 credit hours of ancillary options[2]~~
	• 12 credit hours of French language or civilization courses at or above the 2000 level • 12 credit hours of French literature or civilization courses at or above the 2000 level		• FREN 4426 (3) • 6 credit hours of French at the 4000 level
	• 6 credit hours of French language or civilization courses at or above the 3000 level • 6 credit hours of French literature or civilization courses at or above the 3000 level • 9 credit hours of French at or above the 3000 level • 24 credit hours of ancillary options[1] • 12 credit hours of free options[2]		

<table>
<tr><th>YEAR 1</th><th>YEAR 2</th><th>YEAR 3</th><th>YEAR 4</th></tr>
<tr><td colspan="4">DOUBLE HONOURS ~~[1, 2, 4]~~</td></tr>
<tr><td rowspan="3">FREN 1190 (6)

or

FREN 1200 (6)</td><td>~~• 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~~

~~• 6 credit hours of ancillary options[2]~~

~~• 12 credit hours from second Honours field~~</td><td>~~• 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~~

~~• 6 credit hours of free options[3]~~

~~• 12 credit hours from second Honours field~~</td><td>~~• 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~~

~~• 6 credit hours of free options[3]~~

~~• 12 credit hours from second Honours field~~</td></tr>
<tr><td colspan="2">• 15 credit hours of French language or civilization courses at or above the 2000 level

• 9 credit hours of French literature at or above the 2000 level</td><td>• FREN 4426 (3)

• 3 credit hours of French at the 4000 level</td></tr>
<tr><td colspan="3">• 6 credit hours of French at or above the 3000 level

• 6 credit hours of ancillary options[1]

• 12 credit hours of free options[2]

• 36 credit hours from the second Honours field</td></tr>
<tr><td colspan="4">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] 1. Ancillary options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding French courses).

[3] 2. Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including French courses).

~~[4] Honours courses: all 4000 level courses.~~</td></tr>
</table>

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 1152, FREN 1154 and FREN 1200 is French. In courses FREN 1152, FREN 1154 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.~~

German and Slavic Studies

Program modifications:

Modifications to the following programs are outlined on the next 2 pages:

- **Bachelor of Arts (General Major) in German**
- **Bachelor of Arts (Single Honours) in German**
- **Bachelor of Arts (Double Honours) in German**

German

- Modification of General Major, Single Honours, Double Honours and Program Notes

Added Material

~~Deleted Material~~

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
30 credit hours of German to include[1]: GRMN 1120[12] GRMN 2100[23] GRMN 2120 or GRMN 2130 or GRMN 2140 GRMN 3200 Within the required credit hours in German, 3 credit hours must be from Category B courses and a further 3 credit hours must be from Categories B or C courses			
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours in German	12 credit hours in German		
SINGLE HONOURS[4]			
• 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[1]: GRMN 1120[12] GRMN 2100[23] GRMN 2120 or GRMN 2130 GRMN 2140 GRMN 3200 • In years 2 and 3 students must also complete 24 credit hours of ancillary options[6] and 6 credit hours of free options[57]			• GRMN 4600[35] • GRMN 4570 • 6 additional credit hours in German courses numbered at the 4000 level • 6 additional credit hours in German courses numbered at the 3000 or 4000 level • 12 credit hours in free options[57]
• Within the required credit hours in German, 15 credit hours must be from Category B courses and a further 15 credit hours must be from Categories B or C courses			
DOUBLE HONOURS[4]			
• 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[1]: GRMN 1120[12] GRMN 2100[23]			• GRMN 4600[35] • GRMN 4570 • 3 additional credit hours in German courses numbered at the 4000 level

GRMN 2120 or GRMN 2130 GRMN 2140 GRMN 3200 • In years 2 and 3 students must also complete 6 credit hours of ancillary options[6] and 6 credit hours in free options[5Z] • In years 2 and 3 students must also complete 24 credit hours in second Honours field	• 3 additional credit hours in German courses numbered at the 3000 or 4000 level • 6 credit hours in free options[5Z] • 12 credit hours in other Honours field
• Within the required credit hours in German, 12 credit hours must be from Category B courses and a further 6 credit hours must be from Categories B or C courses	

NOTES:

[1]Students with superior language ability in German, who did not have to complete either GRMN 1120 or GRMN 2100 can replace GRMN 1120 or GRMN 2100 with either 6 credit hours in German courses or with YDSH 1220.

[12] 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".

[23] 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] Honours courses: all 4000 level courses.

[5] With written consent of department head, students may substitute GRMN 4600 with GRMN 4200.

~~[5] Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including German courses).~~

[6] Ancillary options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding German courses in the Single Honours, and excluding German and the second Honours field courses in the Double Honours).

[7] Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including German courses).

Global Political Economy

Program modifications:

Modifications to the following programs are outlined on the next 3 pages:

- **Bachelor of Arts (General Major) in Global Political Economy**
- **Bachelor of Arts (Single Advanced Major) in Global Political Economy**

Global Political Economy

-Modification of Program Notes and List A

Added Material

~~Deleted Material~~

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR[1] TOTAL: 48 CREDIT HOURS			
• 6 credit hours from the following: HIST 1370, HIST 1380, HIST 1500, HIST 2730, HIST 2732, HIST 2734 • ECON 1010 and ECON 1020, or ECON 1210 and ECON 1220 • GPE 1700 (or GEOG 1700)	• ANTH 2000[2] • ECON 2540 • ECON 2550 • GPE 2700 • SOC 2290[3], or both ANTH 3930 and STAT 1000	• ANTH 3320[2] • GPE 3700 • POLS 3250[4] or ANTH 3750 • POLS 3270[4] • SOC 3380 or SOC 3838 or SOC 3840 or SOC 3890[3]	
SINGLE ADVANCED MAJOR TOTAL: 66 CREDIT HOURS			
• 6 credit hours from the following: HIST 1370, HIST 1380, HIST 1500, HIST 2730, HIST 2732, HIST 2734 • ECON 1010 and ECON 1020, or ECON 1210 and ECON 1220 • GPE 1700 (or GEOG 1700) • POLS 2602	• ANTH 2000[2] • ECON 2540 • ECON 2550 • GPE 2700 • SOC 2290[3], or both ANTH 3930 and STAT 1000	• ANTH 3320[2] • GPE 3700 • POLS 3250[4] or ANTH 3750 • POLS 3270[4] • SOC 3380 or SOC 3838 or SOC 3840 or SOC 3890[3]	GPE 4700
	In years 2, 3 and 4 students must take an additional 9 credit hours from List A.		

NOTES:

[1] Students in the General Major are very strongly advised to include in their elective courses a minimum of 6 credit hours from the following list (if not already taken in the core requirements): ANTH 2530, ANTH 3750, ECON 2630, HIST 1370, HIST 1380, HIST 1500, HIST 2670, HIST 2680, HIST 2730, HIST 2732, HIST 2734,POLS 2502, POLS 2602, ~~POLS 2504~~, POLS 3250, POLS 3810, SOC 3380, SOC 3838, SOC 3840, SOC 3890.

[2] Students are advised to take ANTH 1220 or ANTH 1520 as an elective in Year 1 as it is the prerequisite for some upper level Anthropology courses. Otherwise, students will require written consent of Anthropology department head prior to registration.

[3] Students are advised to take SOC 1200 as an elective in Year 1 as it is the prerequisite for upper level Sociology courses. Otherwise, students will require written consent of Sociology and Criminology department head prior to registration.

[4] Students are advised to take ~~POLS 2504~~POLS 2502 as an elective in Year 2 as it is the prerequisite for upper level Political Studies courses. Otherwise, students will require written consent of Political Studies department head prior to registration.

List of Courses for Global Political Economy

See the departmental Calendar section for full course descriptions.

Global Political Economy		
GPE 1700	Social Justice in the 21st Century: Global Political Economy and Environmental Change (same as GEOG 1700)	3
GPE 2700	Perspectives on Global Political Economy	3
GPE 3700	A Survey of Global Political Economy	3
GPE 4700	Studies in Global Political Economy	6
Anthropology		
ANTH 2000	Culture, Society, and Power	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 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
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 2730	Modern World History, 1914-1945: The 30 Years' Crisis (G,M)	3
HIST 2732	Modern World History, 1945-1992: The Age of Three Worlds (G,M)	3
HIST 2734	Modern World History, 1980-Present: New World Order? (G,M)	3
Political Studies		
POLS 2602	Introduction to comparative Politics	3
POLS 3250	International Political Economy	3
POLS 3270	Theories of the Capitalist World Order	3
Sociology and Criminology		
SOC 2290	Introduction to Research Methods	6
SOC 3380	Power, Politics and the Welfare State	3
SOC 3838	Ecology and Society	3
SOC 3840	Community and Social Reconstruction	3
SOC 3890	Power and Inequality in Comparative Perspective	3
List A		
Faculty of Arts		
Anthropology		
ANTH 2530	Anthropology of Political Systems	3
ANTH 3750	Anthropological Perspectives on Globalization and the World-System	3
Economics		
ECON 2630	An Introduction to the World's Economies	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 2670	History of Capitalism (M)	3
HIST 2680	A History of Socialism from the French Revolution to the Present (M)	3
HIST 2730	Modern World History, 1914-1945: The 30 Years' Crisis (G,M)	3
HIST 2732	Modern World History, 1945-1992: The Age of Three Worlds (G,M)	3
HIST 2734	Modern World History, 1980-Present: New World Order? (G,M)	3

HIST 3580	Topics in Recent World History (M) Acceptable for credit only when the topic is "Global Economic Crises in World History, 1929-Present"	3
Political Studies		
POLS 2502	Introduction to World Affairs	3
~~POLS 2504~~	~~Introduction to International Relations~~	~~3~~
POLS 3250	International Political Economy	3
POLS 3810	Introduction to Marxism	3
Sociology and Criminology		
SOC 2240	Sociology of Globalization	3
SOC 3380	Power, Politics and the Welfare State	3
SOC 3838	Ecology and Society	3
SOC 3840	Community and Social Reconstruction	3
SOC 3890	Power and Inequality in Comparative Perspective	3

History

Program modifications

Modifications to the following programs are detailed on the next 5 pages:

- **Bachelor of Arts (General Major) in History**
- **Bachelor of Arts (Single Advanced Major) in History**
- **Bachelor of Arts (Single Honours) in History**
- **Minor (Concentration) in History**
- **Bachelor of Arts (Double Advanced Major) in History** (*new*)
- **Bachelor of Arts (Single Advanced Major) in History, Co-operative Education Option** (*new*)
- **Bachelor of Arts (Single Honours) in History, Co-operative Option** (*new*)

History

- Modify Single Advanced Major and Single Honours to include Cooperative Education option.
- In follow-up to Senate approval of Double Advanced programs in the Faculty of Arts, the department wishes to introduce a Double Advanced Major program in History.

Added Material
~~Deleted Material~~

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 HIST 4400 or HIST 4580 in Year 4 if they intend to do graduate work.

Cooperative Education Options

Students interested in alternating employment terms and academic terms as part of the Single Advanced Major and Honours programs in History may apply to enter the Co-operative Education option upon completion of their second year in the program (min. 48 credit hours completed). The course and grade requirements for entry to this option are the same as those required for entry to the regular four-year Advanced Degree and Honours Degree programs respectively, as indicated in the charts below. Students should refer to the general faculty regulations for Cooperative Options (section 3.4).

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 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, Double Advanced Major, Minor (Concentration), Single Honours or Double Honours in History.

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td></td></tr>
<tr><td colspan="4">GENERAL MAJOR TOTAL: 30 CREDIT HOURS</td></tr>
<tr><td rowspan="2">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~~</td><td>12 credit hours in History courses numbered at <u>or above</u> the 2000 level</td><td>6 credit hours in History courses numbered at <u>or above</u> the 3000 level

6 credit hours in History courses numbered at <u>or above</u> the 2000 ~~or 3000~~ level</td><td></td></tr>
<tr><td colspan="2">Within the 30 credit hours, students must choose 6 credit hours from each of 3 different areas of study.</td><td></td></tr>
<tr><td colspan="4">SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS</td></tr>
<tr><td rowspan="2">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~~</td><td>18 credit hours in History courses numbered at <u>or above</u> the 2000 level</td><td>18 credit hours in History courses numbered at <u>or above</u> the 3000 level~~,~~<u>;</u>

or

12 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 2000 level~~,~~<u>;</u>

or

12 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 4000 level</td><td>6 credit hours in History courses numbered at the 4000 level</td></tr>
<tr><td colspan="3">Within the 48 credit hours, students must choose 6 credit hours from each of 3 different areas of study.</td></tr>
</table>

SINGLE ADVANCED MAJOR (Co-op Option)[3] TOTAL: 51 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 or above the 2000 level	18 credit hours in History courses numbered at or above 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
	ARTS 3010 (1), ARTS 3020 (1), and ARTS 3030 (1) Within the 48 credit hours, students must choose 6 credit hours from each of 3 different areas of study		
DOUBLE ADVANCED MAJOR TOTAL: 42 CREDIT HOURS			
6 credit hours in History courses numbered at the 1000 or 2000 level	15 credit hours in History courses numbered at or above the 2000 level	15 credit hours in History courses numbered at or above the 3000 level or 9 credit hours in History courses numbered at the 3000 level and 6 credit hours in History courses numbered at the 2000 level or 9 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 42 credit hours, students must choose 6 credit hours from each of 3 different areas of study		

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 or above the 2000 level	6 credit hours in History courses numbered at or above the 2000 ~~or 3000~~ level	
SINGLE HONOURS[1, 4]			
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 or above the 2000 ~~or 3000~~ level 6 credit hours in History courses numbered at or above the 3000 level HIST 3990 (6) 24 credit hours in ancillary options[2] 6 credit hours in free options[3]	24 credit hours in History courses numbered at the 4000 level 6 credit hours in free options[3]	
	Honours students must choose from a minimum 6 credit hours from ~~of~~ three different defined areas of historical study.		
SINGLE HONOURS (Co-op Option) [1, 3, 4]			
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 or above the 2000 ~~or 3000~~ level 6 credit hours in History courses numbered at or above the 3000 level HIST 3990 (6) 24 credit hours in ancillary options[2] 3 credit hours in free options[3]	24 credit hours in History courses numbered at the 4000 level 6 credit hours in free options[3]	
	ARTS 3010 (1), ARTS 3020 (1), and ARTS 3030 (1) Honours students must choose from a minimum 6 credit hours from ~~of~~ three different defined areas of historical study.		

DOUBLE HONOURS[1, 4]		
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 or above the 2000 or 3000 level HIST 3990 (6) 6 credit hours in ancillary options[2] 6 credit hours in free options[3] 24 credit hours in other Honours field	12 credit hours in History courses numbered at the 4000 level 6 credit hours in free options[3] 12 credit hours in other Honours field
	Honours students must choose from a minimum 6 credit hours from ~~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 to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding History courses).

[3] Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including History courses). It is recommended students register for additional History courses at the 2000 level or higher. Students electing the co-op stream substitute 3 credit hours of free options with three 1 credit hour work placement courses normally spread over the final two years of their program.

[4] Honours courses: all 4000 level courses.

Judaic Studies

Modifications to the following programs, involving changes to List A Courses Acceptable for Judaic Studies Credit are detailed on the next two pages.

- **Bachelor of Arts (General Major) in Judaic Studies**
- **Bachelor of Arts (Single Advanced Major) in Judaic Studies**
- **Minor (Concentration) in Judaic Studies**

Judaic Studies

-update to List A – Courses Acceptable for Judaic Studies Credit

Added Material

~~Deleted Material~~

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.		Credit Hours
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 (B)	3
GRMN 3262	Representations of the Holocaust in English Translation (C)	3
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
POLS 3342	Arab-Israeli Conflict	3
Religion		
RLGN 1120	Biblical Hebrew	6
RLGN 1390	Readings in Biblical Hebrew 1	3
RLGN 1400	Readings in Biblical Hebrew 2	3
RLGN 2140	Introduction to Judaism	3
RLGN 2160	Hebrew Bible (Tanakh / "Old Testament")	3
RLGN 2162	**Great Jewish Books**	**3**
~~**RLGN 2760**~~	~~**Rabbinic Judaism**~~	~~**3**~~
RLGN 2770	Contemporary Judaism	3
RLGN 3280	Hasidism	3
RLGN 3400	Zionism: Religious Perspectives	3

RLGN 3800	Selected Old Testament Literature and Themes	6
RLGN 3810	The Talmud	3
RLGN 3824	Kabbalah	3
RLGN 3830	The Bible as Story	3
RLGN 4300	Advanced Topics in Judaism	3

Linguistics

Deletion:

LING 1340 Semantics Cr.Hrs. 3 -3.0

Introductions:

LING 2500 Semantics and Pragmatics Cr.Hrs. 3 +3.0
This course introduces students to basic theories of semantics and pragmatics, with application to the analysis of linguistic data. Topics covered include sense vs. reference, lexical relations, presupposition and topicality, participant roles, information structure, speech acts, metaphor, and metonymy. Prerequisite: a grade of "C" or better in LING 1200.

LING 3350 Language and Gesture Cr.Hrs. 3 +3.0
While it was once thought that gestures were more or less peripheral to language and were used in largely non-principled ways, current studies continue to build evidence that gesture is central to meaning construction. This course looks at current thought and theory regarding the role of gesture from an evolutionary perspective, as semantic and grammatical units, as co-speech elements, and in signed language. Students may not hold credit for both LING 3350 and LING 3840 when titled “Language and Gesture.” Prerequisite: [a grade of "C" or better in 9 credit hours of Linguistics courses] or written consent of instructor.

LING 3510 Cognitive Semantics Cr.Hrs. 3 +3.0
This course examines meaning from a cognitive linguistics viewpoint, including embodied meaning and embodied language, the 'viewer' and the thing being viewed, construal and image schemas, mental network and mental spaces theories, subjective and intersubjective meaning, metaphor and metonymy theory, and the role of language usage in building semantic knowledge. Prerequisite: [C+ or better in LING 2500] or written consent of instructor.

NET CHANGE IN CREDIT HOURS: +6.0

Medieval and Early Modern Studies

Program modifications:

Modifications to the following programs are outlined on the next page:

- **Bachelor of Arts (General Major) in Medieval and Early Modern Studies**
- **Bachelor of Arts (Single Advanced Major) in Medieval and Early Modern Studies**
- **Minor (Concentration) in Medieval and Early Modern Studies**

Medieval and Early Modern Studies

-Modification of Group 1: History, Philosophy and Religions course list used in the General Major, Single Advanced Major and Minor (Concentration)

-Modification of the Group 1: History, Philosophy and Religions title

Added Material

~~Deleted Material~~

8.21.2 Medieval and Early Modern Studies

Group 1: History~~, Philosophy~~ and Religions

See the departmental Calendar section for full course descriptions. With written consent of the program coordinator courses not on this list may be used to satisfy the Group 1 requirement.

Classics		
CLAS 1280	Introduction to Ancient Roman Culture	3
CLAS 2170	Roman History: The Roman Empire, 30 BC-AD 337	3
CLAS 3270	The World of Late Antiquity: History and Archaeology	3
History		
HIST 2180	The History of Catholicism to 1540 (G)	3
HIST 2930	The History of the British Isles, 412-1485 (D)	6
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 3480	The Margins of the Middle Ages (D)	3
HIST 3550	Popular Culture, Crime and Punishment in England, 1550-1850 (E)	3
HIST 3880	Europe in Transition: 1348-1648 (E)	6
HIST 4040	The Later Middle Ages (D)	6
HIST 4050	England in the Long Eighteenth Century (E)	6
~~Philosophy~~		
~~PHIL 2780~~	~~Thomas Aquinas~~	~~3~~
Religion		
RLGN 2114	Monks. Mystics and Manuscripts in Medieval Christianity	3
~~RLGN 2730~~	~~Jews and Judaism in Antiquity~~	~~3~~
~~RLGN 2760~~	~~Rabbinic Judaism~~	~~3~~
~~RLGN 2780~~	~~Classical Islam~~	~~3~~
RLGN 3194	Islamic Philosophy	3
RLGN 3230	Gender, the Body, and Sexuality in Early Christianity	3
RLGN 3824	Kabbalah	3
RLGN 4282	Advanced Studies in Medieval Christianity	3

Native Studies

Program modification:

Modifications to the following programs are outlined on the next page:

- **Bachelor of Arts (General Major) in Native Studies**
- **Minor (Concentration) in Indigenous Languages**

Native Studies

-Modification of "Other" within preamble to clarify number of hours of Indigenous Language courses must be taken for a General Major/Indigenous Language Minor

Added Material

~~Deleted Material~~

8.22.1 Program Information

Courses in this department examine the history, art, literature, governance, languages, and the philosophical and religious traditions of Canada's original inhabitants. Other courses explore Canadian legal, political, and health care systems in relation to Indigenous people. Indigenous and non-Indigenous students may specialize in either Native studies or Indigenous languages, Anishinaabemowin (Ojibwe) and Cree.

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.

Anishinaabemowin (Ojibwe) and Cree Language Focus Areas (General Major Degree only)

Students may elect to take courses that, in combination, make up a focus area in either the Anishinaabemowin (Ojibwe) or Cree languages. The required courses for these focus areas will be completed as part of the General Major Degree requirements.

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) Indigenous 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, or 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 Indigenous Languages. ~~but~~Students may not complete both a Major and Minor in Native Studies. Students Majoring in Native Studies (no language concentration) who choose to complete an Indigenous Language Minor will be required to complete 18 credit hours of Indigenous Language courses in addition to the six credit hours of Indigenous Language required in the General Major program.

Likewise, students may not complete both the General Major Degree with an Indigenous Language Focus [Anishinaabemowin (Ojibwe) / Cree] and an Indigenous Language Minor.

Before registering for approved cross-listed courses, students should consult the *Calendar* or the departments regarding prerequisites for specific courses.

Philosophy

Deletions:

PHIL 1320 Introductory Logic Cr.Hrs. 6 -6.0
PHIL 2780 Thomas Aquinas Cr.Hrs. 3 -3.0
PHIL 3770 Topics in Moral Theory 2 Cr.Hrs. 3 -3.0
PHIL 4600 Science and Philosophy Since Newton Cr.Hrs. 3 -3.0
PHIL 4640 Symbolic Logic 2 Cr.Hrs. 3 -3.0

Introductions:

PHIL 1300 Introduction to Logic Cr.Hrs. 3 +3.0
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. Students may not hold credit for PHIL 1300 and the former PHIL 1320 or PHIL 1321.

PHIL 1420 Philosophy as a Way of Life Cr.Hrs. 3 +3.0
This course explores various texts and traditions that offer visions of the good life and focuses on connecting philosophical arguments with contemporary issues and day-to-day decision making. The goal is to think deeply and rigorously about foundational questions like how should we live, does life have a meaning, what justifies our beliefs, what obligations do we have to each other, and how to make rational decisions.

Modifications:

PHIL 2140 Theory of Knowledge Cr.Hrs. 3 0.0
This course challenges and investigates our view of knowledge and rationality. Problems dealt with normally include: the nature of knowledge, sense experience, truth and necessary truth, the analytic-synthetic distinction, memory, induction, etc. Students may not hold credit for both PHIL 2140 and the former PHIL 2760.

PHIL 2150 Mind and Body Cr.Hrs. 3 0.0
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.

PHIL 2170 Special Topics Cr.Hrs. 3 0.0
Topics and content may vary. Students can earn multiple credits for this course only when the topic subtitle is different.

PHIL 2190 Philosophy and Sexuality Cr.Hrs. 3 0.0
This course examines various moral and legal issues related to sexuality. Topics may include: casual sex, monogamy, love, and commitment; the definition of marriage; the meaning of gender; the nature of consent; the moral and legal status of prostitution and pornography; the scope of sexual privacy and other moral challenges presented by new technology. Students may not hold credit for both PHIL 2190 and PHIL 2170 when titled "Sexuality."

PHIL 2200 Intermediate Logic Cr.Hrs. 3 0.0
A systematic investigation of 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 2200 and the former PHIL 2430. Prerequisite: a grade of "C" or better in PHIL 1300 or the former PHIL 1320 or PHIL 1321 or written consent of department head.

PHIL 2290 Ethics and Society Cr.Hrs. 6 0.0
An examination of some contemporary ethical theories and their application to a number of practical issues. Issues to be discussed may include: reverse discrimination, freedom of expression, paternalism, and theories of punishment. Students may not hold credit for PHIL 2290 and any of the former PHIL 2531 or PHIL 2740 or PHIL 2741 or PHIL 2750 or PHIL 2751. Prerequisite: successful completion of 30 hours of university credit.

PHIL 2612 A Philosophical History of Science Cr.Hrs. 3 0.0
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.

PHIL 2614 Philosophy of Science Cr.Hrs. 3 0.0
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.

PHIL 2630 Continental Rationalism Cr.Hrs. 3 0.0
A study of the great Continental philosophers, Descartes, Spinoza, and Leibniz, who viewed reason, rather than experience, as the key to knowledge. Students may not hold credit for both PHIL 2630 and PHIL 2631.

PHIL 2640 British Empiricism Cr.Hrs. 3 0.0
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 and PHIL 2641.

PHIL 2650 Plato Cr.Hrs. 3 0.0
An examination of Plato's views on knowledge, reality, human nature, politics, and morals through a study of his most significant dialogues. Students may not hold credit for both PHIL 2650 and the former PHIL 2651.

PHIL 2660 Aristotle Cr.Hrs. 3 0.0
A study of Aristotle's most important views on reality, knowledge, human nature, morals, and politics. Students may not hold credit for both PHIL 2660 and PHIL 2661.

PHIL 2710 Twentieth-Century European Philosophy: Existentialism Cr.Hrs. 3 0.0
This course will be devoted to a study of existentialist themes as they appear in the philosophical writings of some of the following: Kierkegaard, Nietzsche, Camus, Sartre, de Beauvoir, Buber, Hadot, Foucault, R.D. Laing, and others. Students may not hold credit for PHIL 2710 and any of: the former PHIL 2820 or the former PHIL 2821.

PHIL 2740 Ethics and Biomedicine Cr.Hrs. 3 0.0
An examination of some contemporary ethical theories and their application to a few important ethical issues in contemporary medicine and biology. Examples of topics to be covered include: euthanasia and medically assisted suicide, human reproductive cloning, and human enhancement. Students may not hold credit for PHIL 2740 and any of: PHIL 2741 or PHIL 2290 or the former PHIL 2531.

PHIL 2750 Ethics and the Environment Cr.Hrs. 3 0.0
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 and any of: PHIL 2751 or PHIL 2290 or the former PHIL 2531.

PHIL 2790 Moral Philosophy Cr.Hrs. 6 0.0
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 Sidgwick, Kant, Rawls, Scanlon, and Ross will be discussed.

PHIL 2830 Business Ethics Cr.Hrs. 3 0.0
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 and PHIL 2831.

PHIL 3580 Kant Cr.Hrs. 3 0.0
A study of the 18th-century German thinker, Immanuel Kant, focusing on the revolutionary theories about reality and human knowledge contained in his major metaphysical work, The Critique of Pure Reason. Prerequisite: [a grade of "C" or better in one of: PHIL 2630 or PHIL 2631 or PHIL 2640 or PHIL 2641] or written consent of department head.

PHIL 3650 Contemporary Metaphysics Cr.Hrs. 3 0.0
A course in contemporary metaphysics. Possible topics include the metaphysics of causation, time and persistence, laws and modality, essence, and fundamentality. Prerequisite: [a grade of 'C' or better in PHIL 2580] or written permission of department head. The course content may vary. Students can earn multiple credits for this course only when the topic subtitle is different.

PHIL 3760 Topics in Moral Theory Cr.Hrs. 3 0.0
A critical examination of issues in moral theory, such as consequentialism and deontology. Prerequisite: [a grade of "C" or better in PHIL 2790] or written consent of department head. The course content may vary. Students can earn multiple credits for this course only when the topic subtitle is different

PHIL 4520 Historical Topics Cr.Hrs. 3 0.0
Selected topics in the history of philosophy. Prerequisite: written consent of department head. The course content may vary. Students can earn multiple credits for this course only when the topic subtitle is different.

PHIL 4630 Symbolic Logic Cr.Hrs. 3 0.0
Selected topics in mathematical logic, including propositional and quantificational logic, number theory, and the major metatheoretical results. Prerequisite: written consent of department head. The course content may vary. Students can earn multiple credits for this course only when the topic subtitle is different.

NET CHANGE IN CREDIT HOURS: -12.0

Political Studies

Modifications:

A number of POLS courses will be removed from the List of Written English Courses. See Observation 2 above.

Program modifications:

Modifications to the following programs are outlined on the next 2 pages:

- **Bachelor of Arts (Single Advanced Major) in Political Studies, Co-operative Education Option** (*new*)
- **Bachelor of Arts (Single Honours) in Political Studies, Co-operative Education Option** (*new*)

Political Studies

- Modify Single Advanced Major and Single Honours to include Cooperative Education option.

Added Material

~~Deleted Material~~

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 in Political Studies may be taken in combination with the program of Central and East European Studies. See Section 8.5.

Cooperative Education Options

Students interested in alternating employment terms and academic terms as part of the Single Advanced Major and Single Honours programs in Political Studies may apply to enter the Co-operative Education option upon completion of their second year in the program (min. 48 credit hours complete). The course and grade requirements for entry to this option are the same as those required for entry to the Single Advanced Major and Single Honours programs respectively, as indicated above. Students should refer to the general faculty regulations for Cooperative Options.

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

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">SINGLE ADVANCED MAJOR TOTAL: 48 CREDIT HOURS <u>(incl. Co-operative Education Option if selected)</u></td></tr>
<tr><td rowspan="2">6 credit hours in Political Studies courses numbered at or above the 1000 level</td><td colspan="3">• 30 credit hours in Political Studies courses numbered at or above the 2000 level

• 12 credit hours in Political Studies courses numbered at or above the 3000 level</td></tr>
<tr><td colspan="3"><u>If Co-operative Education Option is selected:</u>

<u>• 30 credit hours in Political Studies courses numbered at or above the 2000 level</u>

<u>• 9 credit hours in Political Studies courses numbered at or above the 3000 level</u>

<u>• ARTS 3010 (1), ARTS 3020 (1), ARTS 3030 (1)</u></td></tr>
<tr><td colspan="4">SINGLE HONOURS [1] <u>(incl. Co-operative Education Option if selected)</u></td></tr>
<tr><td rowspan="3">6 credit hours in Political Studies courses numbered at or above the 1000 level</td><td rowspan="3">• 21 credit hours in Political Studies courses numbered at the 2000 level

• 9 credit hours in ancillary options[3]</td><td>• POLS 3950

• 21 credit hours in Political Studies courses numbered at the 3000 level[2]

<s>• 6 credit hours in ancillary options[3]</s></td><td>• 3 credit hours in Political Studies courses numbered at the 3000 level[2]

• 18 credit hours in Political Studies courses numbered at the 4000 level

<s>•9 credit hours in ancillary options[3]</s></td></tr>
<tr><td colspan="2">• <u>15 credit hours in ancillary options[3]</u></td></tr>
<tr><td colspan="2"><u>If Co-operative Education Option is selected:</u>

<u>• ARTS 3010 (1), ARTS 3020 (1), ARTS 3030 (1)</u>

<u>• 12 credit hours in ancillary options[3]</u></td></tr>
</table>

NOTES:

1 Within the courses required above, a student must include at least six credit hours in political theory (POLS 2302, POLS 3310, POLS 3320, POLS 3350, POLS 3360, POLS 3370, POLS 3380, POLS 4310, POLS 4320). Students who enrolled in a program in Political Studies prior to Fall 2019 may use the aforementioned courses to satisfy the requirement for six credit hours in political theory.

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 to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding Political Studies courses).

4 Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including Political Studies courses).

Psychology

Modification:

PSYC 3570 Psychology of Women Cr.Hrs 3 0.0
Examines the unique experiences of women from a psychological perspective. Psychological theory and empirical research will inform course content. Students may not hold credit for both PSYC 3570 and the former PSYC 2390. Prerequisite: [a grade of "C" or better in PSYC 2380 or the former PSYC 2400] or written consent of department head.

NET CHANGE IN CREDIT HOURS: 0.0

Religion

Deletions:

RLGN 2050 Modern and Contemporary Christianity Cr.Hrs. 3 -3.0
RLGN 2730 Jews and Judaism in Antiquity Cr.Hrs. 3 -3.0
RLGN 2760 Rabbinic Judaism Cr.Hrs. 3 -3.0
RLGN 2780 Classical Islam Cr.Hrs. 3 -3.0
RLGN 3100 Rituals of Death and Mourning Cr.Hrs. 3 -3.0
RLGN 3110 Issues in the Study of Evil and Religion Cr.Hrs. 3 -3.0

Introductions:

RLGN 2032 Introduction to the Study of Religion Cr.Hrs. 3 +3.0
This course is an introduction to the academic study of religion, its history and theoretical approaches. Topics addressed may include texts, myths, rituals, symbols, and institutions. Several methodological approaches associated with religious studies, comparative religion, and the history of religion will also be discussed.

RLGN 2052 Conservative Christianity in the United States Cr.Hrs. 3 +3.0
An introductory study of 20th and 21st century trends in conservative Christianity in the United States with an emphasis on the gospel of prosperity, the moral majority, and dominion theology. Themes include attitudes and practices concerning health, politics, capitalism, race, and sex/gender. Students may not hold credit for both RLGN 2052 and the former RLGN 2050.

RLGN 2116 Cognitive Science and Religion Cr.Hrs. 3 +3.0
Survey of recent developments in the cognitive science of religion (including evolutionary and biocultural approaches). Topics include religion and cognition, supernatural concepts, the evolution of religion, religious ritual, mental time travel, and cognition and culture. Responses and rejoinders to the cognitive science of religion will also be examined.

RLGN 2162 Great Jewish Books Cr.Hrs. 3 +3.0
From bestselling authors of today back to the books of the Bible, Jews have been a people of writers and readers. This course is a survey of the kinds of literature that have shaped Jewish culture, highlighting the conversations of Jews with each other across the centuries. Students may not hold credit for RLGN 2162 and the former RLGN 2760.

RLGN 2778 Introduction to Islam Cr.Hrs. 3 0.0
This course explores the question, "What is Islam?" It situates the study of Islam in the broader academic discipline of Religious Studies and provides an introduction to Islam's central beliefs, institutions, and practices. Topics to be examined include: the life of the Prophet Muhammad, the Qur'an, law, Shi'ism, gender, mysticism, art, and science in medieval, modern, and contemporary Muslim societies.

RLGN 3102 Myth and Mythmaking: Narrative, Ideology, Scholarship Cr.Hrs. 3 0.0
An intensive study of popular, scholarly, and critical conceptions of myth and myth making. Three approaches to myth will be examined: myth as universal estate of humanity, myth as object of scientific discourse, and myth as ideology in narrative form. Throughout, students will be encouraged to think about scholars studying myth as mythmakers themselves, thus opening the field to a more critical appraisal of the entwinement of narrative, ideology, and scholarship. Students may not hold credit for RLGN 3102 and the former RLGN 3110.

Modifications:

RLGN 2160 Introduction to Hebrew Scriptures Cr.Hrs. 3 0.0
An introduction to the ancient books known to the Jews as the Bible or Tanakh (Torah, Nevi'im and Ketuvim) and to Christians as the Old Testament. The course will explore traditional and modern ways of studying these texts, including midrashic and literary approaches. A previous introductory course in Judaism is recommended but not required. Students may not hold credit for both RLGN 2160 and RLGN 2161.

RLGN 2770 Contemporary Judaism Cr.Hrs. 3 0.0
How does an ancient tradition work in today's world? Where is the energy of creativity, the energy of conflict, in contemporary Judaism? What approaches are scholars using as they try to understand current issues in Jewish life and thought? This course will respond to these questions in light of recent and current developments in various streams of Judaism, especially in the United States and Israel, centres of large Jewish populations. A previous introductory course in Judaism is recommended but not required.

RLGN 4080 Critical Theory and Religion Cr.Hrs. 3 0.0
A selective study of the vast and varied field of theoretical and critical approaches that have come to play a central role in the study of religion since World War II, this course focuses on one or more of the following, its context and precursors: African American theory and criticism, colonialism and post-colonialism, cultural studies, deconstruction, feminist criticisms, Frankfurt School, hermeneutics, semiotics, psychoanalytic theory and criticism, structuralism and post-structuralism. Prerequisite: written consent of department head.

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are outlined on the next 2 pages:

- **Bachelor of Arts (General Major) in Religion**
- **Bachelor of Arts (Single Advanced Major) in Religion**
- **Bachelor of Arts (Single Honours) in Religion**
- **Bachelor of Arts (Double Honours) in Religion**

Religion

- Modification to General Major, Single Advanced Major, Minor (Concentration), Single Honours, Double Honours

Added Material

~~Deleted Material~~

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 or above ~~(with written consent of the department head, students are permitted to substitute Honours courses in the Major)~~ • 18 credit hours in Religion courses		
• Within the courses required above, only 12 credit hours are permitted to be numbered at the 1000 level • Within the courses required above, students must complete courses from at least two religious traditions: Buddhism, Christianity, Hinduism, Islam, Judaism[1]			
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		
• Within the courses required above, only 12 credit hours are permitted to be numbered at the 1000 level • Within the courses required above, students must complete courses from at least three religious traditions: Buddhism, Christianity, Hinduism, Islam, Judaism[1]			
MINOR (CONCENTRATION) TOTAL: 18 CREDIT HOURS			
6 credit hours in Religion courses	12 credit hours in Religion courses		
Within the courses required above, only 12 credit hours are permitted to be numbered at the 1000 level			
SINGLE HONOURS[4]			
6 credit hours in Religion courses	• 18 credit hours in Religion courses numbered at the 2000 level or above • 12 credit hours in ancillary options[2]	• ~~12~~ 15 credit hours in Religion courses numbered at the 3000 level or above • ~~18~~ 12 credit hours in Religion courses numbered at the 4000 level • RLGN 4310, RLGN 4320 • ~~12~~ 15 credit hours in free options[3] • 12 credit hours in ancillary options[2]	
Within the courses required above, students must complete courses from at least three religious traditions: Buddhism, Christianity, Hinduism, Islam, Judaism[1]			

DOUBLE HONOURS[4]		
6 credit hours in Religion courses	• 12 credit hours in Religion courses numbered at the 2000 level • 6 credit hours in ancillary options[2] • 12 credit hours in other Honours field	• ~~6~~ 9 credit hours in Religion courses numbered at the 3000 level or above • ~~12~~ 9 credit hours in Religion courses numbered at the 4000 level • RLGN 4310, RLGN 4320 • 12 credit hours in free options[3] • 24 credit hours in other Honours field
Within the courses required above, students must complete courses from at least three religious traditions: Buddhism, Christianity, Hinduism, Islam, Judaism[1]		

NOTES:

[1] Religious traditions are categorized as follows:

Buddhism includes:
RLGN 2020, RLGN 3150, RLGN 3152, RLGN 3162, RLGN 3260, RLGN 3266, RLGN 4100.

Christianity includes:
RLGN 1350, RLGN 2036, RLGN 2040, ~~RLGN 2050~~, RLGN 2052, RLGN 2114, RLGN 2170, RLGN 2520, RLGN 2530, RLGN 2840, RLGN 2850, RLGN 3230, RLGN 3780, RLGN 3870, RLGN 4280, RLGN 4282.

Hinduism includes:
RLGN 2010, RLGN 3210, RLGN 4060, RLGN 4190.

Islam includes:
RLGN 2100, RLGN 2770, ~~RLGN 2780~~, RLGN 2790, RLGN 3190, RLGN 3194, RLGN 4180.

Judaism includes:
RLGN 1120, RLGN 1390, RLGN 1400, RLGN 2140, RLGN 2160, RLGN 2162, ~~RLGN 2730, RLGN 2760~~, RLGN 2770, RLGN 3280, RLGN 3800, RLGN 3810, RLGN 3824.

[2] Ancillary options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (excluding Religion courses).

[3] Free options are to be chosen from courses that are acceptable for credit in the Faculty of Arts (including Religion courses).

[4] Honours courses: all 4000 level courses.

Sociology and Criminology

Deletion:

SOC 2470 Courtship and Marriage Cr.Hrs. 3 -3.0

Introduction:

SOC 3762 Law, Justice and Indigenous Peoples Cr.Hrs. 3 +3.0
A critical examination of the complex and varied role that law has played, and continues to play, in regard to Indigenous peoples in the Canadian settler state context. The course straddles the divisions between criminal law, constitutional law, government legislation, transitional justice, as well as international legal norms. Students may not hold credit for both SOC 3762 and SOC 3740 when titled “Law, Justice and Indigenous Peoples.” Prerequisite: [a grade of "C" or better in SOC 1200 or the former SOC 1201] or [a grade of "C" of better in both SOC 1211 and SOC 1221].

NET CHANGE IN CREDIT HOURS: 0.0

Women’s and Gender Studies

Program modification:

Modifications to the following programs are outlined on the next 3 pages:

- **Bachelor of Arts (General Major) in Women’s and Gender Studies**
- **Bachelor of Arts (Single Advanced Major) in Women’s and Gender Studies**
- **Bachelor of Arts (Single Honours) in Women’s and Gender Studies**
- **Bachelor of Arts (Double Honours) in Women’s and Gender Studies**
- **Minor (Concentration) in Women’s and Gender Studies**

Women's and Gender Studies

- Modification of General Major, Single Advanced Major, Minor (Concentration), Single Honours, Double Honours

Added Material

~~Deleted Material~~

8.29.2 Women's and Gender Studies

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

Classics

CLAS 2210	Women in Ancient Greece and Rome	3

Economics

ECON 2362	Economics of Gender	3

French, Spanish and Italian

FREN 2680	Littérature féminine française (B)	3
FREN 3860	Études sur Beauvoir (B)	3

German

GRMN 1310	Love in German Culture in English Translation (C)	3
GRMN 3280	Sex, Gender and Cultural Politics in the German-Speaking World (B)	3
GRMN 3282	Sex, Gender and Cultural Politics in the German-Speaking World in English Translation (C)	3

History

HIST 2400	History of Human Rights and Social Justice in the Modern World (G,M)	3
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 3811~~	~~Famille, amour et marriage dans la société occidentale, 1500-1800 (E)~~	~~6~~
HIST 4060	Gender History in Canada (C)	6

Native Studies

NATV 2430	Indigenous Women's Stories	3
NATV 3360	Indigenous Women in Canada	3
NATV 3380	Gender and Indigenous Societies	3

Philosophy

PHIL 3220	Feminist Philosophy	3

Political Studies

POLS 3100	Gender and Politics in Canada	3

Psychology

PSYC 2380	Psychology of Gender	3
PSYC 3570	Psychology of Women	3

Religion

RLGN 2680	Women and Religion 1	3
RLGN 2690	Women and Religion 2	3

Slavic Studies

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 3350	Feminism and Sociological Theory	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 Acceptable for credit only when the topic is “Women Artists.”	3

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

- For course descriptions, see departmental listings.
- NOTE: List A courses are identified in Aurora Student with the course attribute of “Women’s Studies Requirement.”

College of Dentistry

Program modification:

Modifications to the **Diploma in Dental Hygiene** are outlined on the next 2 pages.

School of Dental Hygiene Undergraduate Calendar

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

NO CHANGE REQUIRED

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 1400 or ENGL 1340~~

3 credit hours of ENGL at the 1000 level or higher

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. An interview, biographical sketch and letters of reference are considered within the Special Applicant Category. Preference will be given to Manitobans in the Special Applicant Category (includes the Canadian Indigenous/Aboriginal Peoples applicant category) and on the alternate list.

2.2 Bachelor of Science in Dental Hygiene, Degree Completion Program

NO CHANGE REQUIRED

4.1 Diploma in Dental Hygiene

For students admitted as of **Fall,** ~~2012~~ **2020** and forward. Students admitted prior to **2020** ~~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.

First Year

(Direct Entry)

ENGL	**At the 1000 level or higher**	**3**
~~ENGL 1400 *~~	~~Thematic Approaches to the Study of Literature~~	~~3~~
~~* or ENGL 1340~~	~~Introduction to Literary Analysis~~	~~3~~
PSYC 1200	Introduction to Psychology	6
BIOL 1410 and	Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human Body	3
STAT 1000	Basic Statistical Analysis 1	3
6 credit hours of electives	Electives (Sociology is strongly recommended)	6
CHEM 1300 and CHEM 1310	University 1 Chemistry: Structure and Modeling in Chemistry	3
	University 1 Chemistry: An Introduction to Physical Chemistry	6
Or	Or	
CHEM 1320	University 1 Chemistry: An Introduction to Organic Chemistry	3
	Total credit hours	30

Faculty of Education

Curriculum, Teaching and Learning

Introduction:

EDUB 5014 Pedagogy and Film Cr.Hrs. 3 +3.0
A study of films and their relationships to contemporary educational practice. The approach will be a critical one exploring and analyzing films and their relationships to teaching, teachers, students and curricula. The emphasis is on understanding film as a powerfully educative media in its own right as well as its complex relationships with traditional school knowledge. May not be held with EDUB 5220 when titled “Pedagogy and Film: Studying the Moving Image” or EDUB 5230 when titled “Portrayal of Teaching in the Popular Media.”

NET CHANGE IN CREDIT HOURS: +3.0

Educational Administration, Foundations and Psychology

Deletions:

EDUA 5600 Introduction to Inclusive Special Education Cr.Hrs. 6 -6.0
EDUA 5610 Field Experience in Inclusive Special Education Cr.Hrs. 6 -6.0
EDUA 5630 Assessment and Instruction in Inclusive Special Education Cr.Hrs. 6 -6.0
EDUA 5640 Inclusive Special Education: Early and Middle Years Cr.Hrs. 3 -3.0
EDUA 5650 Inclusive Special Education: High School and Transition to Adult Life Cr.Hrs. 3 -3.0
EDUA 5660 Organization and Delivery of Resource Programs and Support Services Cr.Hrs. 3 -3.0
EDUA 5670 Strategies for Organizing Inclusive Classrooms and Schools Cr.Hrs. 3 -3.0

Introductions:

EDUA 5602 Introduction to Inclusive Education Cr.Hrs. 6 +6.0
A survey course for educators interested in inclusive education - legislative, pedagogical, attitudinal and systemic barriers to inclusion and exemplary inclusive provisions are covered. Topics include SRV, the organization and implementation of inclusive classroom, school-wide, and community supports. May not be held with the former EDUA 5600 or EDUA 5601.

EDUA 5612 Field Experience in Inclusive Education Cr.Hrs. 6 +6.0
A field-based situation for full and part-time students to apply inclusive 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. May not be held with the former EDUA 5610. Pre- or corequisites: [EDUA 5602 (or the former EDUA 5600) or EDUA 5601 or equivalent] and [EDUA 5632 (or the former 5630) or EDUA 5631 or equivalent] and [EDUA 5662 (or the former EDUA 5660) or EDUA 5661 or equivalent]. Course evaluated on a pass/fail basis.

EDUA 5632 Assessment and Instruction in Inclusive Education Cr.Hrs. 6 +6.0
An examination of curriculum-based and classroom-based assessment to guide the instruction of students experiencing learning or behavioral difficulties in inclusive classrooms. May not be

held with the former EDUA 5630 or EDUA 5631. Pre- or corequisite: EDUA 5602 (or the former 5600) or EDUA 5601 or equivalent.

EDUA 5642 Inclusive Education: Transition from School to Adult Life Cr.Hrs. 6 +6.0
An examination of the practices for supporting students from preschool until they transition into adulthood, including the nature of support services and an analysis of factors influencing program development and effectiveness. May not be held with the former EDUA 5640 or the former EDUA 5650.

EDUA 5662 Delivering Supports for Inclusive Education Cr.Hrs. 3 +3.0
A critical study of the nature of learning support and an analysis of factors influencing program development and effectiveness. May not be held with the former EDUA 5660 or EDUA 5661. Pre- or corequisite: EDUA 5602 (or the former EDUA 5600).

EDUA 5014 Educational Leadership Cr.Hrs. 3 +3.0
This course focuses on the concept of educational leadership and its relevance to the organization of schooling (primarily public schooling) in Manitoba and the lives of those people (students, teachers, parents, administrators etc.) most closely associated with school. May not be held with EDUA 5080 when titled "Educational Leadership."

NET CHANGE IN CREDIT HOURS: 0.0

Faculty of Engineering

Biosystems Engineering

Modification:

BIOE 4650 Textiles in Healthcare and Medical Applications Cr.Hrs. 4 0.0
This course provides students with an introduction to medical textiles and healthcare products used in current practices, as well as fundamentals for designing textile products and devices that improve the health and quality of life of human beings. The course includes both basic topics related to healthcare and medical textiles (i.e., materials and structures, nanofibers for medical uses, comfort and health problems with textiles, biocompatibility and biostability issues) and applications of textile products for healthcare and medical end uses (i.e., protective and hygiene textiles, external devices, tissue engineering and intelligent/smart textiles). Prerequisite: BIOE 2590. Pre- or corequisite: BIOE 3320.

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are outlined on the next 2 pages:

- **Bachelor of Science in Engineering (Biosystems), Biomedical Specialization**
- **Bachelor of Science in Engineering (Biosystems), Bioresource Specialization**

Biomedical Specialization

The biomedical specialization provides engineers with knowledge of human anatomy and physiology to enhance the understanding of the role to be played by engineers in specific areas within biomedical engineering such as rehabilitation engineering, clinical engineering, medical imaging, and orthopaedics.

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 (choose both courses)
BIOL 1410 Human Anatomy
BIOL 1412 Physiology of the Human Body

Group B: Biosystems Engineering Design Electives (choose 3 from the list)
BIOE 4414 Imaging and Spectroscopy for Biosystems
BIOE 4610 Design of Assistive Technology Devices
BIOE 4640 Bioengineering Applications in Medicine
BIOE 4650 Textiles in Healthcare and Medical Applications

Group C: Complementary Studies Electives (choose 2 from the list)
ENG 1900 Occupational Health and Safety Awareness
ENVR 3400 Introduction to Environment and Health
HIST 4660 History of Health and Disease (6) (counts as 2)
HIST 4680 Social History of Health and Disease in Modern Canada (6) (counts as 2)
HNSC 1210 Nutrition for Health and Changing Lifestyles
NATV 3240 Indigenous Medicine and Health
-KPER 1200 Physical Activity, Health and Wellness
PHIL 2740 Ethics and Biomedicine (or PHIL 2741 Éthique et biomédicine)

Group D: Free Electives (choose 2 from the list)
(Note: additional courses from Group C can be used to fulfill Group D electives.)
~~BIOE 4650 Textiles in Healthcare and Medical Applications~~
BIOL 2410 Human Physiology 1
BIOL 2420 Human Physiology 2
BIOL 4470 Sensory-Motor Physiology
CHEM 2210 Introductory Organic Chemistry 1
CHEM 2360 Biochemistry 1
CHEM 2370 Biochemistry 2
ECE 4610 Biomedical Instrumentation and Signal Processing
KPER 2330Biomechanics
KIN 4330 Advanced Biomechanics
MECH 4322 Design of Biomechanical Devices
MECH 4360 Biomaterials for Medical Applications
PHYS 3220 Medical Physics and Physiological Measurement
PHYS 4400 Medical Imaging

Note: Special permission may be granted by the Head of Department for courses not appearing on the list for Group C or Group D.

Bioresource Specialization

Challenges remain in the production of food and renewable resources for a world of ever-increasing population. The bioresource specialization provides the educational background to enable engineers to devise strategies and technologies for producing food, fibre, bio-based products, and renewable energy efficiently and sustainably.

Students who obtain a grade of "C" or better in the courses listed below will receive a notation of "Bioresource Specialization" on their transcript at the time of graduation.

Group A: Science Electives (choose both courses)
BIOE 2600 Plant and Animal Physiology for Engineers
SOIL 4060 Physical Properties of Soil

Group B: Biosystems Engineering Design Electives (choose 3 from the list)
BIOE 4390 Unit Operations 1
BIOE 4412 Design of Light-Frame Building Systems
BIOE 4420 Crop Preservation
BIOE 4440 Bioprocessing for Biorefining
BIOE 4590 Management of By-Products from Animal Production
BIOE 4600 Design of Water Management Systems

Group C: Complementary Studies Electives (choose 2 from the list)
ABIZ 1000 Introduction to Agribusiness Management
ABIZ 1010 Economics of World Food Issues and Policies
ABIZ 3530 Farm Management
FOOD 1000 Food Safety Today and Tomorrow
GEOG 2520 Geography of Natural Resources

Group D: Free Electives (choose 2 from the list)
(Note: additional courses from Group B or C can be used to fulfill Group D electives.)
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
FOOD 3010 Food Process 1
FOOD 4260 Water Management in Food Processing
PLNT 2500 Crop Production
PLNT 2510 Fundamentals of Horticulture
PLNT 3560 Organic Crop Production on the Prairies
SOIL 3520 Pesticides: Environment, Economics and Ethics

Note: Special permission may be granted by the Head of Department for courses not appearing on the list for Group C or Group D.

Civil Engineering

Modifications:

CIVL 3690 Environmental Engineering Analysis Cr.Hrs. 4 0.0
(Lab required) Introduction to environmental engineering analysis concepts, risk assessment, colloidal dispersions, mass balances, reaction kinetics, and reactor design principles. Water pollution and water quality in rivers and lakes. Physical, chemical and biological unit operations and processes applied in water and/or wastewater treatment. Meteorology and air pollution, atmospheric dispersion. Solid waste management issues. Prerequisites: (CHEM 1310 or CHEM 2560), [ENG 2030 or ENG 2040 (or the former ENG 2010)], [STAT 2220 or (STAT 1000 and STAT 2000)].

CIVL 4030 Advanced Structural Design Cr.Hrs. 4 0.0
(Lab required) Special topics in structural engineering including analysis and design of prestressed concrete structures, fibre-reinforced polymer (FRP)-reinforced concrete structures, and wood structures. Pre- or corequisite: CIVL 3770.

CIVL 4250 Groundwater Hydrology Cr.Hrs. 4 0.0
(Lab required) Introduction to the theory of groundwater flow; flow nets; regional groundwater flow; well hydraulics; role of groundwater in geologic and engineering processes; multiphase flow. Prerequisites: CIVL 2790, GEOL 1340 (or the former GEOL 2250), MATH 2130 (or MATH 2110), MATH 2132 (or MATH 2100).

CIVL 4420 Highway Pavement Design Cr.Hrs. 4 0.0
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. Pre- or corequisite: CIVL 3790.

NET CHANGE IN CREDIT HOURS: 0.0

Mechanical Engineering

Modifications to the **Bachelor of Science in Engineering (Mechanical)**, to introduce a **Manufacturing Stream (Concentration)**, are outlined on the next 5 pages.

UNIVERSITY OF MANITOBA

Office of the Provost and Vice-President (Academic)

PROPOSAL FOR NEW ACADEMIC MINOR OR CONCENTRATION

Please enter the requested information below and submit both hardcopies and electronic copies to the Office of the University Secretary and the Vice-Provost (Integrated Planning and Academic Programs). Note: this template has been formatted using Microsoft Word 2010 for PC. Some formatting may be lost if using an earlier version of Word or Microsoft Word for Mac. Should you have any difficulties, please contact Cassandra Davidson, Program Analyst, at cassandra.davidson@umanitoba.ca.

It is advised that the unit initially discuss the proposed new minor/concentration with the Vice-Provost (Integrated Planning and Academic Programs) prior to completion of and submission of this form.

Date: 31 October 2019

Faculty: Engineering
Department: Mechanical Engineering

Contact Details: Dr. Paul Labossiere, P.Eng., Associate Head (UG Program), Department of Mechanical Engineering , Paul.Labossiere@umanitoba.ca

Section 1: Program Overview

1. Program type: Minor: ☐ Concentration: ☒

2. Proposed program name: Manufacturing Stream

3. Length of program: *Indicate the required number of credit hours including associated pre-requisite requirements.*
12 credit hours

4. Proposed start of program:
Fall 2020

Section 2: Program Details

5. Description of program: *Provide a brief outline of the program, its objectives and how it will benefit student.*
The mechanical engineering program is proposing a new Manufacturing Stream within the program. Background: The department currently offers many undergraduate technical elective courses which are specifically focused on manufacturing issues which are well subscribed by current students and highly supported by local industry. Historically, the department had two programs, Mechanical Engineering and Manufacturing Engineering. For accreditation purposes, the Manufacturing Program was removed

some 10 years back and was replaced with a Manufacturing Option which consisted of five specific technical elective requirements. Due to resource fluctuations, the department was not able to commit to offering all five of these courses on a yearly basis and the manufacturing option was deleted several years ago; however, it was not replaced with a Manufacturing Stream which should have been the case. We seek to remedy this oversight to ensure that our students receive the recognition they deserve for completing technical specialization courses related to manufacturing engineering.

6. Course requirements: *Provide a list of courses (include course codes) and breakdown of course requirements by level (e.g. 6 hours at the 1000 level, 3 hours at the 2000 level, etc.). Indicate whether proposed coursework is currently offered or new. Note any pre-requisite details where applicable.*

Students choose three (3) technical electives from the following eight (8) courses. Some courses may be offered in alternating years.
MECH 3550 Robotics and Computer Numerical Control 4cr.hrs.
MECH 3582 Manufacturing Planning and Quality Control 4cr.hrs.
MECH 3570 Manufacturing Automation 4cr.hrs.
MECH 3592 Simulation Modelling and Facilities Planning 4cr.hrs.
MECH 4192 Aerospace Materials and Manufacturing Processes 4cr.hrs.
MECH 4240 Design for Manufacturing 4cr.hrs.
MECH 4330 Contemporary Topics in Manufacturing Engineering 1 4cr.hrs.
MECH 4342 Contemporary Topics in Manufacturing Engineering 2 4cr.hrs.

7. Program availability: *Will this program be offered to all students eligible to declare a minor/concentration or will it be restricted to a subset of students. If the latter, provide a brief explanation as to why the program will be restricted.*
The completion of the Manufacturing Stream would be made available to all students in the mechanical engineering program and their successful completion will be assessed at the time of graduation. Access to the aforementioned courses may be restricted due to space limitations consistent with current registration procedures for these and other technical electives currently offered within the program.

8. Admission requirements: *If applicable, outline any admission requirements to the program.*
N/A

Section 3: Program Demand

9. Strategic priorities: *Comment on how the program fits within the university's strategic priorities.*
Winnipeg has strong and vibrant aerospace, agricultural, and bus manufacturing industries, to name a few, which have demonstrated committed involvement with the Faculty of Engineering at the University of Manitoba. Friends of Engineering and the Manitoba Aerospace Engineering Liaison Group are active organizations consisting of Industry and academic representatives and were established to advance the

Faculty of Engineering's strategic priorities both in terms of research engagement and the teaching and training of future engineers and highly qualified personnel.

10. Student demand: *Provide evidence of student demand and interest in the program.*
Students have consistently shown demand for existing courses within the proposed Manufacturing Stream. This proposed stream is in direct agreement with what industry deem necessary to promote the manufacturing specialization and provide students with the recognition deserved for completion of the related courses.

11. Projected enrolment: *Based on the evidence of demand, provide projected enrolment numbers in the program.*
Typical enrolment numbers for the exiting courses within the proposed Manufacturing Stream are between 20 and 40 students and it is anticipated that there be only a modest increase in the number of interested students. Presently, the majority of students understand the importance and impact of these courses on their employability in the local manufacturing industry.

12. Effects on other programs: *Comment on the potential effect of the program on other existing programs. Attach letters of support for any programs/units impacted by the proposed program.*
N/A

13. Similar programs: *If known, describe similar programs within Manitoba, outlining any similarities or differences with the proposed program.*
N/A

14. External consultation: *Where appropriate, outline any consultations with industry, business and/or any third-party groups in development of the proposed program.*
N/A

Section 4: Resource Requirements

15. Projected costs and revenues: *Provide a general overview of the projected costs and revenues of the program. Where applicable, comment in detail on the categories below.*
No additional costs are required to implement the proposed Manufacturing Stream and no expected revenues are expected to be gained.

16. Coursework: *Comment on whether the proposed program will require the offering of additional courses.*
No additional courses are required to implement the proposed Manufacturing Stream

17. Staffing: *Comment on whether the proposed program will require additional academic or administrative staff.*
No additional staff are required to implement the proposed Manufacturing Stream

18. Infrastructure / equipment: *Comment on how the proposed program will impact the use of current infrastructure and equipment.*
No additional resources are required to implement the proposed Manufacturing Stream

19. Library resources: *If the program involves new courses, or coursework that has not been offered on a regular basis in recent years, comment on the adequacy of existing library resources.*
N/A

20. Additional Funds: *Provide information on whether new funds are required for this program. If so, provide details.*
No additional funds are required to implement the proposed Manufacturing Stream

Section 5: Approvals

Faculty Approvals:

Department/Program Head: _____ 31/10/2019

Dean/Director: J Reddens. 31 Oct 2019. Enter date.

Faculty/School Council: _____ Enter date.

Institutional Approvals:

Senate Committee on Curriculum & Course Changes: Enter date.

Senate Planning & Priorities Committee (*if required*): Enter date.

Senate Approval: Enter date.

Provost Approval: _____ Enter date.

Summary for the Program Modification

Program Modification

The mechanical engineering program is proposing a new Manufacturing Stream within the program.

There are no changes to existing course offerings and no change in credit hours

Academic Calendar Content Addition for the Proposed Program Modification

4.10.7 Manufacturing Stream

Choose 3 TEs 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 3550	**Robotics and Computer Numerical Control**	**4**
MECH 3582	**Manufacturing Planning and Quality Control**	**4**
MECH 3570	**Manufacturing Automation**	**4**
MECH 3592	**Simulation Modelling and Facilities Planning**	**4**
MECH 4192	**Aerospace Materials and Manufacturing Processes**	**4**
MECH 4240	**Design for Manufacturing**	**4**
MECH 4330	**Contemporary Topics in Manufacturing Engineering 1**	**4**
MECH 4342	**Contemporary Topics in Manufacturing Engineering 2**	**4**

The current Aerospace Option, Aerospace Stream, Materials Stream, Solid Mechanics Stream and Thermofluids Stream remain unchanged as they appear in the current academic calendar.

Faculty of Health Sciences

Interdisciplinary Health Program

Deletion:

HMEC 4090 Practicum in Human Ecology Cr.Hrs. 6 -6.0

NET CHANGE IN CREDIT HOURS: -6.0

Program modifications:

Modifications to the following programs are outlined on the next 25 pages:

- **Bachelor of Health Sciences**
- **Bachelor of Health Studies**
  - **Health Policy, Planning, and Evaluation Concentration**
  - **Family Health Concentration**

Bachelor of Health Sciences Elective List

The science requirement may be met using any course offered by the Faculty of Science or the Faculty of Agricultural and Food Sciences on the approved elective list (see below), in addition to the following courses:

Clayton H Riddell Faculty of Environment Earth and Resources
ENVR 1000 Environmental Science 1: Concepts
ENVR 3400 Introduction to Environment and Health
ENVR 4400 Advanced Issues in Environment and Health

Rady Faculty of Health Science
HEAL 3610 Mechanisms of Disease 1

Max Rady College of Medicine
BGEN 3022 Introduction to Human Genetics A
BGEN 3024 Introduction to Human Genetics B

PHAC 4030 Drugs in Human Disease I
PHAC 4040 Drugs in Human Disease II

PHGY 1030 Fundamentals of Medical Physiology

Faculty of Agricultural and Food Sciences
FOOD 4150 Food Microbiology 1

HNSC 1200 Food: Facts and Fallacies
HNSC 2130 Nutrition through the Life Cycle
HNSC 2140 Basic Principles of Human Nutrition
HNSC 3220 Food and Nutrition Literacy Education
HNSC 3300 Vitamins and Minerals in Human Health
HNSC 3310 Macronutrients and Human Health
~~HNSC 3320 Nutrition Education and Dietary Change~~
HNSC 3342 Management for Food and Nutrition Professionals
HNSC 3350 Culture and Food Patterns
HNSC 3870 Food Geographies (cross-listed with GEOG 3870)

HNSC 4290 Food, Nutrition and Health Policies
HNSC 4300 Community Nutrition Intervention
HNSC 4310 Nutrition and the Elderly
HNSC 4340 Maternal and Child Nutrition
HNSC 4350 Nutrition in Exercise and Sport
HNSC 4540 Functional Foods and Nutraceuticals

SOIL 3520 Pesticides: Environment, Economics and Ethics

Faculty of Arts
ECON 2310 Canadian Economic Problems
ECON 2350 Community Economic Development
ECON 2362 Economics of Gender
ECON 2410 The Manitoba Economy
ECON 3690 Economic Issues of Health Policy
ECON 3692 Economic Determinants of Health
ECON 4140 Evaluation of Economic Policy and Programs

NATV 1220 Indigenous Peoples in Canada, Part 1
NATV 1240 Indigenous Peoples in Canada, Part 2
NATV 2020 The Métis in Canada
NATV 2110 Introduction to Indigenous Community Development
NATV 3100 Indigenous Healing Ways
NATV 3240 Indigenous Medicine and Health
NATV 3330 Indigenous People, Science and the Environment

PHIL 1200 Introduction to Philosophy
PHIL 2290 Ethics and Society
PHIL 2750 Ethics and the Environment

PSYC 2250 Introduction to Psychological Research
PSYC 2260 Introduction to Research Methods in Psychology
PSYC 2290 Child Development
PSYC 2360 Brain and Behaviour
PSYC 2440 Behaviour Modification Principles
PSYC 2490 Abnormal Psychology
PSYC 3070 Adult Development
PSYC 3130 Introduction to Health Psychology
PSYC 3150 Behavioural Modification Applications
PSYC 3310 Adolescent Development

SOC 1200 Introduction to Sociology
SOC 2330 Social Psychology in Sociological Perspective
SOC 2390 Social Organization
SOC 2460 The Family
SOC 2490 Sociology of Health and Illness

SOC 2620 The Sociology of Aging
SOC 3540 The Sociology of Health Care Systems
SOC 3660 Sociology of Mental Disorder
SOC 3770 Women, Health and Medicine

I H Asper School of Business
LEAD 2010 Learning to Lead

MIS 2000 Information Systems for Management

Clayton H Riddell Faculty of Environment, Earth and Resources
ENVR 1000 Environmental Science 1 - Concepts
ENVR 3400 Introduction to Environment and Health
ENVR 4400 Advanced Issues in Environment and Health

GEOG 1280 Introduction to Human Geography
GEOG 2330 Place, Populations and Mobility: Geographic Perspectives (HS)
GEOG 3640 Social Geography of the Environment (HS)
GEOG 3870 Food Geographies (cross-listed with HNSC 3870)

Faculty of Kinesiology and Recreation Management
KIN 2610 Health and Physical Aspects of Aging
KIN 3510 Physical Activity and Aging

KPER 1200 Physical Activity, Health and Wellness
KPER 2700 Motor Control and Learning
KPER 3470 Exercise Physiology

REC 2650 The Social Aspects of Aging

Rady Faculty of Health Sciences

~~HMEC 4090 Practicum in Human Ecology~~

HEAL 1600 Health and Health Professions
HEAL 3610 Mechanisms of Disease 1
HEAL 4500 Injury Prevention Across the Life Course
HEAL 4650 Selected Topics in Interdisciplinary Health

College of Nursing
NURS 2610 Health and Physical Aspects of Aging
NURS 3330 Women and Health
NURS 3400 Men’s Health: Concerns, Issues and Myths
NURS 4520 Professional Foundations 5: Interprofessional and Collaborative Practice

Max Rady College of Medicine
BGEN 3022 Introduction to Human Genetics A
BGEN 3024 Introduction to Human Genetics B

FMLY 1000 Families in Contemporary Canadian Society
FMLY 1010 Human Development in the Family
FMLY 1012 Introduction to Social Development
FMLY 1420 Family Management Principles
FMLY 2012 Development, Conflict and Displacement
FMLY 2400 Family Financial Health
FMLY 2500 Diversity and Families
FMLY 2600 Foundations of Childhood Developmental Health
FMLY 2650 The Social Aspects of Aging
FMLY 2800 Family Violence
FMLY 3012 Theories of Social Development
FMLY 3220 Death and the Family
FMLY 3240 Families in Later Years
FMLY 3330 Parenting and Developmental Health
FMLY 3400 Families as Consumers
FMLY 3470 Selected Studies in the Family I
FMLY 3600 Adolescents in Families and Society
FMLY 3780 Introduction to the Development of Programs for Children and Families
FMLY 3790 Introduction to the Evaluation of Programs for Children and Families
FMLY 3800 Conflict Resolution in the Family
FMLY 3802 Intimate Partner Violence
FMLY 3806 Children, Violence and Rights
FMLY 4012 Social Development Policies
FMLY 4220 Aging and Risk in a Global Context
FMLY 4300 Field Experience
FMLY 4330 Management of Family Stress
FMLY 4400 Family Economics: Poverty and Wealth
FMLY 4470 Selected Studies in the Family II
FMLY 4480 Work and Family Issues
FMLY 4500 Senior Thesis
FMLY 4602 Family Relationships, Health and Well-Being
FMLY 4604 Children in Adversity
FMLY 4606 A Social Justice Perspective on Indigenous Maternal and Child Health
FMLY 4802 Family Violence Prevention

PHAC 4030 Drugs in Human Disease I
PHAC 4040 Drugs in Human Disease II

PHGY 1030 Fundamentals of Medical Physiology

Faculty of Science
BIOL 2300 Principles of Ecology

BIOL 2410 Human Physiology 1
BIOL 2420 Human Physiology 2
BIOL 2500 Genetics 1
BIOL 2520 Cell Biology
BIOL 2380 Introductory Toxicology
BIOL 3290 Medicinal and Hallucinogenic Plants
BIOL 3542 Developmental Biology
BIOL 3560 Comparative Animal Histology
BIOL 3270 Introductory Parasitology
BIOL 3470 Environmental Physiology of Animals 1
BIOL 3500 Genetics 2
BIOL 4542 Genes and Development
BIOL 4544 Advanced Developmental and Cellular Biology

CHEM 2210 Introductory Organic Chemistry 1: Structure and Function
CHEM 2220 Introductory Organic Chemistry 2: Reactivity and Synthesis
CHEM 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy
CHEM 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
CHEM 2770 Elements of Biochemistry 1
CHEM 2780 Elements of Biochemistry 2
CHEM 3570 Biophysical Chemistry
CHEM 4360 Signaling and Regulation of Gene Expression
CHEM 4370 Glycobiology and Protein Activation
CHEM 4620 Biochemistry of Nucleic Acids
CHEM 4630 Biochemistry of Proteins
CHEM 4670 Drug Design and Drug Discovery

MATH 1230 Differential Calculus
MATH 1500 Introduction to Calculus

MBIO 1010 Microbiology I
MBIO 1220 Essentials of Microbiology
MBIO 1410 Introduction to Molecular Biology
MBIO 2020 Microbiology II
MBIO 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy
MBIO 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
MBIO 2420 Introductory Virology
MBIO 3000 Applied Biological Safety
MBIO 3010 Mechanisms of Microbial Disease
MBIO 3030 Microbiology III
MBIO 3430 Molecular Evolution
MBIO 3450 Regulation of Biochemical Processes
MBIO 3460 Membrane and Cellular Biochemistry
MBIO 3470 Microbial Systematics
MBIO 4010 Immunology H
MBIO 4020 Immunology

MBIO 4410 Virology
MBIO 4440 Systems Microbiology: from Genomes to Life
MBIO 4480 Microbes in our Environment

PHYS 1020 General Physics 1
PHYS 1030 General Physics 2
PHYS 1050 Physics 1: Mechanics
PHYS 1070 Physics 2: Waves and Modern Physics
PHYS 3220 Medical Physics and Physiological Measurement

STAT 2000 Basic Statistical Analysis 2
STAT 3000 Applied Linear Statistical Models
STAT 3170 Statistical Quality Control
STAT 3380 An Introduction to Nonparametric Statistic

Faculty of Social Work
SWRK 1310 Introduction to Social Welfare Policy Analysis
SWRK 2650 The Social Aspects of Aging

Bachelor of Health Studies Elective List

The science requirement may be met using any course offered by the Faculty of Science on the approved elective list (see below), in addition to the following courses:

Faculty of Agricultural and Food Sciences
FOOD 4150 Food Microbiology 1
HNSC 1200 Food, Facts and Fallacies
HNSC 2130 Nutrition through the Life Cycle

Clayton H. Riddell Faculty of Environment, Earth and Resources
EER 1000 Earth: A User's Guide
ENVR 1000 Environmental Science 1: Concepts
ENVR 3400 Introduction to Environment and Health
ENVR 4400 Advanced Issues in Environment and Health

Max Rady College of Medicine
BGEN 3022 Introduction to Human Genetics A
BGEN 3024 Introduction to Human Genetics B

PHGY 1030 Fundamentals of Medical Physiology

Faculty of Agricultural and Food Sciences
ABIZ 1010 Economics of World Food Issues and Policies
ABIZ 3550 Environmental Policy

HNSC 3350 Culture and Food Patterns
HNSC 3870 Food Geographies (cross-listed with GEOG 3870)
HNSC 4290 Food, Nutrition and Health Policies

SOIL 3520 Pesticides: Environment, Economics and Ethics

Faculty of Arts
ANTH 2020 Relatedness in a Globalizing World
ANTH 2040 Native North America: A Sociocultural Survey
ANTH 2240 Plagues and People
ANTH 2300 Anthropology of Childhood
ANTH 2500 Culture, Environment and Technology

ANTH 2510 Anthropology of Economic Systems
ANTH 2550 Culture and the Individual
ANTH 2560 Anthropology of Illness
ANTH 2820 Human Osteology
ANTH 2860 Evolution and Human Diversity
ANTH 2880 Human Evolution
ANTH 2890 Human Population Biology
ANTH 3200 Anthropology of Food
ANTH 3320 Women in Cross-Cultural Perspective
ANTH 3330 Sex and Sexualities
ANTH 3500 Peoples of the Arctic
ANTH 3550 Canadian Subcultures
ANTH 3740 Human Growth and Variation
ANTH 3750 Anthropological Perspectives on Globalization and the World-System
ANTH 4860 Selected Topics in Biological Anthropology

ECON 2310 Canadian Economic Problems
ECON 2350 Community Economic Development
ECON 2362 Economics of Gender
ECON 2410 The Manitoba Economy
ECON 3690 Economic Issues of Health Policy
ECON 3692 Economic Determinants of Health
ECON 4140 Evaluation of Economic Policy and Programs
GPE 1700 Social Justice in the 21st Century: Global Political Economy and Environmental Change

HIST 2010 Indigenous History in Canada
HIST 2400 History of Human Rights and Social Justice in the Modern World
HIST 3730 A History Western Canada

LABR 1260 Working for a Living
LABR 3060 Workplace Health and Safety
LABR 3070 Labour Relations and Occupational Health and Safety Law

NATV 1220 Indigenous Peoples in Canada, Part 1
NATV 1240 Indigenous Peoples in Canada, Part 2
NATV 1250 Introductory Cree 1
NATV 1270 Introductory Anishinaabemowin (Ojibwe) 1
NATV 1300 Selected Topics in Introductory Indigenous Language
NATV 2020 The Métis in Canada
NATV 2040 The Dakota, Lakota, and Nakota Nations
NATV 2060 Eastern Woodlands Encounters Columbus to Confederation
NATV 2070 Cree, Innu, and Dene Nations
NATV 2080 Inuit Society and Culture
NATV 2100 Indigenous Spirituality
NATV 2110 Introduction to Indigenous Community Development

NATV 3100 Indigenous Healing Ways
NATV 3150 Residential School Literature
NATV 3240 Indigenous Medicine and Health
NATV 3330 Indigenous People, Science and the Environment

PHIL 1200 Introduction to Philosophy
PHIL 2150 Mind and Body
PHIL 2290 Ethics and Society
PHIL 2740 Ethics and Biomedicine
PHIL 2750 Ethics and the Environment
~~POLS 2070 Introduction to Canadian Government~~
POLS 3100 Gender and Politics in Canada
~~POLS 3160 Human Rights and Civil Liberties~~
POLS 3860 Canadian Federalism
POLS 4190 Manitoba Politics and Government
~~POLS 4860 The Canadian Policy Process~~

PSYC 2250 Introduction to Psychological Research
PSYC 2260 Introduction to Research Methods in Psychology
PSYC 2290 Child Development
PSYC 2360 Brain and Behaviour
PSYC 2440 Behaviour Modification Principles
PSYC 2470 Learning Foundations of Psychology
PSYC 2480 Cognitive Processes
PSYC 2490 Abnormal Psychology
PSYC 2530 Psychology of Personality
PSYC 2540 Social Psychology
PSYC 3070 Adult Development
PSYC 3130 Introduction to Health Psychology
PSYC 3150 Behavioural Modification Applications
PSYC 3160 Perception and Attention
PSYC 3310 Adolescent Development
PSYC 3390 Thinking
PSYC 3430 Sensory Processes
PSYC 3470 Dyadic Relations
PSYC 3490 Individual Differences
PSYC 3580 Language and Thought
PSYC 3630 Psychological Measurement and Assessment

RLGN 1322 Introduction to Eastern Religions
RLGN 1324 Introduction to Western Religions
RLGN 1410 Death and Concepts of the Future
RLGN 1420 Ethics in World Religions
RLGN 1430 Food: Religious Concepts and Practices
RLGN 2060 Religion and Violence
RLGN 2590 Religion and Social Issues

SOC 2320 Canadian Society and Culture
SOC 2330 Social Psychology in Sociological Perspective
SOC 2360 Small Group Interaction
SOC 2370 Ethnic Relations
SOC 2390 Social Organization
SOC 2460 The Family
~~SOC 2470 Courtship and Marriage~~
SOC 2490 Sociology of Health and Illness
SOC 2510 Criminology
SOC 2610 Sociology of Criminal Justice and Corrections
SOC 2620 The Sociology of Aging
SOC 2630 Social Change
SOC 3310 Theorizing Crime, Law and Social Justice
SOC 3370 Sociology of Work
SOC 3380 Power, Politics and the Welfare State
SOC 3400 Policing and Crime Prevention
SOC 3540 The Sociology of Health Care Systems
SOC 3660 Sociology of Mental Disorder
SOC 3730 Society and Education
SOC 3750 Institutional Responses to Violence in Family and Intimate Relationships
SOC 3770 Women, Health and Medicine
SOC 3790 Women, Crime and Social Justice
SOC 3810 Sociological Perspectives on Gender and Sexuality
SOC 3820 Qualitative and Historical Methods in Sociology
SOC 3830 Youth, Crime and Society
SOC 3840 Community and Social Reconstruction
SOC 3860 Genocide, Crime and Society
SOC 3890 Power and Inequality in Comparative Perspective

WOMN 1600 Introduction to Women's and Gender Studies in the Social Sciences
WOMN 2000 Feminist Thought
WOMN 2500 Race, Class and Sexuality
WOMN 2560 Women, Science and Technology
WOMN 2600 Sex, Gender, Space and Place
WOMN 2610 Gender, Transport and Social Justice
WOMN 3000 Interdisciplinary Research in Women's and Gender Studies
WOMN 3560 Feminist Perspectives on Violence Against Women

I. H. Asper School of Business
ACC 1100 Introductory Financial Accounting
ACC 1110 Introductory to Managerial Accounting

GMGT 2060 Management and Organizational Theory

HRIR 2440 Human Resource Management

HRIR 3450 Labour and Employment Relations
HRIR 4410 Staffing and Management Development
HRIR 4420 Compensation

LEAD 2010 Learning to Lead
LEAD 3010 Negotiation and Conflict Management
LEAD 4020 Leadership, Power and Politics in Organizations

MIS 2000 Information Systems for Management
MIS 3510 Systems Analysis and Design
MIS 3520 Data Communications and Networking

Clayton H. Riddell Faculty of Environment, Earth and Resources
GEOG 1280 Introduction to Human Geography
GEOG 1290 Introduction to Physical Geography
GEOG 1700 Social Justice in the 21st Century: Global Political Economy and Environmental Change
GEOG 2330 Place, Populations and Mobility: Geographic Perspectives
GEOG 2640 Geography of Culture and Inequality
GEOG 3640 Social Geography of the Environment
GEOG 3870 Food Geographies
GEOG 4280 Gender and the Human Environment

Faculty of 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

Rady Faculty of Health Sciences
HEAL 1600 Health and Health Professions
HEAL 4500 Injury Prevention Across the Life Course
HEAL 4650 Selected Topics in Interdisciplinary Health

~~HMEC 4090 Practicum in Human Ecology~~

Max Rady College of Medicine
BGEN 3022 Introduction to Human Genetics A
BGEN 3024 Introduction to Human Genetics B

PHGY 1030 Fundamentals of Medical Physiology

FMLY 1000 Families in Contemporary Canadian Society
FMLY 1010 Human Development in the Family
FMLY 1012 Introduction to Social Development
FMLY 1420 Family Management Principles

FMLY 2012 Development, Conflict, and Displacement
FMLY 2400 Family Financial Health
FMLY 2500 Diversity and Families
FMLY 2600 Foundations of Childhood Developmental Health
FMLY 2650 The Social Aspects of Aging
FMLY 2800 Family Violence
FMLY 3012 Theories of Social Development
FMLY 3220 Death and the Family
FMLY 3240 Families in Later Years
FMLY 3330 Parenting and Developmental Health
FMLY 3400 Families as Consumers
FMLY 3470 Selected Studies in the Family I
FMLY 3600 Adolescents in Families and Society
FMLY 3750 Fundamentals of Health Promotion
FMLY 3800 Conflict Resolution in the Family
FMLY 3802 Intimate Partner Violence
FMLY 3806 Children, Violence and Rights
FMLY 4012 Social Development Policies
FMLY 4220 Aging and Risk in a Global Context
FMLY 4300 Field Experience
FMLY 4330 Management of Family Stress
FMLY 4400 Family Economics: Poverty and Wealth
FMLY 4470 Selected Studies in the Family II
FMLY 4480 Work and Family Issues
FMLY 4500 Senior Thesis
FMLY 4604 Children in Adversity
FMLY 4606 A Social Justice Perspective on Indigenous Maternal and Child Health
FMLY 4802 Family Violence Prevention

College of Nursing
NURS 2610 Health and Physical Aspects of Aging
NURS 3330 Women and Health
NURS 3400 Men's Health: Concerns, Issues and Myths
NURS 4520 Professional Foundations 5: Interprofessional and Collaborative Practice

Faculty of Kinesiology and Recreation Management
KIN 2610 Health and Physical Aspects of Aging
KIN 3450 Motor Control and Learning
KIN 3510 Physical Activity and Aging

KPER 1200 Physical Activity, Health and Wellness
KPER 2200 Planning Principles
KPER 3100 Inclusive Physical Activity and Leisure

REC 2650 The Social Aspects of Aging
REC 3220 Program Planning and Evaluation

REC 4250 Leisure and Aging

Faculty of Science
NOTE: Any of these courses from the Faulty of Science can be used to satisfy the 6 credit hour science requirement

BIOL 1000 Biology: Foundations of Life
BIOL 1010 Biology: Biological Diversity and Interaction (NB. 1000/1010 cannot be held with BIOL1020/BIOL1030)
OR
BIOL 1020 Biology 1: Principles and Themes
BIOL1030 Biology 2: Biological Diversity, Function and Interactions
BIOL 1300 Economic Plants
BIOL 1340 The State of the Earth's Environment: Contemporary Issues
BIOL 1410 Anatomy of the Human Body
BIOL 1412 Physiology of the Human Body
BIOL 2520 Cell Biology
BIOL 3290 Medicinal and Hallucinogenic Plants

CHEM 1300 University 1 Chemistry: Structure and Modelling in Chemistry
CHEM 1310 University 1 Chemistry: An Introduction to Physical Chemistry
CHEM 1320 University 1 Chemistry: An Introduction to Organic Chemistry
CHEM 2210 Introductory Organic Chemistry 1: Structure and Function
CHEM 2220 Introductory Organic Chemistry 2: Reactivity and Synthesis
CHEM 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy
CHEM 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
CHEM 2770 Elements of Biochemistry 1
CHEM 2780 Elements of Biochemistry 2

MATH 1010 Applied Finite Mathematics
MATH 1020 Mathematics in Art
MATH 1080 Fundamentals of Mathematical Reasoning
MATH 1090 Mathematical Reasoning in Euclidean Geometry

MATH 1220 Linear Algebra 1
MATH 1230 Differential Calculus
MATH 1300 Vector Geometry and Linear Algebra
MATH 1500 Introduction to Calculus

MBIO 1010 Microbiology 1
MBIO 1220 Essentials of Microbiology
MBIO 1410 Introduction of Molecular Biology
MBIO 2020 Microbiology II
MBIO 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy
MBIO 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
MBIO 2420 Introductory Virology

PHYS 1020 General Physics 1
PHYS 1030 General Physics 2
PHYS 1050 Physics 1: Mechanics
PHYS 1070 Physics 2: Waves and Modern Physics

STAT 2000 Basic Statistical Analysis 2

Faculty of Social Work
SWRK 1310 Introduction to Social Welfare Policy Analysis
SWRK 2050 Community and Organizational Theory
SWRK 2080 Interpersonal Communication Skills
SWRK 2110 Emergence of the Canadian Social Welfare State
SWRK 2130 Comparative Social Welfare Systems
SWRK 2650 The Social Aspects of Aging
SWRK 3130 Contemporary Canadian Social Welfare

Bachelor of Health Studies Concentration Elective List

Health Policy, Planning, and Evaluation:
Students selecting the Health Policy, Planning, and Evaluation concentration should choose 18 credit hours from the following courses:

ABIZ 1010 Economics of World Food Issues and Policies
ACC 1100 Introductory Financial Accounting
ANTH 2560 Anthropology of Illness
ECON 3690 Economic Issues of Health Policy
ECON 3692 Economic Determinants of Health
ENVR 3400 Introduction to Environment and Health
ENVR 4400 Advanced Issues in Environment and Health
FMLY 4012 Social Development Policies
GEOG 1280 Introduction to Human Geography
GEOG 1700 Social Justice in the 21st Century: Global Political Economy and Environmental Change
GEOG 2640 Geography of Culture and Inequality
HNSC 1200 Food Facts and Fallacies
HNSC 3350 Cultural and Food Patterns
HNSC 3870 Food Geographies
KIN 2610 Health and Physical Aspects of Aging (also NURS 2610)
KPER 1200 Physical Activity, Health, and Wellness
KPER 2200 Planning Principles
LABR 1260 Working for a Living
LABR 3060 Workplace Health and Safety
LEAD 2010 Learning to Lead
LEAD 3010 Negotiation and Conflict Management
LEAD 4020 Leadership, Power, and Politics in Organizations
NATV 2100 Indigenous Spirituality
NATV 3100 Indigenous Healing Ways
PSYC 2260 Introduction to Research Methods in Psychology
PSYC 2540 Social Psychology
PSYC 3130 Introduction to Health Psychology
REC 3220 Program Planning and Evaluation
SOC 2390 Social Organization
~~SOC 2490 Sociology of Health and Illness~~
SOC 2630 Social Change
SOC 3540 The Sociology of Health Care Systems
STAT 2000 Basic Statistical Analysis 2
SWRK 1310 Introduction to Social Welfare Policy Analysis
SWRK 2050 Community and Organizational Theory
SWRK 2080 Interpersonal Communication Skills

Family Health:
Students selecting the Family Health concentration should choose 18 credit hours from the following courses:

FMLY 1000 Families in Contemporary Canadian Society
FMLY 1010 Human Development in the Family
FMLY 1420 Family Management Principles
FMLY 2012 Development, Conflict and Displacement
FMLY 2400 Family Financial Health
FMLY 2500 Diversity and Families
FMLY 2600 Foundations of Childhood Developmental Health
FMLY 2650 The Social Aspects of Aging
FMLY 2800 Family Violence
FMLY 3012 Theories of Social Development
FMLY 3220 Death and the Family
FMLY 3240 Families in the Later Years
FMLY 3330 Parenting and Developmental Health
FMLY 3400 Families as Consumers
FMLY 3470 Selected Studies in the Family I
FMLY 3600 Adolescents in Families and Society
FMLY 3800 Conflict Resolution in the Family
FMLY 3802 Intimate Partner Violence
FMLY 3806 Children, Violence and Rights
FMLY 4012 Social Development Policies
FMLY 4220 Aging and Risk in a Global Context
FMLY 4300 Field Experience
FMLY 4330 Management of Family Stress
FMLY 4400 Family Economics: Poverty and Wealth
FMLY 4470 Selected Studies in the Family II
FMLY 4480 Work and Family Issues
FMLY 4500 Senior Thesis
FMLY 4604 Children in Adversity
FMLY 4606 A Social Justice Perspective on Indigenous Maternal and Child Health
FMLY 4802 Family Violence Prevention
HEAL 4500 Injury Prevention Across the Life Course
NURS 2100 Introduction to Family Caregiving Across the Lifespan

The electives lists below apply to ALL students enrolled in the IHP program prior to September 1, 2018.

Sciences Orientation Electives:
(Senate Approved May 2016.)

Faculty of Agricultural and Food Sciences
FOOD 4150 Food Microbiology 1
FOOD 4540 Functional Foods and Neutraceuticals

HNSC 2130 Nutrition through the Life Cycle
HNSC 2140 Basic Principles of Human Nutrition
HNSC 3220 Food and Nutrition Literacy Education
HNSC 3300 Vitamins and Minerals in Human Health
HNSC 3310 Macronutrients and Human Health
~~HNSC 3320 Nutrition Education and Dietary Change~~
HNSC 3342 Management for Food and Nutrition Professionals
HNSC 3870 Food Geographies (cross-listed with GEOG 3870)
HNSC 4290 Food, Nutrition and Health Policies
HNSC 4300 Community Nutrition Intervention
HNSC 4310 Nutrition and the Elderly
HNSC 4340 Maternal and Child Nutrition
HNSC 4350 Nutrition in Exercise and Sport
HNSC 4540 Functional Foods and Neutraceuticals

Faculty of Arts
PSYC 2290 Child Development
PSYC 2360 Brain and Behaviour
PSYC 2490 Abnormal Psychology
PSYC 3430 Sensory Process

I H Asper School of Business
MIS 2000 Information Systems for Management
MIS 3500 Database Management Systems
MIS 3510 Systems Analysis and Design
MIS 3520 Data Communications and Knowledge

Clayton H Riddell Faculty of Environment, Earth and Resources
EER 1000 Earth: A User's Guide

ENVR 1000 Environmental Science 1: Concepts
ENVR 3400 Introduction to Environment and Health
ENVR 4400 Advanced Issues in Environment and Health

GEOG 1280 Introduction to Human Geography

GEOG 1290 Introduction to Physical Geography
GEOG 3870 Food Geographies (cross-listed with HNSC 3870)

Rady Faculty of Health Sciences
BGEN 3022 Introduction to Human Genetics A
BGEN 3024 Introduction to Human Genetics B

~~HMEC 4090 Practicum in Human Ecology~~

PHAC 4030 Drugs in Human Disease I
PHAC 4040 Drugs in Human Disease II

HEAL 3610 Mechanisms of Disease I

College of Nursing
NURS 2610 Health and Physical Aspects of Aging

Faculty of Science
BIOL 1412 Physiology of the Human Body
BIOL 2300 Principles of Ecology
BIOL 2410 Human Physiology 1
BIOL 2420 Human Physiology 2
BIOL 2500 Genetics 1
BIOL 2520 Cell Biology
BIOL 2380 Introductory Toxicology
BIOL 2390 Introduction Ecology
BIOL 3290 Medicinal and Hallucinogenic Plants
BIOL 3542 Developmental Biology
BIOL 3560 Comparative Animal Histology
BIOL 3270 Introduction to Parasitology
BIOL 3470 Environmental Physiology of Animals 1
BIOL 3500 Genetics 2
BIOL 4542 Genes and Development
BIOL 4544 Advanced Developmental and Cellular Biology

CHEM 1320 University 1 Chemistry: An Introduction to Organic Chemistry (NOTE: may not be held with 2210/2220)
CHEM 2210 Introductory Organic Chemistry 1: Structure and Function
CHEM 2220 Introductory Organic Chemistry 2: Reactivity and Synthesis
CHEM 2360 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy
CHEM 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
CHEM 2770 Elements of Biochemistry 1
CHEM 2780 Elements of Biochemistry 2
CHEM 3570 Biophysical Chemistry
CHEM 4360 Signaling and Regulation of Gene Expression
CHEM 4370 Glycobiology and Protein Activation

CHEM 4620 Biochemistry of Nucleic Acids
CHEM 4630 Biochemistry of Proteins
CHEM 4670 Drug Design and Drug Discovery
~~COMP 1260 Introductory Computer Usage 1~~
~~COMP 1270 Introductory Computer Usage 2~~

MATH 1220 Linear Algebra 1
MATH 1230 Differential Calculus
MATH 1300 Vector Geometry and Linear Algebra
MATH 1500 Introduction to Calculus
~~MATH 2140 Modelling~~
MATH 3330 Computational Algebra
MATH 3440 Ordinary Differential Equations
MATH 3460 Partial Differential Equations

MBIO 1010 Microbiology 1
MBIO 1220 Essentials of Microbiology
MBIO 1410 Introduction to Molecular Biology
MBIO 2020 Microbiology 2
MBIO 2360 Biochemistry 1: Biomolecules and Introduction to Metabolic Energy
MBIO 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
~~MBIO 2410 Essentials of Molecular Biology (May not be held with MBIO 2020 or MBIO 2021)~~
MBIO 2420 Introductory Virology
MBIO 3000 Biosafety
MBIO 3010 Mechanisms of Microbial Disease
MBIO 3030 Microbiology 3
MBIO 3430 Molecular Evolution
MBIO 3450 Regulation of Biochemical Processes
MBIO 3460 Membrane and Cellular Biochemistry
MBIO 3470 Microbial Systematics
MBIO 4010 Immunology H
MBIO 4020 Immunology
MBIO 4410 Virology
MBIO 4440 Systems Microbiology
MBIO 4480 Microbes in our Environment

PHYS 1020 General Physics 1
PHYS 1030 General Physics 2
PHYS 1050 Physics 1: Mechanics
PHYS 1070 Physics 2: Waves and Modern Physics
PHYS 3220 Medical Physics and Physiological Measurement
~~PHYS 4560 Applied Nuclear Science~~

STAT 2000 Basic Statistical Analysis 2
STAT 3000 Applied Linear Statistical Models

STAT 3170 Statistical Quality Control
STAT 3380 An Introduction to Nonparametric Statistic

Social Science Orientation Electives
(Senate Approved May 2016.)

Faculty of Agricultural and Food Sciences
ABIZ 1010 Economics of World Food Issues and Policies
ABIZ 3550 Environmental Policy

HNSC 1200 Food, Facts and Fallacies
HNSC 2130 Nutrition through the Life Cycle
HNSC 3350 Cultural and Food Patterns
HNSC 4290 Food Nutrition Health Policies

SOIL 3520 Pesticides: Environment, Economics and Ethics

Faculty of Arts
ANTH 2020 Relatedness in a Globalizing World
ANTH 2040 Native North America: A Sociocultural Survey
ANTH 2240 Plagues and People
ANTH 2300 Anthropology of Childhood
ANTH 2500 Culture, Environment and Technology
ANTH 2510 Anthropology of Economic Systems
ANTH 2550 Culture and the Individual
ANTH 2560 Anthropology of Illness
ANTH 2820 Human Osteology
ANTH 2860 Evolution and Human Diversity
ANTH 2880 Human Evolution
ANTH 2890 Human Population Biology
ANTH 3200 Anthropology of Food
ANTH 3320 Women in Cross-Cultural Perspective
ANTH 3330 Sex and Sexualities
ANTH 3500 Peoples of the Arctic
ANTH 3550 Canadian Subcultures
ANTH 3740 Human Growth and Variation
ANTH 3750 Anthropological Perspectives on Globalization and the World-System
ANTH 4860 Special Topics in Biological Anthropology

ECON 2310 Canadian Economic Problems
ECON 2350 Community Economic Development
ECON 2362 Economics of Gender
ECON 2410 The Manitoba Economy
ECON 3690 Economic Issues of Health Policy
ECON 3692 Economic Determinants of Health

ECON 4140 Evaluation of Economic Policy and Programs
GPE 1700 Social Justice in the 21st Century: Global Political Economy and Environmental Change

HIST 2280 Aboriginal History of Canada
HIST 2400 History of Human Rights and Social Justice in the Modern World
HIST 3730 A History Western Canada

LABR 1260 Working for a Living
LABR 3050 Issues in Occupational Health and Safety and Workers' Compensation
LABR 3060 Workplace Health and Safety
LABR 3070 Labour Relations and Occupational Health and Safety Law

NATV 1220 Indigenous Peoples in Canada, Part 1
NATV 1240 Indigenous Peoples in Canada, Part 2
NATV 1250 Introductory Cree 1
NATV 1270 Introductory Anishinaabemowin (Ojibwe) 1
NATV 1300 Selected Topics in Introductory Indigenous Language
NATV 2020 The Métis in Canada
NATV 2040 The Dakota, Lakota, and Nakota Nations
NATV 2060 Eastern Woodlands Encounters Columbus to Confederation
NATV 2070 Cree, Innu, and Dene Nations
NATV 2080 Inuit Society and Culture
NATV 2100 Indigenous Spirituality
NATV 2110 Introduction to Indigenous Community Development
NATV 3100 Indigenous Healing Ways
NATV 3150 Residential School Literature
NATV 3240 Indigenous Medicine and Health
NATV 3330 Indigenous People, Science and the Environment

PHIL 1200 Introduction to Philosophy
PHIL 2150 Mind and Body
PHIL 2290 Ethics and Society
PHIL 2740 Ethics and Biomedicine
PHIL 2750 Ethics and the Environment

POLS 3100 Gender and Politics in Canada
~~POLS 3160 Human Rights and Civil Liberties~~
POLS 3860 Canadian Federalism
POLS 3960 Canadian Politics
POLS 4190 Manitoba Politics and Government

PSYC 2250 Introduction to Psychological Research
PSYC 2260 Introduction to Research Methods in Psychology
PSYC 2290 Child Development
~~PSYC 2390 Psychology of Women~~
~~PSYC 2400 Psychology of Sex Differences~~

~~PSYC 2410 Social Psychology 1~~
~~PSYC 2420 Social Psychology 2~~
PSYC 2440 Behaviour Modification Principles
PSYC 2470 Learning Foundations of Psychology
PSYC 2480 Cognitive Processes
PSYC 2490 Abnormal Psychology
PSYC 2530 Psychology of Personality
PSYC 2540 Social Psychology
PSYC 3070 Adult Development
PSYC 3130 Introduction to Health Psychology
PSYC 3150 Behaviour Modifications Applications
PSYC 3310 Adolescent Development
PSYC 3390 Thinking
PSYC 3160 Perception and Attention
PSYC 3470 Dyadic Relations
PSYC 3490 Individual Differences
PSYC 3580 Language and Thought
PSYC 3630 Psychological Measurement and Assess

~~RLGN 1320 Introduction to World Religions~~
RLGN 1322 Introduction to Eastern Religions
RLGN 1324 Introduction to Western Religions
RLGN 1410 Death and Concepts of the Future
RLGN 1420 Ethics in World Religions
RLGN 1430 Food: Religious Concepts and Practices
RLGN 2060 Religion and Violence
RLGN 2590 Religion and Social Issues

SOC 2320 Canadian Society and Culture
SOC 2330 Social Psychology in Sociological Perspectives
SOC 2360 Small Group Interaction
SOC 2370 Ethnic Relations
SOC 2390 Social Organization
SOC 2460 The Family
~~SOC 2470 Courtship and Marriage~~
SOC 2490 Sociology of Health and Illness
SOC 2510 Criminology
SOC 2610 Sociology of Criminal Justice and Corrections
SOC 2620 The Sociology of Aging
SOC 2630 Social Change
SOC 3310 Theorizing Crime, Law and Social Justice
SOC 3370 Sociology of Work
SOC 3380 Power, Politics and the Welfare State
SOC 3400 Policing and Crime Prevention
SOC 3540 The Sociology of Health Care Systems
SOC 3660 Sociology of Mental Disorder

SOC 3730 Society and Education
SOC 3750 Institutional Responses to Violence in Family and Intimate Relationships
SOC 3770 Women, Health and Medicine
SOC 3790 Women, Crime and Social Justice
SOC 3810 Sociological Perspectives on Gender and Sexuality
SOC 3820 Qualitative and Historical Methods in Sociology
SOC 3830 Youth, Crime and Society
SOC 3840 Community and Social Reconstruction
SOC 3860 Genocide, Crime and Society
SOC 3890 Power and Inequality in Comparative Perspective

WOMN 1600 Introduction to Women's & Gender Studies in the Social Sciences
WOMN 2000 Feminist Thought
WOMN 2500 Race, Class and Sexuality
WOMN 2560 Women, Science and Technology
WOMN 2600 Sex, Gender, Space and Place
WOMN 2610 Gender, Transport and Social Justice
WOMN 3000 Interdisciplinary Research in Women's and Gender Studies
~~WOMN 3330 Sex and Sexualities~~
WOMN 3560 Feminist Perspectives on Violence Against Women

I. H. Asper School of Business
ACC 1100 Introduction to Financial Accounting
ACC 1110 Introduction to Managerial Accounting

GMGT 2060 Management and Organization Theory

HRIR 2440 Human Resource Management
HRIR 3450 Labour and Employment Relations
HRIR 4410 Staffing and Management Development
HRIR 4420 Compensation

Clayton H. Riddell Faculty of Environment, Earth and Resources
GEOG 1280 Introduction to Human Geography
GEOG 1700 Social Justice in the 21st Century: Global Political Economy and Environmental Change
GEOG 2330 Place, Populations and Mobility: Geographic Perspectives
GEOG 2640 Geography of Culture and inequality
GEOG 3640 Social Geography of the Environment
GEOG 4280 Gender and the Human Environment

~~Faculty of Education~~
~~EDUA 1500 Aboriginal Education~~
~~EDUA 1540 Cross-Cultural Education~~

Rady Faculty of Health Sciences
HEAL 4500 Injury Prevention Across the Life Course

HEAL 4650 Selected Topics in Interdisciplinary Health
~~HMEC 4090 Practicum in Human Ecology~~

Max Rady College of Medicine
FMLY 1000 Families in Contemporary Canadian Society
FMLY 1010 Human Development in the Family
FMLY 1012 Introduction to Social Development
FMLY 1420 Family Management Principles
FMLY 2012 Development, Conflict and Displacement
FMLY 2400 Family Financial Health
FMLY 2500 Diversity and Families
FMLY 2600 Foundations of Childhood Developmental Health
FMLY 2650 The Social Aspects of Aging
FMLY 2800 Family Violence
FMLY 3012 Theories of Social Development
FMLY 3220 Death and the Family
FMLY 3240 Families in the Later Years
FMLY 3330 Parenting and Developmental Health
FMLY 3400 Families as Consumers
FMLY 3470 Selected Studies in the Family I
FMLY 3600 Adolescents in Families and Society
FMLY 3750 Fundamentals of Health Promotion
FMLY 3780 Introduction to the Development of Programs for Children and Families
FMLY 3790 Introduction to the Evaluation of Programs for Children and Families
FMLY 3800 Conflict Resolution in the Family
FMLY 3802 Intimate Partner Violence
FMLY 3806 Children, Violence and Rights
FMLY 4012 Social Development Policies
FMLY 4220 Aging and Risk in a Global Context
FMLY 4330 Management of Family Stress
FMLY 4400 Family Economics: Poverty and Wealth
FMLY 4470 Selected Studies in the Family II
FMLY 4480 Work and Family Issues
FMLY 4500 Senior Thesis
FMLY 4602 Family Relationships, Health and Well-Being
FMLY 4604 Children in Adversity
FMLY 4606 A Social Justice Perspective on Indigenous Maternal and Child Health
FMLY 4802 Family Violence Prevention

College of Nursing
NURS 2610 Health and Physical Aspects of Aging
NURS 3330 Women and Health
NURS 3400 Men’s Health: Concerns, Issues and Myths

Faculty of Kinesiology and Recreation Management
~~KIN 2320 Human Anatomy~~

KIN 2610 Health and Physical Aspects of Aging
KIN 4500 Aging and Health

KPER 2320 Human Anatomy

PERS 1200 Physical Activity, Health and Wellness
PERS 3100 Inclusive Physical Activity and Leisure

REC 2650 The Social Aspects of Aging
REC 4250 Leisure and Aging

Faculty of Social Work
SWRK 1310 Introduction to Social Welfare Policy Analysis
SWRK 2050 Community and Organizational Theory
SWRK 2080 Interpersonal Communication Skills
SWRK 2650 The Social Aspects of Aging
SWRK 2110 Emergence of the Canadian Social Welfare State
SWRK 2130 Comparative Social Welfare Systems
SWRK 3130 Contemporary Canadian Social Welfare

Faculty of Kinesiology and Recreation Management

Modifications:

KIN 3300 Functional Assessment and Restoration A Cr.Hrs. 3 0.0
(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). Prerequisite: KIN 3320. Corequisite: KIN 3912 or permission of instructor.

KIN 3400 Therapeutic Modalities Cr.Hrs. 3 0.0
(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 be held with the former PT 2720. Prerequisite: KIN 3320 or permission of instructor.

KIN 3912 Athletic Therapy Practicum Cr.Hrs. 4 0.0
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 the former PHED 3910 or the former KIN 3910. Prerequisite [KIN 2750 (or the former PHED 2020 or the former PHED 3180)] and [KIN 2200 (or the former KIN 3200 or the former PHED 3200)]. Corequisite: KIN 3330 or permission of instructor. Evaluated on a pass/fail basis.

KIN 3914 Clinical Block Placement Cr.Hrs. 2 0.0
Clinical internship experiences on campus and in the community for prospective Athletic Therapy candidates. May not be held for credit with KIN 3910 (PHED 3910). Prerequisites: (KIN 3332, KIN 3400, and KIN 3912) or permission of instructor. Evaluated on a pass/fail basis.

KIN 4400 Therapeutic Exercise Rehabilitation Cr.Hrs. 3 0.0
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. Prerequisites [KIN 3160 (or the former PHED 3160 or the former PHED 3060)] and [KPER 3512 (or the former KIN 3512, or the former KIN 3090, or the former PHED 3090)] and [KIN 3332] or permission of instructor.

REC 2650 The Social Aspects of Aging Cr.Hrs. 3 0.0
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 FMLY 2650 (the former HMEC 2650, SWRK 2650).

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are outlined on the next 9 pages:

- **Bachelor of Kinesiology**
- **Bachelor of Kinesiology (Athletic Therapy)**
- **Bachelor of Physical Education**
- **Bachelor of Recreation Management and Community Development**

Faculty of Kinesiology and Recreation Management – Program Changes

Revisions to:

- Admission Requirements, Program Requirements: Bachelor of Kinesiology, Bachelor of Kinesiology (Athletic Therapy), Bachelor of Physical Education

Key: **New Material**

~~Deleted Material~~

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)

The Faculty of Kinesiology and Recreation Management accepts some of the annual admissions quota into the 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.

Kinesiology/Physical Education Admission Requirements (Direct Entry Category 2)

- English 40S
- Applied Mathematics 40S or Pre-Calculus Mathematics 40S
- One of Biology 40S (*recommended for Bachelor of Kinesiology*), Chemistry 40S, Physics 40S, or Computer Science 40S

Recreation Management and Community Development Admission Requirements (Direct Entry Category 3)

- English 40S
- Applied Mathematics 40S or Pre-Calculus Mathematics 40S
- A third 40S course

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 Advanced Entry Admission (from U1 or another academic program)

The Advanced Entry admission requirements for all degrees include a minimum of 24 credit hours of successfully completed coursework to include the following required courses listed below. 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. Academic course work completed from other recognized post-secondary institutions will be considered once evaluated for equivalency.

Kinesiology/Kinesiology-Athletic Therapy/Physical Education Admission Requirements (Advanced Entry)

- BIOL 1410 Anatomy of the Human Body *and*
- BIOL 1412 Physiology of the Human Body (minimum grade of C) **OR**

  BIOL 2410 Human Physiology 1 and BIOL 2420 Human Physiology 2 (minimum average grade of C) *and*
- KPER 1500 Foundations of Physical Education and Kinesiology (minimum grade of C) *and*
- 15 additional credit hours

Recreation Management and Community Development Admission Requirements (Advanced Entry)

- KPER 1400 Concepts of Recreation and Leisure (minimum grade C) *and*
- 21 additional credit hours

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 Achievement 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 Disabilities, 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.

4.1 Program Requirements: Bachelor of Kinesiology

(Students admitted Direct Entry in September 2017 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.

Year 1: 30 credit hours

Course No.		Credit Hours
BIOL 1410	Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human ~~Anatomy~~ **Body ***	3
KPER 1200	Physical Activity, Health and Wellness	3
KPER 1500	Foundations of Physical Education and Kinesiology	3
PSYC 1200	Introduction to Psychology	6
STAT ~~1000~~	~~Basic Statistical Analysis 1~~	3
(M**)**	**~~STAT 1000 or STAT 1150~~** **1000 Basic Statistical Analysis 1 or STAT 1150 Introduction to Statistics and Computing**	
	Faculty of Science Courses from List A	6
	Elective	3

Year 2: 30 credit hours

Course No.		Credit Hours
KPER 2120	Academic Skills in Kinesiology and Recreation Management	3
KPER 2170	History of Physical Activity and Leisure	3
KPER 2200	Planning Principles	3
KPER 2320	Human Anatomy	3
KPER 2330	Biomechanics	3
KPER 2350	Introduction to Research	3
KPER 2540	Psychology of Sport and Physical Activity	3
KPER 2700	Motor Control and Learning	3
	Elective	6

Year 3: 30 credit hours

Course No.		Credit Hours
KPER 3100	Inclusive Physical Activity and Leisure	3
KPER 3460	Sociology of Physical Activity and Leisure	3
KPER 3470	Exercise Physiology	3
KPER 3510	Physical Activity and Aging	3
KPER 3512	Principles of Fitness Training	3
	Faculty Elective	6
	Elective	9

Year 4: 30 credit hours

Course No.		Credit Hours
KPER 4020	Philosophy of Physical Activity and Leisure	3
KPER 4100	Current Issues	3

Advanced Faculty Electives*	12
Faculty Elective (any)	3
Elective	9

***BIOL 2410 Human Physiology I and BIOL 2420 Human Physiology II (minimum average grade of C) can be substituted for BIOL 1412**

*****Advanced Faculty Electives can be chosen from KIN or KPER courses at the 3000- or 4000-level.

List A: List of Faculty of Science Electives.

ASTR 1810 Introduction to Astronomy: The Magnificent Universe (3)
ASTR 1830 Life in the Universe (3)
BIOL 1020 Biology1: Principles and Themes (3)
BIOL 1030 Biology 2: Biological Diversity and Interactions (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)
COMP 1010 Introductory Computer Science (or equivalent) (3)
COMP 1020 Introductory Computer Science 2 (3)
MATH 1240 Elementary Discrete Mathematics (3)
MATH 1300 Vector Geometry and Linear Algebra (or equivalent) (3)
MATH 1500 Introduction to Calculus (or equivalent) (3)
MATH 1700 Calculus 2 (or equivalent) (3)
MBIO 1010 Microbiology 1 (3)
PHYS 1020 General Physics 1 (or equivalent) (3)
PHYS 1030 General Physics 2 (or equivalent) (3)
STAT 2000 Basic Statistical Analysis 2 (or equivalent) (3)

4.2 Program Requirements: Bachelor of Kinesiology – Athletic Therapy Program

(Students admitted Year 2 Advanced Entry in September 2018 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 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 - 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.

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 Practical (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.		Credit Hours
BIOL 1410	Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human ~~Anatomy~~ **Body ***	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
KPER 1200	Physical Activity, Health and Wellness	3
KPER 1500	Foundations of Physical Education and Kinesiology	3
PSYC 1200	Introduction to Psychology	6
STAT ~~1000~~ **(**M**)**	~~Basic Statistical Analysis 1~~ ~~**STAT 1000 or STAT 1150**~~ **1000 Basic Statistical Analysis 1 or STAT 1150 Introduction to Statistics and Computing**	3
	Faculty of Science Courses from List A	6

Year 2: 30 credit hours

Course No.		Credit Hours
KIN 2750	Athletic Therapy Skills	3
KIN 2200	Basic Trauma and Life Support	3
KIN 3320	Advanced Human Anatomy	3
KPER 2120	Academic Skills in Kinesiology and Recreation Management	3
KPER 2170	History of Physical Activity and Leisure	3
KPER 2200	Planning Principles	3
KPER 2320	Human Anatomy	3
KPER 2330	Biomechanics	3
KPER 2350	Introduction to Research	3
KPER 2700	Motor Control and Learning	3

Year 3: 30 credit hours

Course No.		Credit Hours
KIN 3160	Pathology and Sport Medicine	3
KIN 3330	Functional Assessment and Restoration A	3
KIN 3332	Functional Assessment and Restoration B	3
KIN 3400	Therapeutic Modalities	3
KIN 3912	Athletic Therapy Practicum	4
KIN 3914	Clinical Block Placement	2
KPER 3100	Inclusive Physical Activity and Leisure	3
KPER 3460	Sociology of Physical Activity and Leisure	3
KPER 3470	Exercise Physiology	3

KPER 3512	Principles of Fitness Training	3

Year 4: 30 credit hours

Course No.		Credit Hours
KIN 2540	Psychology of Sport and Physical Activity	3
KIN 3510	Physical Activity and Aging	3
KIN 4160	Advanced Pathology and Sport Medicine	3
KIN 4330	Advanced Biomechanics	3
KIN 4400	Therapeutic Exercise Rehabilitation	3
KIN 4910	Athletic Therapy Practicum	6
KPER 4020	Philosophy of Physical Activity and Leisure	3
KPER 4100	Current Issues	3
	Electives	3

*** BIOL 2410 Human Physiology I and BIOL 2420 Human Physiology II (minimum average grade of C) can be substituted for BIOL 1412**

List A: List of Faculty of Science Electives.

ASTR 1810 Introduction to Astronomy: The Magnificent Universe (3)
ASTR 1830 Life in the Universe (3)
BIOL 1020 Biology1: Principles and Themes (3)
BIOL 1030 Biology 2: Biological Diversity and Interactions (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)
COMP 1010 Introductory Computer Science (or equivalent) (3)
COMP 1020 Introductory Computer Science 2 (3)
MATH 1240 Elementary Discrete Mathematics (3)
MATH 1300 Vector Geometry and Linear Algebra (or equivalent) (3)
MATH 1500 Introduction to Calculus (or equivalent) (3)
MATH 1700 Calculus 2 (or equivalent) (3)
MBIO 1010 Microbiology 1 (3)
PHYS 1020 General Physics 1 (or equivalent) (3)
PHYS 1030 General Physics 2 (or equivalent) (3)
STAT 2000 Basic Statistical Analysis 2 (or equivalent) (3)

4.3 Program Requirements: Bachelor of Physical Education

(Students admitted Year 1 Direct Entry in September 2017 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.

Year 1 or University 1: 30 credit hours

Course No.		Credit Hours
BIOL 1410	Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human Body *	3
ENGL 1XXX	English (1200, 1300, or equivalent)	6
KPER 1200	Physical Activity, Health and Wellness	3
KPER 1500	Foundations of Physical Education and Kinesiology	3
M Requirement	MATH or STAT Course	3
	Elective/Teaching Minor	9

Year 2: 36 credit hours

Course No.		Credit Hours
KPER 2120	Academic Skills in Kinesiology and Recreation Management	3
KPER 2170	History of Physical Activity and leisure	3
KPER 2200	Planning Principles	3
KPER 2320	Human Anatomy	3
KPER 2330	Biomechanics	3
KPER 2540	Psychology of Sport and Physical Activity	3
KPER 2700	Motor Control and Learning	3
PHED 2442	Health Education	3
	Required Experiential Learning Courses:	
PHED 2710	Human Movement Principles	3
PHED 2742	Group Fitness and Leadership	3
	Electives/Teaching Minor	6

Year 3: 36 credit hours

Course No.		Credit Hours
KPER 3100	Inclusive Physical Activity and Leisure	3
KPER 3460	Sociology of Physical Activity and Leisure	3
KPER 3470	Exercise Physiology	3
KPER 3512	Principles of Fitness Training	3
KPER 3550	Growth and Motor Development	3
PHED 3122	Developmental Games and Activities	3
PHED 3362	Culturally Relevant Pedagogies	3
PHED 3732	Dance and Rhythmic Activities	3
	Electives/Teaching Minor	9

Degree Exit Requirement: Current CPR Level C and Emergency or Standard Aid Certification.

*** BIOL 2410 Human Physiology I and BIOL 2420 Human Physiology II (minimum average grade of C) can be substituted for BIOL 1412**

*** Note:** 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 Academic 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.

4.4 Program Requirements: Bachelor of Recreation Management and Community Development

(Students admitted Year 1 Direct Entry in September 2017 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.

Year 1 – University 1: 30 credit hours

Course No.		Credit Hours
KPER 1200	Physical Activity, Health and Wellness	3
KPER 1400	Concepts of Recreation and Leisure	3
PSYC 1200	Introduction to Psychology	6
SOC 1200	Introduction to Sociology	6
STAT ~~1000~~ **(**M**)** ~~Basic Statistical Analysis 1~~ **~~STAT 1000 or STAT 1150~~ 1000 Basic Statistical Analysis 1 or STAT 1150 Introduction to Statistics and Computing**		3
	Electives	9

Year 2: 30 credit hours

Course No.		Credit Hours
KPER 2120	Academic Skills in Kinesiology and Recreation Management	3
KPER 2170	History of Physical Activity and Leisure	3
KPER 2200	Planning Principles	3
KPER 2350	Introduction to Research	3
REC 2400	Management and Marketing of Leisure Services	3
	Introductory Recreation Electives Must choose 3 of the following 4 **5**:	9
REC 2100	Introduction to Leisure Travel (3)	
REC 2130	Introduction to Outdoor and Land-Based Recreation (3)	
REC 2150	Introduction to Therapeutic Recreation (3)	
REC 2170	Introduction to Sport Management (3)	
REC 2650	**Social Aspects of Aging**	
	Electives	6

Year 3: 30 credit hours

Course No.		Credit Hours
KPER 3100	Inclusive Physical Activity and Leisure	3

KPER 3460	Sociology of Physical Activity and Leisure	3
REC 3072	Principles of Community Development	3
REC 3180	Social Psychology of Leisure	3
REC 3220	Program Planning and Evaluation	3
REC 3630	Service and Experiential Learning	3
REC 3850	The Planning of Recreation Areas and Facilities	3
	Advanced Recreation Elective	3
	Electives	6

Year 4: 30 credit hours

Course No.		Credit Hours
KPER 4020	Philosophy of Physical Activity and Leisure	3
KPER 4100	Current Issues	3
KPER 4630	Supervised Fieldwork Experience (or both KPER 4631 and 4632 combined)	12
REC 4070	Advanced Community Development	3
	Advanced Recreation Elective	3
	Electives	6

List C: List of Approved Advanced Recreation Electives:

REC 3090 Sustainable Nature-Based Tourism (3)
REC 3170 Sport and Development in Community (3)
REC 3310 Cultural Tourism (3)
REC 3770 Indigenous Perspectives on Land-Based Education (3)
REC 4060 Person Centred Leisure Education (3)
REC 4072 Advanced Marketing of Leisure Services (3)
REC 4120 Recreational Travel and Tourism (3)
REC 4250 Leisure and Aging (3)
REC 4350 Parks and Protected Areas Planning, Management: Field Studies (6)
REC 4400 The Administration of Special Events (3)
REC 4720 Wilderness Adventures (3)
REC 4770 Indigenous Recreation and Wellbeing (3)
KPER 4000 Special Topics (3)
KPER 4110 The Olympics and the Global Sporting Event (3)
KPER 4310 Physical Activity Counselling
KPER 4320 Sport and the Body (3)
KPER 4340 Sport, Film and Society (3)
PHED 4710 Outdoor Education (3)

Modifications to the **Interfaculty Option in Aging** are outlined on the next page.

Faculty of Kinesiology and Recreation Management – Program Changes

Revisions to:

- Interfaculty Option in Aging (section 4.7)

Key: **New Material**

~~Deleted Material~~

4.7 Interfaculty Option in Aging

~~The Option in Aging is offered by and in the following faculties: Arts, Nursing, *Kinesiology and Recreation Management*, and Social Work.~~

An Interfaculty Option in Aging is offered by the following faculties and colleges: Agricultural and Food Sciences, Arts, Kinesiology and Recreation Management, Medicine, Nursing, 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~~ **FMLY 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~~/**FMLY 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.

Faculty of Management

Accounting and Finance

Introduction:

MIS 3010 Business Data Analytics Cr.Hrs. 3 +3.0
The course covers the process of data analysis: extracting, transforming, analyzing, visualizing, and interpreting data by using popular analytics software and techniques. May not be held with MIS 4250 when titled Data Analytics. Prerequisite: MIS 2000 (C+) or MIS 2001 (C+).

NET CHANGE IN CREDIT HOURS: +3.0

Business Administration

Program proposal:

A proposal for a **Minor in Leadership for Business and Organizations** is outlined on the next 9 pages.

UNIVERSITY OF MANITOBA

Office of the Provost and Vice-President (Academic)

PROPOSAL FOR NEW ACADEMIC MINOR OR CONCENTRATION

Please enter the requested information below and submit both hardcopies and electronic copies to the Office of the University Secretary and the Vice-Provost (Integrated Planning and Academic Programs). Note: this template has been formatted using Microsoft Word 2010 for PC. Some formatting may be lost if using an earlier version of Word or Microsoft Word for Mac. Should you have any difficulties, please contact Cassandra Davidson, Program Analyst, at cassandra.davidson@umanitoba.ca.

It is advised that the unit initially discuss the proposed new minor/concentration with the Vice-Provost (Integrated Planning and Academic Programs) prior to completion of and submission of this form.

Date: 9 August 2019

Faculty: Management
Department: Business Administration

Contact Details: Dr. Jijun Gao, Associate Professor and Department Head, Business Administration, Jijun.Gao@umanitoba.ca and Dr. Suzanne Gagnon, Suzanne.Gagnon@umanitoba.ca, Associate Professor and Director James W Burns Leadership Institute

Section 1: **Program Overview**

1. Program type: Minor: ☒ Concentration: ☐

2. Proposed program name: Minor in Leadership for Business and Organizations

3. Length of program: *Indicate the required number of credit hours including associated pre-requisite requirements.*
The minimum number of credits for this minor is 18 credit hours

4. Proposed start of program:
Fall 2020

Section 2: **Program Details**

5. Description of program: *Provide a brief outline of the program, its objectives and how it will benefit student.*

The proposed Minor in Leadership for Business and Organizations is offered to non-Management students whose faculties permit a minor, through the Department of Business Administration with the support from the newly established James W Burns Leadership Institute. The minor is a response to calls across sectors for graduates who combine their subject knowledge with conceptual organizational knowledge and competencies in leading teams, conflict resolution, organizational change, negotiations,

as well as corporate social responsibility and other leadership components that facilitate and support personal, work group and organizational success. These are the essential components of leadership knowledge that apply to graduates across sectors.

The proposed minor advances experiential, interdisciplinary learning and the University's strategic priority #1, Goal a. in *Taking our Place,* through assisting interested students to distinguish themselves from other graduates in the marketplace. The minor aims to meet needs of students enrolled in non-professional degree programs who wish to complement their subject knowledge with education and skills offered via such a minor.

The minor courses teach theoretical leadership knowledge and competencies that are relevant across disciplines and types of organization including for-profit business, non-profit, and the public sector. The interdisciplinary mix of students in the classroom will facilitate learning from alternative perspectives and knowledge bases. This is underlined with the capstone course in 'Leading Change'. This legacy course will consist in an interdisciplinary team project in an organizational setting, defined broadly, that builds on the theory and content of the earlier courses.

6. Course requirements: *Provide a list of courses (include course codes) and breakdown of course requirements by level (e.g. 6 hours at the 1000 level, 3 hours at the 2000 level, etc.). Indicate whether proposed coursework is currently offered or new. Note any pre-requisite details where applicable.*

The Minor in Leadership for Business and Organizations will consist of 18 credit hours from the following:

1) All students must complete 6 credit hours of prerequisite course work, with a grade of "C" or better, prior to declaring the Minor, comprising:

Business and Society	GMGT 1010 (3hrs)
Management and Organizational Theory	GMGT 2060 (3 hrs)

2) And, after entry to the minor all students must complete the following 6 credit hours:

Introduction to Organizational Behaviour	GMGT 2070 (3 hrs)
Leading Change	LEAD 4010 (3 hrs)

3) And, any 6 credit hours from the following courses:

Management Decision-Making	GMGT 3010 (3 hrs)
Negotiation and Conflict Management	LEAD 3010 (3 hrs)
Team Building & Diversity	LEAD 3020 (3 hrs)
Corporate Social and Environmental Responsibility	LEAD 3030 (3 hrs)
Leadership, Power and Politics in Organizations	LEAD 4020 (3 hrs)
**Social Psychology	PSYC 2540 (3 hrs)
***Aboriginal Organizations	NATV 3350 (3 hrs)
***Aboriginal Economic Leadership	NATV 4320 (3 hrs)

***Prerequisite: PSYC 1200(C) or written consent of department head.*

****Prerequisite NATV 1200 (C) or [NATV 1200 (C) and NATV 1240 (C)] or written consent of department head.*

7. Program availability: *Will this program be offered to all students eligible to declare a minor/concentration or will it be restricted to a subset of students. If the latter, provide a brief explanation as to why the program will be restricted.*

The Minor in Leadership in Business and Organizations will be open to any student eligible to declare a minor. A minimum number of seats would be available each year to faculties that allow the minor in their degree program. This would parallel the current practice followed for annual new admits to the Management Minor which has been in place for some decades.

8. Admission requirements: *If applicable, outline any admission requirements to the program.*

The general admission requirement for entry to the Minor in Leadership for Business and Organizations is a grade of "C" or better in each of:

Business and Society	GMGT 1010 (3hrs)
Management and Organizational Theory	GMGT 2060 (3 hrs)

Students who declare the Minor will not be enrolled in the Faculty of Management.

Section 3: **Program Demand**

9. Strategic priorities: *Comment on how the program fits within the university's strategic priorities.*

The Minor in Leadership for Business and Organizations serves and advances several key points in the University's strategic plan, *Taking our Place*:

- Increasing opportunities for experiential learning (Inspiring minds)
- Developing a community and culture of leadership and teamwork among our students and stakeholders (Building community)
- Being an internationally recognized university with local relevance and global impact (Forging connections)

Further, the proposed minor advances strategic priority #1, Goal a. in *Taking our Place,* through assisting students enrolled in non-professional and degree programs of a more general nature to add value to their degrees and distinguish themselves from other graduates in the marketplace.

10. Student demand: *Provide evidence of student demand and interest in the program.*
Consultations with Faculty leadership in several faculties that permit a minor have expressed interest and projected some demand from their students. These include Arts, Science, Kinesiology and Recreation, and Environment, Earth and Resources. The Deans and Associate Deans in each of these faculties have provided formal support for the minor. Given the initial size of the minor program (35 places in years 1 and 2, 65 places thereafter depending on demand), we expect that demand will meet this supply.

Other faculties were consulted and at this time, their students are not able to enrol in a minor and we do not expect demand from the following faculties: Nursing, Agriculture and Music.

11. Projected enrolment: *Based on the evidence of demand, provide projected enrolment numbers in the program.*

We will cap enrolment in the Minor at 35 in Year 1 and Year 2 of operation. In Year 3 and Year 4 of operation, we will cap enrolment in the Minor at 65.

The number of positions allocated for Fall 2020 / Winter 2021 to each eligible Faculty/School is to be confirmed.

It will be up to each participating Faculty/School to decide which students they will admit to the Minor. Students admitted to the Minor may register for the relevant courses at any time throughout the registration period. Once admitted into the Minor after completing the prerequisites, students have the same priority of access to the minor courses as Asper students. (Please see attached internal process document.)

Advisors would be supported through the following, and the minor would be advertised to students across faculties using means such as:

- A one-pager and supporting documentation for Academic Advisors across faculties;
- A website banner and distributing it to communications stakeholders in all faculties;
- Social media communications channels to students to increase knowledge of the minor and its benefits;
- A UM Today article about leadership and tying the minor into the article, and also posting this on student channels;
- A presentation at the monthly UM Communications Group meeting to make communications stakeholders across faculties aware;
- Advertising the new minor in the 2020 University Viewbook.

12. Effects on other programs: *Comment on the potential effect of the program on other existing programs. Attach letters of support for any programs/units impacted by the proposed program.*

Asper has been offering a Minor in Management for some years, first approved by Senate on November 4, 1981. This has generally been well-subscribed and currently 90 positions are offered. The Minor in Leadership for Business and Organizations is targeted to a different area of conceptual knowledge and skills, specifically leadership and organizational knowledge relevant to personal and organizational leadership effectiveness in every industry and sector.

We know of no other similar programs offered at the University of Manitoba or in other postsecondary institutions in our immediate environment.

Upon request of the Faculty of Arts, we have included three Arts courses as electives in the Minor.

13. Similar programs: *If known, describe similar programs within Manitoba, outlining any similarities or differences with the proposed program.*

N/A

14. External consultation: *Where appropriate, outline any consultations with industry, business and/or any third-party groups in development of the proposed program.*

Members of the Department of Business Administration have had discussions with organizational leaders and employers across sectors about the value of this proposed Minor in terms of the hiring potential of University of Manitoba students. These include leaders in engineering, business, the arts, science, natural resources and the environment, social services, and the broad public sector and civil service.

Extensive secondary sources such as the Conference Board of Canada and the Business Council of Canada point to the increasing need for and relevance of organizational leadership skills among graduates across disciplines. As organizations become flatter, more members of the labour force work in different relationships with large organizations and in smaller teams and groups, leadership skills become increasingly important. In their report 'Navigating Change' (2018), the Business Council writes, *"We'd like to see a] focus by educational institutions on producing grads with job-ready skills: arts students exposed to technology and business, or technical programs that include collaboration, leadership and communication skills development."* Their survey of employers further finds that: "Organizations are looking for qualities that go beyond technical capabilities when they hire new graduates. The most sought-after skill is the ability to work in teams. It should be emphasized that these are the characteristics that differentiate top candidates who already meet the required threshold for functional knowledge.

The top five skills employers look for in entry-level hires, according to the Business Council's report, are below. Each relates directly to the leadership knowledge and capabilities that we will teach in this Minor:

1. Collaboration/teamwork/interpersonal/relationship-building skills
2. Communication skills
3. Problem-solving skills
4. Analytical capabilities
5. Resiliency

[Source: Navigating Change: 2018 Business Council Skills Survey, Spring 2018]

Section 4: **Resource Requirements**

15. Projected costs and revenues: *Provide a general overview of the projected costs and revenues of the program. Where applicable, comment in detail on the categories below.*

Projected costs and revenues have been calculated through the Dean's office and we expect these to be in balance given that the additional enrolments of students will match the costs to the faculty in providing new sessions and spaces. New sections may be anticipated beginning in year 2, should

enrolments increase as projected. For example we would anticipate one new section of the more popular Business electives, which would be monitored on an ongoing basis.

In the same line, in years 3 and 4, monitoring interest and demand, the department would add space and/or sections as appropriate. Most of the pressure would be anticipated in the required courses for the Minor.

16. Coursework: *Comment on whether the proposed program will require the offering of additional courses.*
No new courses are required in developing this Minor. While some of these courses are not offered every year, given their number there will be sufficient availability of electives for years 2 and 3 of the Minor on an ongoing basis.

17. Staffing: *Comment on whether the proposed program will require additional academic or administrative staff.*
Currently there is capacity for additional students in the Minor courses. It is anticipated that additional academic staff and new sections of some courses may be needed beginning in year 2, if the projected enrolments increase as expected, as mentioned in point 15 above.

In terms of Administrative support, the required support will come from existing administrative capacity in the Department of Business Administration, for example in liaising with the home faculties, and promoting the Minor to students.

18. Infrastructure / equipment: *Comment on how the proposed program will impact the use of current infrastructure and equipment.*
No additional infrastructure of equipment will be required.

19. Library resources: *If the program involves new courses, or coursework that has not been offered on a regular basis in recent years, comment on the adequacy of existing library resources.*
No additional library resources will be required.

20. Additional Funds: *Provide information on whether new funds are required for this program. If so, provide details.*
We are not seeking additional funds from the university at this time; the program will be self-sustaining.

Section 5: **Approvals**

Faculty Approvals:

Department/Program Head: _____ Aug 9/19. Enter date.

Dean/Director: _____ Aug 9/19 Enter date.

Faculty/School Council: _____ Sept 6/19. Enter date.

Institutional Approvals:

Senate Committee on Curriculum & Course Changes: _____ Enter date.

Senate Planning & Priorities Committee (*if required*):_____ Enter date.

Senate Approval:_____ Enter date.

Provost Approval: _____ Enter date.

Faculty of Management/I.H. Asper School of Business
Calendar Modification
Effective for September 2020

Section 3: Academic Regulations

NOTE: A new Section 3.3 will be created and this section will be renumbered from Section 3.3 onward.

3.3 Leadership for Business and Organizations Minor for Non-Business Students

The Minor in Leadership for Business and Organizations is offered to non-Management students whose faculties permit a Minor. The minor combines subject knowledge with conceptual organizational knowledge and competencies in leading teams, conflict resolution, organizational change, negotiations as well as corporate responsibility and other leadership components that facilitate and support personal, work group and organizational success.

A limited number of seats in this minor will be available each year. Supplementary entrance requirements and enrolment limits may vary with a student's faculty of registration. Students planning to enrol in this minor should consult a student advisor in their home faculty.

The Minor in Leadership for Business and Organizations consists of 18 credit hours from the following:

Entrance to the Minor in Leadership for Business and Organizations is comprised of 6 credit hours of prerequisite courses completed with a minimum grade of "C" or better:

GMGT 1010 Business and Society (3)
GMGT 2060 Management and Organizational Theory (3)
*Other Faculty specific entrancerequirements may be required because of the limited seats available each year; students must consult a student advisor in their home faculty for additional information.

And, after entry to the minor all students must complete the following 6 credit hours:

GMGT 2070 Introduction to Organizational Behaviour (3)
LEAD 4010 Leading Change (3)

And, any 6 credit hours from the following courses:

GMGT 3010 Management Decision-Making (3)
LEAD 3010 Negotiation and Conflict Management (3)
LEAD 3020 Team Building & Diversity (3)
LEAD 3030 Corporate Social and Environmental Responsibility (3)
LEAD 4020 Leadership, Power and Politics in Organizations (3)
PSYC 2540 Social Psychology (3)
NATV 3350 Aboriginal Organizations (3)
NATV 4320 Aboriginal Economic Leadership (3)

Internal Process Document Example
Leadership for Business and Organizations Minor
Proposed Seats per Interested Faculty

The Leadership for Business and Organizations Minor consists of 18 credit hours of specified courses. Entrance requirements are specified but each Faculty's supplementary entrance requirements and enrolment limits vary with a student's faculty of registration.

The following are the estimated number of positions allocated, to interested faculties, for the first 4 years from Fall 2020 through Fall 2023 to each Faculty/School offering the Leadership for Business and Organizations Minor:

*exact allocation/faculty may vary as the interest of students from Faculty's offering the minor vary; numbers shown are based on interest at time of request for support prior to Senate approval

Faculty/School	**Number of Positions Y1&Y2 (total avail 35)**	**Number of Positions Y3&Y4 (total avail 65)**
Arts	12	23
Science	12	23
Kinesiology and Recreation Mgmt	6	10
Environment	5	9

It is up to each Faculty/School to decide which students they will admit to the Leadership for Business and Organizations Minor. Students admitted to the Minor may register for Business courses at any time throughout the registration period. They have the same priority of access to Business courses as do Business students. However, their own Faculty advisors must add the Business courses for them using the "College" override.

Up to and including datexxx, yearxxx, registration in Asper courses is restricted to Asper students, the Leadership for Business and Organizations Minor students, the Management Minor students, and students with allocated reserves. Commencing date xxx, non-Asper students may register in Asper courses (with some exceptions as noted in the comments under each section in the Fall /Winter schedule), provided space is available, and provided students meet all prerequisite and co-requisite requirements.

H:\ASB\Calendar and Curriculum\Department of BADMIN\Leadership Minor Proposal\Proposal and Supports\Final Documents\Leadership Minor_DRAFT Allocation of Seats.docx

College of Medicine

Community Health Sciences

Modifications:

FMLY 3780 Introduction to the Development of Programs for Children and Families 0.0
Cr.Hrs. 3
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: HNSC 2000 (or the former HMEC 2000 or the former HMEC 2050).

FMLY 3790 Introduction to the Evaluation of Programs for Children and Families 0.0
Cr.Hrs. 3
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. Prerequisites: HNSC 2000 (or the former HMEC 2000 or the former HMEC 2050).

FMLY 4220 Aging and Risk in a Global Context Cr.Hrs. 3 0.0
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. Pre- or corequisite: FMLY 2650 (or the former HMEC 2650) or SWRK 2650 or SWRK 2651 or REC 2650 or NURS 2610 or KIN 2610.

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications

Modifications to the programs listed below are described on the next 2 pages:

- **Bachelor of Human Ecology in Family Social Sciences**
  - **Aging and Developmental Health Option**
  - **Social Development Option**

4.4.2 Aging and Developmental Health Option

4.4.2 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.

Aging and Developmental Health Option		
Course Number	**Course Name**	**Credit Hours**
~~HMEC or REC or SWRK 2650~~	~~Social Aspects of Aging~~	~~3~~
FMLY or REC or SWRK 2650	**The Social Aspects of Aging**	**3**
NURS or 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
PSYC 2490	Abnormal Psychology	
PSYC 3070	Adult Development	
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 3540	The Sociology of Health Care Systems	

4.4.6 Social Development Option

4.4.6 Social Development Option

Social Development Option		
Course Number	**Course Name**	**Credit Hours**
	At least 9 credit hours from:	**9**
FMLY 2012	Development, Conflict, and Displacement	
FMLY 3012	Theories of Social Development	
FMLY 4012	Social Development Policies	

FMLY 4400	Family Economics, Poverty and Wealth	
	Three (3) credit hours from:	**3**
~~HMEC/SWRK/REC 2650~~	~~Social Aspects of Aging~~	
FMLY/SWRK/REC 2650	**The 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	Management of Family Stress	
FMLY 4480	Work and Family Issues	
FMLY 4602	Family Relationships, Health and Well-Being	
FMLY 4604	Children in Adversity	
	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 1220	**Indigenous Peoples in Canada, Part 1**	
~~NATV 1240~~	~~The Native Peoples of Canada, Part 2~~	
NATV 1240	**Indigenous Peoples in Canada, Part 2**	
~~POLS 1000~~	~~Democracy and Development~~	
~~POLS 2070~~	~~Introduction to Canadian Government~~	
~~POLS 4710~~	~~Political Theory and the Family~~	
POLS 1502	**Introduction to Political Studies**	
POLS 2702	**Introduction to Canadian Politics**	
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	

Modifications to the **Bachelor of Human Ecology in Family Social Sciences, After Degree** are outlined on the next 2 pages.

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 Bachelor of Human Ecology Social Sciences Degree Program that are required to complete an option. If a second option is not chosen, then these credit hours must be taken within the program. There are no free electives in the ADP.

Students admitted in September 2015 or Later

Bachelor of Human Ecology Family Social Sciences Degree Program Core Courses (any 6 credit hours. See note 3):

Research Methods and Presentation, Introduction to Social Epidemiology, or Integration of Health Determinants of Individuals (see note 3)

At least 6 credit hours from:

~~HMEC 2000,~~		6 – 9
~~HMEC 3000,~~ or		
HEAL 2600	Integration of Health Determinants of Individuals	
HEAL 3000	**Introduction to Social Epidemiology**	
HNSC 2000	**Research Methods and Presentation**	

Family Social Sciences Requirements (see note 4):

FMLY 2400	Family Financial Health	3
FMLY 2500	Diversity and Families	3
FMLY 3750	Fundamentals of Health Promotion	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~~

FMLY/SWRK/REC 2650 The Social Aspects of Aging

Family Social Sciences Option (see note 6):		15
Family Social Sciences Electives (see note 7):		12 – 15
~~Stat 1000~~	~~Basic Statistical Analysis (see note 8):~~	~~3~~
STAT 1000	**Basis Statistical Analysis 1 (see note 8):**	**3**
Total		60

NOTES:

1. The same entrance requirements will be applied to ADP students in order to maintain current Degree Program 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 Bachelor of Human Ecology Family Social Sciences Degree Program 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 Bachelor of Human Ecology Family Social Sciences Degree Program 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 Family Social Sciences.

ADP in FSS is 60 credit hours. If students have taken any of the required courses for this degree, they can be transferred in. ADP students will need to take additional courses in order to fulfill the University of Manitoba's Residency Requirement. This requirement states all students must complete at least 60 credit hours in the Bachelor of Human Ecology - Family Social Sciences degree program at the University of Manitoba. Students may want to discuss additional courses with the Academic Advisor's office.

Modifications to the **Interfaculty Option in Aging** are outlined on the next page.

4.7 Interfaculty Option in Aging

An Interfaculty Option in Aging is offered by the following faculties and colleges: Agricultural and Food Sciences, Arts, Kinesiology and Recreation Management, Medicine, Nursing, and Social Work.

To complete the option, students must complete each of the following requirements:

Interfaculty Option in Aging		
~~Required Courses (6 credit hours):~~	~~HMEC 2650~~ or ~~REC 2650~~ or ~~SWRK 2650~~ ~~The Social Aspects of Aging~~	~~KIN 2610~~ or ~~NURS 2610~~ ~~Health and Physical Aspects of Aging~~
Required Courses (6 credit hours):	**FMLY 2650 or REC 2650 or SWRK 2650**	**KIN 2610 or NURS 2610**
At least six (6) credit hours of discipline-specific (professional) applied work in the student's department of registration	FMLY 4300 ~~HMEC 4090~~ Agricultural and Food Sciences Course: HNSC 4362	Application is required for all field placement or practicum courses.
Six (6) credit hours of aging-related courses from participating units	Human Ecology Courses: FMLY 3220 FMLY 3240 FMLY 4220 Agricultural and Food Science Courses: HNSC 2130 HNSC 4310	

Upon completion of these requirements, a comment will be added to the student's transcript.

Faculty of Science

Actuarial Mathematics

Program Modification:

Modifications to the **Bachelor of Science (Honours) in Actuarial Mathematics** are outlined on the next 2 pages.

4.1 Actuarial mathematics

Campus Address/General Office: 640 Drake Centre
Telephone: 204 474 6412
Email Address: warrencentre@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 DGPA of 3.00, and also obtained a minimum grade of "B" in one of the courses listed in Year 1 of the program chart. All of the courses listed in Year 1 of the program chart 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 3630 (or both ACT 3130 and ACT 3230), **ACT 4010**, ACT 4020, ACT 4030, ACT 4060, ACT 4160.

4.1.2 Actuarial Mathematics Program Chart

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS ACTUARIAL MATHEMATICS 120 CREDIT HOURS			
ECON 1010~~[4]~~; ECON 1020~~[4]~~ MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240 STAT 1150[1], STAT 2150	ACT 2020, ACT 2120, ACT 2210 STAT 2400, ~~STAT 3400~~ **STAT 2800** ACC 1100[2], FIN 2200[2] MATH 2720 GMGT 2010[4]	ACT 3630 (or both ACT 3130 and ACT 3230), ACT 3340, ACT 4020[3], ACT 4030[3] ~~STAT 3050, STAT 3800~~ **STAT 3030, STAT 3100**	**ACT 4010,** ACT 4060, ACT 4160 **STAT 3450[3],** ~~STAT 3470[3],~~ STAT 3490[3] MSCI 2150
6 credit hours of electives	3 credit hours of electives	9 credit hours of electives[5]	~~15~~ **12** credit hours of electives[5]
30Hours	30 Hours	30 Hours	30 Hours
JOINT STATISTICS - ACTUARIAL MATHEMATICS HONOURS: See Section 4.13.3			

NOTES:

[1] The following substitutions are allowed: MATH 1300 (C) or MATH 1310 in place of MATH 1220 (C), MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230 (C), MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232 (C), STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150.

[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 3470,~~ **STAT 3450,** STAT 3490, ACT 4020 and ACT 4030 may be taken in Year 3 or 4.

[4] GMGT 2010 fulfills the written English requirement.

[5] It is recommended that electives in Year 3 and Year 4 be chosen from Actuarial Mathematics, 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. Examples include:
Year 3: FIN 3410, FIN 3450, FIN 3480, MSCI 3400, ~~STAT 3480,~~ **STAT 3150, STAT 3550, STAT 3690.**
Year 4: FIN 4240, STAT 4100, ~~STAT 4200, STAT 4520, STAT 4530,~~ **STAT 4150, STAT 4250,** STAT 4630.

Biochemistry

Program modifications:

Modifications to the following programs are outlined on the next 2 pages:

- **Bachelor of Science (Major) in Biochemistry, Cooperative Option**
- **Bachelor of Science (Honours), in Biochemistry Cooperative Option**

4.2 Biochemistry

<table>
<tr><th colspan="4">4.2.2 Biochemistry Programs (offered Jointly by the Departments of Chemistry and Microbiology)</th></tr>
<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 2260 (CHEM 2280), CHEM 2360, CHEM 2370, CHEM 2400, CHEM 2470

MBIO 1010[6], MBIO 2020</td><td>CHEM 3570

MBIO 3410, MBIO 3450, MBIO 3460</td><td>CHEM 4360, CHEM 4620, CHEM 4630, (CHEM 4710 (6) or MBIO 4530 (6))

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">18 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>
<tr><td colspan="4">JOINT HONOURS CO-OPERATIVE OPTION[3] 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 2260 (CHEM 2280), CHEM 2360, CHEM 2370, CHEM 2400, CHEM 2470

MBIO 1010[6], MBIO 2020</td><td>CHEM 3570

MBIO 3410, MBIO 3450, MBIO 3460</td><td>CHEM 4360, CHEM 4620, CHEM 4630

MBIO 4540</td></tr>
<tr><td colspan="2" rowspan="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">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]</td></tr>
<tr><td colspan="2"><s>Work Terms:</s>

<s>MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990</s>

<u>Co-op Requirements (if selected):
SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)</u></td></tr>
</table>

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 PHYS 1020), PHYS 1070 (or PHYS 1030) MATH 1500[1], MATH 1700[1]	CHEM 2210, CHEM 2220, CHEM 2260 (CHEM 2280), CHEM 2360, CHEM 2370, CHEM 2400, CHEM 2470 MBIO 1010[6], 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~~ **Co-op Requirements (if selected): SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)**	

NOTES:

[1] MATH 1230 or MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1232 or 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 co-operative 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, the former MATH 1190, the former COMP 1260, the former COMP 1270, COMP 1500 and COMP 1600 may not be chosen to satisfy this requirement

[6] MBIO 1010 can be taken in Year 1 after BIOL 1020.

(The number 6 in brackets indicates a six credit hour course.)

Biological Sciences

Introduction:

BIOL 4314 Arctic Field Ecology Cr.Hrs. 3 +3.0
This hands-on field course will be held in Churchill, MB. While participating in ongoing monitoring and research, students will learn techniques for estimating wildlife abundance, distribution, behaviour, and reproductive parameters. The course is offered in Summer Term. A field trip fee will be assessed in addition to tuition fees. May not be held with BIOL 4800 when topic is Arctic Field Ecology - Churchill, MB. Prerequisites: (one of BIOL 2300, BIOL 2301, or AGEC 2370) and (one of STAT 1150, STAT 1000, or STAT 1001) and instructor permission.

Modifications:

BIOL 1000 Biology: Foundations of Life Cr.Hrs. 3 0.0
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. May not be held with BIOL 1001, BIOL 1020, or BIOL 1021. Prerequisite: Any grade 12 or 40S Mathematics course (50%) or MSKL 0100.

BIOL 1010 Biology: Biological Diversity and Interaction Cr.Hrs. 3 0.0
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. May not be held with BIOL 1011, BIOL 1030, or BIOL 1031. Prerequisite: Any grade 12 or 40S Mathematics course (50%) or MSKL 0100.

BIOL 1020 Biology 1: Principles and Themes Cr.Hrs. 3 0.0
(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. May not be held with BIOL 1021, BIOL 1000, BIOL 1001, or BIOE 2590. Prerequisite: Biology 40S (50%) and [any 40S Mathematics (50%) or MSKL 0100] and [one of 40S Chemistry (50%), CSKL 0100, 40S Physics (50%), or PSKL 0100] or BIOL 1000. 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 2242 The Flowering Plants Cr.Hrs. 3 0.0
(Lab required) 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. May not be held with the former BOTN 2010. Prerequisite: BIOL 1030 or BIOL 1031.

BIOL 2260 Biology of Fungi and Lichens Cr.Hrs. 3 0.0
(Lab required) 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. May not be held with BIOL 2261 or the former BOTN 2210. Prerequisite: BIOL 1030 or BIOL 1031.

BIOL 2300 Principles of Ecology Cr.Hrs. 3 0.0
(Lab required) 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. May not be held with BIOL 2301, BIOL 2390, or AGEC 2370. Prerequisite: BIOL 1030 or BIOL 1031. Prerequisite or concurrent requirement: one of STAT 1150 (D), STAT 1000 (D), or STAT 1001 (D).

BIOL 3310 Foundations of Population Ecology Cr.Hrs. 3 0.0
(Lab required) The study of living populations, through experimentation and theory, will be examined. Topics investigated will include population regulation, competition, predation, disease, harvest, nonlinear and spatial dynamics and individual based models. Concepts and methods are reinforced through tutorials and evaluated by assignments and examinations. May not be held with the former ZOOL 3680. Prerequisites: [one of BIOL 2300, BIOL 2301, or AGEC 2370] and [one of STAT 1150, STAT 2000, or STAT 2001] or consent of department.

BIOL 3314 Field Ecology Cr.Hrs. 3 0.0
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. May not be held with the former BOTN 3420 or the former ZOOL 3450. Prerequisites: [a "C" or better in one of BIOL 2300, BIOL 2301, or AGEC 2370] and [a "D" or better in one of STAT 1150, STAT 2000, or STAT 2001].

BIOL 3318 Boreal Ecology Cr.Hrs. 3 0.0
A survey of ecological factors in the formation, evolution, and survival of northern biota including northern peoples. There will be optional weekend field trips. May not be held with the former ZOOL 3380. Prerequisite: [one of BIOL 2300, BIOL 2301, or AGEC 2370] and [one of STAT 1150, STAT 1000, or STAT 1001]; or consent of department.

BIOL 3340 Biology of Primitive Fungi and Allies Cr.Hrs. 3 0.0
Studies on the evolution of ancestral fungi, relevant Chromista and slime molds within the broader context of evolution of derived fungi and ancient groups basal to fungi and animals. The course also encompasses cogent life histories, development, structure, taxonomy, and fundamental biochemistry. General methods for environmental collection, isolation and study of these organisms will be presented in lectures. Prerequisite: BIOL 2260 or BIOL 2261, or consent of the department.

BIOL 3350 Methods of Data Collection and Analysis in Ecology Cr.Hrs. 3 0.0
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. May not be held with the former BIOL 4320 or the former ZOOL 4200. Prerequisites: [a "C" or better in one of BIOL 2300, BIOL 2301, or AGEC 2370] and [a "D" or better in one of STAT 1150, STAT 2000, or STAT 2001] or consent of department.

BIOL 3560 Comparative Animal Histology Cr.Hrs. 3 0.0
(Lab required) 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. May not be held with BIOL 3561 or the former ZOOL 3060. Prerequisite: one of BIOL 2210, BIOL 2520, or BIOL 2521.

BIOL 4220 Marine Biodiversity Cr.Hrs. 3 0.0
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. May not be held with the former ZOOL 4260. Prerequisites: [one of BIOL 2300, BIOL 2301, or AGEC 2370] and [one of STAT 1150, STAT 1000, or STAT 1001]; or consent of department.

BIOL 4312 Analysis of Biological Communities Cr.Hrs. 3 0.0
A survey of methods and approaches to the analysis of biological and environmental data containing many variables. Offered in alternate years. May not be held with the former BOTN 4650. Prerequisites: [one of BIOL 2300, BIOL 2301, or AGEC 2370] and [one of STAT 1150, STAT 2000, or STAT 2001].

BIOL 4380 Environmental Toxicology Cr.Hrs. 3 0.0
(Lab required) 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. May not be held with the former ZOOL 4840. Prerequisites: [one of CHEM 2370, CHEM 2371, MBIO 2370, MBIO 2371, CHEM 2780, or MBIO 2780] and [one of BIOL 2300, BIOL 2301, or AGEC 2370] and [one of STAT 1150, STAT 1000, or STAT 1001]; and [one of BIOL 2410, BIOL 2411, BIOL 3470, BIOL 3472, the former BIOL 3460, the former BIOL 3462] or consent of department.

BIOL 4480 Comparative Endocrinology Cr.Hrs. 3 0.0
The structure, control, and function of vertebrate endocrine systems. BIOL 2520, BIOL 2521, one of BIOL 2410, BIOL 2411, BIOL 3470 or BIOL 3472, and a course in biochemistry are strongly recommended as prerequisites. This course is restricted to students in Year 3 or Year 4 in any faculty. Prerequisite: one of BIOL 1030 or BIOL 1031 and successful completion of 60 credit hours of University coursework.

NET CHANGE IN CREDIT HOURS: +3.0

Program modifications:

Modifications to the following programs are outlined on the next 13 pages:

- **Bachelor of Science (Honours) in Biological Sciences**
- **Bachelor of Science (Honours) in Biological Sciences, Co-operative Option**
- **Bachelor of Science (Major) in Biological Science**
- **Bachelor of Science (Major) in Biological Sciences, Co-operative Option**
  - **including the following Themes, for both Honours and Major programs:**
    - **Cell, Molecular and Biology Theme**
    - **Ecology and Environmental Biology Theme**
    - **Environmental and Integrative Physiology Theme**
    - **Evolution and Biodiversity Theme**
    - **Integrative Biology**

4.3 Department of Biological Sciences

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 must 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.

To enter the Biological Sciences Honours program a student must have completed at least 24 credit hours with a minimum DGPA of 3.00, and obtained a minimum grade of "B" in BIOL 1030. CHEM 1300, CHEM 1310, STAT 1150 or 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.

To continue in the Biological Sciences 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, and obtain a minimum grade of “C” on the courses that make up the 120 credit hours of the degree.

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 must 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 1150 or 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.

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 DGPA of 2.00 and a minimum grade of "C" or better in all required courses and required option courses.

4.3.4 Honours and Major Co-operative Options

A co-operative education option is available for both Major and Honours students. Students should refer to Section 3.5 of this chapter for further information on the Co-op programs.

Honours Co-op

The course, grade requirements and minimum DGPA requirement for entry and continuation in the Co-operative Option are the same as that for regular Honours program.

Before starting the first co-op work term, the following prerequisite courses must be completed: BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1150 or 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, BIOL 2262), plus one additional course from either Group A or Group B.

Major Co-op

The course and minimum grade requirements for entry and continuation in the Co-operative Option are the same as those required for the regular Major program. However, the entry and continuation DGPA requirement is set at a minimum of 2.5.

Before starting the first co-op work term, the following prerequisite courses must be completed: BIOL 1020, BIOL 1030, CHEM 1300, CHEM 1310, STAT 1150 or STAT 1000, 3 credit hours of specified Mathematics or Physics, BIOL 2300, BIOL 2500, and BIOL 2520. 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, BIOL 2262), plus one additional course from either Group A or Group B.

4.3.5 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 3542; *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, BIOL 3312, BIOL 3314, STAT 2150 or STAT 2000.

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, BIOL 3472, BIOL 3400 (the former BIOL 3450), BIOL 3452.

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 courses required for the Evolution and Biodiversity Theme in addition to the core course requirements:

List A: One of the following: BIOL 3360, BIOL 4300, BIOL 4362, BIOL 4510.

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: BIOL 2200, BIOL 2210, BIOL 2240, BIOL 2242, MBIO 1010; One of the following: BIOL 3400 (the former BIOL 3450), BIOL 3470 or BIOL 3472; Plus: 24 credit hours in Biological Sciences (3000/4000 level courses) and 6 credit hours in Microbiology (3000/4000 level courses).

4.3.6 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[1], BIOL 2500, BIOL 2520; one of BIOL 2200 or BIOL 2210; one of BIOL 2240, BIOL 2242, BIOL 2260 or BIOL 2262; 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.

NOTE:

[1] BIOL 2300 has a prerequisite or concurrent requirement of STAT 1150 or STAT 1000. Students planning this option should consider taking STAT 1150 or STAT 1000 as part of their Introductory Science requirement.

4.3.7.1 Biological Science - Cell, Molecular and Developmental Theme 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: Cell, Molecular and Developmental Biology Theme (incl. Co-op) 120 CREDIT HOURS (Courses listed in chart below and electives)</td></tr>
<tr><td rowspan="2">BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

<u>STAT 1150 or</u> STAT 1000</td><td rowspan="2">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, BIOL 2262

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

BIOL 3542[4] (theme course)

Choose one of the following:

BIOL 3400 <s>(the former BIOL 3450)</s>, BIOL 3470, BIOL 3472</td><td>BIOL 4100 (6)</td></tr>
<tr><td colspan="2">30 credit hours of 3000 or 4000 level Biology courses[3] (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 <s>1200</s>1240[1], 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><s>Work Terms</s> <u>Co-op Requirements</u> (if <s>Co-op</s> <u>selected</u>):

<s>BIOL 3980, BIOL 3990</s>

<u>SCI 3980, SCI 3990</u></td><td><s>Work Terms</s> <u>Co-op Requirements</u> (if <s>Co-op</s> <u>selected</u>):

<s>BIOL 4980, BIOL 4990 (if necessary)</s>

<u>SCI 4980, and SCI 4990 (if a 4th work term is selected)</u></td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">FOUR YEAR MAJOR: Cell, Molecular and Developmental Biology Theme (incl. Co-op)[2] 120 CREDIT HOURS (Courses listed in chart below and electives)</td></tr>
<tr><td>BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

<u>STAT 1150 or</u> STAT 1000</td><td>BIOL 2300, BIOL 2500, BIOL 2520

Choose one course from each of:</td><td colspan="2">BIOL 3300

BIOL 3542[4] (theme course)</td></tr>
</table>

	Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260, BIOL 2262 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)	Choose one of the following: BIOL 3400 ~~(the former BIOL 3450)~~, BIOL 3470, BIOL 3472 30 credit hours of 3000 or 4000 level Biology courses[3] (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~~1240[1], 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~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 3980, BIOL 3990~~ SCI 3980, SCI 3990	~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 4980, BIOL 4990 (if necessary)~~ SCI 4980, and SCI 4990 (if a 4th work term is selected)
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] MATH 1230, MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH ~~1240~~ 1200 may be ~~taken~~ used in place of MATH ~~1200~~ 1240.

[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 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.

[4] The former BIOL 2540 may be used in place of BIOL 3542.

(The number 6 in brackets indicates a six credit hour course.)

4.3.7.2 Biological Sciences – Ecology and Environmental Biology Theme Charts

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS: Ecology and Environmental Biology Theme (incl. Co-operative Option) 120 CREDIT HOURS			
BIOL 1020, BIOL 1030	BIOL 2300, BIOL 2500,	BIOL 3100, BIOL 3300	BIOL 4100 (6)

CHEM 1300, CHEM 1310 STAT 1150 and STAT 2150[1] (strongly recommended) or STAT 1000 and STAT 2000 (theme course)	BIOL 2520 Choose one course from each of: Group A: BIOL 2200, BIOL 2210 Group B: BIOL 2240, BIOL 2242, BIOL 2260, BIOL 2262 One additional course from either Group A or Group B	BIOL 3310, BIOL 3312, BIOL 3314[4] (theme courses) Choose one of the following: BIOL 3400 ~~(the former BIOL 3450)~~, BIOL 3470, BIOL 3472	
		21 credit hours of 3000 or 4000 level Biology courses[3] (courses from outside Biology may be approved by the theme advisor) 15 credit hours of ~~approved~~ electives	
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH ~~1200~~1240[1], 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~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 3980, BIOL 3990~~ SCI 3980, SCI 3990	~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 4980, BIOL 4990 (if necessary)~~ SCI 4980, and SCI 4990 (if a 4th work term is selected)
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)[2] 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1150 and STAT 2150[1] (strongly recommended) or STAT 1000 and 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, BIOL 2262 One additional course from either Group A or Group B	BIOL 3300 BIOL 3310, BIOL 3312, BIOL 3314[4] (theme courses) Choose one of the following: BIOL 3400 ~~(the former BIOL 3450)~~, BIOL 3470, BIOL 3472 21 credit hours of 3000 or 4000 level Biology courses[3] (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:		~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected):	~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected):

3 credit hours of Mathematics or Physics chosen from: MATH ~~1200~~[1] MATH 1240[1], MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 6 credit hours from the Faculty of Arts, including a required "W" course		~~BIOL 3980, BIOL 3990~~ SCI 3980, SCI 3990	~~BIOL 4980, BIOL 4990 (if necessary)~~ SCI 4980, and SCI 4990 (if a 4th work term is selected)
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] MATH 1230, MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH ~~1240~~ 1200 may be ~~taken~~ used in place of MATH ~~1200~~ 1240. Note that STAT 2150 has a prerequisite which requires one of MATH 1230, MATH 1500, MATH 1510, or MATH 1690.

[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 21 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] With departmental approval, other Field Ecology courses may be used in place of BIOL 3314.

(The number 6 in brackets indicates a six credit hour course.)

4.3.7.3 Biological Sciences – Environmental and Integrative Physiology Theme 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: Environmental and Integrative Physiology Theme (incl. Co-op) 120 CREDIT HOURS (Courses listed in chart below and electives)</td></tr>
<tr><td rowspan="2">BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

STAT 1150 or STAT 1000</td><td rowspan="2">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, BIOL 2262

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,</td><td>BIOL 3100, BIOL 3300

Choose one of the following:

BIOL 3400 ~~(the former BIOL 3450)~~, BIOL 3470, BIOL 3472

Choose two of the following:

BIOL 3470, BIOL 3472, BIOL 3400 ~~(the former BIOL 3450)~~ (if not already taken), or BIOL 3452 (theme courses)</td><td>BIOL 4100 (6)</td></tr>
<tr><td colspan="2">24 credit hours of 3000 or 4000 level Biology courses[3] (courses from outside Biology may be approved by the theme advisor)</td></tr>
</table>

	CHEM 2360, and CHEM 2370 (theme 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~~1240[1], 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~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 3980, BIOL 3990~~ SCI 3980, SCI 3990	~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 4980, BIOL 4990 (if necessary)~~ SCI 4980, and SCI 4990 (if a 4th work term is selected)
30 Hours	30 Hours	30 Hours	30 Hours

YEAR 1	YEAR 2	YEAR 3	YEAR 4
FOUR YEAR MAJOR: Environmental and Integrative Physiology Theme (incl. Co-op)[2] 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 STAT 1150 or 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, BIOL 2262 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)	BIOL 3300 Choose one of the following: BIOL 3400 ~~(the former BIOL 3450)~~, BIOL 3470, BIOL 3472 Choose two of the following: BIOL 3470, BIOL 3472, BIOL 3400 (if not already taken), or BIOL 3452 (theme courses) 24 credit hours of 3000 or 4000 level Biology courses[3] (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~~1240[1], 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~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 3980, BIOL 3990~~ SCI 3980, SCI 3990	~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 4980, BIOL 4990 (if necessary)~~ SCI 4980, and SCI 4990 (if a 4th work term is selected)

30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] MATH 1230, MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH ~~1240~~ 1200 may be ~~taken~~ used in place of MATH ~~1200~~ 1240.

[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.

(The number 6 in brackets indicates a six credit hour course.)

4.3.7.4 Biological Sciences – Evolution and Biodiversity Theme 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: Evolution and Biodiversity Theme (incl. Co-operative Option) 120 CREDIT HOURS</td></tr>
<tr><td rowspan="2">BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

STAT 1150 or STAT 1000</td><td rowspan="2">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, BIOL 2262

Plus one additional course from either Group A or Group B</td><td>BIOL 3100, BIOL 3300

Choose one of the following:

BIOL 3400 ~~(the former BIOL 3450)~~, BIOL 3470, BIOL 3472</td><td>BIOL 4100 (6)</td></tr>
<tr><td colspan="2">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[3] (courses from outside Biology may be approved by the theme advisor)

15 credit hours of ~~approved~~ electives</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~~1240[1], 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</td><td>~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected):

~~BIOL 3980, BIOL 3990~~

SCI 3980, SCI 3990</td><td>~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected):

~~BIOL 4980, BIOL 4990 (if necessary)~~

SCI 4980, and SCI 4990 (if a 4th work term is selected)</td></tr>
</table>

30 Hours	30 Hours	30 Hours	30 Hours

YEAR 1	YEAR 2	YEAR 3	YEAR 4
FOUR YEAR MAJOR: Evolution and Biodiversity Theme (incl. Co-op)[2] 120 CREDIT HOURS (Courses listed in chart below and electives)			
BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310 <u>STAT 1150 or</u> 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, BIOL 2262 Plus one additional course from either Group A or Group B	BIOL 3300 Choose one of the following: BIOL 3400 ~~(the former 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[3] (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~~1240[1], 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~~ <u>Co-op Requirements</u> (if ~~Co-op~~ <u>selected</u>): ~~BIOL 3980, BIOL 3990~~ <u>SCI 3980, SCI 3990</u>	~~Work Terms~~ <u>Co-op Requirements</u> (if ~~Co-op~~ <u>selected</u>): ~~BIOL 4980, BIOL 4990 (if necessary)~~ <u>SCI 4980, and SCI 4990 (if a 4th work term is selected)</u>
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] MATH 1230, MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH ~~1240~~ <u>1200</u> may be ~~taken~~ <u>used</u> in place of MATH ~~1200~~ <u>1240</u>.

[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.

(The number 6 in brackets indicates a six credit hour course.)

4.3.7.5 Biological Sciences – Integrative Biology Theme 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: Integrative Biology Theme (incl. Co-operative Option) 120 CREDIT HOURS</td></tr>
<tr><td rowspan="2">BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

STAT 1150 or STAT 1000</td><td rowspan="2">BIOL 2300, BIOL 2500, BIOL 2520

Required Theme courses:

BIOL 2200, BIOL 2210, BIOL 2240, BIOL 2242

MBIO 1010

Either both of CHEM 2770 and CHEM 2780; or all three of CHEM 2210, CHEM 2360 and CHEM 2370</td><td>BIOL 3100, BIOL 3300

Choose one of the following:

BIOL 3400 (~~the former BIOL 3450~~), BIOL 3470, BIOL 3472</td><td>BIOL 4100 (6)</td></tr>
<tr><td colspan="2">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</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~~1240[1], 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</td><td>~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected):

~~BIOL 3980, BIOL 3990~~

SCI 3980, SCI 3990</td><td>~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected):

~~BIOL 4980, BIOL 4990 (if necessary)~~

SCI 4980, and SCI 4990 (if a 4th work term is selected)</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td></tr>
<tr><td colspan="3">FOUR YEAR MAJOR: Integrative Biology Theme (incl. Co-op)[2] 120 CREDIT HOURS (Courses listed in chart below and electives)</td></tr>
<tr><td>BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310

STAT 1150 or STAT 1000</td><td>BIOL 2300, BIOL 2500, BIOL 2520

Required Theme courses:

BIOL 2200, BIOL 2210, BIOL 2240, BIOL 2242</td><td>BIOL 3300

Choose one of the following:

BIOL 3400 (~~the former BIOL 3450~~), BIOL 3470, BIOL 3472

24 credit hours of 3000 or 4000 level Biology courses[3]</td></tr>
</table>

	MBIO 1010 Either both of CHEM 2770 and CHEM 2780; or all three of CHEM 2210, CHEM 2360 and CHEM 2370	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~~1240[1], 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~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 3980, BIOL 3990~~ SCI 3980, SCI 3990	~~Work Terms~~ Co-op Requirements (if ~~Co-op~~ selected): ~~BIOL 4980, BIOL 4990 (if necessary)~~ SCI 4980, and SCI 4990 (if a 4th work term is selected)
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] MATH 1230, MATH 1510, MATH 1520, or MATH 1690 may be taken in place of MATH 1500; MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH ~~1240~~ 1200 may be ~~taken~~ used in place of MATH ~~1200~~ 1240.

[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.

(The number 6 in brackets indicates a six credit hour course.)

4.3.7.6 Biological Sciences – Program Charts

YEAR 1	YEAR 2	YEAR 3	YEAR 4
THREE YEAR GENERAL 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[1], BIOL 2500, BIOL 2520; one of BIOL 2200 or BIOL 2210; one of BIOL 2240, BIOL 2242, BIOL 2260 or BIOL 2262; plus 21 additional credit hours from the Biological Sciences including at least 6 credit hours at the 3000 or 4000 level.		

MINOR	
BIOL 1020, BIOL 1030	12 credit hours of 2000, 3000, and/or 4000 level Biology courses.

NOTES:

[1] BIOL 2300 has STAT 1150 or STAT 1000 as a prerequisite or concurrent requirement. Students in this program may want to consider selecting STAT 1150 or STAT 1000 as part of their Introductory Science requirement. See Section 3.2 for more information.

~~(The number 6 in brackets indicates a 6 credit hour course.)~~

Chemistry

Program modification:

Modifications to the following programs are outlined on the next 3 pages:

- **Bachelor of Science (Honours) in Chemistry, Co-operative Option**
- **Bachelor of Science (Major) in Chemistry, Co-operative Option**

4.5.2 Chemistry Honours Degree Program Chart

4.5.2 Chemistry 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[3] (incl. Co-operative Option if selected) 120 CREDIT HOURS</td></tr>
<tr><td>CHEM 1300, CHEM 1310 (B)

PHYS 1050 (or PHYS 1020), PHYS 1070

MATH 1500[1], MATH 1700[1]</td><td>CHEM 2210, CHEM 2220, CHEM 2260 (CHEM 2280), CHEM 2290, CHEM 2400, CHEM 2470, CHEM 2860(CHEM 2360)</td><td>CHEM 3400, CHEM 3590</td><td>CHEM 4610 (6), 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[2]

12 credit hours of ~~approved~~ electives in years one and two</td><td colspan="2">Sufficient credit hours (18) from the 2000, 3000 and 4000 level Chemistry[3] courses not yet taken to total a minimum of 63 credit hours of Chemistry courses at the 1000-4000 level. These credit hours may make up part of a focus area.

9 credit hours of non-Chemistry[5] courses which are part of a designated focus area[3]. If no Focus Area is selected, students must choose 9 credit hours of Chemistry courses.

15 credit hours of ~~approved~~ electives in years three and four[4]</td></tr>
<tr><td colspan="2"></td><td><u>~~Work Terms (if Co-op selected):~~ Co-op Requirements (if selected):</u>

~~CHEM 3980, CHEM 3990~~ <u>SCI 3980, SCI 3990</u></td><td><u>~~Work Terms (if Co-op selected):~~ Co-op Requirements (if selected):</u>

~~CHEM 4980 and/or CHEM 4990~~ <u>SCI 4980 and SCI 4990 (if a 4th work term is selected)</u></td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

NOTES:

[1] MATH 1230, MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1232 or MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.

[2] MATH 1010, MATH 1020, the former MATH 1190, MATH 1191, COMP 1500, COMP 1600, the former COMP 1260 and the former COMP 1270, may not be used to satisfy this requirement.

[3] 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.

[4] Elective courses should be selected in consultation with the Department of Chemistry and/or a Faculty of Science Academic Advisor.

[5] Not all Focus Areas include non-Chemistry courses. Some Focus Areas are all Chemistry courses. Refer to the description of each Focus Area for more information.

(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

4.5.3 Chemistry Major Degree Program Chart

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">4-YEAR MAJOR[3,4] (incl. Co-operative Option if selected) 120 CREDIT HOURS (comprising courses listed in chart below, and electives[5])</td></tr>
<tr><td>CHEM 1300, CHEM 1310 (C+)

PHYS 1050 (or PHYS 1020(C+)), PHYS 1070

MATH 1500[1], MATH 1700[1]</td><td>CHEM 2210, CHEM 2220, CHEM 2260 (CHEM 2280), CHEM 2290, CHEM 2400, CHEM 2470, CHEM 2860(CHEM 2360)</td><td>CHEM 3400, CHEM 3590</td><td>CHEM 4610 (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[2]</td><td colspan="2">Sufficient credit hours (18) from the 2000, 3000 and 4000 level Chemistry[3] courses not yet taken to total a minimum of 57 credit hours of Chemistry courses at the 1000-4000 level. These credit hours may make up part of a focus area.

9 credit hours of non-Chemistry courses[6] which are part of a designated focus area[3]. (Note: If no Focus Area is selected, students must choose 9 credit hours of Chemistry courses.)</td></tr>
<tr><td colspan="2"></td><td><s>Work Terms (if Co-op selected):</s> Co-op Requirements (if selected):

<s>CHEM 3980, CHEM 3990</s> SCI 3980, SCI 3990</td><td><s>Work Terms (if Co-op selected):</s> Co-op Requirements (if selected):

<s>CHEM 4980 and/or CHEM 4990</s> SCI 4980 and SCI 4990 (if a 4th work term is selected)</td></tr>
</table>

NOTES:

[1] MATH 1230, MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1232 or MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700.

[2] MATH 1010, MATH 1020, the former MATH 1190, MATH 1191, COMP 1500, COMP 1600, the former COMP 1260 and the former COMP 1270 may not be used to satisfy this requirement.

[3] 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.

[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] Elective courses should be selected in consultation with the Department of Chemistry and/or a Faculty of Science Academic Advisor.

[6] Not all Focus Areas include non-Chemistry courses. Some Focus Areas are all Chemistry courses. Refer to the description of each Focus Area for more information.

(Letters in brackets indicate minimum prerequisite standing for further study. The number 6 in brackets indicates a 6 credit hour course.)

Computer Science

Program modifications:

Modifications to the following programs are outlined on the next 8 pages:

- **Bachelor of Science (Major) in Computer Science**
- **Bachelor of Science (Major) in Computer Science, Cooperative Option**
- **Bachelor of Computer Science (Honours)**
- **Bachelor of Computer Science (Honours), Cooperative Option**
- **Bachelor of Science (Joint Honours) in Computer Science and Mathematics**
- **Bachelor of Science (Joint Honours) in Computer Science and Mathematics, Co-operative Option**
- **Bachelor of Science (Joint Honours) in Computer Science and Physics and Astronomy**
- **Bachelor of Science (Joint Honours) in Computer Science and Physics and Astronomy, Co-operative Option**

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 paid employment experience. The co-operative (co-op) option in Computer Science is well established with the first class graduating in October 1983.

~~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 Co-op 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.

To enter the Honours program in Computer Science, 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 COMP 1020, "C+" in both MATH 1220 (or MATH 1300) and MATH 1230 (or MATH 1500) (or their equivalents) and "C" in MATH 1700 (or equivalents).

To continue in the Computer Science 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 Computer Science Honours program students must achieve a minimum DGPA 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.

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 DGPA of 2.00, and also obtained a minimum grade of "C+" in COMP 1020, "C+" in both MATH 1300 and MATH 1500 (or their equivalents) and "C" in MATH 1700 (or equivalents).

To continue in the Major program a student must maintain a minimum DGPA of 2.00.

To graduate with the Computer Science Major degree, a student must present a minimum grade of "C+" in: MATH 1300 (or equivalent), MATH 1500 (or equivalent), and a minimum grade of "C" in MATH 1240, MATH 1700 (or equivalent), (STAT 1000 or STAT 1150), COMP 2080, COMP 2140, COMP 2150, COMP 2160, COMP 2280, COMP 3350, COMP 3370, COMP 3430, COMP 4620 and in each of the 18 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 DGPA of 2.00.

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~~ should 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 programs 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. In addition to the faculty maximum, students may be allowed to take up to an additional 12 credit hours of courses outside of the Faculty of Science, with departmental permission. 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.

Honours and Major Co-operative Options

A co-operative education option is available for both Major and Honours students. Students should refer to Section 3.5 of this chapter for further information on the Co-op programs.

Honours Co-op

The course, grade requirements and minimum DGPA requirement for entry and continuation in the Co-operative Option are the same as that for regular Honours program.

Students are required to complete all the first and second year courses in the program chart before their first co-op work term.

Major Co-op

The course and minimum grade requirements for entry and continuation in the Co-operative Option are the same as those required for the regular Major program. However, the entry and continuation DGPA requirement is set at a minimum of 2.5.

Students are required to complete all the first and second year courses in the program chart before their first co-op work term.

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	**Human-Computer Interaction and Computer Graphics**
~~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 who declare an area of specialization and who obtain a grade of "C" or**	Requires: COMP 3020, and COMP 3490; one of COMP 4020 or COMP 4490.

<u>better in the required courses will receive a notation on their transcript.</u> 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 4140, COMP 4300, and COMP 4580. **Artificial Intelligence** Requires: COMP 3190; and two of COMP 4180, COMP 4190, COMP 4200, and/or COMP 4360.	**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 4050, COMP 4350 and COMP 4620. **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 Program Charts

YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS [2,3,4,5] **(Including Co-operative Option if selected)**[2] 120 CREDIT HOURS			
COMP 1010[1], COMP 1020 (B) (MATH 1220[1] (C+) or MATH 1300[1] (C+)) (MATH 1230[1] (C+) or MATH 1500[1] (C+)) MATH 1700[1] (C)	COMP 2080, COMP 2140, COMP 2150, COMP 2160, COMP 2280 MATH 1240[1]	COMP 3030, COMP 3170, COMP 3350, COMP 3370, COMP 3430	COMP 4620 and 21 credit hours of 4000 level Computer Science courses
In Year 1 and / or Year 2 the following must be completed: STAT 1000 (C) or STAT 1150 (C) 6 credit hours from the Faculty of Arts, which should include the required 3 credit hour "W" course. 18 credit hours of ~~approved~~ electives ~~courses~~ [3,4]		21 credit hours of ~~approved~~ electives [3,5] **~~Work Terms~~ <u>Co-op Requirements</u> (if ~~Co-op S~~<u>selected</u>):** **~~COMP 2980, COMP 3980, COMP 4980~~ <u>SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if a 4th work term is selected)</u>** ~~must be completed prior to the last academic term~~	
30 Hours	30 Hours	30 Hours	30 Hours
FOUR YEAR MAJOR [2,3,4,5] **(Including Co-operative Option if Selected)**[2] 120 CREDIT HOURS			
COMP 1010[1], COMP 1020 (C+)	COMP 2080, COMP 2140, COMP	COMP 3350, COMP 3370, COMP 3430, COMP 4620	

MATH 1300[1] (C+), MATH 1500[1] (C+), MATH 1700[1] (C)	2150, COMP 2160, COMP 2280 MATH 1240[1]	18 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) or STAT 1150 (C) 6 credit hours from the Faculty of Arts, which should include the required 3 credit hour "W" course. 18 credit hours of ~~approved~~ electives [4,5]		30 credit hours of ~~approved~~ electives [3,5] **~~Work Terms~~ Co-op Requirements (if ~~Co-op S~~selected):** **~~COMP 2980, COMP 3980, COMP 4980~~ SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if a 4th work term is selected)** ~~must be completed prior to the last academic term~~
THREE YEAR GENERAL (90 CREDIT HOURS)		
COMP 1010[1], 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 in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level)	
MINOR		
COMP 1010[1], COMP 1020	COMP 2140 Plus a minimum of 9 credit hours from 2000 and (or) 3000 level Computer Science courses.	

NOTES:

[1] COMP 1012 may be taken in place of COMP 1010. MATH 1210, MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH 1230, MATH 1510, MATH 1520, or MATH 1690 (6) may be taken in place of MATH 1500; MATH 1232, MATH 1710 or MATH 1690 (6) may be taken in place of MATH 1700. Honours students are encouraged to take MATH 1220 instead of MATH 1300 and to take MATH 1230 instead of MATH 1500 to better prepare them for later, higher-level studies. Students who have previously completed COMP 2130 may use it in lieu of MATH 1240.

[2] Entry to the Honours Co-operative Option and four-year Major Co-operative Option is at the end of second year. Employment terms follow 3A (September-December), 3B (May-August) and 4A (January-April). Students in the Co-operative Option must complete three employment terms and receive a passing grade in **~~COMP 2980, COMP 3980 and COMP 4980~~ SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if selected)** prior to the last academic term.

[3] Additional information on how students may select their courses can be found at the beginning of this section.

[4] IMPORTANT: The Honours and four-year Major degree need not be completed in the order 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 Co-operative 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.

[5] 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, either MATH 1232 or MATH 1690 (or a minimum grade of "A" in MATH 1700), and have satisfied the Faculty of Science requirements for entry to the honours program. It is recommended that STAT 2150 be completed in Year 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 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240 STAT 1150[1] 6 credit hours from the Faculty of Arts, which should include the required 3 credit hour "W" course~~[2]~~ 3 credit hours of electives	COMP 2080, COMP 2140, COMP 2160, COMP 2280 MATH 2020, MATH 2080, MATH 2090, MATH 2150, MATH 2180 3 credit hours of ~~approved~~ electives	COMP 3030, COMP 3170, COMP 3370, COMP 3430 Three of: COMP 3010, COMP 3020, COMP 3290, COMP 3350, COMP 3380, COMP 3190, COMP 3440, COMP 3490, COMP 3820 Three of: COMP 4020, COMP 4140, COMP 4180, COMP 4190, (COMP 4290), COMP 4300, COMP 4340, COMP 4350, COMP 4360, COMP 4380, COMP 4490, COMP 4510, COMP 4580, COMP 4690, COMP 4710 MATH 2030, MATH 2160, MATH 3320, MATH 3440, MATH 3470, MATH 3472 9 credit hours from MATH 2070, MATH 2170, any 3000 or 4000 level Mathematics courses, of which at least 3 credit hours must be 4000 level 3 credit hours of electives	
	~~Work Terms~~ Co-op Requirements (if ~~Co-op S~~selected): **~~COMP 2980~~ SCI 3980~~[2]~~**	**~~Work Terms~~ Co-op Requirements (if ~~Co-op S~~selected):** **~~COMP 3980~~ SCI 3990~~[2]~~**	**~~Work Terms~~ Co-op Requirements (if ~~Co-op S~~selected):** **~~COMP 4980~~ SCI 4980~~[2]~~, and SCI 4990~~[2]~~ (if a 4th work term is selected)**
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (A) in place of MATH 1220, MATH 1500 (A) or MATH 1510 (A) in place of MATH 1230, MATH 1700 (A) or MATH 1710 (A) in place of MATH 1232, MATH 1690 (B) in place of MATH 1230and MATH 1232. With permission from the department, students may be able to substitute STAT 1000 and STAT 2000 in place of STAT 1150.

[2] When chosen, the Co-operative Option work terms (**~~COMP 2980, COMP 3980, COMP 4980~~ SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if selected)**) 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 and Astronomy program, the student must have a minimum grade of "B" in each of PHYS 1050 (or "B+" in PHYS 1020), PHYS 1070 (or B+ in PHYS 1030), MATH 1300, MATH 1500, MATH 1700 (or any equivalent), COMP 1010 (or COMP 1012) and COMP 1020 and a minimum DGPA of 3.00. Students must complete a minimum of 9 credit hours per term in each Fall and Winter term.

To continue in the Honours program, students must maintain a minimum DGPA of 3.00, complete a minimum of 9 credit hours during each Fall and Winter term (or equivalent for students in the Co-operative option).

To graduate with the Honours degree, a student must obtain a minimum DGPA of 3.00 and present a minimum grade of "C" in each course that contributes to the degree

~~The departments must approve a student's Honours 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) (or PHYS 1030 (B+)) COMP 1010 or COMP 1012, 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~~ **should** include the required 3 credit hour "W" course[3] 3 credit hours of electives	PHYS 2260 or Physics elective[5], PHYS 2386, PHYS 2496, PHYS 2650 MATH 1240[2], MATH 2720 COMP 2080, COMP 2140, COMP 2160, COMP 2280	PHYS 2600, PHYS 2610 or Physics elective[5], PHYS 3386, PHYS 3670, PHYS 3496 ~~COMP 2190~~, COMP 3170, COMP 3430 6 credit hours of 3000 and/or 4000 level Computer Science courses **3 credit hours of electives**	PHYS 4680 12 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 electives
	~~Work Terms~~ **Co-op Requirements (if ~~Co-op~~ Sselected):** **~~COMP 2980~~ SCI 3980[4]**	~~Work Terms~~ **Co-op Requirements (if ~~Co-op~~ Sselected):** **~~COMP 3980~~ SCI 3990[4]**	~~Work Terms~~ **Co-op Requirements (if ~~Co-op~~ Sselected):** **~~COMP 4980~~ SCI 4980[4], and SCI 4990[4] (if a 4th work term is selected)**
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] PHYS 1050 and PHYS 1070 are recommended.

[2] MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH 1230, MATH 1510 or MATH 1520 may be taken in place of MATH 1500; MATH 1232 or MATH 1710 may be taken in place of MATH 1700; MATH

1690 may be taken in place of MATH 1500 and MATH 1700. Students who have previously completed COMP 2130 may use it in lieu of MATH 1240.

[3] 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.

[4] When chosen, the Co-operative Option work terms (~~**COMP 2980, COMP 3980, COMP 4980**~~ **SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if selected)**) will normally be completed during the Summer Terms following years 2, 3, and 4 respectively.

[5] Students are required to take at least one of PHYS 2260 or PHYS 2610.

Genetics

Program modifications:

Modifications to the following programs are outlined on the next 2 pages:

- **Bachelor of Science (Major) in Genetics, Cooperative Option**
- **Bachelor of Science (Honours) in Genetics, Cooperative Option**

4.7 Genetics Program

4.7.2 Genetics Program Charts

<table>
<tr><td colspan="4">4.7.2 Genetics</td></tr>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">HONOURS[4] 120 CREDIT HOURS</td></tr>
<tr><td>CHEM 1300, CHEM 1310

BIOL 1020, BIOL 1030

STAT 1000 or STAT 1150

MATH 1500[1]

One of: MATH 1200[1], MATH 1300[1], or MATH 1700[1]</td><td>BIOL 2500, BIOL 2520

CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370)

MBIO 1010, MBIO 2020

STAT 2000 or STAT 2150</td><td colspan="2" rowspan="2">BIOL 3500

MBIO 3410

PLNT 3140

BGEN 3022, BGEN 3024

BGEN 4010[4] (6) or MBIO 4530[4] (6)

One of: ANTH 2240, ANTH 2560, ANTH 2860, or ANTH 2890

36 credit hours from list of optional courses (a minimum of 12 of these credit hours must be 4000 level)</td></tr>
<tr><td colspan="2">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</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 Co-operative Option[3,4] 120 CREDIT HOURS</td></tr>
<tr><td>CHEM 1300, CHEM 1310

BIOL 1020, BIOL 1030

STAT 1000 or STAT 1150

MATH 1500[1]

One of: MATH 1200[1], MATH 1300[1], or MATH 1700[1]</td><td>BIOL 2500, BIOL 2520

CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370)

MBIO 1010, MBIO 2020

STAT 2000 or STAT 2150</td><td colspan="2">BIOL 3500

MBIO 3410

PLNT 3140

BGEN 3022, BGEN 3024

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)</td></tr>
<tr><td colspan="2">In Year 1 or Year 2:

3 credit hours from the Faculty of Arts</td><td colspan="2">~~Work Terms[3,4]:~~

~~MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990~~</td></tr>
</table>

3 credit hour "W" course[2] 6 credit hours of electives		**Co-op Requirements[3,4] (if selected): SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)**	
30 Hours	30 Hours	30 Hours	30 Hours
MAJOR (Including Co-operative Option if selected)[3,4] 120 CREDIT HOURS			
CHEM 1300, CHEM 1310 BIOL 1020, BIOL 1030 STAT 1000 or STAT 1150 MATH 1500[1] One of: MATH 1200[1], 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 or STAT 2150	BIOL 3500 MBIO 3410 PLNT 3140 BGEN 3022, BGEN 3024 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[3,4]:~~ ~~MBIO 3980, MBIO 3990, MBIO 4980 and/or MBIO 4990~~ **Co-op Requirements[3,4] (if selected): SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)**	

NOTES:

[1] MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH 1230, MATH 1510, or MATH 1520 may be taken in place of MATH 1500; MATH 1232 or MATH 1710 may be taken in place of MATH 1700; MATH 1690 may be taken in place of MATH 1500 and MATH 1700; MATH 1240 may be taken in place of MATH 1200.

[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] IMPORTANT: Students in the co-operative program are advised to ensure that they are able to satisfy the prerequisites for all 3000 and 4000 level courses they plan to take.

[4] MBIO 4530 and BGEN 4010 are required courses for students in Genetics Honours, but are not available to students in Co-operative Option, and require department consent for students in the Genetics Major.

Mathematics

Deletion:

MATH 2140 Modelling Cr.Hrs. 3 -3.0

Introduction:

MATH 3610 Introduction to Mathematical Modelling Cr.Hrs. 3 +3.0
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. May not be held with the former MATH 3820 or the former MATH 3821. Prerequisite: MATH 2150 (C) or MATH 2151 (C) or MATH 2720 (B) or MATH 2721 (B) or MATH 2130 (B) or consent of Instructor.

Modifications:

MATH 3132 Engineering Mathematical Analysis 3 Cr.Hrs. 3 0.0
(Lab required) Vector integral calculus; series of Ordinary differential equations; Fourier series and Partial differential equations. For Engineering and Geophysics students only. May not be held with the former MATH 3740, the former MATH 3800, or the former MATH 3100. Prerequisites: MATH 2130 and MATH 2132.

MATH 3490 Optimization Cr.Hrs. 3 0.0
(Lab required) This course introduces the theory and practice of optimization. Both unconstrained and constrained problems are considered, as well as continuous and discrete optimization. Topics include linear programming, unconstrained optimization, constrained nonlinear optimization and integer programming. Applications to Statistics and Data Science will be explored. Prerequisites: [one of MATH 2090, MATH 2091, MATH 2740, the former MATH 2300, the former MATH 2301, the former MATH 2350, or the former MATH 2352] and [one of MATH 2150, MATH 2151, MATH 2720, MATH 2721, or the former MATH 2750].

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are outlined on the next 8 pages:

- **Bachelor of Science (Honours) in Mathematics**
- **Bachelor of Science (Honours) in Mathematics, Cooperative Option**
- **Bachelor of Science (Double Honours) in Mathematics**
- **Bachelor of Science (Double Honours) in Mathematics, Cooperative Option**
- **Bachelor of Science (Major) in Mathematics**
- **Bachelor of Science (Major) in Mathematics, Cooperative Option**
- **Bachelor of Science (Major) in Applied Mathematics with Computer Science Option**
- **Bachelor of Science (Major) in Applied Mathematics with Computer Science Option, Cooperative Option**
- **Bachelor of Science (Major) in Applied Mathematics with Economics Option**
- **Bachelor of Science (Major) in Applied Mathematics with Economics Option, Cooperative Option**
- **Bachelor of Science (Major) in Applied Mathematics with Statistics Option**
- **Bachelor of Science (Major) in Applied Mathematics with Statistics Option, Cooperative Option**
- **Bachelor of Science (Joint Honours) in Mathematics and Economics**

4.9 Department of Mathematics

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.

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 DGPA of 3.00, and also obtained a minimum grade of “B” in either MATH 1232 or MATH 1690, or a minimum grade of "A" in MATH 1700.

To continue in the 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 ~~maintain~~ achieve a minimum 3.00 DGPA and achieve a minimum grade of “C” on all courses that make up the 120 credit hours of the degree.

List of Year 2 Mathematics electives (of which two are required for the core requirements): MATH 2030, MATH 2040, MATH 2070, ~~MATH 2140~~, MATH 2160, MATH 2170.

Students are encouraged to discuss potential electives with a departmental advisor.

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.

Four Year Major Requirements

To enter the four year Major in Mathematics, a student must have a “C+” in either MATH 1232 or MATH 1690 or a minimum grade of "B" in MATH 1700, 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 DGPA of 2.00, and a minimum grade of “C” in each of the Major Program Specific courses (see below).

Major Program Specific Courses

MATH 1220, MATH 1230, MATH 1232, MATH 1240, MATH 2020, MATH 2030, MATH 2080, MATH 2090, MATH 2150, MATH 2160, MATH 2180, MATH 3320, ~~MATH 3322,~~ MATH 3340, MATH 3360, MATH 3390, MATH 3440, MATH 3460~~.~~, and the 6 credit hours ~~List~~ of Year 2 Mathematics Electives ~~(of which two are required for the core requirements)~~: ~~MATH 2030,~~ MATH 2040, MATH 2070, ~~MATH 2140~~, ~~MATH 2160,~~ MATH 2170. A student may substitute any 3000/4000 level Math course for either of these two electives.

Other electives can be chosen.

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 1232 or MATH 1690 or a minimum grade of "B" in 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 DGPA of 2.00, and a minimum grade of “C” in each of the Major Program Specific courses (see below).

Applied Mathematics Major Program Specific Courses

MATH 1220, MATH 1230, MATH 1232, MATH 1240, MATH 2070, MATH 2080, MATH 2090, ~~MATH 2140~~, MATH 2150, MATH 2160, MATH 2180, MATH 3340, MATH 3420, MATH 3440, MATH 3460, ~~and~~ MATH 3470, and MATH 3610.

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 1230, MATH 1232 and MATH 1220. See the individual charts below for additional requirements for each option.

Options List: MATH 2030, MATH 2040, MATH 2170, or any 3000/4000 level MATH course.

Honours and Major Co-operative Options

A co-operative education option is available for both Major and Honours students. Students should refer to Section 3.5 of this chapter for further information on the Co-op programs.

Honours Co-op

The course, grade requirements and minimum DGPA requirement for entry and continuation in the Co-operative Option are the same as that for regular Honours program.

Students will need to have completed MATH 2020, MATH 2080, MATH 2090, MATH 2150 and MATH 2180 (or their equivalents as approved by the department of Mathematics) before entrance into the Co-op Program. Students who plan on, or are required to, take MATH 3470 and MATH 3472 are recommended to take these in the Fall and Winter (respectively) of Year 3 (similarly with MATH 3320 and MATH 3322).

Major Co-op

The course and minimum grade requirements for entry and continuation in the Co-operative Option are the same as those required for the regular Major program. However, the entry and continuation DGPA requirement is set at a minimum of 2.5.

Students will need to have completed MATH 2020, MATH 2080, MATH 2090, MATH 2150 and MATH 2180 (or their equivalents as approved by the department of Mathematics) before entrance into the Co-op Program. Students who plan on, or are required to, take MATH 3470 and MATH 3472 are recommended to take these in the Fall and Winter (respectively) of Year 3 (similarly with MATH 3320 and MATH 3322).

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.

4.9.2.1 Mathematics

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">MATHEMATICS HONOURS (including Co-operative Option) 120 CREDIT HOURS</td></tr>
<tr><td>MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240</td><td>MATH 2020, MATH 2080, MATH 2090, MATH 2150, MATH 2180

6 credit hours from the following list:

MATH 2030, MATH 2040, MATH 2070, ~~MATH 2140~~, MATH 2160[2], MATH 2170</td><td colspan="2" rowspan="3">36 credit hours Mathematics courses, which must include the following:

MATH 3320, MATH 3340, MATH 3390, MATH 3440, MATH 3470, MATH 3472;

And one of the two concentrations listed below:

Applied and Computational Mathematics Concentration:

MATH 3420, MATH 3460, MATH 4370; and additional 9 credit hours to be chosen from:

MATH 3322, MATH 3330, MATH 4280, MATH 4320[3], MATH 4330[3], MATH 4380[3], MATH 4390[3], MATH 4440, MATH 4460[3]

Pure Mathematics Concentration:

MATH 3322, one of (MATH 3410[3] or MATH 3480[3]), MATH 4260, and one of (MATH 4300[3] or MATH 4340[3] or MATH 4360[3]);

and an additional 6 credit hours to be chosen from: MATH 3360, MATH 4240[3], MATH 4270, MATH 4280, MATH 4290, MATH 4450, MATH 4470[3]</td></tr>
<tr><td colspan="2">STAT 1150[1], COMP 1010[1]</td></tr>
<tr><td colspan="2">The following must be completed in Year 1 or Year 2:

6 credit hours from the Faculty of Arts, which should include the required “W” course.</td></tr>
<tr><td colspan="2">15 credit hours of electives</td><td colspan="2">12 credit hours of approved (not necessarily mathematics) electives</td></tr>
<tr><td colspan="2" rowspan="2">The following must be completed in Year 1 or Year 2:

6 credit hours from the Faculty of Arts, which should include the required “W” course.</td><td colspan="2">12 credit hours of ~~electives~~ Mathematics courses from: MATH 2030, MATH 2070, MATH 2160, MATH 2170 (if not taken as a required 2nd year elective) and all Year 3 and 4 mathematics courses</td></tr>
<tr><td colspan="2">Co-op Requirements (if selected):
SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (A) in place of MATH 1220, MATH 1500 (A) or MATH 1510 (A) in place of MATH 1230, MATH 1700 (A) or MATH 1710 (A) in place of MATH 1232, MATH 1690 (B) in place of MATH 1230 and MATH 1232. With permission from the department, students may be able to substitute STAT 1000 and STAT 2000 in place of STAT 1150. COMP 1012 may be used in lieu of COMP 1010.

[2] Department strongly recommends choosing MATH 2160 as one of the electives in Year 2.

[3] These courses may not be offered every year, but are usually offered once every second year. Please refer to Aurora Student for courses offered in the current year and to the website of the Department of Mathematics for the planned schedule of future course offerings.

4.9.2.2 Mathematics Double Honours Program Chart

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">MATHEMATICS HONOURS DOUBLE (including Co-operative Option) MINIMUM 120 CREDIT HOURS (comprising courses listed in chart below, and the required courses from the other department)</td></tr>
<tr><td rowspan="2">MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240

STAT 1150[1]

COMP 1010[1]

Plus 6 credit hours from the Faculty of Arts, which should include the required “W” course</td><td rowspan="2">MATH 2020, MATH 2080, MATH 2090, MATH 2150, MATH 2180

6 credit hours from the following list:

MATH 2030, MATH 2040, MATH 2070, ~~MATH 2140~~, MATH 2160, MATH 2170</td><td>MATH 3320, MATH 3340, MATH 3390, MATH 3440, MATH 3470, MATH 3472</td><td>15 credit hours from: MATH 2030, MATH 2070, MATH 2160, MATH 2170 (if not taken as a required 2nd year elective); and all Year 3 and 4 mathematics courses of which at least 9 credit hours must be 4000 level.</td></tr>
<tr><td colspan="2">Co-op Requirements (if selected):
SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)</td></tr>
</table>

NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (A) in place of MATH 1220, MATH 1500 (A) or MATH 1510 (A) in place of MATH 1230, MATH 1700 (A) or MATH 1710 (A) in place of MATH 1232, MATH 1690 (B) in place of MATH 1230 and MATH 1232. With permission of the department, students may be able to substitute STAT 1000 and STAT 2000 in place of STAT 1150. COMP 1012 may be used in lieu of COMP 1010.

4.9.2.3 Mathematics Major Program Chart

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">MATHEMATICS FOUR YEAR MAJOR (including Co-operative Option) 120 CREDIT HOURS</td></tr>
<tr><td>MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240</td><td>MATH 2020, MATH 2080, MATH 2090, MATH 2150, MATH 2180

6 credit hours from the following:

MATH 2030, MATH 2040, MATH 2070, ~~MATH 2140~~, MATH 2160, MATH 2170</td><td colspan="2">A total of 48 credit hours from MATH 2030, MATH 2070, MATH 2160, MATH 2170 and any 3000/4000 level Mathematics courses, which must include:

MATH 2030 (if not already taken as Year 2 elective), MATH 2160 (if not already taken as Year 2 elective), MATH 3320, ~~MATH 3322,~~ MATH 3340, MATH 3360, MATH 3390, MATH 3440, MATH 3460</td></tr>
<tr><td colspan="2" rowspan="2">STAT 1150[1], COMP 1010[1]

15 credit hours of approved electives</td><td colspan="2">12 credit hours of approved electives</td></tr>
<tr><td colspan="2">Co-op Requirements (if selected):
SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)</td></tr>
</table>

The following must be completed in Year 1 or Year 2: 6 credit hours from the Faculty of Arts, which should include the required “W” course.	

NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (B) in place of MATH 1220, MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230, MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232, MATH 1690 (C+) in place of MATH 1230 and MATH 1232. With permission from the department, students may be able to substitute STAT 1000 and STAT 2000 in place of STAT 1150. COMP 1012 may be used in lieu of COMP 1010.

4.9.2.4 Applied Mathematics Major with Computer Science Option Program Chart

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">APPLIED MATHEMATICS FOUR YEAR MAJOR with COMPUTER SCIENCE OPTION (including Co-operative Option) 120 CREDIT HOURS</td></tr>
<tr><td>MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240

COMP 1010[1], COMP 1020</td><td>MATH 2080, MATH 2090, MATH 2150, MATH 2160, MATH 2180

COMP 2140</td><td colspan="2">MATH 2070, ~~MATH 2140~~, MATH 3340, MATH 3420, MATH 3440, MATH 3460, MATH 3470, <u>MATH 3610</u></td></tr>
<tr><td rowspan="4">6 credit hours from the Faculty of Arts, which should include the required “W” course

6 credit hours of approved electives</td><td colspan="3">STAT 1150[1] and STAT 2150

9 credit hours chosen from:

MATH 2030, MATH 2040, MATH 2170, 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 2160; and one of: COMP 3380, COMP 3440 or COMP 3020

Theoretical Computer Science: COMP 2080, and two of: COMP 3030, COMP 3170, COMP 3820 or COMP 4420

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</td></tr>
<tr><td colspan="3">27 credit hours of electives taken during years 2, 3 and 4</td></tr>
<tr><td></td><td colspan="2">Co-op Requirements (if selected):
SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)</td></tr>
</table>

NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (B) in place of MATH 1220, MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230, MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232, MATH 1690 (C+) in place of MATH 1230 and MATH 1232. STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150. COMP 1012 may be used in lieu of COMP 1010.

4.9.2.5 Applied Mathematics with Economics Option Program Chart

<table>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">APPLIED MATHEMATICS FOUR YEAR MAJOR with ECONOMICS OPTION (including Co-operative Option) 120 CREDIT HOURS</td></tr>
<tr><td>MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240

ECON 1010 and ECON 1020 (or ECON 1210 and ECON 1220)</td><td>MATH 2080, MATH 2090, MATH 2150, MATH 2160, MATH 2180</td><td colspan="2">MATH 2070, ~~MATH 2140~~, MATH 3340, MATH 3420, MATH 3440, MATH 3460, MATH 3470, MATH 3610, MATH 4370</td></tr>
<tr><td rowspan="2">9 credit hours of electives</td><td colspan="3">STAT 1150[1], STAT 2150

COMP 1010[1]

ECON 2030, ECON 3030

6 credit hours from:

MATH 2030, MATH 2040, MATH 2170, or any 3000/4000 level MATH course

6 credit hours from:

ECON 2010, ECON 2020, ECON 3010 and ECON 3020</td></tr>
<tr><td colspan="3">24 credit hours of approved electives taken during years 2, 3 and 4</td></tr>
<tr><td colspan="2">3 credit hour “W” course must be taken in Year 1 or Year 2</td><td colspan="2">Co-op Requirements (if selected):
SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)</td></tr>
</table>

NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (B) in place of MATH 1220, MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230, MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232, MATH 1690 (C+) in place of MATH 1230 and MATH 1232. STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150. COMP 1012 may be used in place of COMP 1010.

4.9.2.6 Applied Mathematics with Statistics Option Program Chart

YEAR 1	YEAR 2	YEAR 3	YEAR 4
APPLIED MATHEMATICS FOUR YEAR MAJOR with STATISTICS OPTION (including Co-operative Option) 120 CREDIT HOURS			

MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240 STAT 1150[1]	MATH 2080, MATH 2090, MATH 2150, MATH 2160, MATH 2180 STAT 2150, STAT 2400	MATH 2070, ~~MATH 2140~~, MATH 3340, MATH 3420, MATH 3440, MATH 3460, MATH 3470, MATH 3610 ~~STAT 2400, STAT 3400, STAT 3470, STAT 3480, STAT 3800~~ STAT 2800, STAT 3100, STAT 3450
6 credit hours from the Faculty of Arts, which should include the required "W" course	COMP 1010[1] 9 credit hours from: MATH 2030, MATH 2040, MATH 2170, or any 3000/4000 level MATH course ~~6~~ 9 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	
		Co-op Requirements (if selected): SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)

NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (B) in place of MATH 1220, MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230, MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232, MATH 1690 (C+) in place of MATH 1230 and MATH 1232. STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150. COMP 1012 may be used in place of COMP 1010.

4.9.2.7 Mathematics General Degree and Minor Requirements

YEAR 1	YEAR 2	YEAR 3	YEAR 4
THREE YEAR GENERAL 90 CREDIT HOURS			
MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240	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 1220[1], MATH 1230[1], MATH 1232[1], plus a minimum of 9 credit hours from MATH 1240[1] (or) and 2000 and (or) 3000 level Mathematics courses.			

NOTES:

[1] MATH 1500 or MATH 1510 may be taken in place of MATH 1230; MATH 1300 may be taken in place of MATH 1220; MATH 1700 or MATH 1710 may be taken in place of MATH 1232. MATH 1200 may be taken in place of MATH 1240, but these courses are not equivalent. i.e. students should note that MATH 1240 is a prerequisite to some 2nd year mathematics courses of which MATH 1200 is not a prerequisite.

4.9.2.9 Mathematics – Economics Joint Honours Program

<table>
<tr><td colspan="4">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.</td></tr>
<tr><td colspan="4">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), either MATH 1232 or MATH 1690 (or a minimum grade of "A" in MATH 1700) and have satisfied the Faculty of Science requirements for entry to the honours program.</td></tr>
<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>Both ECON 1010, ECON 1020, or both ECON 1210 and ECON 1220

MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240

STAT 1150[1, 2]

COMP 1010[2]</td><td>ECON 2010, ECON 2020

MATH 2020, MATH 2080, MATH 2090, MATH 2150, MATH 2180</td><td colspan="2" rowspan="2">ECON 3010, ECON 3020, ECON 3040[3]

MATH 2030, MATH 2160, MATH 3320, MATH 3340, MATH 3440, MATH 3470. MATH 3472

24 credit hours of approved Economics courses[3]

3 credit hours from ~~MATH 2140~~, MATH 3420, MATH 3460, MATH 3610, MATH 4370, or any Mathematics course at the 4000 level.

3 credit hours of Mathematics courses at the 3000 or 4000 level.</td></tr>
<tr><td>6 credit hours of electives, including the required “W” course.</td><td>9 credit hours of approved electives</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
<tr><td colspan="4">NOTES:

[1] Students are strongly advised to take MATH 1220, MATH 1230 and MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (A) in place of MATH 1220, MATH 1500 (A) or MATH 1510 (A) in place of MATH 1230, MATH 1700 (A) or MATH 1710 (A) in place of MATH 1232, MATH 1690 (B) in place of MATH 1230 and MATH 1232. With permission from the department, students may be able to substitute STAT 1000 and STAT 2000 in place of STAT 1150.

[2] Some courses may be taken in a different year than indicated; STAT 1150, COMP 1010, ECON 3040 may be taken in Year 2. The normal prerequisite for ECON 3040 is ECON 2040 (or the former ECON 3170), which will be waived for students in this program who have completed Year 1.

[3] 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 and at least 6 credit hours must be at the 4000 level. Students are encouraged to take ECON 4010, ECON 4020 and ECON 4040.</td></tr>
</table>

4.9.2.10 Mathematics - Computer Science Joint Honours Program (Including Co-op if selected) - see 4.6.3 Computer Science - Mathematics Joint Honours Program

Mathematics - Computer Science Joint Honours Program (Including Co-op if selected) - see 4.6.3 Computer Science - Mathematics Joint Honours Program

4.9.2.11 Mathematics - Statistics Joint Honours Program

Mathematics - Statistics Joint Honours Program - see 4.13.5 Statistics - Mathematics Joint Honours Program

Microbiology

Deletions:

MBIO 4010 Immunology H Cr.Hrs. 3 -3.0
MBIO 4600 Molecular Genetics of Prokaryotes Cr.Hrs. 3 -3.0
MBIO 4610 Molecular Genetics of Eukaryotes Cr.Hrs. 3 -3.0

Introductions:

MBIO 3600 Molecular Microbiology Techniques Cr.Hrs. 3 +3.0
A lab based course, intended to teach the fundamental techniques required to work in a modern molecular microbiology lab. Students will develop a thorough understanding of the theory underpinning the techniques introduced in this course, laboratory skills in current molecular microbiology techniques, and application of techniques to investigate scientific questions, such as the identification of unknowns. Evaluation will emphasize successful completion of protocols and presentation of results, with an emphasis on scientific writing. May not be held with the former MBIO 4600, MBIO 4601, or MBIO 4030 when the topic was Advanced Microbial Genetics Lab. Prerequisite: MBIO 3410 or MBIO 3411.

MBIO 4032 Special Topics in Microbiology Cr.Hrs. 3 +3.0
(Lab required) Microbiology is a very broad field that encompasses a wide range of specialized topics. In this course, students can pursue a specific topic in detail through laboratory-based research projects and may include lectures, assigned readings, and presentation of seminars. The course is normally restricted to third and fourth year Honours and Major students in Microbiology, Biochemistry, and Genetics. Topics to be covered by the course shall be decided by the instructor(s) in consultation with the student(s) and with the approval from the Department. Prerequisite: Consent of Instructor.

MBIO 4700 Computational Molecular Microbiology Cr.Hrs. 3 +3.0
The introduction to bioinformatics concepts achieved by applying computational tools to analyse sequence/molecular data relevant to Microbiology. The course will introduce existing bioinformatics tools that deal with biological databases, sequence alignment, gene and protein structure prediction, molecular phylogenetics, genomics and proteomics. May not to be held with MBIO 4030 when the topic was Applied Bioinformatics Resources for Microbial Based Research. Prerequisite: a “B” or better in MBIO 3410 or MBIO 3411.

Modifications:

MBIO 4020 Immunology Cr.Hrs. 3 0.0
Topics will include antigens, antibodies, antigen-antibody reactions, immunogenetics, regulation of immune reactions, complement, hypersensitivities, autoimmunity, immunodeficiencies, transplantation and tumour immunology. May not be held with MBIO 4011 or the former MBIO 4010. Prerequisite: MBIO 3010 or MBIO 3011.

MBIO 4602 Molecular Genetics of Prokaryotes - Lectures Cr.Hrs. 3 0.0
A detailed examination of replication, expression, mutability, repair and transposition of DNA in bacteria and their viruses. May not be held with the former MBIO 4600 or MBIO 4601. Prerequisites: [one of MBIO 2020, MBIO 2021, the former MBIO 2110, or the former MBIO 2111] and [one of MBIO 2370, MBIO 2371, CHEM 2370, or CHEM 2371]. BIOL 2500 or BIOL 2501 is recommended.

MBIO 4612 Molecular Genetics of Eukaryotes - Lectures Cr.Hrs. 3 0.0
A comprehensive study dealing with replication and expression of DNA, genome structure, and the involvement of genes in diseases such as cancer. May not be held with the former MBIO 4610 or MBIO 4611. Prerequisites: [one of MBIO 2020, MBIO 2021, the former MBIO 2110, or the former MBIO 2111] and MBIO 3410 or MBIO 3411. BIOL 2500 or BIOL 2501 is recommended.

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are outlined on the next 3 pages:

- **Bachelor of Science (Honours) in Microbiology**
- **Bachelor of Science (Honours) in Microbiology, Co-operative Option**
- **Bachelor of Science (Major) in Microbiology**
- **Bachelor of Science (Major) in Microbiology, Co-operative Option**

4.10.2 Microbiology Program Charts

<table>
<tr><th colspan="4">4.10.2 Microbiology</th></tr>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">HONOURS[6] 120 CREDIT HOURS</td></tr>
<tr><td>MBIO 1010[5]

BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310</td><td>MBIO 2020, MBIO 2360 (CHEM 2360), MBIO 2370[3] (CHEM 2370)

BIOL 2500, BIOL 2520

CHEM 2210, CHEM 2220</td><td>MBIO 3010, MBIO 3030, MBIO 3280, MBIO 3410, MBIO 3470, <u>MBIO 3600</u></td><td>MBIO 4020, MBIO 4440, MBIO 4480, MBIO 4530 (6)

One of: MBIO ~~4600~~ <u>4602</u>, MBIO ~~4610~~ <u>4612</u> or MBIO 4672</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~~<u>1240</u>[1], MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050

<u>STAT 1150 or</u> STAT 1000 ~~or STAT 1150~~

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</td><td colspan="2">18 credit hours of Microbiology courses including 3 credit hours at the 4000 level

~~9~~ <u>6</u> credit hours chosen from Microbiology courses or from the option list (see below)</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 CO-OPERATIVE OPTION[6,7] 120 CREDIT HOURS</td></tr>
<tr><td>MBIO 1010[5]

BIOL 1020, BIOL 1030

CHEM 1300, CHEM 1310</td><td>MBIO 2020, MBIO 2360 (CHEM 2360), MBIO 2370[3] (CHEM 2370)

BIOL 2500, BIOL 2520

CHEM 2210, CHEM 2220</td><td>MBIO 3010, MBIO 3030, MBIO 3280, MBIO 3410, MBIO 3470, <u>MBIO 3600</u></td><td>MBIO 4020, MBIO 4440, MBIO 4480

One of: MBIO ~~4600~~ <u>4602</u>, MBIO ~~4610~~ <u>4612</u> or MBIO 4672</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~~<u>1240</u>[1], MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050

<u>STAT 1150 or</u> STAT 1000 ~~or STAT 1150~~</td><td colspan="2">24 credit hours of Microbiology courses including 3 credit hours at the 4000 level

~~9~~ <u>6</u> credit hours chosen from Microbiology courses or from the option list (see below)

~~Work Terms:~~ <u>Co-op Requirements:</u></td></tr>
</table>

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)		~~MBIO~~ **SCI** 3980, ~~MBIO~~ **SCI** 3990, ~~MBIO~~ **SCI** 4980 and~~/or~~ ~~MBIO~~ **SCI** 4990 **(if a 4th work term is selected)**	
30 Hours	30 Hours	30 Hours	30 Hours
FOUR YEAR MAJOR (Including Co-op)[4,6,7] 120 CREDIT HOURS			
MBIO 1010[5] BIOL 1020, BIOL 1030 CHEM 1300, CHEM 1310	MBIO 2020, MBIO 2360 (CHEM 2360), MBIO 2370[3] (CHEM 2370) BIOL 2500, BIOL 2520 CHEM 2210, CHEM 2220	MBIO 3010, MBIO 3030, MBIO 3410, **MBIO 3600**	
In Year 1 or Year 2 the following must be completed: 3 credit hours of Mathematics or Physics chosen from: MATH ~~1200~~**1240**[1], MATH 1300[1], MATH 1500[1], PHYS 1020 or PHYS 1050 **STAT 1150 or** STAT 1000 ~~or STAT 1150~~ 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 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~~ **15** credit hours of ~~approved~~ electives ~~**Work Terms:**~~ **Co-op Requirements:** ~~MBIO~~ **SCI** 3980, ~~MBIO~~ **SCI** 3990, ~~MBIO~~ **SCI** 4980 and~~/or~~ ~~MBIO~~ **SCI** 4990 **(if a 4th work term is selected)**	
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			

*As of Fall 2018, admission to the Biotechnology programs has been temporarily suspended. For further information, see the Faculty of Science office.

NOTES:

[1] MATH 1220 or MATH 1310 may be taken in place of MATH 1300; MATH 1230, MATH 1510, MATH 1520 or MATH 1690 may be taken in place of MATH 1500. MATH ~~1240~~ **1200** may be ~~taken~~ **used** in place of MATH ~~1200~~ **1240**.

[2] MBIO 4530 may be selected only by special permission.

[3] It is strongly recommended that MBIO 2370 (CHEM 2370) be completed prior to year 3 as it is the prerequisite to many upper level MBIO courses.

[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 1410 cannot be used to satisfy course requirements in a Major or Honours program.

[7] Students in the Co-operative Option must complete MBIO 3010 and MBIO 3410 before their first employment term.

(The number 6 in brackets indicates a 6 credit hour course.)

Option List for All Microbiology Programs:

Agroecology: AGEC 2370

Biological Sciences:
BIOL 2242, BIOL 2260, BIOL 2261, BIOL 2300, BIOL 2301, BIOL 2380, BIOL 2381, BIOL 2410, BIOL 2411, BIOL 2420, BIOL 2421, BIOL 3260, BIOL 3290, BIOL 3291, BIOL 3330, BIOL 3370, BIOL 3400, BIOL 3450, BIOL 3452, BIOL 3460, BIOL 3462, BIOL 3470, BIOL 3472, BIOL 3500, BIOL 3501, BIOL 3542, BIOL 3560, BIOL 3561, BIOL 4242, BIOL 4244, BIOL 4246, BIOL 4430, BIOL 4480, BIOL 4540, BIOL 4542, BIOL 4544 (BIOL 3540), BIOL 4554, BIOL 4556, BIOL 4560

Chemistry:
CHEM 2260 (CHEM 2280), CHEM 2290, CHEM 2400 (CHEM 2380), 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: AGRI 2180

Pharmacology: PHAC 4030, PHAC 4040

Plant Science: PLNT 3400

Statistics: STAT 2000 or STAT 2150

NOTE: Other suitable options may be selected with permission of the department

Physics and Astronomy

Modifications:

PHYS 2260 Optics Cr.Hrs. 3 0.0
(Lab required) A survey of refraction, reflection, simple lens systems and optical systems, dispersion, achromatism and an elementary treatment of diffraction, interference, and polarization. May not be held with PHYS 2261. Prerequisites: [a "C" or better in PHYS 1050 or PHYS 1051] or [a "C+" or better in PHYS 1020 or PHYS 1021] and [one of MATH 1230, MATH 1500, MATH 1501, MATH 1510, MATH 1520, or MATH 1690]. Pre- or corequisites: [one of PHYS 1070, PHYS 1071, PHYS 1030, PHYS 1031, or PHYS 2152] and [one of MATH 1210, MATH 1211, MATH 1220, MATH 1300, MATH 1301, or MATH 1310] and [one of MATH 1232, MATH 1700, MATH 1701, or MATH 1710].

PHYS 2496 Mathematical Physics 1 Cr.Hrs. 3 0.0
This course provides a continuation of the mathematics required for both the Honours and Major programs in Physics and Astronomy. Topics include sequences and series, an introduction to complex numbers, special functions, ordinary differential equations, Fourier series and transforms, and an introduction to probability and statistics. May not be held with PHYS 2490. Prerequisites: [a "C" or better in PHYS 1050 or PHYS 1051] or [a "C+" or better in PHYS 1020 or PHYS 1021] and [one of MATH 1232, MATH 1690, MATH 1700, MATH 1701, or MATH 1710]. Pre- or corequisite: one of PHYS 1070, PHYS 1071, PHYS 1030, PHYS 1031, or PHYS 2152.

PHYS 2650 Classical Mechanics 1 Cr.Hrs. 3 0.0
The first in a sequence of two courses on intermediate to advanced level mechanics. Topics include inertial and non-inertial reference frames, energy, oscillations, dynamics of systems of particles, motion of a projectile with air resistance, planar motion of rigid bodies, as well as gravitation and central-force motion. Prerequisite: [a “C” or better in one of PHYS 1070, PHYS 1071, or PHYS 2152] or [a "C+" or better in PHYS 1030 or PHYS 1031]. Pre- or corequisite: one of PHYS 2496, PHYS 2490 or MATH 3132.

PHYS 3496 Mathematical Physics 2 Cr.Hrs. 3 0.0
This course provides a continuation of the mathematics required for both the Honours and Major programs in Physics and Astronomy. Topics include complex analysis, generalized coordinate systems, Sturm-Liouville theory and generalized orthogonal functions, partial differential equations, and applications in physics. Prerequisites: [one of PHYS 2390, MATH 2720, MATH 2721, MATH 2130, MATH 2150, or MATH 2151] and one of PHYS 2496 or PHYS 2490. MATH 2090 or the former MATH 2300 is recommended.

PHYS 3650 Classical Mechanics 2 Cr.Hrs. 3 0.0
The second in a sequence of two courses on intermediate to advanced level mechanics. Topics include calculus of variations, Lagrangian and Hamiltonian dynamics, rotational motion of rigid bodies in three dimensions, canonical equations using Poisson brackets, nonlinear oscillations and chaos, and coupled oscillations. Prerequisite: PHYS 2650. Pre- or corequisite: one of PHYS 3496, PHYS 2490, or MATH 3132.

NET CHANGE IN CREDIT HOURS: 0.0

Statistics

Deletions:

STAT 3050 Introduction to Probability Theory and Its Applications Cr.Hrs. 3	-3.0
STAT 3400 Introduction to Probability II Cr.Hrs. 3	-3.0
STAT 3470 Statistical Methods for Research Workers 1 Cr.Hrs. 3	-3.0
STAT 3480 Statistical Methods for Research Workers 2 Cr.Hrs. 3	-3.0
STAT 3800 Mathematical Statistics Cr.Hrs. 3	-3.0
STAT 4200 Statistical Inference 2 Cr.Hrs. 3	-3.0
STAT 4580 Sampling Techniques 2 Cr.Hrs. 3	-3.0
STAT 4590 Design of Experiments 2 Cr.Hrs. 3	-3.0
STAT 4690 Applied Multivariate Analysis Cr.Hrs. 3	-3.0

Introductions:

STAT 2300 Principles of Data Collection Cr.Hrs. 3 +3.0
Introduction to the basic principles and foundational aspects of data collection with a focus on the design and basic analysis of observational and experimental studies. Important issues like randomization, blocking and confounding, sampling, stratification, response bias and nonresponse will be covered. May not be held with the former STAT 3480. Prerequisite: one of STAT 1150, STAT 2000 (B), or STAT 2001 (B).

STAT 2800 Introduction to Probability 2 Cr.Hrs. 3 +3.0
(Lab required) Joint and conditional distributions, distributions of functions of random variables, laws of total expectation and variance, moments and generating functions. May not be held with the former STAT 3400 or the former STAT 3500. Prerequisite: STAT 2400. Pre- or corequisite: one of MATH 2150, MATH 2151, MATH 2720, MATH 2721, or the former MATH 2750.

STAT 3030 Introduction to Stochastic Processes Cr.Hrs. 3 +3.0
Review of conditional probability and expectations, Markov chains, homogeneous and nonhomogeneous Poisson processes. Optional topics include: reliability theory, queuing theory and Brownian motion. May not be held with the former STAT 3050. Prerequisites: [one of STAT 2800, the former STAT 3400, or the former STAT 3500] and [one of MATH 2150, MATH 2151, MATH 2720, MATH 2721, or the former MATH 2750].

STAT 3100 Introduction to Statistical Inference Cr.Hrs. 3
+3.0 (Lab required) Overview of the most common approaches to inference associated with point estimation, confidence intervals and hypothesis testing, including likelihood, least-squares and moment-based methods, as well as large sample approximations. May not be held with the former STAT 3600 or the former STAT 3800. Prerequisites: STAT 2150 and STAT 2400. Pre- or corequisite: one of MATH 2150, MATH 2151, MATH 2720, MATH 2721, or the former MATH 2750.

STAT 3150 Statistical Computing Cr.Hrs. 3 +3.0
Programming using statistical software, random number generation, principles of Monte Carlo simulation, simulation-based inference, Monte Carlo integration, and other related topics. Prerequisites: STAT 2150 and STAT 2400.

STAT 3450 Linear Models Cr.Hrs. 3 +3.0
Least-squares approach to simple and multiple regression, one-way analysis of variance, two-way analysis of variance and related topics. May not be held with STAT 3000, the former STAT 3120, or the former STAT 3470. Prerequisites: STAT 2150 and STAT 2400 and [one of MATH 1220, MATH 1300 (B), or MATH 1301 (B)].

STAT 3550 Nonlinear Regression Models Cr.Hrs. 3 +3.0
Nonlinear multiple regression, logistic regression, Poisson regression and generalizations, over/under dispersion, model selection techniques. May not be held with STAT 4000. Prerequisite: one of STAT 3450, the former STAT 3120, or the former STAT 3470. Pre- or corequisites: [one of STAT 3100, the former STAT 3600, or the former STAT 3800] and STAT 3150.

STAT 3690 Multivariate Analysis Cr.Hrs. 3 +3.0
Multivariate normal distribution, multivariate regression and applications, visualization of multivariate data and dimension reduction, principal component analysis, canonical correlation. May not be held with the former STAT 4690. Prerequisites: [one of STAT 2800, the former STAT 3400, or the former STAT 3500] and [one of STAT 3450, the former STAT 3120, or the former STAT 3470] and [one of MATH 2150, MATH 2151, MATH 2720, MATH 2721, or the former MATH 2750].

STAT 4000 Applied Statistical Modelling Cr.Hrs. 3 +3.0
Generalizations of linear models, including polynomial regression, analysis of covariance, logistic regression and regression for count data. Other optional topics include: random effects and mixed models, models for dependent data, advanced concepts in designing experiments. This course may not be used in the Honours or Major degree programs in Statistics. May not be held with STAT 3550. Prerequisite: one of STAT 3000, STAT 3450, the former STAT 3120, or the former STAT 3470.

STAT 4150 Bayesian Analysis and Computing Cr.Hrs. 3 +3.0
(Lab required) Bayesian modelling, prior and posterior distributions, predictive distributions, credible regions, Bayes factors and model uncertainty, Bayesian computational methods. Prerequisites: [one of STAT 2800, the former STAT 3400, or the former STAT 3500] and [one of STAT 3100, the former STAT 3600, or the former STAT 3800] and STAT 3150.

STAT 4250 Statistical Learning Cr.Hrs. 3 +3.0
(Lab required) Topics related to the use of Statistics and inferential methods in machine learning, including the lasso and ridge regression, classification and clustering, neural networks, support vector machines, bagging, boosting and ensemble methods. Prerequisites: [one of STAT 3100, the former STAT 3600, or the former STAT 3800] and STAT 3150 and [STAT 3690 or the former STAT 4690].

Modifications:

STAT 1150 Introduction to Statistics and Computing Cr.Hrs. 3 0.0
(Lab required) This course is recommended for students in mathematically rich disciplines, including Statistics, Mathematics, Actuarial Science, Computer Science, and related interdisciplinary programs. Topics to be covered include: summarizing and displaying large datasets, sampling, estimation and significance tests, probability calculations, random variables and probability distributions, introduction to regression and correlation analysis, statistical

software. Not to be held with STAT 1000, STAT 1001, STAT 2000, STAT 2001 and STAT 2220. Prerequisite: Minimum of 70% in Pre-calculus Mathematics 40S or a grade of B or better in MSKL 0100 or equivalent.

STAT 2150 Statistics and Computing Cr.Hrs. 3 0.0
(Lab required) This course is recommended for students in mathematically rich disciplines, including Statistics, Mathematics, Actuarial Science, Computer Science, and related interdisciplinary programs. Topics to be covered include: exploratory data analysis and visualization, graphical methods, random number generation, random variables, simple statistical models and computing, Monte Carlo methods, large sample and simulation-based inference, statistical software packages. Prerequisites: [a "C" or better in STAT 1150 or a "B" or better STAT 2000 or STAT 2001] and [a "C" or better in one of: MATH 1230, MATH 1500, MATH 1501, MATH 1510, the former MATH 1530, or MATH 1690].

STAT 2400 Introduction to Probability 1 Cr.Hrs. 3 0.0
(Lab required) Basic probability, discrete and continuous random variables, important families of distributions, functions of a random variable, expectation and variance, introduction to joint distributions. This course is not available to students who have previously obtained credit for the former STAT 3500. Prerequisites: [one of STAT 1150, STAT 2000 (B), or STAT 2001 (B)] and [one of MATH 1232, MATH 1690, MATH 1700 (B), MATH 1701 (B), MATH 1710 (B), or the former MATH 1730 (B)].

STAT 3000 Applied Linear Statistical Models Cr.Hrs. 3 0.0
Applied linear regression, analysis of variance for designed experiments and related topics. This course is not for use in the Honours or Major degree programs in Statistics. May not be held with STAT 3450, the former STAT 3120, or the former STAT 3470. Prerequisite: one of STAT 1150, STAT 2000 or STAT 2001.

STAT 3170 Statistical Quality Control Cr.Hrs. 3 0.0
Techniques for quality improvement through the use of statistical process control. Topics will include acceptance sampling, Pareto diagrams, control charts, measurements of process capability and process performance. Prerequisite: one of STAT 1150, STAT 2000 or STAT 2001.

STAT 3380 Introduction to Nonparametric Statistics Cr.Hrs. 3 0.0
Parametric versus nonparametric inference, inference using ranks and order statistics, contingency tables, goodness-of-fit tests, applications in the social and physical sciences. Prerequisite: one of STAT 1150, STAT 2000 or STAT 2001.

STAT 3490 Time Series Analysis Cr.Hrs. 3 0.0
Analysis of time series data and related methodologies: autoregressive and moving-average models and their generalizations, trend and seasonal components, exponential smoothing, the Box-Jenkins Methodology. Prerequisite: one of STAT 3450, the former STAT 3120, or the former STAT 3470.

STAT 4100 Statistical Inference Cr.Hrs. 3 0.0
(Lab required) Rigorous treatment of inferential methods associated with point estimation, confidence intervals and hypothesis testing, including large sample techniques. May not be held with the former STAT 4140. Prerequisites: [one of STAT 2800, the former STAT 3400, or the former STAT 3500] and [one of STAT 3100, the former STAT 3600, or the former STAT 3800].

STAT 4170 Lifetime Data Analysis Cr.Hrs. 3 0.0
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: [one of STAT 3100, the former STAT 3600, or the former STAT 3800] and [one of STAT 3450, the former STAT 3120, or the former STAT 3470].

STAT 4520 Sampling Techniques Cr.Hrs. 3 0.0
Development of sampling theory for use in sample survey problems. Covered topics include: probability sampling and inclusion probabilities, standard sampling designs, ratio and regression estimators, linearization of estimators. Prerequisites: [STAT 2300 and (one of STAT 3450, the former STAT 3120, or the former STAT 3470)] or the former STAT 3480.

STAT 4530 Design of Experiments Cr.Hrs. 3 0.0
Construction and analysis of commonly used experimental designs: block designs, Latin square designs, factorial and fractional factorial designs, split-plot designs. Prerequisites: [STAT 2300 and (one of STAT 3450, the former STAT 3120, or the former STAT 3470)] or the former STAT 3480.

STAT 4600 Topics in Statistics Cr.Hrs. 3 0.0
Topics of current interest in Statistics that will vary with the needs and interests of students and faculty. This course can be completed as a topics course multiple times under different titles. Prerequisite: Consent of Department

STAT 4630 Stochastic Processes Cr.Hrs. 3 0.0
Continuous time processes, renewal processes, Brownian motion, martingales, and other related processes. Prerequisite: STAT 3030 or the former STAT 3050.

STAT 4700 Statistical Consulting Cr.Hrs. 3 0.0
The role of a Statistics Consultant. Practical consulting experience. This course is restricted ~~to fourth year~~ students in the Honours, Joint Honours, or Major degree programs in Statistics. Students are advised to take this course in their fourth year. Prerequisite: STAT 2300 or the former STAT 3480. Pre- or corequisites: STAT 3550 and [STAT 3690 or the former STAT 4690].

NET CHANGE IN CREDIT HOURS: +6.0

Program modifications:

Modifications to the following programs are outlined on the next 23 pages:

- **Bachelor of Science (General)**
- **Bachelor of Science (Honours) in Statistics**
- **Bachelor of Science (Honours) in Statistics, Co-operative Option**
- **Bachelor of Science (Major) in Statistics**
- **Bachelor of Science (Major) in Statistics, Co-operative Option**
- **Minor in Statistics, Option 1 and Option 2**
- **Bachelor of Science (Joint Honours) in Statistics and Actuarial Mathematics**
- **Bachelor of Science (Joint Honours) in Statistics and Computer Science**

- **Bachelor of Science (Joint Honours) in Statistics and Computer Science, Co-operative Option**
- **Bachelor of Science (Joint Honours) in Statistics and Economics**
- **Bachelor of Science (Joint Honours) in Statistics and Mathematics**

Department of Statistics
Undergraduate Course and Program Changes
Revised according to SCCCC comments

1. Background:

An external review of our academic programs was initiated in the Spring 2018, with the associated site visit taking place on September 27 and 28. We had already started working on updating and modernizing our programs, in particular with respect to the contribution of Statistics to the Data Science program being developed by a committee of the Faculty of Science. In addition to these initial changes, we have also added most of the suggestions made by the program review committee.

The result is a full complement of new programs (including joint programs) with added applied and computational components, but with slightly less emphasis on theoretical statistics and a greater variety of optional courses. Another key aspect of the new Honours and Major programs in Statistics is the need for shorter sequences of prerequisites, reduced course dependencies and added flexibility in how students can satisfy degree requirements. We expect the changes to help with some of the past issues related to unusually long times to completion for some students.

Note that all the proposed course and program changes were unanimously approved by the Departmental Council of the Department of Statistics on May 23.

2. Executive Summary of Changes:

Program Changes

The specific details of our suggested program changes can be found in the revised program charts. The following points highlight the most important changes:

- we reduce course dependencies by having shorter sequences of prerequisites,
- we remove the "area of application" requirement of the current program,
- we put a stronger emphasis on applied and computational courses,
- we distinguish the honours and major programs by making the major less focused on traditional theoretical courses and adding flexibility by having more optional courses (rather than required courses),
- we add a required course (COMP 1020) and a sequence of optional courses in Computer Science,
- we require fewer courses, while allowing for more options in Mathematics,
- we officially introduce courses in Computational Statistics, Bayesian Analysis and Statistical Learning that will now be part of our regular offerings, rather then being offered occasionally as "Topics" courses.

Many of the above points are related to recommendations made by the external review. Table 1 gives an overview of the changes in required and optional courses in terms of credit hours (CH) for the B.Sc. Honours and Major programs in Statistics. Proposed changes to the joint programs are similar; see Tables 2 to 5. We are generally increasing the number of CH of optional courses and reducing the number of CH of required courses.

As a final note, changes to the joint programs with Computer Science and Economics include changes that are not related directly to the course changes in Statistics. In particular, in the joint program with Economics, MATH 2140 is replaced by a new 3000 level course on the same topic. Also, Computer Science is deleting COMP 2190, which is currently required in our joint program

with them. We are simply suggesting to replace that course with an elective. Finally, the Joint Honours has a Co-op option where the Work terms are now using the subject code SCI.

Course Changes

Associated with our suggested program changes, there are a number of course additions/deletions and modifications. Course additions and deletions are presented in Table 6. With the exception of STAT 4000, these are all courses that are either required or optional in our degrees. The required courses will be offered every year, while the optional courses will be offered either every year, or every other year on a rotational basis in order to allow us to offer a wider variety of courses over a two year cycle. As a result, we propose to introduce 11 courses and delete 9, for a net change of +6 credit hours (CH).

The proposed course modifications are presented in Table 7. We propose to modify a total of 12 courses. No change in CH is associated with these potential modifications. The suggested changes are mostly associated with a need to change prerequisites for these courses, although some courses also have an updated list of topics and/or a change to bring their description into line with that of other courses in terms of style. The exceptions to this are STAT 1150 and STAT 2150 which we suggesting to add to the U1 list of recommended courses. We are not suggesting any other changes to these two courses.

Finally, note that some proposed course modifications and introductions would include a mandatory (dry) lab component under the new plan. This would imply a slight increase in the number of labs between all of our upper level courses. The costs associated with these labs should be covered in part through lab fees.

3. Transition Plan:

It is expected that the transition to the new program should be reasonably smooth. Indeed, it is the case that

- a few of the new courses are the result of essentially changing a course title,
- some of the new courses are approximately equivalent content-wise (i.e. enough common content) to some of the courses being deleted (see Table 8),
- most others, that are completely new, have prerequisites that have the above approximate equivalence,
- the new programs allow for more flexibility for the students in terms of there being more electives and optional courses.

Students already in a program will be asked to talk to an advisor from the Department of Statistics or to the one Faculty of Science student advisor specializing in Statistics (currently Leslie Small) to help them navigate through the revised program.

Generally speaking, the courses STAT 2300 (Principles of Data Collection), STAT 3100 (Introduction to Statistical Inference) and STAT 3150 (Computational Statistics) will be required for many of the new 4000 level courses and hence, will require special treatment. The situation will be slightly different for each of these three courses. For STAT 2300, the situation will be simple: we will accept the former STAT 3480 as a replacement as it covered some of the same topics at a more advanced level. For STAT 3100, which we plan to offer in both Fall and Winter terms, we will accept STAT 3800 as an acceptable replacement for the first few offerings of the 4000 level courses that will require it as a prerequisite. The teaching of those 4000 level courses will take the transition into account. For STAT 3150, which we expect to offer in the Fall term, we would agree to accept it as a corequisite for the first offering of the 4000 level courses that will require

it. Finally, the first few offerings of STAT 2800 will take the transition and changes to STAT 2400 into account.

In order to make the situation completely clear, Table 9 gives the mapping of new courses being used to graduate under any of our old programs (Honours, Major and Joint Honours) and Table 10 gives the mapping of old courses being used to graduate under any of the new programs. In these tables, we only display required courses as optional courses will easily be accommodated: any previously required course that is not required under a new program will be usable to satisfy the requirements of CH in relevant optional courses (STAT or MATH).

4. Looking ahead:

We plan to introduce an honours thesis option and a series of topics courses in the very near future to further increase the variety of course options and experiences for our students. Because of our recent hiring, we also foresee creating optional courses with focuses on the analysis of biological data, on biostatistics (health related applications) and/or on financial data.

Finally, we want to further increase the number of upper level courses which include a lab component. This will help better train students in advanced theoretical topics, but also and perhaps especially, it will help improve their skills related to the use of statistical software and computing. This is an important aspect of the external review with which we are in full agreement, but we feel that these changes do have to be brought in gradually.

Table 1: Credit Hour requirements (CH) for B.Sc. Honours and Major in Statistics

Current requirements in CH

Degree	STAT required	STAT options	MATH required	COMP required	MATH options	Arts options	Other options + electives
Honours	36[1]	15[1]	21	3	6	6	33
Major	36[2]	15[2]	21	3	6	6	33

[1] Of these, a minimum of 21 CH must be at the 4000 level
[2] Of these, a minimum of 18 CH must be at the 4000 level

Proposed requirements in CH

Degree	STAT required	STAT options	MATH required	COMP required	MATH, STAT and/or COMP options	Arts options	Other options + electives
Honours	33[3]	24[3]	18	6	12[5]	6	21
Major	27[4]	24[4]	15	6	15[5]	6	27

[3] Of these, a minimum of 18 CH must be at the 4000 level
[4] Of these, a minimum of 15 CH must be at the 4000 level
[5] Of these, a minimum of 6 CH must be from MATH and/or COMP

Table 2: CH requirements for the B.Sc. Joint Honours in Statistics and Actuarial Mathematics

Current requirements in CH

Degree	STAT required	STAT options	Asper/ECON required	Asper/ECON options	MATH required	'W' course	Other electives
Joint Honours	39	0	45	0	15	3	18

Proposed requirements in CH

Degree	STAT required	STAT options	Asper/ECON required	Asper/ECON options	MATH required	'W' course	Other electives
Joint Honours	27	12	45	0	15	3	18

Table 3: CH requirements for the B.Sc. Joint Honours in Statistics and Mathematics

Current requirements in CH

Degree	STAT required	STAT options	MATH required	MATH options	COMP required	Arts options	Other options + electives
Joint Honours	33	0	54	6	3	6	18

Proposed requirements in CH

Degree	STAT required	STAT options	MATH required	MATH options	COMP required	Arts options	Other options + electives
Joint Honours	27	6	54	6	3	6	18

Table 4: Required credit hours (CH) for the B.Sc. Joint Honours in Statistics and Computer Science

Current requirements in CH

Degree	STAT required	STAT options	COMP required	COMP options	MATH required	Arts options	Other options + electives
Joint Honours	33	6	27	12	18	6	18

Proposed requirements in CH

Degree	STAT required	STAT options	COMP required	COMP options	MATH required	Arts options	Other options + electives
Joint Honours	30	9	24	12	18	6	21

Table 5: Required credit hours (CH) for the B.Sc. Joint Honours in Statistics and Economics

Current requirements in CH

Degree	STAT required	STAT options	ECON required	ECON options	MATH required	'W' course + COMP required	Other options + electives
Joint Honours	36	0	24	21	30	6	3

Proposed requirements in CH

Degree	STAT required	STAT options	ECON required	ECON options	MATH required	'W' course + COMP required	Other options + electives
Joint Honours	27	15	24	21	24	6	3

Table 6: Deletions and additions of STAT courses

Course Deletions

Course Number	Course Title	Lab	Credit Hours
3050	Introduction to Probability Theory & Its Applications	No	3
3400	Introduction to Probability II	Yes	3
3470	Statistical Methods for Research Workers 1	No	3
3480	Statistical Methods for Research Workers 2	No	3
3800	Mathematical Statistics	Yes	3
4200	Statistical Inference 2	No	3
4580	Sampling Techniques 2	No	3
4590	Design of Experiments 2	No	3
4690	Applied Multivariate Analysis	No	3

Total for Deletions: −27

Course Additions

Course Number	Course Title	Lab	Credit Hours
2300	Principles of data collection	No	3
2800	Introduction to Probability 2	Yes	3
3030	Introduction to Stochastic Processes	No	3
3100	Introduction to Statistical Inference	Yes	3
3150	Statistical Computing	No	3
3450	Linear Models	No	3
3550	Nonlinear Regression Models	No	3
3690	Multivariate Analysis	No	3
4000	Applied Statistical Modelling	No	3
4150	Bayesian Analysis and Computing	Yes	3
4250	Statistical Learning	Yes	3

Total for Additions: +33

Table 7: Course modifications (all courses labelled STAT)

Course Modifications

Course Number	Course Name	Lab	Credit Hours
1150	Introduction to Statistics and Computing	Yes	3
2150	Statistics and Computing	Yes	3
2400	Introduction to Probability 1	Yes	3
3000	Applied Linear Statistical Models	No	3
3170	Statistical ~~Process Control~~Quality Control	No	3
3380	Introduction to Nonparametric Statistics	No	3
3490	Time Series Analysis	No	3
4100	Statistical Inference	Yes	3
4170	Lifetime Data Analysis	No	3
4520	Sampling Techniques	No	3
4530	Design of Experiments	No	3
4600	Topics in Statistics	No	3
4630	Stochastic Processes	No	3
4700	Statistical Consulting	No	3

Table 8: Approximate equivalencies and acceptable replacements (all courses labelled STAT) for prerequisite purposes

Approximate Equivalencies

New Course	Approximately equivalent course
2800 - Introduction to Probability 2	3400 - Introduction to Probability II
3030 - Introduction to Stochastic Processes	3050 - Introduction to Probability Theory & Its Applications
3450 - Linear Models	3470 - Statistical Methods for Research Workers 1
3690 - Multivariate Analysis	4690 - Applied Multivariate Analysis

Acceptable Replacements

New Course	Acceptable prerequisite replacement
2300 - Principles of Data Collection	3480 - Statistical Methods for Research Workers 2
3100 - Introduction to Statistical Inference	3800 - Mathematical Statistics

Table 9: Course mapping: satisfying graduation requirements for previous programs using new course offerings

Course Required Under Previous Programs	Replacement course after changes
STAT 1150	course still offered
STAT 2150	course still offered
STAT 2400	course still offered
STAT 3050	STAT 3030
STAT 3400	STAT 2800
STAT 3470	STAT 3450
STAT 3480	STAT 2300
STAT 3490	course still offered
STAT 3800	STAT 3100
STAT 4100	course still offered
STAT 4200	Any 4000 level STAT course
STAT 4520	course still offered[1]
STAT 4530	course still offered[1]

[1] Course is now optional under new programs.

Optional Courses Under Previous Programs[2]	Replacement course after changes
STAT 3170	course still offered
STAT 3380	course still offered
STAT 3490	course still offered
STAT 4170	course still offered
STAT 4580	no replacement
STAT 4590	no replacement
STAT 4600	course still offered
STAT 4630	course still offered
STAT 4690	STAT 3690
STAT 4700	course still offered
New courses that would be acceptable options	STAT 3150 STAT 3550 STAT 4150 STAT 4250

[2] For the previous B.Sc. Honours and Major in Statistics, 15 CH of optional courses need to be selected among these.

Table 10: Course mapping: satisfying graduation requirements for new programs using previous course offerings

Course Required Under New Programs	Replacement course from before changes
STAT 1150	course was offered
STAT 2150	course was offered
STAT 2300	STAT 3480
STAT 2400	course was offered
STAT 2800	STAT 3400
STAT 3030	STAT 3050
STAT 3100	STAT 3800
STAT 3150	no replacement option
STAT 3450	STAT 3470
STAT 3690	STAT 4690
STAT 4100	course was offered

Optional Courses Under New Programs[1]	Replacement course from before changes
STAT 3030[2]	STAT 3050
STAT 3170	course was offered
STAT 3380	course was offered
STAT 3490	course was offered
STAT 3550	no replacement option
STAT 4100[2]	course was offered
STAT 4150	no replacement option
STAT 4170	course was offered
STAT 4250	no replacement option
STAT 4520	course was offered
STAT 4530	course was offered
STAT 4600	course was offered
STAT 4630	course was offered
STAT 4700	course was offered

[1] For the new B.Sc. Honours and Major in Statistics, between 24 and 33 CH of optional courses need to be selected among these.

[2] Acceptable option in the B.Sc. Major only

4.13.1 Program Information4.13.1 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 Computer Science, Mathematics, Economics and Actuarial Mathematics.

Honours Requirements

To enter the Honours program in Statistics, 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 STAT 2150.

STAT 1150, MATH 1220, MATH 1230, MATH 1232 and MATH 1240 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 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 and minimum grade of "C" in each course that contributes to the 120 credit hours of the degree.

Four Year Major Requirements

To enter the Major Degree program in Statistics, 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 STAT 2150.

STAT 1150, MATH 1220, MATH 1230, MATH 1232 and MATH 1240 are all requirements of the Statistics ~~Honours~~ **Major** 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 DGPA of 2.00.

To graduate from the four year Major program a student must obtain a minimum DGPA of 2.00, and a minimum grade of "C" in ~~each of~~ the Major Program Specific courses ~~(see below).~~ **, which include all program required courses (see program chart) and optional courses selected from lists C, D and E.**

~~**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 one of the following sequences of courses in Economics or Computer Science.~~

~~*Economics:* ECON 1010, ECON 1020, ECON 2010, ECON 2020, ECON 2030, ECON 3010, ECON 3020, ECON 3030, ECON 3040, ECON 4040, ECON 4042. (This list of courses is effective as of Fall 2015.)~~

~~*Computer Science (Software and Artificial Intelligence):* COMP 1010, COMP 1020, COMP 1500, COMP 1600, COMP 2080, COMP 2130, COMP 2140, COMP 3380, COMP 3440, COMP 4200, COMP 4380.~~

~~*Computer Science (Numerical Analysis and Graphics):* COMP 1010, COMP 1020, COMP 1500, COMP 1600, COMP 2080, COMP 2130, COMP 2140, COMP 2190, COMP 3140 or COMP 3490.~~

Honours and Major Co-operative Options

A co-operative education option is available for both B.Sc. (Honours) and B.Sc. (Major) students in Statistics. Students should refer to Section 3.5 of this chapter for further information on the Co-op programs.

Honours Co-op

The course, grade requirements and minimum DGPA requirement for entry and continuation in the Co-operative Option are the same as that for regular Honours program.

Students are required to complete the first and second year requirements of the program; and ~~STAT 3470 and STAT 3480~~ STAT 2300 and STAT 3450 before beginning their first co-op work term.

Major Co-op

The course and minimum grade requirements for entry and continuation in the Co-operative Option are the same as those required for the regular Major program. However, the entry and continuation DGPA requirement is set at a minimum of 2.5.

Students are required to complete the first and second year requirements of the program; and ~~STAT 3470 and STAT 3480~~ STAT 2300 and STAT 3450 before beginning their first co-op work term.

Optional courses for Honours and Major Programs

The following lists of options are used in the Honours and Major programs.

List A: Statistics options for the Honours program

STAT 3170, STAT 3380, STAT 3490, STAT 3550, STAT 4150, STAT 4170, STAT 4250, STAT 4520, STAT 4530, STAT 4600, STAT 4630, STAT 4700

List B: Mathematics options for the Honours program

MATH 2030, MATH 2070, MATH 2090, MATH 2160, MATH 2180, MATH 2740, MATH 3330, MATH 3340, MATH 3360, MATH 3440, MATH 3460, MATH 3470, MATH 3490, MATH 3610, MATH 4370, MATH 4390

List C: Computer Science options for the Honours and Major programs

COMP 2080, COMP 2140, COMP 3170, COMP 3190, COMP 3380, COMP 3820, COMP 4190, COMP 4360, COMP 4380, COMP 4420, COMP 4710

List D: Statistics options for the Major program

STAT 3030, STAT 4100 and all options in List A

List E: Mathematics options for the Major program

MATH 2080 and all options in List B

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. STAT 2000 and STAT 2150 cannot be used towards this requirement.

<table>
<tr><td colspan="4">4.13.2 Statistics</td></tr>
<tr><td>YEAR 1</td><td>YEAR 2</td><td>YEAR 3</td><td>YEAR 4</td></tr>
<tr><td colspan="4">HONOURS[1] (Including Co-operative Option) 120 CREDIT HOURS (comprising courses listed in chart below, and electives)</td></tr>
<tr><td>STAT 1150[1] [2]

MATH 1220[1] [2],
MATH 1230[1] [2],
MATH 1232[1] [2],
MATH 1240</td><td>STAT 2400, <u>STAT 2800</u>

<s>MATH 2030, MATH 2080, (MATH 2150 or MATH 2720)</s>

<u>MATH 2080, MATH 2150[2]</u></td><td><s>STAT 3050, STAT 3400, STAT 3470, STAT 3480, STAT 3800</s>

<u>STAT 3030, STAT 3100, STAT 3150, STAT 3450, STAT 3690</u></td><td><s>STAT 4100, STAT 4200, STAT 4520, STAT 4530</s>

<u>STAT 4100</u></td></tr>
<tr><td colspan="2">The following courses must be taken in Year 1 or Year 2:

COMP 1010, <u>COMP 1020</u>

STAT 2150 (B), <u>STAT 2300</u>

6 credit hours from the Faculty of Arts, which should include the required “W” course

<s>21 credit hours of elective courses including courses to be chosen from an area of application outlined in note 2 below.[2]</s>

<u>6 credit hours from the lists of Mathematics and Computer Science options (Lists B and C above)</u>

<u>9 credit hours of elective courses[3]</u></td><td colspan="2"><s>15 credit hours chosen from:</s>

<s>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.</s>

<u>24 credit hours from the list of Statistics options for the Honours program (List A given above), with at least 15 credit hours at the 4000 level</u>

<s>6 credit hours chosen from:</s>

<s>MATH 2140, MATH 2160, MATH 2180, MATH 3340, MATH 3440, MATH 3460, MATH 3470, MATH 3472</s>

<u>6 credit hours from the lists of Statistics, Mathematics and Computer Science options for the Honours program (Lists A, B and C above)</u>

<s>12 credit hours of approved elective courses including courses to be chosen from an area of application outlined in note 2 below.[2]</s>

<u>12 credit hours of elective courses[3]</u></td></tr>
<tr><td colspan="2"></td><td><s>Co-op Requirements:</s>

<s>STAT 3980</s></td><td><s>Co-op Requirements:</s>

<s>STAT 3990, STAT 4980, STAT 4990 (if a 4th work term selected)</s></td></tr>
<tr><td colspan="2"></td><td colspan="2"><u>Co-op Requirements (if selected):</u>
<u>SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)</u></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[~~4~~ 1] (Including Co-operative Option) 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
STAT 1150[~~1~~ ~~2~~] MATH 1220[~~1~~ ~~2~~], MATH 1230[~~1~~ ~~2~~], MATH 1232[~~1~~ ~~2~~], MATH 1240	STAT 2400, **STAT 2800** ~~MATH 2030, MATH 2080, (MATH 2150 or MATH 2720)~~ **MATH 2720**	~~STAT 3050, STAT 3400, STAT 3470, STAT 3480~~, ~~STAT 3800~~ **STAT 3100, STAT 3150, STAT ~~3470~~ 3450, STAT 3690**	~~STAT 4100, STAT 4200, STAT 4520, STAT 4530~~
The following courses must be taken in Year 1 or Year 2: COMP 1010, **COMP 1020** STAT 2150 (C+), **STAT 2300** 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]~~ **6 credit hours from the lists of Computer Science and Mathematics options for the Major program (Lists C and E above)** **12 credit hours of elective courses[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~~ **24 credit hours from the list of Statistics options for the Major program (List D given above), with at least 15 credit hours at the 4000 level** ~~6 credit hours chosen from:~~ ~~MATH 2140, MATH 2160, MATH 2180, MATH 3340, MATH 3440, MATH 3460, MATH 3470, MATH 3472~~ **9 credit hours from the lists of Computer Science, Statistics and Mathematics options for the Major program (Lists C, D and E above)** ~~12 credit hours of elective courses - including courses required for the chosen area of application outlined in note 3 below.[3]~~ **15 credit hours of elective courses[3]**	
		~~Co-op Requirements:~~ ~~STAT 3980~~ **~~SCI 3980~~**	~~Co-op Requirements:~~ ~~STAT 3990, STAT 4980, STAT 4990 (if a 4th work term selected)~~ **~~SCI 3990, SCI 4980, SCI 4990 (if a 4th work term selected)~~**
		Co-op Requirements (if selected): SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)	
30 Hours	30 Hours	30 Hours	30 Hours

THREE YEAR GENERAL 90 CREDIT HOURS	
STAT 1150[5 2], STAT 2150	STAT 2400, ~~STAT 3400~~ **STAT 2800** 12 additional credit hours of 2000, 3000, and (or) 4000 level Statistics courses[6 4]
MINOR: OPTION 1	
STAT 1000, **STAT 2000**	~~STAT 2000~~, STAT 3000 9 additional credit hours of 2000, 3000, or 4000 level Statistics courses[5]
MINOR: OPTION 2	
STAT 1150, **STAT 2150**	~~STAT 2150~~ 12 additional credit hours of 2000, 3000, or 4000 level Statistics courses[4]

NOTES:

[4 1] IMPORTANT: The four year 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, elective and optional courses and is meant to be a guide around which students can plan their program.

[1 2] The following substitutes are allowed: MATH 1300 (B) in place of MATH 1220; MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230; MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232; MATH 1690 ~~(C)~~ in place of MATH 1230 and MATH 1232; **MATH 2720 in place of MATH 2150**; STAT 1000 ~~(C)~~ and STAT 2000 (B) in place of STAT 1150.

~~[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 Although not required, students are encouraged to select some of their electives from traditional fields of application in Statistics such as Biological Sciences, Microbiology, Actuarial Mathematics, Economics, Psychology, or Sociology.

~~[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.~~

[6 4] STAT 2000 and STAT 2150 cannot be counted towards this requirement.

[5 STAT 2000 cannot be counted towards this requirement.

(Letters in brackets indicate minimum prerequisite standing for further study.)

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 STAT 2150. All of the courses listed in Year 1 of the program chart are program requirements and students are strongly urged to take them in the first year.

To continue in the Joint Honours Statistics - Actuarial Mathematics 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 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.

Recommended Electives: FIN 3410, FIN 4240, COMP 1010, ~~STAT 4630~~

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS			
STAT 1150[1], STAT 2150 (B) ECON 1010[2], ECON 1020[3] MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240 3 credit hour "W" course	~~STAT 2400, STAT 3400~~ **STAT 2300, STAT 2400, STAT 2800** ACT 2020, ACT 2120, ACT 2210 ACC 1100[2], FIN 2200[2] MATH 2720	~~STAT 3050, STAT 3470, STAT 3480, STAT 3490[3]; STAT 3800~~ **STAT 3030, STAT 3100, STAT 3450** ACT 3340, ACT 3630 (or both ACT 3130 and ACT 3230)	STAT 4100~~, STAT 4200, STAT 4520, STAT 4530;~~ ACT 4060, ACT 4160, ACT 4020[3], ACT 4030[3] MSCI 2150
3 credit hours of electives	~~6~~ **3** credit hours of electives	**3 credit hours of Statistics electives[4]** ~~6~~ **9** credit hours of electives	**9 credit hours of Statistics electives[4]** 3 credit hours of electives
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

~~[4] The following substitutions are allowed: MATH 1300 (C) or MATH 1310 (C) in place of MATH 1220 (C), MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230 (C), MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232. STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150.~~

[1] The following substitutions are allowed: MATH 1300 or MATH 1310 in place of MATH 1220; MATH 1500 (B) or MATH 1510 (B) in place of MATH 1230; MATH 1700 (B) or MATH 1710 (B) in place of MATH 1232; STAT 1000 and STAT 2000 (B) in place of STAT 1150.

[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,~~ ACT 4020 and ACT 4030 may be taken in Year 3 or 4.

[4] **The 12 credit hours of electives in Statistics in Years 3 and 4 must all be at the 3000 level or higher, at least 9 of which must be at the 4000 level. The following courses are recommended: STAT 3150, STAT 3490, STAT 3550, STAT 3690, STAT 4150, STAT 4250, STAT 4630.**

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.6.5 Computer Science – Statistics Joint Honours Program

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS ~~(comprising courses listed in chart below, and electives)~~ (Including Co-operative Option if selected)			
COMP 1010, COMP 1020 (B) STAT 1150[1], STAT 2150 (B) MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240 Plus 6 credit hours from the Faculty of Arts, which could include the required 3 credit hour "W" course.	COMP 2080, COMP 2140, COMP 2150, COMP 2160, ~~COMP 2190~~ **STAT 2300,** STAT 2400, **STAT 2800** MATH 2080, MATH 2150[1] 6 **3** credit hours of electives	COMP 3170, COMP 3380 ~~STAT 3050, STAT 3400, STAT 3470, STAT 3480, STAT 3800~~ **STAT 3030, STAT 3100, STAT 3150, STAT 3450** ~~9 credit hours of electives[3] including 3 credit hours from 3rd year COMP~~ **12 credit hours of electives[2]**	STAT 4100~~, STAT 4520, STAT 4530~~ ~~21 credit hours of electives including 6 credit hours from 4th year COMP[2], 3 credit hours from 3rd year COMP and 6 credit hours from 4th year STAT courses~~ **27 credit hours of electives[3]**
	Co-op Requirements (if selected): **SCI 3980[4], SCI 3990[4], SCI 4980[4], and SCI 4990 (if a 4th work term is selected)**		
30 Hours	30 Hours	30 Hours	30 Hours
~~**JOINT HONOURS CO-OPERATIVE OPTION[4] 120 CREDIT HOURS (comprising courses listed in chart below, and electives)**~~			
~~COMP 1010, COMP 1020 (B) STAT 1150[1], STAT 2150 (B) MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240 Plus 6 credit hours from the Faculty of Arts, which could include the required 3 credit hour "W" course.~~	~~COMP 2080, COMP 2140, COMP 2150, COMP 2160, COMP 2190 STAT 2400 MATH 2080, MATH 2150 6 credit hours of electives~~	~~COMP 3170, COMP 3380 STAT 3050, STAT 3400, STAT 3470, STAT 3480, STAT 3800 9 credit hours of electives[3] 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[2], 3 credit hours from 3rd year COMP and 6 credit hours from 4th year STAT courses~~
-	~~COMP 2980[4]~~	~~COMP 3980[4]~~	~~COMP 4980[4]~~
~~30 Hours~~	~~30 Hours~~	~~30 Hours~~	~~30 Hours~~

NOTES:

~~[1] MATH 1510 (B) or MATH 1500 (B) may be taken in place of MATH 1230; MATH 1300 (B) may be taken in place of MATH 1220; MATH 1710 (B) or MATH 1700 (B) may be taken in place of MATH 1232. STAT 1000 (C) and STAT 2000 (B) may be taken in place of STAT 1150.~~

[1] The following substitutions are allowed: MATH 1500 (B) or MATH 1510 (B) may be taken in place of MATH 1230; MATH 1300 (B) may be taken in place of MATH 1220; MATH 1700 (B) or MATH 1710 (B) may be taken in place of MATH 1232; MATH 2720 may be taken in place of MATH 2150; STAT 1000 and STAT 2000 (B) may be taken in place of STAT 1150.

~~[2] COMP 4710 and COMP 4380 are suggested if offered.~~

~~[3] The following courses are suggested: COMP 3350, COMP 3020, COMP 3490, STAT 3490, STAT 4630, STAT 4690.~~

[2] **These must include 3 credit hours of COMP courses at the 3000 level. The following courses are suggested: COMP 3020, COMP 3350, COMP 3490, STAT 3490, STAT 3550, STAT 3690.**

[3] **These must include 3 credit hours of COMP courses at the 3000 or 4000 level, 6 credit of COMP courses at the 4000 level, and 9 credit hours of STAT courses at the 4000 level. The following courses are suggested: COMP 4380, COMP 4710, STAT 4150, STAT 4250, STAT 4630.**

[4] The work terms ~~COMP 2980, COMP 3980 and COMP 4980~~ **SCI 3980, SCI 3990 and SCI 4980** will **normally** be completed in the summers following Year 2, Year 3 and Year 4, respectively and must be completed by the last academic term.

4.13.6 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 2150 in second year and enter Honours in Year 3.

To enter the Joint Honours Statistics-Economics program in the Faculty of Science, 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 2150; and have satisfied the Faculty of Science requirements for entry to the honours program. Students are strongly encouraged to take MATH 1220, MATH 1230, MATH 1232 and MATH 1240 in Year 1.

To continue in the Joint Honours Statistics-Economics program in the Faculty of Science, a minimum DGPA of 3.00 is required.

To graduate with the B.Sc. Joint Honours Statistics-Economics degree from the Faculty of Science, a student must achieve a minimum DGPA of 3.00, and a minimum grade of "C" in each course that contributes to the 120 credit hours of the degree.

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS			
Both ECON 1010 and ECON 1020 or both ECON 1210 and ECON 1220 STAT 1150[1] MATH 1220[1], MATH 1230[1], MATH 1232[1], MATH 1240 COMP 1010	ECON 2010, ECON 2020 ~~STAT 2150, STAT 2400~~ **STAT 2150, STAT 2300, STAT 2400, STAT 2800** ~~MATH 2030, MATH 2080, MATH 2140, MATH 2150 or MATH 2720~~ **MATH 2080, MATH 2150[1]**	ECON 3010, ECON 3020 ~~STAT 3400, STAT 3470, STAT 3480, STAT 3490, STAT 3800~~ **STAT 3100, STAT 3150, STAT 3450** ~~MATH 2160, MATH 3360~~ **MATH 2160, MATH 3610**	ECON 4040, ECON 4042 ~~STAT 4100, STAT 4200, STAT 4520, STAT 4530~~ **STAT 4100**
6 credit hours of electives including the required "W" course.	6 credit hours of approved Economics electives[2]	3 credit hours of approved Economics electives[2] **6 credit hours of approved Statistics electives[3]**	12 credit hours of approved Economics electives[2] **9 credit hours of approved Statistics electives[3]**
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

~~[1] The following substitutes are allowed: MATH 1300 in place of MATH 1220, MATH 1500 in place of MATH 1230, MATH 1700 in place of MATH 1232, STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150. Students must attain specific grade requirements in order to meet the upper level course prerequisites. Consult course descriptions for further information.~~

[1] The following substitutions are allowed: MATH 1300 in place of MATH 1220; MATH 1500 in place of MATH 1230; MATH 1700 in place of MATH 1232; MATH 2720 in place of MATH 2150; STAT 1000 and STAT 2000 (B) in place of STAT 1150. Students must attain specific grade requirements in order to meet the upper level course prerequisites. Consult course descriptions for further information.

[2] Of the 21 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 2030 and ECON 3040 are recommended in Year 2 or 3. The normal prerequisite for ECON 3040 is ECON 2040, which will be waived for students in this program who have completed Year 1.

[3] The 15 credit hours of electives in Statistics in Years 3 and 4 must all be at the 3000 level or higher, at least 9 of which must be at the 4000 level. The following courses are recommended: STAT 3030, STAT 3490, STAT 3550, STAT 3690, STAT 4150, STAT 4250, STAT 4630.

(Letters in brackets indicate minimum prerequisite standing for further study.)

4.13.5 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 obtained a minimum grade of "B" in STAT 2150, and either MATH 1232 or MATH 1690 (or a minimum grade of "A" in MATH 1700).

To continue in the Honours program, students must maintain a minimum DGPA of 3.00.

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 remaining courses that contribute to the 120 credit hours of the degree.

<table>
<tr><th>YEAR 1</th><th>YEAR 2</th><th>YEAR 3</th><th>YEAR 4</th></tr>
<tr><td colspan="4">JOINT HONOURS 120 CREDIT HOURS (comprising courses listed in chart below, and electives)</td></tr>
<tr><td>MATH 1220[1], MATH 1230[1], MATH 1232[1] (B), MATH 1240</td><td>STAT 2400<u>, STAT 2800</u>

MATH 2020, MATH 2080, MATH 2090, MATH 2150, MATH 2160, MATH 2180</td><td><s>STAT 3050, STAT 3470, STAT 3480, STAT 3400, STAT 3800</s>

<u>STAT 3030, STAT 3100, STAT 3150, STAT 3450</u></td><td><s>STAT 4100, STAT 4520, STAT 4530</s>

<u>STAT 4100</u></td></tr>
<tr><td colspan="2">The following courses must be taken in Year 1 or Year 2:

STAT 1150[1], STAT 2150 (B)

COMP 1010

6 credit hours from the Faculty of Arts, which should include the required "W" course

<s>12</s> <u>9</u> credit hours of approved electives</td><td colspan="2">MATH 2030, MATH 3320, MATH 3322, MATH 3340, MATH 3470, MATH 3472, MATH 3440, MATH 3460

3 credit hours from MATH 2070, MATH 2170 and any 3000/4000 level Mathematics courses

3 credit hours from any 4000 level Mathematics courses

<u>6 credit hours from any 4000 level Statistics courses</u>

<s>6</s> <u>9</u> credit hours of approved electives</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

NOTES:

<s>[1] Students are strongly advised to take MATH 1220, MATH 1230, MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (A) in place of MATH 1220; MATH 1500 (A) or MATH 1510 (A) in place of MATH 1230, MATH 1700 (A) in place of MATH 1232, MATH 1690 (B) in place of MATH 1230 and MATH 1232. STAT 1000 (C) and STAT 2000 (B) in place of STAT 1150.</s>

<u>[1] Students are strongly advised to take MATH 1220, MATH 1230, MATH 1232. The following substitutions are allowed (but not advised), provided the grades indicated in brackets are achieved: MATH 1300 (A) in place of MATH 1220; MATH 1500 (A) or MATH 1510 (A) in place of MATH 1230; MATH 1700 (A) in place of MATH 1232; MATH 1690 (B) in place of MATH 1230 and MATH 1232; STAT 1000 and STAT 2000 (B) in place of STAT 1150.</u>

(Letters in brackets indicate minimum prerequisite standing for further study.)

Faculty of Social Work

Modification:

SWRK 2650 The Social Aspects of Aging Cr.Hrs. 3 0.0
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. May not be held with FMLY 2650 or the former HMEC 2650 or REC 2650 or HMEC 2650 or SWRK 2651. (A required Option in Aging course.)

NET CHANGE IN CREDIT HOURS: 0.0

Program modification:

Modifications to the **Inter Faculty Option in Aging** are outlined below:

The Faculty of Social Work is requesting the following changes be made to the Academic Calendar under 1.2 Interfaculty Option in Aging (additions highlighted, deletions indicated by strikethrough font):

An Interfaculty Option in Aging is offered by the following faculties and colleges: Agricultural and Food Sciences, Arts, Kinesiology and Recreation Management, Medicine, Nursing, and Social Work. To complete the option, students will complete each of the following requirements: a) ~~2610*~~ **NURS 2610/KIN 2610*** Health and Physical Aspects of Aging; b) ~~2650*~~ **SWRK 2650/FMLY 2650/REC 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.

Université de Saint Boniface

Faculté d’éducation et des études professionnelles

École d’administration des affaires

Modifications:

ACC 2021 Comptabilité intermédiaire: Capitaux propres et passifs Cr.Hrs. 3 0.0
Cadre théorique de la comptabilité relatif aux capitaux propres avec un accent sur le traitement comptable des passifs à court et à long terme, les régimes de retraite, les impôts sur les bénéfices, les actions et les surplus. On ne peut se faire créditer ACC 2021 et ACC 2020 ou FIN 3250. Préalable: Une note minimale de C dans (ACC 2011 ou ACC 2010) et (FIN 2201 ou FIN 2200).

ACC 3031 Comptabilité avancée Cr.Hrs. 3 0.0
Société en nom collectif, consolidation, regroupements d'entreprises, états financiers consolidés; comptabillté des organismes à but non lucratif et des organismes du secteur public. Ce cours n'est pas offert à chaque année. On ne peut se faire créditer ACC 3031 et ACC 3030. Préalables: Une note minimale de C dans (ACC 2011 ou ACC 2010) et (ACC 2021 ou ACC 2020).

ACC 4011 Vérification Cr.Hrs. 3 0.0
Étude de la philosophie et des notions de la vérification, des responsabilités légales et éthiques d'un vérificateur, des techniques de base de la vérification comptable, y compris l'échantillonnage statistique et l'établissement d'organigrammes, et de la vérification de gestion. On ne peut se faire créditer ACC 4011 et ACC 4010. Préalables: Une note minimale de C dans (ACC 2011 ou ACC 2010) et (ACC 2021 ou ACC 2020).

ACC 4031 Théorie comptable Cr.Hrs. 3 0.0
Évolution de la théorie comptable, processus de normalisation et influence du milieu sur son cheminement, étude des modèles de mesure des bénéfices, théorie d'agence, hypothèse de l'efficience des marchés de capitaux, etc. Contenu variable d'année en année selon les besoins des étudiantes et des étudiants, et selon la spécialité du professeur ou de la professeure. On ne peut se faire créditer ACC 4031 et ACC 4030. Préalables: Une note minimale de C dans (ACC 2021 ou ACC 2020) et (FIN 2201 ou FIN 2200).

FIN 2201 Gestion financière Cr.Hrs. 3 0.0
(Laboratoire requis) Introduction aux principes de la gestion financière de l'entreprise, en particulier dans le choix du financement, le choix de l'investissement et la gestion des fonds. On ne peut se faire créditer FIN 2201 et FIN 2200. Préalables: [ACC 1101 ou ACC 1100 avec une note minimale de D], [MATH 1230 ou MATH 1501 ou MATH 1500 ou MATH 1520 avec une note minimale de C], [STAT 1001 ou STAT 1000 ou STAT 1150 avec une note minimale de C], [ECON 1011 (ou ECON 1010) et ECON 1021 (ou ECON 1020) ou l'ancien ECON 1201 (ou l'ancien ECON 1200) avec une note minimale de C].

FIN 3411 Investissements Cr.Hrs. 3 0.0
Introduction aux marchés de capitaux à l'efficacité des opérations de couverture, aux différents concepts financiers, aux modèles de fixation de prix sur les gains en capital, à la théorie et à la gestion de portefeuille, aux options et les marchés à terme, aux investissements internationaux et à l'efficacité des marchés. Les étudiants apprendront des concepts financiers, manipuleront

des outils et des techniques, ainsi que leur utilisation dans les prises de décision d'investissement. Les étudiants doivent avoir une bonne connaissance du logiciel Excel car les travaux du cours exigent l'analyse des données sur des feuilles de calcul. On ne peut se faire créditer FIN 3411 et FIN 3410. Préalables: [une note minimale de C+ dans FIN 2201 ou FIN 2200] et [une note minimale de C dans MATH 1220 ou MATH 1301 ou MATH 1300 ou MATH 1310] et [une note minimale de C dans STAT 2001 ou STAT 2000 ou STAT 2150].

FIN 3481 Financement d'entreprise: Théories et pratiques Cr.Hrs. 3 0.0
Approfondir la compréhension que les étudiants ont de la théorie financière et des techniques financières ainsi que de leur application aux politiques financières d'entreprise. Parmi les sujets étudiés, on compte: le coût du capital, le choix des investissements, la structure financière, les politiques de dividende, le crédit-bail, les options réelles, les fusions et les acquisitions ainsi que d'autres sujets spéciaux. On ne peut se faire créditer FIN 3481 et FIN 3480. Préalables: [une note minimale de C+ dans FIN 2201 ou FIN 2200] et [une note minimale de C dans MATH 1220 ou MATH 1301 ou MATH 1300 or MATH 1310] et [une note minimale de C dans STAT 2001 ou STAT 2000 ou STAT 2150].

MKT 3221 Recherche en marketing Cr.Hrs. 3 0.0
Étude de la planification et de la mise en oeuvre de la recherche comme exigence pour prendre des décisions éclairées en marketing. On ne peut se faire créditer MKT 3221 et MKT 3220. Préalables: Une note minimale de D dans MKT 2211 ou MKT 2210 ou l’autorisation professorale.

MSCI 2151 Introduction aux sciences de la gestion Cr.Hrs. 3 0.0
Introduction aux techniques et aux modèles des sciences de la gestion. La programmation linéaire, les problèmes d'affectation et de transport, la théorie de la décision et les files d'attente. On ne peut se faire créditer MSCI 2151 et MSCI 2150 ou ABIZ 2520. Préalables: Une note minimale de C dans (MATH 1520 ou MATH 1501 ou MATH 1500 ou MATH 1230) et (STAT 1150 ou STAT 1001 ou STAT 1000).

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the **Baccalauréate en administration des affaires** are outlined on the next 2 pages.

SECTION D – ACADEMIC CALENDAR

Comptabilité

Cette concentration requiert 12 crédits parmi la liste des cours suivants :

ACC 2011 Comptabilité intermédiaire – Actifs (3)
ACC 2021 Comptabilité intermédiaire – Capitaux propres et passifs (3)
ACC 3041 Comptabilité de coûts (3)
~~ACC 3031 Comptabilité avancée (3)~~ **ACC 4031 Théorie comptable (3)**

Et au choix ACC 3031 Comptabilité avancée (3)*

* Cours en rotation; les suivre l'année où ils sont offerts.

SECTION D – ACADEMIC CALENDAR

Finances

Cette concentration requiert 12 crédits parmi la liste des cours suivants:

~~FIN 2201 Gestion financière (3)~~*

FIN 3411 Investissements (3)*

FIN 3451 Finances internationales (3)*

FIN 3481 Financement d'entreprise: théories et pratiques (3)*

FIN 4401 Pratiques de gestions financières (3)*

* Cours en rotation; les suivre l'année où ils sont offerts.

Faculté d’éducation

Deletions:

EDUA 3303 Intégration et identité professionnelles Cr.Hrs. 3 -3.0
EDUB 1011 Stages et séminaires 1 Cr.Hrs. 3 -3.0
EDUB 4205 Didactiques: l'approche par projet Cr.Hrs. 6 -6.0

Introductions:

EDUA 3305 Intégration et identité professionnelles Cr.Hrs. 6 +6.0
Développement de l'habileté à faire le lien entre la pratique et la théorie et à mettre en oeuvre une gestion efficace de sa pratique pédagogique. On ne peut se faire créditer EDUA 3305 et l'ancien EDUA 3303.

EDUB 3305 Introduction à l'enseignement Cr.Hrs. 3 +3.0
Ce cours fournira des occasions d'exploration, de discussion et de réflexion professionnelle sur divers aspects théoriques de l'enseignement. Le cours est destiné aux étudiantes et étudiants en première année du baccalauréat en éducation. On ne peut se faire créditer EDUB 3305 et l'ancien EDUB 1011.

EDUB 3307 Stages en milieu scolaire 1 Cr.Hrs. 3 +3.0
Ces stages en milieu scolaire seront effectués sous la surveillance du personnel de la Faculté et de l'école d'accueil et présenteront aux étudiantes et étudiants des occasions d'observation, de consultation et de mise en application des aspects théoriques de l'enseignement et de l'apprentissage. Le cours est destiné aux étudiantes et étudiants en première année du baccalauréat en éducation. On ne peut se faire créditer EDUB 3307 et l'ancien EDUB 1011. Une note de réussite ou d’échec sera attribuée pour ce cours.

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the **Baccalauréat en éducation** are outlined on the next 2 pages:

SECTION D - Academic Calendar Content

Voie primaire et intermédiaire

3.0 Exigences

Le baccalauréat en éducation voie primaire et intermédiaire de l'USB, d'une durée de deux ans, exige l'obtention préalable d'un premier grade universitaire (B.A., B.Sc., etc.) et comprend un total de 60 crédits, répartis entre cours obligatoires et stages pratiques.

3.1 Exigences de crédits du programme

Le programme de baccalauréat en éducation – voie primaire et intermédiaire ne comporte que des cours du tronc commun; il n'y a aucun cours à option ou au choix.

1RE ANNÉE ~~(30 CRÉDITS)~~ (33 CRÉDITS)

EDUA 1801	Psychologie de l'apprentissage et de l'enseignement I (3)
EDUA 2801	Psychologie de l'apprentissage et de l'enseignement II (3)
EDUA 2901	Le rôle de l'école dans la société (3)
EDUA 3201	Diversité culturelle dans les écoles (3)
EDUA 3313	Perspectives autochtones en contexte scolaire (3)
EDUA 3993	Éducation en français en contextes minoritaire et d'immersion (3)
~~EDUB 1011~~	~~Stages et séminaires I (3)~~
EDUB 3101	Méthodologie de la lecture à l'élémentaire I (3)
EDUB 3291	Principes et pratiques de l'évaluation des apprentissages (3)
EDUB 4051	Méthodologie générale (3)
EDUB 3305	**Introduction à l'enseignement (3)**
EDUB 3307	**Stages en milieu scolaire 1 (3)**
EDUB 2211	Perfectionnement du français oral et écrit (3) *Note : Ce cours est obligatoire pour les étudiantes et étudiants ayant reçu une cote 3 dans l'une ou l'autre des exigences du profil langagier de la Faculté d'éducation. Il ne peut pas être crédité aux fins du baccalauréat en éducation. Les cours additionnels de perfectionnement linguistique ne comptent pas parmi les 60 crédits du baccalauréat en éducation.*

2E ANNÉE ~~(30 CRÉDITS)~~ (27 CRÉDITS)

EDUB 3013	Microenseignement et pratiques pédagogiques (3)
~~EDUA 3303~~	~~Intégration et identité professionnelles (3)~~
EDUA 3305	**Intégration et identité professionnelles (6)**
EDUA 3323	La pratique réflexive dans la formation professionnelle (3)
EDUB 4011	Stages pratiques (9)
EDUB 4021	Didactique élémentaire (6)
~~EDUB 4205~~	~~Didactiques : l'approche par projet (6)~~

Voie secondaire

3.0 Exigences

3.1 Exigences de crédits du programme

Le baccalauréat en éducation voie secondaire de l'USB, d'une durée de deux ans, exige l'obtention préalable d'un premier grade universitaire (B.A., B. Sc., etc.) et comprend un total de 60 crédits, répartis entre cours obligatoires et stages pratiques.

PREMIÈRE ANNÉE ~~(30 CRÉDITS)~~ (33 CRÉDITS)

EDUA 1801	Psychologie de l'apprentissage et de l'enseignement I (3)
EDUA 2801	Psychologie de l'apprentissage et de l'enseignement II (3)
EDUA 2901	Le rôle de l'école dans la société (3)
EDUA 3201	Diversité culturelle dans les écoles (3)
EDUA 3313	Perspectives autochtones en contexte scolaire (3)
EDUA 3993	Éducation en français en contextes minoritaire et d'immersion (3)
~~EDUB 1011~~	~~Stages et séminaires I (3)~~
EDUB 2511	Intégration de la langue dans toutes les matières (3)
EDUB 3291	Principes et pratiques de l'évaluation des apprentissages (3)
EDUB 4051	Méthodologie générale (3)
EDUB 3305	**Introduction à l'enseignement (3)**
EDUB 3307	**Stages en milieu scolaire 1 (3)**
EDUB 2211	Perfectionnement du français oral et écrit (3) *Ce cours est obligatoire pour les étudiantes et étudiants n'ayant pas satisfait aux exigences linguistiques de la Faculté d'éducation. Ce cours de perfectionnement ne peut pas être crédité aux fins du baccalauréat en éducation. Les cours additionnels de perfectionnement linguistique sont au-delà des 60 crédits du baccalauréat en éducation.*

DEUXIÈME ANNÉE ~~(30 CRÉDITS)~~ (27 CRÉDITS)

~~EDUA 3303~~	~~Intégration et identité professionnelles (3)~~
EDUA 3305	**Intégration et identité professionnelles (6)**
EDUB 3013	Microenseignement et pratiques pédagogiques (3)
EDUA 3323	La pratique réflexive dans la formation professionnelle (3)
EDUB 4011	Stages pratiques (9)
~~EDUB 4205~~	~~Didactiques : l'approche par projet (6)~~
	Didactiques (3) au choix selon les matières enseignables
	Didactiques (3) au choix selon les matières enseignables

École de traduction

Introduction:

TRAD 4991 Révision II – Postédition Cr.Hrs. 3 +3.0
Initiation à la révision de traductions machines. Réflexion sur la place de la traduction automatique et des problématiques qu'elle pose au sein des services de traduction et pour l'avenlr de la profession. Application des principes de la révision à des textes prétraduits appartenant à divers domaines. Préalable: une note minimale de C dans TRAD 3261 et dans TRAD 4051, ou l'autorisation professorale.

NET CHANGE IN CREDIT HOURS: +3.0

MEMO

REGISTRAR'S OFFICE
Room 400 UMSU University Centre
PH: 204 474-9425

University of Manitoba

Date: November 6, 2019

Memo To: Senate

From: Neil Marnoch, Registrar

Re: **Proposed Academic Schedule for 2020-2021**

The attached proposed 2020-2021 Academic Schedule has been updated based on changes in days and/or dates to conform to the 2020 and 2021 calendars and University Closure dates, along with revised information received from academic units. The proposed schedule has been reviewed by all Faculties, Colleges and Schools. Please note the following:

1. Labour Day in 2020 is September 7; New Student Orientation will take place on Tuesday, September 8 (see Section 1.2.1). Fall Term classes in most faculties, colleges and schools will begin on Wednesday, September 9 and end on Friday, December 11 (see Section 1.2.2).
2. The last day to drop a Fall Term or Fall/Winter term spanning course without academic or financial penalty is Tuesday, September 22. The last day to register for a Fall Term or Fall/Winter term spanning course is Wednesday, September 23.
3. There are two statutory holidays in the 2020 Fall Term: Thanksgiving Day, Monday, October 12 and Remembrance Day, Wednesday, November 11 (see Section 1.1.1).
4. The Fall Term Break, for most students, is Monday, November 9 to Friday, November 13 (see Section 1.2.5).
5. There are 62 days available for instruction in Fall Term.
6. The 2020 December Examination Period will be from Saturday, December 12 through Wednesday, December 23 (see Section 1.2.6).
7. The university will re-open after the Winter Holiday on Tuesday, January 5, 2021. Winter Term classes for most faculties, colleges and schools will commence on Monday, January 11, 2021, and end on Wednesday, April 14. (see Section 1.2.2).
8. The last day to drop a Winter Term course without academic or financial penalty is Friday, January 22, 2021. The last day to register for a Winter Term course is Monday, January 25.
9. There are two statutory holidays in the 2021 Winter Term: Louis Riel Day on Monday, February 15 and Good Friday on April 2.
10. Winter Term Break in 2021 is Tuesday, February 16 to Friday, February 19 (see Section 1.2.5).
11. There are 62 days available for instruction in Winter Term.

12. The 2021 April Examination period will be from Friday, April 16 through Friday, April 30 (see Section 1.2.6).

13. The deadline for Voluntary Withdrawal is the 48th teaching day of the term for single term courses. In 2020-2021 these dates are Monday, November 23 for Fall Term courses and Wednesday, March 24 for Winter Term courses (see Section 1.2.3).
    Note: Faculties, colleges and schools offering courses with irregular schedules and withdrawal dates must ensure these are well publicized to students.

14. The Voluntary Withdrawal deadline for Fall/Winter term spanning classes is Friday, January 22. The Voluntary Withdrawal deadline for Winter/Summer term spanning distance and online courses is Wednesday, May 12 (see Section 1.2.3).

15. Convocation ceremonies (see Section 1.2.9) will be held as follows:

▪ Fall Convocation (Fort Garry Campus)	October 20 - 22, 2020
▪ Fall Convocation (Bannatyne Campus)	October 30, 2020
▪ Agriculture Diploma Convocation	May 7, 2021
▪ Spring Convocation (Bannatyne Campus)	May 20, 2021
▪ Spring Convocation (Fort Garry Campus)	June 3 - 8, 2021
▪ Université de Saint-Boniface Convocation	June 14, 2021

    In addition to Convocation ceremonies, the Annual Traditional Graduation Pow Wow in honour of Indigenous students will be held on Saturday, May 1, 2021.

16. Presented as Information: Deadlines to apply for graduation (Section 1.2.9). Fee Payment deadlines are TBD and will be added to the published schedule when they are determined by Financial Services (see Section 1.2.4).

17. Dates for the 2021 Summer Term have not been determined.

Encl.

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

2020-2021 Academic Schedule (updated November 6, 2019)

Admission application deadlines are found online at umanitoba.ca/student/admissions. Additional important date information for Faculty of Graduate Studies students is available at umanitoba.ca/faculties/graduate_studies/deadlines.

Faculties, schools, colleges and/or programs may have other important dates and deadlines that are not included in the Academic Schedule.

Section 1: Dates for Fall/Winter Session

This section contains information for Fall and Winter Terms, including distance and online courses. See section 2 for Summer Term information, including information for distance and online courses offered over Summer Term.

1.1 Dates applicable to all U of M students:

1.1.1 University Closure

When the University is closed no classes/examinations will be held.

Canada Day	July 1, 2020
Terry Fox Day (Civic Holiday)	Aug 3, 2020
Labour Day	Sept 7, 2020
Thanksgiving Day	Oct 12, 2020
Remembrance Day	Nov 11, 2020
Winter Holiday	Dec 24, 2020 to Jan 4, 2021
Louis Riel Day	Feb 15, 2021
Good Friday	Apr 2, 2021
Victoria Day	May 24, 2021
Canada Day	July 1, 2021
Terry Fox Day (Civic Holiday)	Aug 2, 2021

1.2 Dates applicable to most U of M students:

Some additional or differing date information is included in separate sections for: **Agriculture Diploma, Art (School of), Business Administration and Finance (MBA and MFin), Dental Hygiene, Dentistry (includes IDDP), Education (B.Ed. only), Medicine (excludes Family Social Sciences), Nursing, Occupational Therapy, Pharmacy, Physical Therapy, Respiratory Therapy, and Social Work**. Students in these programs should also see their respective section of the Academic Schedule.

1.2.1 Orientation

*Additional or differing dates exist for: **Agriculture Diploma, Architecture, Art, MBA, IDDP (Dentistry), Education (B.Ed. only), Medicine, Nursing, Occupational Therapy, Physical Therapy, and Respiratory Therapy, and Social Work**. Students in these programs should also see their respective section of the Academic Schedule.*

New Student Orientation

Fall Term, Fort Garry Campus	Sept 8, 2020
Winter Term, Fort Garry Campus	Jan 8, 2021

Faculty of Arts, Faculty of Agricultural & Food Sciences, Faculty of Engineering, Faculty of Environment, Earth, & Resources, Faculty of Law, Faculty of Management, Faculty of Music, Faculty of Science, School of Art, Interdisciplinary Health Program	Sept 8, 2020
Faculty of Kinesiology & Recreation Management	July 6 or 9, 2020

1.2.2 Start and End Dates

Additional or differing dates exist for: ***Agriculture Diploma, MBA, Dental Hygiene, Dentistry, Education, Medicine, Nursing, Occupational Therapy, Pharmacy, Physical Therapy, Respiratory Therapy, and Social Work****. Students in these programs should also see their respective section of the Academic Schedule.*

Fall Term	Sept 9 to Dec 11, 2020
Winter Term *No classes, examinations or tests will be held Apr. 15, 2021.*	Jan 11 to Apr 14, 2021
Winter/Summer Term spanning distance and online courses	Jan 11 to July 9, 2021

1.2.3 Registration and Withdrawal Dates

Additional or differing dates exist for: ***Agriculture Diploma and other faculties, colleges and/or schools offering irregularly scheduled courses.*** *Agriculture Diploma students should also see their respective section of the Academic Schedule; all others should also refer to either the 'Irregular Refund and Voluntary Withdrawal Deadline' information posted on the Registrar's Office website (http://umanitoba.ca/registrar/fees/irregular_refund_vw_deadlines.html), or the Class Schedule.*

Regular Registration Period

Fall Term and Fall/Winter Term classes	Ends Sept 8, 2020
Winter Term classes and Winter/Summer term spanning distance and online courses	Ends Jan 10, 2021

Limited Access Term Expiry Dates (To be determined by the Registrar's Office in accordance with the Registration Schedule)

Fall Term and Fall/Winter Term classes	TBD
Winter Term classes and Winter/Summer term spanning distance and online courses	TBD

Registration Revision Period

Students may use this period of time to make changes to their selected courses or class schedule. Last day to drop is ***1 business day*** *prior to the end of the Registration Revision Period.*

Fall Term and Fall/Winter Term classes	Sept 9 to 23, 2020
Winter Term classes and Winter/Summer term spanning distance and online courses	Jan 11 to 25, 2021

Last Date to Drop without Penalty

Last date to drop and have course excluded from transcripts; VWs will be recorded on transcripts for courses dropped after this date. ***There will be no refunds for courses dropped after this date.*** *Additional or differing dates exist for* ***Agriculture Diploma****; students in this program should also see their respective section of the Academic Schedule.*

Fall Term	Sept 22, 2020
Fall/Winter Term classes Part A	Sept 22, 2020
Fall/Winter Term classes Part B (VW recorded if dropped after Sept. 12, 2020)	Jan 22, 2021
Winter Term classes and Winter/Summer term spanning distance and online courses	Jan 22, 2021

Last Date to Register/Registration Revision Deadline

Fall Term and Fall/Winter Term classes	Sept 23, 2020
Winter Term classes and Winter/Summer term spanning distance and online courses	Jan 25, 2021

Voluntary Withdrawal (VW) deadline

Last date to withdraw and not receive a final grade; students cannot withdraw from courses after this date.

Fall Term classes	Nov 23, 2020
Fall/Winter Term spanning classes	Jan 22, 2021
Winter Term classes	Mar 24, 2021
Winter/Summer Term spanning distance and online courses	May 12, 2021

1.2.4 Fee Deadlines

Fee Payment Deadline

A financial penalty will be assessed on accounts with an outstanding balance after this date.

Fall Term	TBD
Winter Term	TBD

See Section 1.2.3 for the Last Day to Drop without Penalty

1.2.5 Term Breaks

Academic and administrative offices will be open during this period; no classes, tests or assignment due dates occur during this time. Additional or differing dates exist for: ***Agriculture Diploma, MBA, Dental Hygiene, Dentistry, Education (B.Ed. only), Medicine (M.D. only), Occupational Therapy, Pharmacy (Year 4), Physical Therapy, and Respiratory Therapy****. Students in these programs should also see their respective section of the Academic Schedule.*

Fall Term Break *The UofM will be closed Wednesday Nov. 11 for Remembrance Day (see 1.1.1).*	Nov 9 to 13, 2020
Winter Term Break *The UofM will be closed Monday Feb. 15 for Louis Riel Day (see 1.1.1).*	Feb 16 to 19, 2021

1.2.6 Examination and Test Dates

Students are reminded that they must remain available until all examination and test obligations have been fulfilled. Additional or differing dates exist for: ***Agriculture Diploma, Dental Hygiene, Dentistry, Education, Medicine (M.D.), and Pharmacy****. Students in these programs should also see their respective section of the Academic Schedule.* ***Students in faculties, colleges, schools or programs offering irregularly scheduled courses*** *should also see the exam timetable available through their program office****.***

Fall Term (includes tests and midterm exams for Fall/Winter Term classes)	Dec 12 to 23, 2020
Winter Term (includes final exams for Fall/Winter Term classes) *No classes, examinations or tests will be held Apr. 15, 2021.*	Apr 16 to 30, 2021

1.2.7 Challenge for Credit

Challenge for Credit application deadline:

For classes offered Fall Term 2020 and spanning Fall/Winter 2020-2021	Sept 23, 2020
For classes offered Winter Term 2021	Jan 25, 2021

1.2.8 Final Grade Appeal Deadlines

For final grades received for Fall Term 2020 classes	Jan 25, 2021
For final grades received for Winter Term 2021 and Fall 2020/Winter 2021 classes	June 7, 2021

1.2.9 Graduation and University Convocation

*Degrees, Diplomas and Certificates will be awarded at Convocation. Graduation date may differ from Convocation Ceremony date. Additional or differing dates exist for **Agriculture Diploma, Dental Hygiene, Dentistry, Medicine, Occupational Therapy, Pharmacy, Physical Therapy, and Respiratory Therapy**; students in these programs should also see their respective section of the Academic Schedule.*

For students graduating Fall 2020:

Deadline to apply online to graduate *for most Undergraduate students*	July 31, 2020
Faculty of Graduate Studies Submission Deadline*	Aug 27, 2020
Convocation Ceremony (Fort Garry Campus)	Oct 20 to 22, 2020
Convocation Ceremony (Bannatyne Campus)	October 30, 2020

For students graduating February 2021:

Deadline to apply online to graduate *for most Undergraduate students*	Sept 22, 2020
Faculty of Graduate Studies Submission Deadline*	Jan 5, 2021
Graduation date for students graduating in February	Feb 3, 2021
Convocation Ceremony (Fort Garry Campus)	June 3 – 8, 2021

For students graduating Spring 2021:

Deadline to apply online to graduate *for most Undergraduate students*	Jan 22, 2021
Faculty of Graduate Studies Submission Deadline*	Apr 1, 2021
Convocation Ceremony –Agriculture Diploma	May 7, 2021
Convocation Ceremony –Bannatyne Campus	May 20, 2021
Convocation Ceremony – Fort Garry Campus	June 3 – 8, 2021
Convocation Ceremony – Université de Saint-Boniface	June 14, 2021
Graduate Studies Submission Deadline* for students graduating Fall 2021	Aug 30, 2021
Annual Traditional Graduation Pow Wow in honour of Indigenous graduates	May 1, 2021

** Last date for receipt by Graduate Studies of Theses/Practica and reports on Theses/Practica, comprehensive examinations, and project reports from students, and lists of potential graduands from departments.*

Dates for Summer 2021 Pending Review

1.3 Dates applicable to Agriculture Diploma:

1.3.1 Orientation

Sept 15, 2020

1.3.2 Start and End Dates

Fall Term	Sept 16 to Dec 9, 2020
Field Trips (regular classes cancelled)	Oct 13 to 16, 2020
Winter Term	Jan 5 to Apr 1, 2021
Field Trips (regular classes cancelled)	Jan 19, Feb 3 & 4, 2021

1.3.3 Registration and Withdrawal Dates

Regular Registration Period

Fall Term and Fall/Winter Term classes	Ends Sept 15, 2020
Winter Term classes	End Jan 4, 2021

Late Registration/Registration Revision Period

A financial penalty may be assessed on late registrations. Students may use this period of time to make changes to their selected courses or class schedule.

Fall Term and Fall/Winter Term classes	Sept 16 to Oct 6, 2020
Winter Term classes	Jan 5 to Jan 25, 2021

Last Day to Drop without Penalty

Last date to drop and have class excluded from transcripts; VWs will be recorded on transcripts for classes dropped after this date.

Fall Term and Fall/Winter Term classes	Oct 5, 2020
Winter Term classes	Jan 22, 2021

Last Date to Register/Registration Revision Deadline

Fall Term and Fall/Winter Term classes	Oct 6, 2020
Winter Term classes	Jan 25, 2021

Voluntary (VW) Withdrawal deadline

Last date to withdraw and not receive a final grade; students cannot withdraw from classes after this date.

Fall Term classes	Nov 20, 2020
Winter Term and Fall/Winter Term classes	Mar 12, 2021

1.3.4 Term Breaks

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

Fall Term Break	n/a
Winter Term Break	See section 1.2.5

1.3.5 Examination and Test Dates

Fall Term (includes tests and midterm exams for Fall/Winter Term classes)	Dec 10 to 21, 2020
Winter Term (includes final exams for Fall/Winter Term classes)	Apr 5 to 15, 2021

1.3.6 Convocation Ceremony - Agriculture

May 7, 2021

1.4 Dates applicable to Architecture

1.4.1 Important Dates (Mandatory for all ED2 Students)

Orientation	Aug 21, 2020 (subject to change)
Pre-term EVDS 2100	Aug 24, 2020 (subject to change)

1.5 Dates applicable to Art (School of):

1.5.1 Important Dates

First Year Field Trip	Oct 14 to 17, 2020
Registration Workshop for Incoming Students	June 15, 2020

1.6 Dates applicable to Business Administration and Finance (M.B.A. and M.Fin.):

1.6.1 Orientation

Fall Term	Week of Aug 10, 2020

1.6.2 Start and End Dates

Fall Term	Aug 10 to mid-Dec, 2020
Winter Term	Jan 5 to mid-Apr, 2021

1.7 Dates applicable to Dental Hygiene:

1.7.1 Start and End Dates

Year 2	
Fall Term Classes	Aug 17 to Nov 27, 2020
Winter Term Classes	Jan 5 to Apr 1, 2021
Year 3	
Fall Term Classes	Aug 10 to Nov 27, 2020
Fall Term Clinics	TBD to Dec 4, 2020
Winter Term Classes	Jan 5 to Apr 1, 2021
Winter Term Clinics	Jan 5 to Apr 9, 2021

1.7.2 Term Breaks

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

Fall Term Break	n/a
Winter Term Break	Mar 1 to 5, 2021

1.7.3 Examination and Test Dates

Year 2	
Fall Term (includes tests and midterm exams for Fall/Winter Term classes)	Nov 30 to Dec 11, 2020
Winter Term	Apr 5 to 9, 2021
Year 3	
Fall Term (includes tests and midterm exams for Fall/Winter Term classes)	Dec 7 to 11, 2020
Winter Term	Apr 12 to 16, 2021

1.7.4 Convocation Ceremony – Bannatyne Campus

May 20, 2021

1.8 Dates applicable to Dentistry (including International Dentist Degree Program):

1.8.1 Start and End Dates

DENT 2440 IDDP Orientation	TBD
Years 1 and 2 Classes and Clinics	
Fall Term	Aug 10 to Nov 27, 2020
Winter Term	Jan 5 to Apr 30, 2021
Year 3/IDDP 1 Classes and Clinics	
Fall Term	Aug 4 to Nov 27 (classes) & Dec 4 (clinics), 2020
Winter Term	Jan 5 to Apr 30, 2021
Year 4/IDDP 2 Classes and Clinics	
Fall Term	Aug 4 to Dec 4, 2020 (classes & clinics)
Winter Term	Jan 5 to Apr 23, 2021

1.8.2 Term Breaks

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

Fall Term Break	n/a
Winter Term Break	Mar 1 to 5, 2021

1.8.3 Examination and Test Dates

Years 1, 2 and 3/IDDP 1

Fall Term (includes tests and midterm exams for Fall/Winter Term classes)	Nov 30 to Dec 11, 2020
Winter Term	May 3 to 14, 2021

Year 4/IDDP 2

Fall Term (includes tests and midterm exams for Fall/Winter Term classes)	Dec 7 to 11, 2020
Winter Term	Jan 11 to 15, 2021

1.8.4 Convocation Ceremony – Bannatyne Campus

May 20, 2021

1.9 Dates applicable to Education (B.Ed. only):

Note: *Unless registered in a B.Ed. course, PBDE students follow the dates listed in Section 1.2: Dates applicable to most U of M students.*

1.9.1 Orientation

Year 1	Sept 1 & 2, 2020
Year 2/Integrated 5	Sept 3 & 4, 2020

1.9.2 Start and End Dates

Note: Practicum dates may vary by practicum placement.

Fall Term

Practicum Block	Sept 8 to 11, 2020
Practicum Mondays	Sept 28 & Oct 26, 2020
MTS PD Day	Oct 23, 2020
Day Classes	Sept 14 to Nov 6, 2020
Practicum Block	Nov 16 to Dec 15, 2020

Winter Term

Program Day	Jan 25, 2021
Day Classes	Jan 12 to Mar 19, 2021
Practicum Mondays	Jan 11, 18; Feb 1, 8 & 22; March 1, 8 & 15, 2021
Practicum Block	Mar 22 to 26; Apr 5 to 27, 2021

1.9.3 Term Breaks

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

Fall Term Break *Note: Dates may vary by practicum placement.*	see section 1.2.5
Winter Term Break	see section 1.2.5
Winter Practicum Break *Note: Dates may vary by school division and/or practicum placement.*	Mar 29 to Apr 2, 2021

1.9.4 Examination and Test Dates

Fall Term (as required)	Nov 7, 2020
Winter Term (as required)	Mar 20, 2021

1.10 Dates applicable to Medicine (excludes Family Social Sciences and Interdisciplinary Health Programs):

Note: *Family Social Sciences and Interdisciplinary Health Programs students follow the dates listed in Section 1.2: Dates applicable to most U of M students.*

1.10.1 Orientation

Year 1	Aug 18 to 21, 2020

1.10.2 Start and End Dates

Year 1	
Fall Term	Aug 24 to Dec 18, 2020
Winter Term	Jan 4 to May 28, 2021
Rural Week	May 24 to 28, 2021
Year 2	
Fall Term	Aug 24 to Dec 18, 2020
Winter Term	Jan 4 to May 21, 2021
Year 3	
Fall Term	Aug 17 to Dec 18, 2020
Winter Term	Jan 4 to May 28, 2021
Year 4	
Fall Term	July 27 to Dec 18, 2020
Winter Term	Jan 4 to May 14, 2021

1.10.3 Term Breaks

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

Year 1 & 2	
Fall Term Break	n/a
Winter Term Break	Mar 15 to 19, 2021
Year 3 & 4 Fall & Winter Term Break	n/a

1.10.4 Examination and Test Dates

Year 1 & 2	n/a
Year 3	
Fall Term	Oct 16 to Nov 27, 2020
Winter Term	Jan 22, Mar 5, Apr 16, May 28, 2021
Year 4	
Fall Term	Sept 4, 2020
Winter Term	May 3 to 16, 2021

1.10.5 Convocation Ceremony – Bannatyne Campus

May 20, 2021

1.11 Dates applicable to Nursing:

1.11.1 Orientation

Year 2 Students admitted for Fall Term	September 1 to 3, 2020
Year 2 Students admitted for Winter Term	December 15 to 17, 2020

1.11.2 Start and End Dates

Fall Term Classes	Sept 9 to Dec 11, 2020
Winter Term Classes	Jan 11 to April 14, 2021

Nursing Practice

Fall Term Practicum	starts Sept.9, 2020
Winter Term Practicum	starts Jan 11, 2021

1.12 Dates applicable to Occupational Therapy:

1.12.1 Start and End Dates

Year 1

Fall Term Classes	Aug 24 to Nov 20, 2020
Basic Fieldwork	Nov 23 to Dec 18, 2020
Winter Term Classes	Jan 5 to Apr 30, 2021
Intermediate Fieldwork 1	May 3 to June 25, 2021

Year 2

Fall Term Classes	Aug 24 to Dec 18, 2020
Intermediate Fieldwork 2	Jan 11 to Mar 5, 2021
Winter Term Classes	Mar 15 to June 25, 2021
Advanced Fieldwork	*flexible start and end dates between* June 28 to Sept 10, 2021

1.12.2 Term Breaks

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

Fall Term Break	n/a
Winter Term Break	March 8 to 12, 2021

****Note**: Some students may need to complete fieldwork during the mid-term break depending on availability of fieldwork sites.*

1.12.3 Convocation Ceremony – Bannatyne Campus

October 30, 2020

1.13 Dates applicable to Pharmacy:

1.13.1 Orientation

Year 1	Aug 31, 2020

1.13.2 Start and End Dates

Year 1	
Fall Term Classes	Aug 31 to Dec 11, 2020
Winter Term Classes	Jan 11 to April 15, 2021
Year 2	
Fall Term Classes	Aug 31 to Dec 4, 2020
IPPE Community	Jan 4 to 29, 2021
Winter Term Classes	Feb 1 to May 6, 2021
Year 3	
Fall Term Classes	n/a
Winter Term Classes	n/a
Year 4	
Fall Term Classes	Aug 31 to Oct 26, 2020
SPEP 4 – Block 1	Nov 2 to Dec 11, 2020
Electives – Block 1	Nov 2 to Dec 18, 2020
Winter Term Classes	n/a
SPEP 4 – Block 2	Jan 5 to Feb 12, 2021
Electives – Block 2	Jan 5 to Feb 19, 2021
SPEP 4 – Block 3	Feb 22 to Apr 1, 2021
Electives – Block 3	Feb 22 to Apr 9, 2021

1.13.3 Term Breaks

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

Year 1	see section 1.2.5
Year 2	
Fall	see section 1.2.5
Winter	March 29 to April 2, 2021
Year 4	n/a

1.13.4 Examination and Test Dates

Year 1	
Fall Term Exams	Dec 14 to 23, 2020
Winter Term Exams	April 19 to 30, 2021
Year 2	
Fall Term Exams	Dec 7 to 18, 2020
Winter Term Exams	May 10 to 21, 2021
Year 3	n/a
Year 4	
Fall Term Exams	Oct 28 to 30, 2020
Winter Term Exams	n/a

1.13.5 Convocation Ceremony – Bannatyne Campus	May 20, 2021

1.14 Dates applicable to Physical Therapy:

1.14.1 Orientation	n/a

1.14.2 Start and End Dates

Year 1	
Fall Term Classes	Aug 4 to Dec 18, 2020
Winter Term Classes	Jan 5 to Mar 27, 2021
Clinical Placement	2x6 week placement between Apr 5 to July 30, 2021
Year 2	
Fall Term Classes	Aug 4 to Oct 9, 2020
Clinical Placement	1x5 week placement block + 1x5 week research block between Oct 12 to Dec 18, 2020
Winter Term Classes	Jan 5 to Mar 27, 2021
Clinical Placement	2x6 week placements between Apr 5 to July 30, 2021

1.14.3 Term Breaks

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

Fall Term Break	n/a
Winter Term Break	Mar 29 to Apr 2, 2021

1.14.3 Convocation Ceremony – Bannatyne Campus	October 30, 2020

1.15 Dates applicable to Physician Assistant Studies

1.15.1 Orientation

Year 1	Aug 24 to Sept 8, 2020
Clinical Year 2 Orientation	Aug 15 to 19, 2020

1.15.2 Start and End Dates

Fall Term	See section 1.2.2
Winter Term	See section 1.2.2
Clinical Year 2 Rotations	Starts Aug 20, 2020

1.15.3 Convocation Ceremony – Bannatyne Campus	October 30, 2020

1.16 Dates applicable to Respiratory Therapy:

1.16.1 Orientation

Year 1	Sept 3 & 4, 2020
Year 3	Aug 19, 2020

1.16.2 Start and End Dates

(Includes clinical placement and classes)

Year 1	
Fall Term	Sept 8 to Dec 18, 2020
Winter Term	Jan 6 to May 28, 2021
Year 2	
Fall Term	Sept 8 to Dec 18, 2020
Winter Term	Jan 6 to June 25, 2021
Year 3	
Fall Term	Aug 20 to Dec 18, 2020
Winter Term	Jan 4 to May 28, 2021

1.16.3 Term Breaks

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

Fall Term Break	n/a
Winter Term Break	see section 1.2.5

1.16.4 Convocation Ceremony – Bannatyne Campus

October 30, 2020

1.17 Dates applicable to Social Work:

1.17.1 Orientation

Fort Garry, Inner City Field Instruction Orientation	Sept 8, 2020

1.17.2 Start and End Dates

Field Instruction*	
Fall Term	Sept 8 to Dec 18, 2020
Winter Term	Jan 11 to Apr 23, 2021

***Note:** Some students may need to complete fieldwork during the fall and/or winter term breaks.*

Section 2: Dates for Summer Term

Pending Review

October 23, 2019

Report of the Faculty Council of Graduate Studies on Course, Curriculum and Regulation Changes

Preamble

1. The Faculty of Graduate Studies (FGS) has responsibility for all matters relating to the submission of graduate course, curriculum, program and regulation changes. Recommendations for such are submitted by the Faculty Council of Graduate Studies for the approval of Senate.

2. The Faculty Council of Graduate Studies met on the above date to consider Bona Fide Academic Requirements (BFAR) statements from the Université de Saint-Boniface (Education), Dept. of Interior Design, Faculty of Graduate Studies (Disability Studies), and Dept. of Soil Science.

Observations

1. The Cooper Commission Implementation Working Group endorsed a proposed graduate program BFAR statement for the Université de Saint-Boniface: Master of Education dated March 29, 2019. See attached.

2. The Cooper Commission Implementation Working Group endorsed a proposed graduate program BFAR statement for the Department of Interior Design: Master of Interior Design dated April 11, 2019. See attached.

3. The Cooper Commission Implementation Working Group endorsed a proposed graduate program BFAR statement for the Faculty of Graduate Studies (Disability Studies): M.A., M.Sc. dated April 11, 2019. See attached.

4. The Cooper Commission Implementation Working Group endorsed a proposed graduate program BFAR statement for the Department of Soil Science: M.Sc., Ph.D. dated May 9, 2019. See attached.

Recommendations

The Faculty Council of Graduate Studies recommends THAT: the BFAR statements from the Implementation Working Group for the Cooper Commission Report listed below be approved by Senate:

Université de Saint-Boniface (Education)
Dept. of Interior Design
Faculty of Graduate Studies (Disability Studies)
Dept. of Soil Science

Respectfully submitted,

Dr. Louise R. Simard, Chair
Faculty Council of Graduate Studies

/ak

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

UNIVERSITY OF MANITOBA

Office of the University Secretary
312 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 474-7511

DATE: March 29, 2019

TO: Dr. Todd Mondor, Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies

FROM: Co-Chairs of the Implementation Working Group for the Cooper Commission Report,
Mr. Jeff M. Leclerc, University Secretary
Ms. Carolyn Christie, Director, Student Accessibility Services

RE: **Graduate Program BFAR Statements for Review by Faculty of Graduate Studies**
(College of Dentistry, Université de Saint-Boniface)

At the September 2017 meeting of the Senate Executive Committee, the Committee charged the Implementation Working Group for the Cooper Commission Report with reviewing draft BFAR statements before these are submitted for approval.

Please find attached, for consideration by the Faculty Council of Graduate Studies, proposed graduate program BFAR statements for the programs indicated below, as endorsed by the Implementation Working Group at its meeting on March 29, 2019:

- College of Dentistry: Master of Dentistry in Periodontics
- Université de Saint-Boniface: Master of Education

If you require additional information, please contact Shannon Coyston, Associate University Secretary (Senate) or either of the Co-Chairs of the Implementation Working Group.

/sc
cc: Dean A. Iacopino
Prof. A. Kelekis-Cholakis
Dean S. Delaquis
Dr. P. Dorrington
Ms. A. Kailer

Université de Saint-Boniface – Maitrise en éducation (administration scolaire; éducation inclusive; langue, littératie et curriculum)		
Exigence universitaire légitime (EUL)	**Enseigné / Évalué**	**Raisonnement**
1		
Tout au long du programme (participation en cours, travaux), les étudiants doivent s'approprier des sources universitaires variées et produire des travaux qui correspondent aux exigences de la maitrise en éducation, et s'approprier les notions qui s'y retrouvent.	Dans tous les cours de ces trois programmes de maitrise	La présente exigence universitaire légitime (EUL) vise à faire en sorte que les étudiants à la maitrise s'approprient des documents de sources variées et les intègrent dans la communication de leurs idées dans la salle de classe et dans la réalisation de leurs travaux. Nous estimons que, pour réussir dans le domaine de l'éducation ou y poursuivre ses études, il est essentiel de produire des travaux universitaires sous diverses formes, y compris sous forme de travaux écrits. Ces diverses formes (ouvrages savants, études empiriques, programmes et politiques scolaires, ressources en ligne, productions médias, déclarations, chartes) servent à valider d'autres productions pouvant être pertinentes dans le contexte du domaine d'étude de l'étudiant. De plus, elles ne représentent pas un accommodement; elles sont plutôt considérées comme des compléments utiles et valables aux travaux écrits. Si

		l'une de ces formes est choisie par l'étudiant (sous réserve de l'approbation de la personne responsable de l'enseignement du cours), ces autres formes pourraient accompagner et complémenter le travail écrit et seraient considérées comme une contribution valable au travail qu'il présente. La participation, la production de travaux universitaires et la mise en pratique des notions présentées font partie intégrante de notre programme et représentent, par conséquent, une EUL indispensable.
2		
Le niveau de compréhension des travaux universitaires démontré par les étudiants et leur analyse critique de ces documents doivent correspondre aux exigences de la maitrise en éducation.	Dans tous les cours de ces trois programmes de maitrise	Bien que l'appropriation des notions présentées dans la documentation universitaire soit une exigence essentielle pour tout finissant du programme, il faut noter qu'une analyse critique particulièrement approfondie est aussi nécessaire. Les étudiantes et les étudiants doivent démontrer leur capacité d'appliquer des concepts théoriques, de discuter de résultats et de démontrer une compréhension critique de différents travaux et de points de vue.

3		
Les étudiantes et les étudiants doivent intégrer des connaissances et des perspectives diverses; celles-ci peuvent ressortir de différents pays, langues ou territoires autochtones, ou encore différents âges, genres, groupes culturels en contexte majoritaire ou minoritaire, orientations, capacités, religions.	Dans tous les cours de ces trois programmes de maitrise	La pensée et la pratique pédagogiques sont nécessairement façonnées par des questions liées à la diversité, à la justice sociale et à l'équité, de sorte que l'inclusion est non seulement favorisée, mais exigée. Au cours du programme, les étudiantes et les étudiants doivent démontrer leur compréhension des multiples niveaux et intersections de la diversité et les intégrer dans leur raisonnement et leurs prises de position, par exemple dans les présentations orales, la participation aux travaux de groupes (groupes constitués par les étudiants ou établis par le professeur) et aux discussions en salle de classe, la réalisation de travaux, les critiques de films ou d'autres médias, l'analyse d'études de cas, et la création de matériels et de ressources pédagogiques.
4		
Les étudiants doivent démontrer que leur connaissance de différentes méthodes de recherche correspond aux exigences de la maitrise en éducation.	Dans tous les cours de ces trois programmes de maitrise	Les étudiantes et les étudiants doivent être conscients des paradigmes (quantitatifs, qualitatifs, etc.) applicables aux différents types de recherche ainsi que des lignes directrices à appliquer pour la

		sélection des méthodes de recherche appropriées. Cela est nécessaire pour permettre aux étudiantes et aux étudiants d'évaluer, de façon efficace, des articles de recherche et d'autres écrits scientifiques, et de planifier et réaliser des projets de recherche et d'évaluation originaux. Ces deux activités, à savoir l'évaluation et la réalisation de projets de recherche, font partie intégrante du programme de maitrise en éducation.
Université de Saint-Boniface – Maitrise en éducation (counselling scolaire)		
Exigence universitaire légitime (EUL)	**Enseigné / Évalué**	**Raisonnement**
1		
Tout au long du programme (participation en cours, travaux), les étudiants doivent s'approprier des sources universitaires variées et produire des travaux qui correspondent aux exigences de la maitrise en éducation, et s'approprier les notions qui s'y retrouvent.	Dans tous les cours du programme de maitrise en counselling scolaire	La présente exigence universitaire légitime (EUL) vise à faire en sorte que les étudiants à la maitrise s'approprient des documents de sources variées et les intègrent dans la communication de leurs idées dans la salle de classe et dans la réalisation de leurs travaux. Nous estimons que, pour réussir dans le domaine de l'éducation ou y poursuivre ses études, il est essentiel de produire des travaux universitaires sous diverses formes, y compris sous forme de

		travaux écrits. Ces diverses formes (ouvrages savants, études empiriques, programmes et politiques scolaires, ressources en ligne, productions médias, déclarations, chartes) servent à valider d'autres productions pouvant être pertinentes dans le contexte du domaine d'étude de l'étudiant. De plus, elles ne représentent pas un accommodement; elles sont plutôt considérées comme des compléments utiles et valables aux travaux écrits. Si l'une de ces formes est choisie par l'étudiant (sous réserve de l'approbation de la personne responsable de l'enseignement du cours), ces autres formes pourraient accompagner et complémenter le travail écrit et seraient considérées comme une contribution valable au travail qu'il présente. La participation, la production de travaux universitaires et la mise en pratique des notions présentées font partie intégrante de notre programme et représentent, par conséquent, une EUL indispensable.

2		
Le niveau de compréhension des travaux universitaires démontré par les étudiants et leur analyse critique de ces documents doivent correspondre aux exigences de la maitrise en éducation.	Dans tous les cours du programme de maitrise en counselling scolaire	Bien que l'appropriation des notions présentées dans la documentation universitaire soit une exigence essentielle pour tout finissant du programme, il faut noter qu'une analyse critique particulièrement approfondie est aussi nécessaire. Les étudiantes et les étudiants doivent démontrer leur capacité d'appliquer des concepts théoriques, de discuter de résultats et de démontrer une compréhension critique de différents travaux et de points de vue.
3		
Les étudiantes et les étudiants doivent intégrer des connaissances et des perspectives diverses; celles-ci peuvent ressortir de différents pays, langues ou territoires autochtones, ou encore différents âges, genres, groupes culturels en contexte majoritaire ou minoritaire, orientations, capacités, religions.	Dans tous les cours du programme de maitrise en counselling scolaire	La pensée et la pratique pédagogiques sont nécessairement façonnées par des questions liées à la diversité, à la justice sociale et à l'équité, de sorte que l'inclusion est non seulement favorisée, mais exigée. Au cours du programme, les étudiantes et les étudiants doivent démontrer leur compréhension des multiples niveaux et intersections de la diversité et les intégrer dans leur raisonnement et leurs prises de position, par exemple dans les présentations orales, la participation

		aux travaux de groupes (groupes constitués par les étudiants ou établis par le professeur) et aux discussions en salle de classe, la réalisation de travaux, les critiques de films ou d'autres médias, l'analyse d'études de cas, et la création de matériels et de ressources pédagogiques.
4		
Les étudiants doivent démontrer que leur connaissance de différentes méthodes de recherche correspond aux exigences de la maitrise en éducation.	Dans tous les cours du programme de maitrise en counselling scolaire	Les étudiantes et les étudiants doivent être conscients des paradigmes (quantitatifs, qualitatifs, etc.) applicables aux différents types de recherche ainsi que des lignes directrices à appliquer pour la sélection des méthodes de recherche appropriées. Cela est nécessaire pour permettre aux étudiantes et aux étudiants d'évaluer, de façon efficace, des articles de recherche et d'autres écrits scientifiques, et de planifier et réaliser des projets de recherche et d'évaluation originaux. Ces deux activités, à savoir l'évaluation et la réalisation de projets de recherche, font partie intégrante du programme de maitrise en éducation.

5		
Les étudiantes et les étudiants démontreront une maitrise de ce qui constitue une conduite professionnelle telle qu'adoptée par l'Association canadienne de counselling et de psychothérapie (www.ccpa-accp.ca). Les étudiantes et les étudiants doivent également faire preuve de respect envers leurs pairs, leurs collègues ainsi que les membres du public avec lesquels ils seront appelés à interagir.	Dans tous les cours du programme de maitrise en counselling scolaire	Les étudiantes et les étudiants en counseling doivent rendre des comptes au public et à leurs pairs. Il leur incombe de connaitre le code de déontologie de la profession, de comprendre son application à leur conduite professionnelle et de s'efforcer de respecter ses valeurs et principes. Dans le contexte du milieu de stage, les étudiantes et les étudiants doivent incarner les valeurs et les principes éthiques de la profession, lesquels protègent les clients qu'ils accompagnent. Les étudiantes et les étudiants devront donc être en mesure de suivre le processus de prise de décisions éthiques pour résoudre les dilemmes auxquels ils seront confrontés en milieu de stage.
6		
Les étudiantes et les étudiants doivent connaitre les stratégies et les interventions ainsi que les approches cliniques afin de pouvoir les appliquer en fonction des besoins du client dans le cadre de leur stage au sein des écoles, des organismes communautaires, des établissements	Dans tous les cours du programme de maitrise en counselling scolaire	Le counseling exige que les étudiantes et les étudiants fassent la preuve de leur capacité d'évaluer, à l'aide d'interventions pertinentes, la motivation et la situation du client. Les étudiantes et les étudiants auront recours à diverses approches théoriques et techniques adaptées à

postsecondaires ou des centres de réadaptation.		la clientèle de leur milieu de stage dans le cadre de séances de counseling individuel ou collectif. Ils connaitront les pratiques basées sur des données probantes ainsi que les différentes interventions qui favorisent le bienêtre et l'autonomie des clients qu'ils accompagnent en milieu de stage.

Université de Saint-Boniface – Master of Education (School Administration; Inclusive Education; Language, Literacy and Curriculum)		
Bone Fide Academic Requirement (BFAR)	**Taught / Evaluated**	**Reasoning**
1		
Students must engage with and integrate a variety of academic sources and produce material commensurate with a Master of Education degree throughout the program (class participation, assignments).	In all of the courses for these three master's programs	The purpose of this BFAR is to ensure that graduate students engage with and integrate academic material from a variety of sources when communicating their ideas in the classroom and in completing assignments. We believe that in order to perform well in the field of education, or to move on to further study in this area, it is essential to produce academic work in various forms, including written work. These various forms (scholarly works, empirical studies, policy and curriculum documents, on-line resources, media productions, declarations and charters) validate additional productions that may be relevant to the student's area of study. In addition, they do not constitute an accommodation; rather, they would be regarded as valuable and valid complements to written work. If chosen by the student (with approval from the course instructor), these additional forms would accompany

		and supplement the written work, and would be regarded as valid contributions to the scholarly work presented by the student. Engagement, integration and production of academic materials is integral to our program, and as such is a necessary BFAR.
2		
Students must demonstrate comprehension and critical analysis of academic work at a level commensurate with a Master of Education degree.	In all of the courses for these three master's programs	While the integration of academic literature is an essential requirement for any student graduating from the program, there is an additional layer of critical analysis that must be noted as a "must". Students must be able to demonstrate an ability to apply theoretical constructs, discuss findings, and offer a critical understanding of different perspectives and works.
3		
Students must engage with a diversity of perspectives and knowledge that may be reflected in different languages, countries and Indigenous territories, ages, genders, cultural groups in a minority or majority context, orientations, abilities or religions.	In all of the courses for these three master's programs	Educational thought and practice are inherently shaped by diversity, social justice and equity issues in a way that, not only promotes inclusion but commands it. Students must exhibit understanding of and engagement with different layers and intersections of diversity in their thinking and

		positioning throughout their program. Examples of engagement include, but are not limited to delivering class presentations, participating in group work (through assigned or student created groups) and whole class and group discussions, completing assignments, reviewing film or other media, analyzing case studies, and creating teaching materials and resources.
4		
Students must demonstrate knowledge of various research methodologies at a level commensurate with the Master of Education program.	In all of the courses for these three master's programs	Students must have awareness of the paradigms (quantitative, qualitative, etc.) that are applied to different types of research studies and the guidelines that should be used in selecting appropriate research methods. This awareness is needed in order to effectively evaluate research articles and scholarly writing, and to plan and carry out original research and evaluation projects. Both of these activities, evaluating and conducting research, are integral to the Master of Education program.
Université de Saint-Boniface – Master of Education (School Counselling)		
Bone Fide Academic Requirement (BFAR)	**Taught / Evaluated**	**Reasoning**
1		
Students must engage with and	In all of the courses for the Master of	The purpose of this BFAR is to ensure

integrate a variety of academic sources and produce material commensurate with a Master of Education degree throughout the program (class participation, assignments).	Education in School Counselling program	that graduate students engage with and integrate academic material from a variety of sources when communicating their ideas in the classroom and in completing assignments. We believe that in order to perform well in the field of education, or to move on to further study in this area, it is essential to produce academic work in various forms, including written work. These various forms (scholarly works, empirical studies, policy and curriculum documents, on-line resources, media productions, declarations and charters) validate additional productions that may be relevant to the student's area of study. In addition, they do not constitute an accommodation; rather, they would be regarded as valuable and valid complements to written work. If chosen by the student (with approval from the course instructor), these additional forms would accompany and supplement the written work, and would be regarded as valid contributions to the scholarly work presented by the student. Engagement, integration and production of academic materials is

		integral to our program, and as such is a necessary BFAR.
2		
Students must demonstrate comprehension and critical analysis of academic work at a level commensurate with a Master of Education degree.	In all of the courses for the Master of Education in School Counselling program	While the integration of academic literature is an essential requirement for any student graduating from the program, there is an additional layer of critical analysis that must be noted as a "must". Students must be able to demonstrate an ability to apply theoretical constructs, discuss findings, and offer a critical understanding of different perspectives and works.
3		
Students must engage with a diversity of perspectives and knowledge that may be reflected in different languages, countries and Indigenous territories, ages, genders, cultural groups in a minority or majority context, orientations, abilities or religions.	In all of the courses for the Master of Education in School Counselling program	Educational thought and practice are inherently shaped by diversity, social justice and equity issues in a way that, not only promotes inclusion but commands it. Students must exhibit understanding of and engagement with different layers and intersections of diversity in their thinking and positioning throughout their program. Examples of engagement include, but are not limited to delivering class presentations, participating in group work (through assigned or student created groups) and whole class and

		group discussions, completing assignments, reviewing film or other media, analyzing case studies, and creating teaching materials and resources.
4		
Students must demonstrate knowledge of various research methodologies at a level commensurate with the Master of Education program.	In all of the courses for the Master of Education in School Counselling program	Students must have awareness of the paradigms (quantitative, qualitative, etc.) that are applied to different types of research studies and the guidelines that should be used in selecting appropriate research methods. This awareness is needed in order to effectively evaluate research articles and scholarly writing, and to plan and carry out original research and evaluation projects. Both of these activities, evaluating and conducting research, are integral to the Master of Education program.
5		
Students will demonstrate a competency of professional conduct as defined by the Canadian Counselling and Psychotherapy Association (www.ccpa-accp.ca). Students must also demonstrate respect towards their peers, colleagues, and other members of the public that they will be required to interact with.	In all of the courses for the Master of Education in School Counselling program	Counselling students are accountable to both the public and their peers and have a responsibility to ensure that they are familiar with the professional Code of Ethics, to understand its application to their professional conduct, and to strive to adhere to its principles and values. Students will demonstrate the ethical values and principles of the profession, which

		safeguards the clients being served at the practicum site. Therefore, students need to be able to demonstrate the ethical decision-making process when faced with dilemmas encountered at the practicum site.
6		
Students must demonstrate competency in the development of strategies, interventions and clinical approaches in order to apply these based on the presenting needs of clients during the practicum in schools, community agencies, higher education and/or rehabilitation settings.	In all of the courses for the Master of Education in School Counselling program	Counselling requires students to demonstrate the ability to evaluate the situation and the client's motivation through relevant interventions. Students will demonstrate the use of a variety of theoretical approaches and techniques that are tailored to the clientele being served at their practicum site when working individually with clients and/or when involved in group counselling. They will have knowledge of evidence based practice as well as various interventions that support the well-being and efficiency of the clients being served at the practicum site.

UNIVERSITY OF MANITOBA

Office of the University Secretary
312 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 474-7511

DATE: May 22, 2019

TO: Dr. Todd Mondor, Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies

FROM: Co-Chairs of the Implementation Working Group for the Cooper Commission Report,
Mr. Jeff M. Leclerc, University Secretary
Ms. Carolyn Christie, Director, Student Accessibility Services

RE: **Graduate Program BFAR Statements for Review by Faculty of Graduate Studies**
(Department of Interior Design; Faculty of Graduate Studies)

At the September 2017 meeting of the Senate Executive Committee, the Committee charged the Implementation Working Group for the Cooper Commission Report with reviewing draft BFAR statements before these are submitted for approval.

Please find attached, for consideration by the Faculty Council of Graduate Studies, proposed graduate program BFAR statements for the programs indicated below, as endorsed by the Implementation Working Group at its meeting on April 11, 2019:

- Department of Interior Design: Master of Interior Design (Department Council of Interior Design, February 7, 2019)
- Faculty of Graduate Studies: M.A. and M.Sc. in Disability Studies

If you require additional information, please contact Shannon Coyston, Associate University Secretary (Senate) or either of the Co-Chairs of the Implementation Working Group.

/sc
cc: Prof. K. Beaverford
Dean J. Beddoes
Prof. N. Hansen
Ms. A. Kailer

UNIVERSITY OF MANITOBA | Faculty of Architecture

Department of Interior Design
201 Russell Building
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9458
Fax (204) 474-7532

Date: March 28, 2019

To: Shannon Coyston, Associate University Secretary (Senate)

From: Kelley Beaverford, Head, Department of Interior Design

Re: FGS BFAR Department of Interior Design

Dear Shannon,

I am writing to inform you that the Department of Interior Design adopted the FGS BFARs. This occurred at our last ID Department Council meeting (Feb 7, 2019).

Please let me know if you require more information.

Kelley Beaverford
Head / Associate Professor
Department of Interior Design

UNIVERSITY OF MANITOBA | Disability Studies
Graduate Studies

Room 128 Education Building
71 Curry Place
Winnipeg, Manitoba
R3T 2N2, Canada
Ph: (204) 474-7017
Fax: (204) 474-6676
disability_studies@umanitoba.ca

March 29, 2019

Shannon Coyston

Academic Specialist: University Secretariat

314C Administration Building

Re: Bona Fide Academic Requirements (BFAR)

Dear Shannon,

This letter is to confirm that the Interdisciplinary Master's Program in Disability Studies will be following the practices of the Faculty of Graduate Studies concerning the Bona Fide Academic Requirements.

Sincerely,

Nancy E. Hansen

Dr. Nancy Hansen

Associate Professor/Director

/TW

UNIVERSITY OF MANITOBA

Office of the University Secretary
312 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 474-7511

DATE: May 22, 2019

TO: Dr. Todd Mondor, Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies

FROM: Co-Chairs of the Implementation Working Group for the Cooper Commission Report,
Mr. Jeff M. Leclerc, University Secretary
Ms. Carolyn Christie, Director, Student Accessibility Services

RE: **Graduate Program BFAR Statements for Review by Faculty of Graduate Studies**
(Department of Soil Science)

At the September 2017 meeting of the Senate Executive Committee, the Committee charged the Implementation Working Group for the Cooper Commission Report with reviewing draft BFAR statements before these are submitted for approval.

Please find attached, for consideration by the Faculty Council of Graduate Studies, proposed graduate program BFAR statements for the programs indicated below, as endorsed by the Implementation Working Group at its meeting on May 9, 2019:

- Department of Soil Science: M.Sc. and Ph.D. in Soil Science.

Proposed BFAR Statements for graduate programs in the Department of Soil Science were endorsed by the Department Council on March 7, 2018.

If you require additional information, please contact Shannon Coyston, Associate University Secretary (Senate) or either of the Co-Chairs of the Implementation Working Group.

/sc
cc: Prof. A. Lobb
Prof. J. Paliwal
Prof. F. Zvomuya
Ms. A. Kailer

UNIVERSITY OF MANITOBA

FACULTY OF AGRICULTURAL AND FOOD SCIENCES

Winnipeg, Manitoba
Canada R3T 2N2

Tel: 204-296-4644
Fax: 204-474-7642

April 16th, 2019

Jitendra Paliwal
Associate Dean (Graduate Programs)
Faculty of Agricultural & Food Sciences
248B Agriculture Building
University of Manitoba
Winnipeg, MB, R3T 2N2

Dear Jitendra:

I am writing to provide a description of the Department of Soil Science's proposed BFAR requirement that graduate student M.Sc. and Ph.D. theses must be written in English. The formal language and rationale are written below. They are based exactly on what the Department of Entomology had proposed.

BFAR wording approved at Department of Soil Science Council:
Students must produce their thesis written in the English language at a level commensurate with degree being sought.

Rationale:
In soil science, the ability to communicate and publish research results in writing is an essential skill so it can be submitted and published in peer review journals. English is the primary language of the discipline in which research is published and evaluated.

If you have any questions, please do not hesitate to contact me.

Sincerely,

David A. Lobb
Professor, Department of Soil Science
Chair, Graduate Studies Committee

REPORT OF THE SENATE COMMITTEE ON AWARDS

Preamble

Terms of reference for the Senate Committee on Awards include the following responsibility:

> On behalf of Senate, to approve and inform Senate of all new offers and revised offers of awards that comply with the Student Awards Policy.

Observations

At its meeting of October 24, 2019, the Senate Committee on Awards approved 5 new offers, 13 revised offers and the withdrawal of 1 award, as set out in Appendix A of the *Report of the Senate Committee on Awards (October 24, 2019).*

Recommendations

On behalf of Senate, the Senate Committee on Awards recommends that the Board of Governors approve 5 new offers, 13 revised offers and the withdrawal of 1 award, as set out in Appendix A (October 24, 2019). These award decisions comply with the Student Awards Policy.

Respectfully submitted,

Dr Jared Carlberg

Chair, Senate Committee on Awards

SENATE COMMITTEE ON AWARDS

October 24, 2019

1. NEW OFFERS

The College of Dental Hygienists of Manitoba Leadership Prize

The College of Dental Hygienists of Manitoba (CDHM) offers an annually funded award to recognize graduating students in the School of Dental Hygiene. The purpose of the prize is to recognize students who show commitment to their peers and community, exemplify leadership qualities, and show dedication to the profession. Each year, beginning in the 2019-2020 academic year, one convocation prize valued at $350 will be offered to a graduating student who:

(1) has completed the requirements for the Diploma in Dental Hygiene;

(2) has achieved a minimum degree grade point average of 3.0; and

(3) has demonstrated a high standard of personal and professional qualities, which will include promotion of peer morale, client advocacy, leadership qualities, ethical competency, and volunteerism.

The School of Dental Hygiene will announce a call for nominations each year.

The Dean of the Gerald Niznick College of Dentistry will ask the Director of the School of Dental Hygiene (or designate) to name the selection committee for this award, which will include a representative from the College of Dental Hygienists of Manitoba.

This agreement may be amended by the mutual consent of the donor (or designate) and the University of Manitoba. All such amendments shall be in writing. In the absence of the donor (or designate), and providing all reasonable efforts have been made to consult, the Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

Douglas R. Grimes ENGAP Scholarship

Colleagues, family and friends established an annual fellowship at The University of Manitoba in honour of the late Douglas R. Grimes, P. Eng., President of Wardrop Engineering Inc. Unspent monies from the fund have been used to establish a new endowment fund to support students in the Engineering Access Program (ENGAP) at the University of Manitoba. Beginning in 2020-2021, the available annual income from the fund will be used to offer one scholarship to an undergraduate student who:

(1) is enrolled full-time (as defined by ENGAP) in the Faculty of Engineering in the Engineering Access Program (ENGAP);

(2) has completed at least one year of full-time study (as defined by ENGAP) in the Faculty of Engineering in the Engineering Access Program (ENGAP);

(3) has achieved a minimum degree grade point average of 3.0; and

(4) has demonstrated leadership skills and community involvement.

Candidates will be required to submit an application that will include a one- to two-page letter outlining their leadership skills and community involvement.

The selection committee will be named by the Director, Engineering Access Program (or designate) and shall include a representative of the Grimes family.

This agreement may be amended by the mutual consent of the donor (or designate) and the University of Manitoba. All such amendments shall be in writing. In the absence of the donor (or designate), and providing all reasonable efforts have been made to consult, the Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

Jacquelynn Garcia Scholarship for Research in Nutraceuticals

In memory of Jacquelynn Garcia, her friends and family established an annual scholarship at the University of Manitoba to encourage and stimulate graduate student interest in research activity in nutraceuticals. Each year, beginning in 2020-2021, one scholarship of $2,500 will be awarded to a graduate student who:

(1) is enrolled full-time in the Faculty of Graduate Studies, in the first or second year of a Master's program;

(2) has achieved a minimum grade point average of 3.5 based on the last 60 credit hours (or equivalent) of study;

(3) is conducting or has proposed to conduct research in the area of nutraceuticals.

Preference will be given to a student who is proposing research in nutraceuticals and their effects on cancer.

In the event that there are no eligible students who meet all of the numbered criteria above, the scholarship will be offered to a student who is enrolled full-time in the Faculty of Graduate Studies in the first four years of a PhD program who meets criteria (2) and (3).

Applicants will be required to submit: (i) a description of the proposed research and a statement of its practical applicability and relevance to nutraceuticals (maximum 500 words), (ii) a current *curriculum vitae* (iii) an official transcript, and (iv) a letter of reference from the graduate advisor or proposed graduate advisor.

The Vice-Provost (Graduate Education) and Dean of the Faculty of Graduate Studies (or designate) will name the selection committee for this award.

This agreement may be amended by the mutual consent of the donor (or designate) and the University of Manitoba. All such amendments shall be in writing. In the absence of the donor (or designate), and providing all reasonable efforts have been made to consult, the Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

Medicine Class of 1965 Medical Student Bursary

The Medicine Class of 1965 established an endowment fund at the University of Manitoba in recognition of their 50th reunion. The fund will be used to offer a bursary to a B.Sc. (Med) student in the Max Rady College of Medicine. Each year, the available annual income from the fund will be used to offer one or more bursaries to students who:

(1) have completed at least one year of full-time study in the Undergraduate Medical Education program in the Max Rady College of Medicine, and are in good academic standing;

(2) has completed either the first or second summer session of the B.Sc.(Med.) program in the year in which the award is tenable; and

(3) have demonstrated financial need on the standard University of Manitoba bursary application form.

The selection committee will have the discretion to determine the number and value of bursaries offered each year based on the available funding.

In any year that there are no qualifying students, the bursaries will be offered to students who meet criteria (1) and (3).

The Dean of the Max Rady College of Medicine (or designate) will name the selection committee for this award.

This agreement may be amended by the mutual consent of the donor (or designate) and the University of Manitoba. All such amendments shall be in writing. In the absence of the donor (or designate), and providing all reasonable efforts have been made to consult,the Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

P.M. Shen Memorial Bursary

Dr. Aaron Chiu and Dr. Leslie Simard-Chiu have established an annual bursary in the amount of $10,000 in honour of P.M. Shen. This bursary will financially support students in the Undergraduate Medical Education program at the University of Manitoba. Beginning in 2019-2020, the bursary will be offered for a period of three years, with the possibility of an extension at the donor's request. Each year, one or more bursaries valued at a minimum of $1,000 will be offered to undergraduate student(s) who:

(1) are enrolled full-time in any year of the Undergraduate Medical Education Program in the Max Rady College of Medicine;

(2) are in good standing;

(3) have demonstrated financial need on the standard University of Manitoba bursary application form.

The selection committee will have the discretion to determine the number and value of bursaries offered each year based on the available funding.

The Dean of the Max Rady College of Medicine (or designate) will name the selection committee for this award.

This agreement may be amended by the mutual consent of the donor (or designate) and the University of Manitoba. All such amendments shall be in writing. In the absence of the donor (or designate), and providing all reasonable efforts have been made to consult, the Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

2. AMENDMENTS

Andrew Howden Business Scholarship

The following amendments were made to the terms of reference for the **Andrew Howden Business Scholarship**:

- The numbered criteria was revised to:

  (1) has graduated from Portage Collegiate Institute;

  (2) has achieved a minimum average of 85% on those courses considered for admission to the I. H. Asper School of Business; and

  (3) is enrolled full-time (minimum 80% course load) in the first year of study in the I.H. Asper School of Business Direct Entry program.

- The renewal criteria was revised to:

  The scholarship is renewable in each of the second, third, and fourth years of study provided that the recipient:

  (1) is enrolled full-time (minimum 80% course load) in the I.H. Asper School of Business in the Bachelor of Commerce (Hons.) program; and

  (2) has achieved a minimum sessional grade point average of 3.0.

- The second paragraph was revised to:

  In the event that a recipient does not qualify for continuation of the scholarship, it may be offered to the next qualified student in the same year of study, either as a renewable scholarship for a student in the second and third year of study (provided that the recipient meets the renewal criteria) or as a one-time scholarship for a student in the fourth year of study.

Bletcher Memorial Scholarship

The following amendments were made to the terms of reference for the **Bletcher Memorial Scholarship**:

- The preamble was revised to:

  The College of Pharmacists of Manitoba (formerly called the Manitoba Pharmaceutical Association) has established the Bletcher Memorial Scholarship as a tribute to the late Professor H.E. Bletcher. Professor Bletcher was associated with pharmaceutical education in Manitoba for 41 years and was Chairman of the Department of Pharmacy at the University of Manitoba from 1914 to 1939. Each year, one scholarship valued at $100 will be offered to an undergraduate student who:

- The numbered criteria was revised to:

  (1) is enrolled full-time (minimum 80% course load) in their third year of study in the degree program in the College of Pharmacy at the University of Manitoba;

  (2) has achieved a minimum degree grade point average of 3.5; and

  (3) has achieved high standing in the second year of the Pharmacy degree program.

- The selection committee paragraph was revised to:

  The selection committee will be the College of Pharmacy Professional Program Awards Committee.

- The standard Board of Governors statement was updated

Bonnie Schultz Memorial Scholarship

The following amendments were made to the terms of reference for the **Bonnie Schultz Memorial Scholarship**:

- The preamble was revised to:

  In memory of the late Bonnie Schultz, friends and colleagues established an annual scholarship for students in the College of Pharmacy. The Manitoba Scholarship and Bursary Initiative made a contribution to this fund. Each year, the available annual interest will be used to offer one scholarship to an undergraduate student who:

- The numbered criteria was revised to:

  (1) is enrolled full time (minimum 80% course load) in the degree program in the College of Pharmacy at the University of Manitoba;

  (2) has achieved a minimum degree grade point average of 3.5; and

  (3) has achieved outstanding merit in the Pharmacy Skills Lab 1, 2 and 3 (currently numbered PHRM 1110, PHRM 2100 and PHRM 3110).

- The selection committee paragraph was revised to:

  The selection committee will be the College of Pharmacy Professional Program Awards Committee.

- The standard Board of Governor statement for was added.

Doreen Ash Memorial Prize

The following amendments were made to the terms of reference for the **Doreen Ash Memorial Prize**:

- The preamble was revised to:

  On the initiative of students in the College of Pharmacy, friends and associates of Mrs. Doreen Ash, long-time staff member of the College of Pharmacy, have established a fund at the University of Manitoba in memorial tribute. Each year, one prize valued at $100 will be offered to an undergraduate student who:

- The numbered criteria was revised to:

  (1) was enrolled full-time (minimum 80% course load) in either their first, second or third year of study in the degree program in the College of Pharmacy, in the year in which the prize was tenable;

  (2) has actively participated in the sports program available to students in the College of Pharmacy;

  (3) has actively participated in the social program of the College of Pharmacy; and

  (4) has participated in the student activities of the College of Pharmacy.

- The following nomination paragraph was added:

  Students may self-nominate or be nominated by peers. The application form will be posted online and must be submitted prior to the annual deadline posted by the College of Pharmacy.

- The selection committee paragraph was revised to:

  The selection committee will be the College of Pharmacy Professional Program Awards Committee.

- The standard Board of Governor statement for was added.

Douglas and Elizabeth MacEwan Student Resident Award

The following amendments were made to the terms of reference for the **Douglas and Elizabeth MacEwan Student Resident Award**:

- The preamble was revised to:

  Douglas and Elizabeth MacEwan established an endowment fund with an initial pledge of $200,000 in 2013 to offer the Douglas and Elizabeth MacEwan Student Resident Award. The Manitoba Scholarship and Bursary Initiative made a contribution to the fund. The purpose of the fund is to provide comprehensive support to a student living in residence for the duration of their undergraduate studies at the University of Manitoba. Beginning in 2015-2016, the available annual income from the fund, up to a maximum value of $20,000, will be used to offer one award to an undergraduate student who:

- The renewal paragraph was updated to:

  The award, valued at the available annual income from the fund, up to a maximum value of $20,000, is renewable for a maximum of three years provided the recipient:

- The standard Board of Governor statement was updated.

Honourable Kenneth J. Galanchuk, Q.C., Bursary in Law

The following amendments were made to the terms of reference for the **Honourable Kenneth J. Galanchuk, Q.C., Bursary in Law**:

- The preamble was revised to:

  The Joe Brain Foundation Inc. established an endowment fund at the University in Manitoba in 2002 to honour of one of its Directors, the Honourable Kenneth J. Galanchuk. The Manitoba Scholarship and Bursary Initiative made a contribution to this fund. The purpose of this bursary is to support students in the Faculty of Law at the University of Manitoba who are residents of Manitoba from north of the 52nd parallel or residents of Creighton, Saskatchewan. Each year, the available annual income from the fund will be used to offer one or more bursaries to undergraduate students who:

- The numbered criteria was revised to:

  (1) are either residents of Manitoba from north of the 52nd parallel or residents of Creighton, Saskatchewan;

  (2) are enrolled full-time (minimum 60% course load) in the Faculty of Law;

  (3) have achieved a minimum cumulative grade point average of 2.5; and

  (4) have demonstrated financial need on the standard University of Manitoba bursary application form.

- The following paragraphs were added:

  In the event that there are no candidates who meet criterion (1) the bursary may be awarded to students who meet criteria (2) through (4).

The selection committee will have the discretion to determine the number and value of awards offered each year based on the available funds.

- The standard Board of Governors statement was added.

Honours Physics Class of 1986 CUPC Prize

The following amendments were made to the terms of reference for the **Honours Physics Class of 1986 CUPC Prize**:

- The last sentence of the preamble was revised to:

  Each year, the available annual income from the fund will be used to offer one or more equal prizes with a minimum value of $100, to undergraduate students who:

- The numbered criteria were revised to:

  (3) were enrolled full- or part-time in the Faculty of Science in the year in which the award was tenable;

  (4) have achieved a minimum degree grade point average of 3.0; and

  (5) attended the CUPC to present a paper or a poster.

- The following paragraph was added:

  If, in any given year, there are more eligible students than the available annual income will support, ties are to be broken using the following criteria, in priority order: (i) any student who wins any award, honourable mention, or a Special Note at the conference will be given first priority; (ii) the Degree Grade Point Average, calculated to the fourth decimal place; (iii) the higher proportion of A+ and A grades in a total program; (iv) the highest number of credit hours completed in the degree program; and (v) the greater proportion of senior- or advanced-level courses in the total program.

- The following sentence was added:

  The selection committee will have the discretion to determine the number and value of awards each year as outlined above.

- The selection committee paragraph was revised to:

  The selection committee will be named by the Head of the Department of Physics (or designate).

- The following paragraph was removed:

  NOTE: Income from the fund will be available for disbursement for the first time after April 1, 2000, thus no award will be made before that time.

- The standard Board of Governors statement was added.

Manitoba Society of Occupational Therapists Prize

The following amendments were made to the terms of reference for the **Manitoba Society of Occupational Therapists Prize**:

- The preamble was revised to:

  The Manitoba Society of Occupational Therapists offers an annual convocation prize for a student in the College of Rehabilitation Sciences in the Master of Occupational Therapy program at the University of Manitoba. Each year, one prize valued at $100 will be offered to a graduating student who:

- The following numbered criteria was added:

  (1) was enrolled full-time in the Faculty of Graduate Studies in the Master of Occupational Therapy program in the year in which the award was tenable;

  (2) has achieved a minimum degree grade point average of 3.5; and

  (3) has achieved the highest standing in the final year of the program amongst all graduating students.

- The following tie breaking paragraph was added:

  Ties are to be broken using the following criteria, in priority sequence: (i) the Degree Grade Point Average, calculated to the fourth decimal place; and (ii) the higher proportion of A+ and A grades in a total program.

- The selection committee paragraph was revised to:

  The Vice-Provost (Graduate Studies) and Dean of the Faculty of Graduate Studies (or designate) will ask the Chair of the College of Rehabilitation Sciences Awards Committee to name the selection committee for this award.

- The standard Board of Governor statement was added.

Nahlah Ayed Prize for Student Leadership and Global Citizenship

The following amendments were made to the terms of reference for the **Nahlah Ayed Prize for Student Leadership and Global Citizenship**:

- The preamble was revised to:

  The International Centre (IC), offers an annual prize to encourage students at the University of Manitoba to participate in activities that celebrate diversity, curiosity, respect, mutual understanding, and that will expand their horizons and develop global skill sets. Each year, the International Centre will offer two prizes, with a minimum value of $500 each and a commemorative certificate. One prize will be allocated to a domestic student and one to an international student, who:

- The numbered criteria was revised to:

  (1) is enrolled full-time (minimum 80% course load) in any degree program in any Faculty, School or College at the University of Manitoba;

  (2) has achieved either:

  (i) as an undergraduate student in the Undergraduate Medical Education Program, is in good academic standing, or as an undergraduate student in any other program has achieved a minimum degree grade point average of 2.5; or

  (ii) as a graduate student, has achieved a minimum point average of 3.0 based on the last 60 credit hours (or equivalent) of study; and

  (3) has demonstrated exceptional vision and leadership, and who has best demonstrated good global citizenship through (i) their participation in activities that bridge local and global communities, and (ii) by actions that demonstrate how students are making vital contributions to civil society and are responding constructively to the emerging issues experienced by local and global communities.

- The standard Board of Governor statement was added.

Wayne Cadogan Bison Football and Track and Field Bursary

The following amendments were made to the terms of reference for the **Wayne Cadogan Bison Football and Track and Field Bursary**:

- The preamble was revised to:

  Wayne Cadogan, a former member of the Bison Football and Track and Field teams, established an endowment fund at the University of Manitoba in 1997 to support student athletes on the Bison Football team and the Bison Track and Field team. Each year, the available annual income from the fund will be used to offer at least two bursaries to undergraduate students who:

- The numbered criteria was revised to:

  (1) are eligible to compete in U Sports and are members of the Bison Football team or the Bison Track and Field team;

  (2) are enrolled full-time, as defined by U Sports, in any faculty, college, or school at the University of Manitoba;

  (3) have achieved:

  (a) as an entering student, a minimum average of 80% on those high school courses used for admission to the University, or

  (b) as a continuing student, a minimum degree grade point average of 2.0; and

  (4) have demonstrated financial need on the standard University of Manitoba bursary application form.

- The selection committee paragraph was revised to:

  The Director of Athletics and Recreation (or designate) will name the selection committee for this award which will include the Head Coach of the Bison Football team (or designate) and the Head Coach of the Bison Track and Field team (or designate).

- The standard Board of Governors statement was updated.

William G. Eamer / College of Pharmacists of Manitoba Graduate Scholarship

The following amendments were made to the terms of reference for the **William G. Eamer / College of Pharmacists of Manitoba Graduate Scholarship**:

- The name of the award was revised to: William G. Eamer / College of Pharmacists of Manitoba Graduate Fellowship
- Criterion (2) was revised to:

  (2) has achieved a minimum grade point average of 3.5 in the last 60 credit hours (or equivalent) of study; and

- Application criterion (2) was revised to:

  (2) an academic transcript;

- The paragraph following the application criteria was revised to:

  Priority towards Masters versus Ph.D. students will ideally alternate each year. This fellowship cannot be held with another fellowship of higher value offered through the College of Pharmacy.

- The standard Board of Governors statement was updated.

William G. Eamer / College of Pharmacists of Manitoba Undergraduate Scholarship

The following amendments were made to the terms of reference for the **William G. Eamer / College of Pharmacists of Manitoba Undergraduate Scholarship**:

- The preamble was revised to:

  Mr. William G. Eamer, B. Comm. (Hon.)/'72, MBA/'73, FCA, in collaboration with Mr. Ronald F. Guse, B.Sc. (Pharm.)/'79, Registrar of the College of Pharmacists of Manitoba (CPhM), established an endowment fund in 2008 to provide scholarships for undergraduate students in the College of Pharmacy at the University of Manitoba. The Manitoba Scholarship and Bursary Initiative has made a contribution to this fund. Each year, the available annual income from the fund will be used to offer eight scholarships valued at a minimum of $1,000 each to undergraduate students who:

- The numbered criteria was revised to:

  (1) are enrolled full-time (minimum 80% course load) in any year of the degree program in the College of Pharmacy;

  (2) (i) if they are a first year student, were enrolled full-time (minimum 80% course load) in the previous year of university study, and have achieved a pre-pharmacy adjusted grade point average of at least 3.5 (or equivalent), or

  (ii), if they are a continuing student, have achieved a minimum degree grade point average of 3.5; and

  (3) have demonstrated social responsibility and personal initiative through active participation in student government or other student or community service.

- The following preference paragraph was added:

  Preference in selection will be to give two scholarships to students in each year of the program, i.e. two scholarships to first year students, two scholarships to second year students, two scholarship to third year students and two scholarships to fourth year students. This scholarship cannot be held with another scholarship of higher value offered through the College of Pharmacy.

- The selection committee paragraph was revised to:

  The selection committee will be the College of Pharmacy Professional Program Awards Committee and will include a representative of the College of Pharmacists of Manitoba.

- The standard Board of Governor statement was updated.

Youth in Care Tuition Grants

The following amendments were made to the terms of reference for the **Youth in Care Tuition Grants**:

- The preamble was revised to:

  The University of Manitoba has established a fund in support of the Youth in Care Tuition Grants. The purpose of the grants is to provide the opportunity for youth who are or who have been in the care of Child and Family Services in Manitoba to attend post-secondary education. The grants can be used for academic supports (tuition, books and supplies) and social supports (living costs including food, transportation, rent, personal expenses, etc).The grants will have a maximum value of $5,000 per year for a maximum of 4 years for each recipient. Each year, up to 10 renewable tuition grants will be offered to undergraduate students who:

- Criterion (3) (a) was revised to:

(3) *have a record of satisfactory academic achievement which is defined as:*

(a) for entering students, met the minimum admission requirements for University 1 or any faculty, college or school at the University of Manitoba that offers a direct-entry option; or

3. WITHDRAWALS

Henry Schein Ash Arcona Award

At the request of the donor

UNIVERSITY OF MANITOBA | Office of the President

202 Administration Building
Winnipeg, MB
Canada R3T 2N2
Telephone: 204-474-9345
Fax: 204-261-1318

Date: November 3, 2019

To: Jeff Leclerc
University Secretary

From: Dr. David Barnard, O.M., Ph.D., FRSC
President and Vice-Chancellor

Re: Request to Increase Admission Target, Bachelor of Kinesiology

---

I attach a recommendation from Dr. Todd Mondor, Deputy Provost, to increase the annual admission target for the Bachelor of Kinesiology.

Under the Admission Targets policy, the President approves changes to, or the introduction of, enrolment limits following consultation and discussion with the dean or director and with Senate and the Board.

Accordingly, please place this item on the agenda for the November 20, 2019 Senate Executive meeting and the December 4, 2019 Senate meeting.

Cc.: Dr. Janice Ristock, Vice-President (Academic) and Provost
Dr. Todd Mondor, Deputy Provost
Dr. Douglas Brown, Dean Faculty of Kinesiology and Recreation Management
Mr. Jeff Adams, Director, Enrolment Services
Ms. Cassandra Davidson, Academic Programs Specialist

University of Manitoba

Office of Provost and Vice-President (Academic)

208 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 480-1408
Fax (204) 275-1160

Date: October 29, 2019

To: Dr. David Barnard, President and Vice-Chancellor

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

Re: Request for Increase to Admission Targets, Bachelor of Kinesiology

---

Under the Admission Targets Policy and at the request of Dr. Douglas Brown, Dean, Faculty of Kinesiology and Recreation Management, I am requesting that you consider an admission target increase of 35 students for the Bachelor of Kinesiology program effective the Fall 2021 intake.

In May 2019, the Faculty was granted a temporary increase to their target to undertake an impact assessment of effects of growth on program delivery and associated resources. As outlined in the attached proposal, the Faculty has determined that they can accommodate an additional 35 seats in the existing program to meet increasing demand without significant resource implications to their unit or others on campus. There is capacity in existing sections of core courses, and lab fees will offset costs for additional lab sections in identified courses.

Consistent with the Admission Targets Policy and Procedure, the President may approve changes to admission targets following consultation with the Dean/Director, Senate, and the Board of Governors. If considered favourable, the proposal will be forwarded to the Province for their review and approval under the provincial Program of Study Regulations.

Please provide your advice concerning this matter to the Office of the University Secretary by Wednesday November 6, 2019 so that, if supported, the request may receive timely consideration by Senate and the Board of Governors.

Cc: Janice Ristock, Provost and Vice-President (Academic)
Douglas Brown, Dean, Faculty of Kinesiology and Recreation Management
Jeff Leclerc, University Secretary
Jeff Adams, Executive Director, Enrolment Services
Cassandra Davidson, Academic Programs Specialist

/cd

UNIVERSITY OF MANITOBA | Enrolment Services

421 University Centre
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-8820
Fax (204) 474-7554

TO: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

FROM: Jeff Adams, Executive Director, Enrolment Services JA

DATE: October 22, 2019

SUBJECT: Bachelor of Kinesiology admission target increase

I support the request from the Faculty of Kinesiology and Recreation Management, as outlined in their September 30th, 2019 memo, to increase the admission target for the Bachelor of Kinesiology degree program from 65 seats to 100 seats. The Faculty was granted a temporary increase last year and they used the year as a trial period to ensure that sufficient demand for seats existed to warrant the increase. I can confirm that from an admissions perspective there was sufficient demand.

Throughout the past year the Faculty consulted in detail with my office and I have no concerns with moving this request forward.

Cc: Laurie Schnarr, Vice-Provost (Students)
Cassandra Davidson, Academic Program Specialist, Office of the Provost

UM | Faculty of Kinesiology and Recreation Management

102 Frank Kennedy Centre
University of Manitoba
Winnipeg, Manitoba
R3T 2N2
umanitoba.ca/kinrec | @umkinrec

September 30th, 2019

Jeff Adams
Executive Director of Enrolment Services
University of Manitoba
Room 421 University Centre
Office: (204) 474-6382
Mobile: (204) 509-5517

Dear Mr. Adams

The Faculty of Kinesiology and Recreation Management would like to request an increase to our Bachelor of Kinesiology degree admission targets. Specifically we would like to admit 100 students into year two of the BKin Degree. This would be a 35 seat increase. As the attached application reveals, this increase will enable to faculty to meet demand for this program without major resource imlications.

Sincerely,

Doug Brown, Dean
Faculty of Kinesiology and Recreation Management

CC. Christine Van Winkle Acting Associate Dean Undergraduate Education

Application

SIGNIFICANT MODIFICATION TO A PROGRAM OF STUDY

Under The Advanced Education Administration Act

Manitoba Education and Training

Universities and colleges requesting approval for a **significant modification** to a program of study from Education and Training must apply using this application form. This form reflects the requirements set out in the Programs of Study Regulation (MR 134/2015) under The Advanced Education Administration Act.

UM INTERNAL REQUIREMENTS

UNIVERSITY OF MANITOBA

1. Please complete the application below and submit one (1) electronic copy (.pdf format) each to the Vice-Provost (Integrated Planning & Academic Programs) and the Office of the University Secretary, (where indicated) along with the following supplemental documentation:
   a. A cover letter justifying and summarizing the rationale behind the request for a significant modification.
   b. Letters of support from internal and/or external stakeholders that were consulted as part of this proposal, if applicable.
2. Note that internal approval of the proposed modification will vary depending on the type of modification (see SECTION C). Please work with the Provost's Office and the Office of the University Secretary in advance, in identifying the appropriate procedures and approval processes. In general, please note the following for each type of modification:
   a. **CHANGE OF SITE** – may require Senate approval if the site requires modifications to admission and/or program requirements (e.g. new admission category).
   b. **CHANGE TO SEAT CAPACITY** – please refer to the Admission Targets Policy and Procedures (http://umanitoba.ca/admin/governance/governing_documents/academic/admission_targets.html). Changes may also require Senate approval if there are modifications to admission and/or program requirements.
   c. **CHANGE TO TIME-TO-COMPLETION** – any addition to or reduction of hours to program requirements, requires Senate approval. For undergraduate programs, please refer to SCCCC Guidelines found at - http://umanitoba.ca/admin/governance/forms/index.html. For graduate programs, please contact FGS for approval process.
   d. **CHANGE TO APPROVED DELIVERY MODEL** – please notify the Provost's Office of any significant changes to course or program delivery method.
   e. **CHANGE TO STATUS OF JOINT PROGRAM** – depending on the significance of the changes resulting from the proposal, this will either require Senate approval as a program modification or will require the introduction of a new program. Please contact the Provost's Office with more details on how becoming a joint program or ceasing a joint program will impact the program.
   f. **CHANGE TO CREDENTIAL**
   g. **CHANGES TO CAPITAL OR OPERATING RESOURCES REQUIRED** -
3. Please direct questions to Cassandra Davidson, Academic Programs Specialist, Office of the Provost and Vice-President (Academic) at Cassandra.Davidson@umanitoba.ca or 204.474.7847.

SECTION A – PROPOSAL DETAILS

Institution:

Applicable faculties/department with responsibility for the program: Faculty of Kinesiology and Recreation Management

If program is a joint program, list all participating institutions and the roles of each in delivering the proposed program:

Program name: Bachelor of Kinesiology

Credential awarded: Bachelor of Kinesiology Degree

Funding request: N/A

Office Use Only

One-time funding: _____

On-going funding: _____

Proposed start date: 2021-09-01

List any critical issues that may impact the start date of the program: N/A

Institutional Program Code(s) (PSIS reporting number):

SECTION B – PROGRAM DESCRIPTION AND DELIVERY

B-1 Provide a general description of the significantly modified program and its objectives: *(Include intended purpose, curriculum design, and highlight distinctive attributes)*

The BKIN degree is designed for students interested in learning how to promote health and wellness, improve sport performance, prevent injuries and chronic disease. This request is to increase admission from 65 to 100 into this existing degree program.

B-2 Describe how this program serves and advances the academic, cultural, social and economic needs and interests of students and the province:

This program offers students interested in the fields of health, chronic disease prevention, physical activity promotion, community wellness and sport and exercise science the opportunity to pursue an undergraduate degree that emphasizes health and wellness promotion, improved sport performance, and chronic disease and injury prevention.

B-3 Describe the existing and anticipated post-secondary learning needs of students in Manitoba that this program addresses and responds to:

Students interested in careers in health and wellness, physical activity promotion, community wellness and exercise and sport social and physical science require a strong foundation in human movement. By studying growth and motor development, human anatomy and physiology, biomechanics, sociology of sport and physical activity, Kinesiology students are well positioned to pursue careers growing in Manitoba.

B-4 Will the program be available for part-time study?

Yes

B-5 Is there a cooperative education, work placement, internship or practicum component?

Students in the Kinesiology degree program can choose to participate in a 12 credit hour fieldwork placement program.

C-2 Change to seat capacity

C-2.1 - List originally approved or currently offered seat capacity and proposed seat capacity.
UM Internal Note: seat capacity as defined by your admission target. If you are not aware of the target, please contact Enrolment Services.

The current seat capacity is 65 incoming students (BKIN year 2). This proposal is for an increase of 35 students resulting in 100 incoming students in 2021. This proposal is to meet the increasing demand for this undergraduate degree program.

C-2.2 - Provide rationale for this change. *(Examples include changes in applications, enrolment and employer demand or alignment with the institution's strategic direction and priorities.)*
UM Internal Note: please ensure to address the following in your response:

- Student demand for places – identify how the current admission levels and the proposed changes compare to the number of qualified applicants to the program.
- Demand for graduates – identify how the current admission levels and the proposed changes reflect market demand for graduates.
- Outline any economic, demographic and/or geographical shifts in the student population that may impact on, or be impacted by, the proposed change.
- Student success – comment on success of current students (progression, time-to-completion, etc.) and graduates of the program (where known).

In 2019, the Faculty of Kinesiology and Recreation Management undertook an impact assessment to identify how an increase in enrolment could impact program delivery. As a result of this process the Faculty has decided to request a permanent increase from 65 admissions to 100.

In 2019 we had 125 qualified applicants for the 65 spaces (direct and advanced entry combined). Note there were an additional 14 'priority 2' applicants who had not completed their Kinesiology entry requirements at the time of applicant consideration and were therefor refused admission.

Below is a summary of admissions data since 2013. This demonstrates the sustained demand for the BKin degree program. Note: the decrease in advanced entry applications in 2018 is believed to reflect changing advanced entry admission requirements rather than decreasing demand for the program.

DirectEntry

	Applications	Acceptances	Min Avg Admitted (85% min)
Fall 2013	61	16	87.66%
Fall 2014	97	16	88.67%
Fall 2015	102	17	91.67%
Fall 2016	80	16	90%
Fall 2017	101	16	86.33%
Fall 2018	124	35	85%
Fall 2019	125	31	85%

AdvancedEntry

	Applications	Acceptances	Min Avg Admitted (2.0 min)
Fall 2013	130	50	3.33
Fall 2014	109	54	3.17
Fall 2015	102	55	3
Fall 2016	117	49	3.21
Fall 2017	108	52	3
Fall 2018	59	50	2.75
Fall 2019	77	50	2.94

The University of Manitoba has experienced increased enrolment year after year, and the demand for the Kinesiology degree program has been increasing with it. Our graduates are sought in graduate programs, after-degree allied health programs, as well as in the workforce.

According to the Province of Manitoba Occupational Forecasts careers pursued by graduates of the Kinesiology degree program will continue to see expansion demand through 2024. Across Canada professional and assisting occupations in health and paraprofessional occupations in community services will continue to increase according to Canadian Occupation Projections. This suggest ongoing demand for the Kinesiology degree program.

C-2.3 - Intake Information

C-2.3 (a) - What is the projected enrolment for the first intake?
If this proposal is accepted the enrollment for 2021 will be a maximum of 100 students (year 2 admissions).

C-2.3 (b) - What is the maximum seat capacity (defined as first-year enrolment capacity)?
Currently the maximum seat capacity is 65. We are requesting and increase to 100.

C-2.3 (c) - What is the anticipated date of maturity?
September 2021

C-2.4 UM Requirement: Address the impact of the proposed change on access to post-secondary education of under-represented groups. Identify any particular demographic experiencing special difficulties either in gaining admission to, or completing the requirements of, the program.
Admission to the BKin Degree is increasingly competitive. Additional seats will provide greater access. Because our program admission requirements are often competitive for admission space, our Advanced Entry admission has an Individual Consideration admissions category to help students from underrepresented groups, who meet the minimum requirements, achieve admission to the program. We offer to 10% of the available annual admission spaces to students who apply under this category, though many achieve admission through the regular competitive applicant pool.
A holistic review of these characteristics along with all required documentation is used for consideration of applications in the Individual Consideration category, with no particular weight to any one characteristic. Individual Consideration will include applicants who identify as one of the following underrepresented group: a) Canada Indigenous Peoples b) Racialized Minorities Those individuals, other than Indigenous/Aboriginal peoples, who, because of their ethnicity, are a "visible" minority in Canada; to include recent immigrants and refugees. c) Mature Students d) ACCESS Program Students e)

Persons with Disabilities Persons with disabilities are those who would consider themselves disadvantaged by reason of any physical, intellectual, mental, sensory or learning impairment. f) Exceptional Circumstances

SECTION D – MODIFICATION INFORMATION

D-1 Describe how this significant modification aligns with the strategic plans of your institution:
The University of Manitoba strategic plan identifies inspiring minds, driving discovery, creating pathways, building community and forging connections as priorities. By increasing admission to the BKIN degree we will to work towards the inspiring minds priority by addressing the university's goal of optimizing enrolment by ensuring more space exist for students interested in this degree program. We will also be able to enhance student mobility within the University by ensuring University one and other degree program students interested in BKIN are able to be admitted to the program. Within the building community priority, a goal outlined by the University of Manitoba is to make the University of Manitoba the institution of first choice for potential students. Currently the University of Winnipeg also offers a BKIN degree and so students not able to be admitted to the University of Manitoba BKIN degree may choose to study elsewhere.

D-2 Outline the internal approval process (i.e. committees, governing bodies) for approving this significant modification within your institution and indicate any dates of decision. *(Governing Council, Board of Governors, Board of Regents, Senate, other)*

Decision-Making body: Senate (consultation only)

Decision:

Date:

Decision-Making body: Board of Governors (consultation only)

Decision:

Date:

Decision-Making body: President

Decision:

Date:

D-3 Responsibility to consult

D-3.1 If this program subject to mandatory review or approval by organizations external to the institution *(such as regulatory bodies, Apprenticeship Manitoba, etc.)*, please describe any consultation processes and provide copies of reports or letter from these organizations providing support:
This degree program is accredited by Canadian Canadian Council of Physical Education and Kinesiology Administrators (CCUPEKA). CCUPEKA accreditation is not dependent upon admission numbers.

D-3.2 What agencies, groups, or institutions have been consulted regarding the significant modification of this program?
UM Internal Note: the unit is to consult with other academic units to identify how the proposed changes might affect quality, access to, and resources associated with the programs offered by that unit, as well as impact on service teaching by supporting faculties/schools. Outline the consultation process with other units and append letters of support, as appropriate.
Students in the BKIN Degree are required to take introductory courses in Biology, Psychology and Statistics. Data on past program applicants indicates that the majority of the students seeking admission to the faculty are already enrolled at the University of Manitoba and therefore have access to these courses. It is possible that demand for these courses could increase slightly due to students transferring in from other institutions therefore support letters were sought from these units.

D-3.3 How have students and faculty been informed of the intent to modify this program?
During the September 2019 Faculty Council (which includes student representative) this proposal was discussed. Additional lab and TA support was discussed.

D-4 List any similar programs offered in Manitoba: *(Provide such information as institution, programs, and credentials offered in addition to any impacts on these programs, explain rationale for duplication.)*
The University of Winnipeg offers a Bachelor of Kinesiology Degree Program. The University of Winnipeg does not have Direct Entry or Advanced Entry quotas for their 4-Year Kinesiology degree program. UW admits all students who meet the minimum requirements for admission. It is unknown whether they have the resources to meet demand for space in courses for all BKin students in any given degree year, but it certainly is more accessible for all applicants. Our admission quotas are carefully planned so that our faculty anticipates the resources to deliver enough required class enrolment space for all of our BKin students in all years of the program.

D-4.1 Describe any specific laddering, articulation and/or credit transfer options for Manitoban students that are anticipated to change as a result of the significant modification of this program:
No laddering, articulation and or credit transfer agreements exist for students transferring between BKIN programs. The University of Manitoba and Faculty of Kinesiology and Recreation Management does consider transfer credits on a course by course basis.

D-5 List any similar programs offered in Canada: *(Provide such information as institution, programs, and credentials offered in addition to any impacts on these programs, explain rationale for duplication.)*
The following Universities in Canada offer Kinesiology degree programs:
University of Toronto, University of British Columbia, University of Saskatchewan, Queen's University, University of Ottawa, University of Calgary, University of Alberta, University of Waterloo Dalhousie University and others.

D-5.1 Describe any specific laddering, articulation and/or credit transfer options for Manitoban students that are anticipated to change as a result of the significant modification of this program.
None

D-6 Describe any changes in labour market demands in Manitoba for graduates of this Program as a result of this significant modification:
(Provide such information as probable employment destinations or further educational opportunities available to graduates of this new program of study. Attach any formal reports such as those from Associations, Statistics Canada, Sector Councils, Industry or Regulators.)
Kinesiology graduates work in varied fields including health care, community wellness and sport and physical activity professions. Kinesiology is also seen as an excellent undergraduate degree to prepare students for further study in medicine and allied health professions. The labour market outlook for careers in allied health professions and coaching and related professions is expected to continue to expand through 2024 according the Manitoba Labour Market Occupational Forecast.

D-7 If copies of any internal or peer evaluations with respect to the significant modification of this program of study are being provided with this proposal, please indicated how any issues identified by these evaluations have been addressed and attach any relevant documents as available:
No peer evaluations are being provided.

D-8 Does this significant modification entail an increase to tuition, or the establishment of or increase to fees that apply to students in this program of study?
UM Internal Note: Comment on potential impact on student access to and affordability of education that may result from the change.

No

SECTION E – REQUIRED RESOURCES AND FINANCIAL IMPLICATIONS

E-1 If one-time or pilot funding is being requested to support the significant modification of this program of study, please identify the amount of funding being requested:
No

E-2 If ongoing funding is being requested to support the significant modification of this program of study, please identify the amount of funding being requested:
No

E-3 If new funding is not being requested, how will the significant modifications to the program be funded? *(Include such information as: where reallocated funding will come from, and the implications of reallocating that funding on other programs/activities of the institution.)*
Tuition and lab fees from the newly admitted students will offset the additional costs of delivering the program to the additional 35 students. Existing lab fees to students will not be increased.

E-4 What are the resource implications to the institution in delivering the significantly modified program of study? *(Include such information as; budget, IT, library, laboratory, computer, space, practicum liability insurance, student services, etc)*
UM Internal Note: Identify how the proposed changes will impact on the *quality of operations* at both the unit level and institutional level (including impact on other affected units), where applicable. Comment on how units delivering service teaching in the program will be impacted by the proposed change.
As we are requesting an increase of 35 spaces to an existing program we do not foresee significant resource implications. Program core courses will be able to accommodate the additional 35 students in each cohort year. To ensure the on going delivery of a high quality program the following courses with laboratories may be expanded to include one additional section for each: KPER 2320 Human Anatomy, KPER 2330 Biomechanics, KPER 2350 Introduction to Research, KPER 2700 Motor Control and Learning, KPER 3470 Exercise Physiology, and KPER 3512 Principles of Fitness Training. Additional laboratory fees will offset the cost lab demonstrators and supplies.

E-5 Please describe new and existing staffing resources needed to provide this significantly modified program of stud:. *(Include reallocation of existing faculty, hiring of new faculty, administrative and support services and any other considerations.)*
UM Internal Note: Identify how the proposed changes will impact on the *quality of instruction* at both the unit level and institutional level (including impact on other affected units), where applicable. Comment on how units delivering service teaching in the program will be impacted by the proposed change.

Within the faculty we have a low advisor to student ration of 1:~450. The additional students will increase this to no more that ~1:500. We have the capacity to add 35 students to existing courses without requiring additional course sections and so no new instructors are needed. To ensure continued high-quality additional lab demos and TA may be hired to support instructors. This cost will be offset by the lab fee paid by these additional students.

E-6 Please describe the effect of the significant modification of this program on existing capital infrastructure and equipment:
UM Internal Note: Identify how the proposed changes will impact on the *quality of operations* at both the unit level and institutional level (including impact on other affected units), where applicable. Comment on how units delivering service teaching in the program will be impacted by the proposed change.

Students in the BKIN Degree are required to take introductory courses in Biology, Psychology and Statistics. Data on past program applicants indicates that most of the students seeking admission to the Faculty are already enrolled at the University of Manitoba and therefore have access to these introductory courses.

SECTION F – SIGNATURES

(A second signature section is provided for joint programs only)

SUBMITTED BY:

President:	***Vice-President/Academic:***
Name:	*Name:*
Signature:	*Signature:*
Date: Click here to enter a date.	*Date:* Click here to enter a date.

For use by joint programs only:

President:	***Vice-President/Academic:***
Name:	*Name:*
Signature:	*Signature:*
Date: Click here to enter a date.	*Date:* Click here to enter a date.

SUBMIT COMPLETED FORM

Once completed and signed, please submit this application form to Post-Secondary Education and Labour Market Outcomes at PSE-LMO@gov.mb.ca with the following attachments *(double-click to engage check box)*:

- ☐ Cover letter
- ☐ Program of Study Financial Form
- ☐ Any supporting documentation *(reviews, letters of support, etc.)*

If you have any questions or require further information, please contact:

Post-Secondary Education and Labour Market Outcomes
Manitoba Education and Training
400-800 Portage Avenue Winnipeg MB R3C 0C4
(204) 945-1833
PSE-LMO@gov.mb.ca

University of Manitoba Libraries

Statement for Program Modification

UNIVERSITY OF MANITOBA
Libraries

Faculty	Kinesiology and Recreation Management
Program	Bachelor of Kinesiology Degree program

The Libraries' collection can support this program, as it was described in the documents provided.

It is not expected that this proposed change will affect the Libraries' ability to continue to provide services such as research and teaching support, reference assistance, document delivery, and the technical infrastructure which allows the discovery and delivery of the Libraries' resources and services.

Sarah Clark
Librarian for Kinesiogloy and Recreation Management

Kristen Kruse
Kristen Kruse
Coordinator, Collections Management

Emma Popowich
Acting Head, Elizabeth Dafoe Library

Lisa Hanson O'Hara
Vice Provost (Libraries) & University Librarian

September 11, 2019
Date

Dr. Kevin G-E. Scott

Associate Head Undergrad
Department of Biological Sciences
University of Manitoba

W473 Duff Roblin
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-8413
Fax (204) 474-7604
kevin.scott@umanitoba.ca

Dear Dr. Christine van Winkle,

The Department of Biological Sciences agrees that the increase in the admission target for the Bachelor of Kinesiology Degree program from 65 to 100 will have minimal impact on our course offerings. The BIOL courses taken by students in this program seldom reach their maximum capacity.

Sincerely,

Kevin G-E. Scott

UNIVERSITY OF MANITOBA | Department of Psychology

Randall K. Jamieson, Ph.D.
Professor
Department of Psychology
University of Manitoba
Winnipeg, MB, R3T 2N2

Email: randy.jamieson@umanitoba.ca
Phone: 1-204-474-7837

Christine M. Van Winkle, PhD
Professor and Acting Associate Dean (Undergraduate Education)
Faculty of Kinesiology and Recreation Management
110 Frank Kennedy Centre
University of Manitoba
R3T 2N2

Dear Professor Van Winkle,

This is a letter in support of the Faculty of Kinesiology and Recreation Management's plan to increase the admission numbers for the Bachelor of Kinesiology Degree program. My understanding is that the plan is to admit 100 students, up from the current maximum of 65.

Psychology recognizes that this increase in admission target will produce a corresponding increase in demand for our *Psychology 1200: Introduction to Psychology* enrollment and that you are not asking us to reserve space to fit the larger cohort. Based on conversations within the department, I believe we can fit the increased enrollment.

Please feel free to contact me if you need any additional information (randy.jamieson@umanitoba.ca; 204-474-9360).

Sincerely,

Randy Jamieson
Acting Department Head

Dated: September 16, 2019

UNIVERSITY OF MANITOBA | Department of Statistics

318 Machray Hall
186 Dysart Road
Winnipeg, Manitoba
Canada R3T2N2
204-474-9826
stats_dept@umanitoba.ca

September 10, 2019

Dr. Christine Van Winkle
Acting Associate Dean (Undergraduate Education)
Faculty of Kinesiology and Recreation Management
110 Frank Kennedy Centre
University of Manitoba

Dear Dr. Van Winckle,

The Department of Statistics supports the request from your Faculty to increase student admissions to a maximum of 100 new students per year in the Bachelor of Kinesiology Degree program.

This increase of 35 additional students per year in your program is expected to have minimal impact on the demand for our courses, and the potentially relatively very small increase in demand (if any) should be accommodated without any difficulty given the size of our offerings.

Best regards,

Alexandre Leblanc

Alexandre Leblanc
Associate Head (Undergraduate)
Department of Statistics

cc: Dr. Liqun Wang, Chair, Department of Statistics
Dr. Stefi Baum, Dean, Faculty of Science

University of Manitoba
Provost & Vice-President (Academic)
208 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 480-1408
Fax (204) 275-1160

Date: October 15, 2019

To: Louise Simard, Acting Dean, Faculty of Graduate Studies

From: Janice Ristock, Provost and Vice-President (Academic) Janice Ristock

Subject: Closure on the Ph.D. program in Cancer Control

Please find attached Manitoba Education and Training's approval of the UM proposal to permanently close the Ph.D. in Cancer Control. This decision follows Senate's recommendation on April 3, 2019 and the Board of Governor's approval on April 23, 2019 to close the program.

The Ph.D. program in Cancer Control was initially implemented in 2004, in partnership with Community Health Sciences to build on existing structures, expertise, and relationships. The program provided a valuable platform for the development of a stand-alone Ph.D. in Nursing (in 2012) which has since replaced the need for the Cancer Control program.

As there are currently no students enrolled in the program, the closure of the program is effective September 1, 2019.

Thank you to everyone involved in the process.

Cc.: Dr. David Barnard, President and Vice-Chancellor
Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)
Dr. Brian Postl, Dean, Rady Faculty of Health Sciences & Vice-Provost (Health Sciences); Dean, Max Rady College of Medicine
Dr. Netha Dyck, Dean, College of Nursing
Mr. Jeff Leclerc, University Secretary
Mr. Jeff Adams, Director, Enrolment Services
Mr. Neil Marnoch, Registrar
Mr. Randy Roller, Executive Director, OIA
Ms. Cassandra Davidson, Academic Programs Specialist

Manitoba
Education and Training

Assistant Deputy Minister, Post-Secondary Education and Workforce Development Division
405 – 800 Portage Avenue, Winnipeg, Manitoba, Canada R3G 0N4
T 204-945-3047 **F** 204-945-1557
www.manitoba.ca

October 7, 2019

Dr. David Barnard
President and Vice-Chancellor
University of Manitoba
president@umanitoba.ca

Dear Dr. Barnard:

I am writing to advise that Manitoba Education and Training has approved the University of Manitoba's proposal to permanently cease the PhD in Cancer Control program, as submitted.

It is understood that the proposed cessation will reduce content overlap and redundancy. I appreciate the University's proactive and ongoing commitment to provide excellent education.

Should you have any questions regarding this approval, please contact Ms. Sonya Penner, Executive Director of Post-Secondary Education and Labour Market Outcomes at 204-945-1839 or at Sonya.Penner@gov.mb.ca.

Sincerely,

Colleen Kachulak

Colleen Kachulak

c. Ms. Sonya Penner, Executive Director, Post-Secondary Education and Labour Market Outcomes, Manitoba Education and Training
Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

PRESIDENT'S REPORT: December 4, 2019

GENERAL

On October 29, Dr. Catherine Cook, Vice-Dean (Indigenous) in the Rady Faculty of Health Sciences, was announced as the University of Manitoba's first Vice-President (Indigenous). Dr. Cook gradually will transition from her responsibilities in the Rady Faculty of Health Sciences to this new position, beginning January 1, 2020. Dr. Cook chaired a committee that established in February 2019 to assess the existing mandate and support structures for Indigenous senior leadership and provide recommendations going forward on the role and its mandate, appropriate reporting structures and units, and necessary supports. This committee issued a series of recommendations for the development of a university-wide approach that advances the University of Manitoba's commitment to Indigenous Engagement, promotes Reconciliation and helps address anti-Indigenous racism and Dr. Cook will lead the report implementation process.

The first Visionary Conversations of the 2019/20 season took place November 6. The topic, *Declaring a Climate Emergency, What Happens Next*? attracted a sold out audience, who came to engage on the topic with Dr. Myrle Ballard, Assistant Professor and Indigenous Scholar in the Department of Chemistry; Dr. David Barber, Distinguished Professor of Environment and Geography and Associate Dean (Research) in the Clayton H. Riddell Faculty of Environment, Earth, and Resources; Curtis Hull, Project Director, Climate Change Connection and co-founder of Bike Winnipeg and Transition Winnipeg; and Dr. Zou Zou Kuzyk, Assistant Professor, Geological Sciences at the Centre for Earth Observation Science. The next Visionary Conversations will take place on December 11 at the Canadian Museum for Human Rights on the topic *What Does a Decolonized Canada Look Like?*

Students admitted to the University of Manitoba with a minimum 95 per cent high school average and who maintain a minimum grade point average of 4.0 and a full course load for the rest of their first degree are given the designation of President's Scholars. This academic year, there are a total of 614 President's Scholars on campus. The 67 President's Scholars who have reached their fourth year of study while maintaining their 4.0 GPA were honoured at a celebration on September 30.

Distinguished Professor Dawne McCance (Religion) has been elected a new Fellow of the Royal Society of Canada (RSC) and professor Frank Deer (Education) has been elected a member of the RSC's College of New Scholars, Artists and Scientists. Distinguished Professor Digvir Jayas (Biosystems Engineering) and Vice-President (Research and International) has been honoured with the Sir John William Dawson Medal in recognition of his important contributions through his research into stored-grain ecosystems.

Deer, a Canada Research Chair in Indigenous Education, aims to understand the ways in which Indigenous languages are important to the social development and cultural identities of Indigenous peoples, and to understand how Canadian Indigenous language revitalization and its sustainability can be appropriately incorporated into primary and secondary school programming.

McCance is an internationally recognized scholar who, through publications and lectures, has opened and enabled new research methodologies in genetics and animal ethics, disability studies, and institutional formations. Her cross-disciplinary research effectively engages today's most pressing social

and ethical concerns. Preeminent among these concerns for her are those associated with conceptual and technological developments that have taken place in biology and genetics since the 1950s.

Jayas has been a world leader in research on stored-grain ecosystems for more than three decades. His work reduces losses in grain quality and quantity during storage in agricultural systems around the globe. He has authored or co-authored over 900 articles including 400 peer-reviewed manuscripts in his field, and these help form the basis upon which storage recommendations are made globally.

The trio will be inducted at the RSC Celebration of Excellence in Ottawa, Nov. 20-24. UM now has 45 Fellows of the RSC and 9 Members of the College of New Scholars, Artists and Scientists.

Nominations for the 2020 Distinguished Alumni Awards are now open and close on December 12. UM will host the Celebration of Excellence event on October 1, 2020, celebrating our 2020 award recipients.

ACADEMIC MATTERS

- Niigaan Sinclair, native studies, received the Peace and Justice Studies Association (PJSA) Educator of the Year award for 2019. The Peace and Justice Studies Association serves as a professional association for scholars in the field of peace and conflict studies. It is dedicated to bringing together academics, educators, and activists to explore alternatives to violence and share visions and strategies for peacebuilding, social justice, and social change.

- Jennifer Watt, curriculum, teaching and learning, was awarded the J.M. Brown Award for Outstanding Contributions to Teacher Education. The award is presented to an individual who has made an outstanding contribution to the improvement of teacher education in Manitoba through the promotion of teacher education at a school or divisional level, the exercising of leadership in education at the school or divisional level, the exercising of leadership in the development of teacher education policy at the provincial level, and/or the superior mentorship of student teachers.

- Pallabi Bhattacharyya, sociology criminology, student was selected to attend the Canada/Germany Summer School in Research with Refugees held at Ludwig Maximilians Universitat in Munich Germany. She was selected due to the importance of her dissertation work on the settlement outcomes among refugee women in Canada.

- Sally Ogoe, sociology and criminology, student received the Canadian Research Data Centre Network's Emerging Investigator Award. This national award is given to only five students. She is being recognized for her work on the economic conditions of refugee women in Canada and her potential as a future leader.

- The Asper School of Business, Indigenous Business Education Partners (IBEP) program recently celebrated its 25th year. The program is opened to First Nation, Inuit and Métis students who are admitted to the university (either through University 1 or through direct entry into the Asper School of Business) who intend to complete their Bachelor of Commerce (Honours).

- The Faculty of Education hosted Filiberto Penados a renowned international Indigenous scholar. He delivered a public lecture entitled *"Expanding understandings of Indigenous knowledges and*

perspectives." He is the director of the Center for Engaged Learning Abroad Belize and is a distinguished international scholar in the areas of education and Indigenous studies.

- The Dr. Gerald Niznick College of Dentistry orthodontic clinic celebrated its grand re-opening showcasing modernized space that will enhance patient care, teaching and learning experience of studies and provide services to the public.

- The Max Rady College of Medicine's department of immunology celebrated its 50th anniversary. The department is the oldest continuously active academic immunology department in North America and is at the forefront of knowledge in allergy, asthma, cancer, immunization, autoimmunity and inflammatory disease research.

RESEARCH MATTERS

- On September 19, Drs. Ross Feldman (Rady Faculty of Health Sciences, St Boniface Hospital Albrechtsen Research Centre) and Thomas Hack (College of Nursing, CancerCare Manitoba, St. Boniface Hospital Albrechtsen Research Centre) were inducted as Fellows into the Canadian Academy of Health Sciences (CAHS) at an induction ceremony held in Ottawa.

  Fellows are chosen by their peers based on their demonstrated leadership, creativity, distinctive competencies and commitment to advancing academic health sciences.

  Feldman's research has provided major contributions to our understanding of how to prevent and control of hypertension, particularly in women. Heart disease in women remains underappreciated, underdiagnosed and undertreated and Dr. Feldman has dedicated his career to rectifying these shortcomings.
  Hack has made significant progress in our understanding of the psychological issues facing cancer patients and the end-of-life challenges that some will encounter. He has published impactful research that has delved into difficult topics of compassion, distress, depression and dignity, as well as therapeutic strategies to aid cancer patients. He is only the second College of Nursing faculty member to be inducted as a Fellow of the CAHS.

  The University of Manitoba now has 29 Fellows of the CAHS.

- Distinguished Professor Harvey Max Chochinov, a leader in palliative care research, has been selected for induction into the Canadian Medical Hall of Fame (CMHF). To be inducted into CMHF, recipients must not only be exemplary scientists, but leaders whose work has led to exceptional improvements in human health.

  His research into the will to live and the desire for death in those with terminal illness has enlightened and informed debate worldwide regarding euthanasia and assisted suicide. In fact, his studies on this topic have been cited in every jurisdiction (including various amicus briefs submitted to the Supreme Court of the United States in considering the constitutionality of physician-assisted suicide) wherein legislative reform pertaining to physician-hastened-death has been raised.

  Chochinov is the co-founder and former chair (2001-2016) of the Canadian Virtual Hospice (CVH). This remarkable and innovative achievement provides online information and support to patients,

families and health care providers on issues related to palliative and end-of-life care. He was also the founder and leader of the Manitoba Palliative Care Research Unit at CancerCare Manitoba, which has facilitated and led world class research in palliative care. The research carried out by Dr. Chochinov and his colleagues has resulted in significant impacts on how CancerCare Manitoba approaches the end-of-life care of cancer patients.

Induction into the Canadian Medical Hall of Fame is only given to a select few who have pushed the boundaries of discovery and innovation. Chochinov will join 10 such exceptional UM physicians when he is inducted at a ceremony in spring 2020.

- Thirty-eight research projects led by fourteen investigators received a total of $2,770,740.44 in grant funding from multiple sponsors. Those projects receiving more than $25,000 are:

PI	Sponsor	Title	Awarded
Azad, Meghan (Pediatrics and Child Health)	W. Garfield Weston Foundation	Optimizing the prebiotic profile of donor human milk for preterm infants: Feasibility of new donor milk matching strategy based on maternal secretor status	$150,000
Buchel, Edward (Surgery)	Manitoba Medical Service Foundation	Clinical fellowship - Peripheral nerve, microsurgery, hand surgery	$25,000
Buchel, Edward (Surgery)	McLaughlin Foundation	Clinical fellowship - Peripheral nerve, microsurgery, hand surgery	$50,000
Fowke, Keith (Medical Microbiology and Infectious Diseases)	Canadian Institutes of Health Research (CIHR)	Sniffing around the issue: investigating the relationship between solvent use and HIV risk	$105,000
Frosk, Patrick (Pediatrics and Child Health)	Children's Hospital Research Institute of Manitoba (CHRIM)	Unexplained Pregnancy Loss Answers Now (uPLAN)	$59,840
Glazebrook, Cheryl (Kinesiology and Recreation Management)	Mitacs Inc. Accelerate Entrepreneur	Design principles and clinical application of a wearable vibration device for individuals with proprioception deficiency	$105,000
Gordon, Joseph (Nursing)	Children's Hospital Research Institute of Manitoba (CHRIM)	Gene-targeting of cardiac and skeletal muscle nix to prevent cardiometabolic complications in offspring exposed to gestational diabetes	$59,790
Gwinner, Gerald (Physics and Astronomy)	TRIUMF	Precision measurements with the TITAN ion trap system at ISAC	$30,000
Jeffrey, Ian (Electrical and Computer Engineering)	Mitacs Inc. Accelerate Internship	Improving wavefield imaging and complementary monitoring technologies for agricultural and biomedical applications	$1,173,333
Jones, Meaghan (Biochemistry and Medical Genetics)	Children's Hospital Research Institute of Manitoba (CHRIM)	Cell type specificity of epigenetic changes due to prenatal cigarette smoke in the lung	$60,000

Keough, Matthew (Psychology)	Canadian Institutes of Health Research (CIHR)	Testing the efficacy of an online self-help treatment for alcohol misuse and emotional problems in young adult Manitobans: A randomized controlled trial (RCT)	$105,000
Lin, Francis (Physics and Astronomy)	Mitacs Inc. Accelerate	Improvement of an all-on-chip assay for studying cell migration	$180,000
Loseto, Lisa (Centre for Earth Observation Science)	Laval University	Using co-produced knowledge to understand and manage subsistence marine harvests in a changing climate	$36,500
Marcoux, Marianne (Centre for Earth Observation Science)	Laval University	Supporting sustainable development of community Greenland halibut fisheries in the Eastern Canadian Arctic (Project number: 47)	$35,000
Muthukumarana, Saman (Statistics)	Mitacs Inc. Accelerate	Modeling and simulation methods for assessing casino player behaviour	$53,333
Peng, Qingjin (Mechanical Engineering)	Mitacs Inc.	Improvement of the robotic system for stereotactic neurosurgery in the MRI-guided process	$30,000
Reynolds, Kristin (Psychology)	Research Manitoba	The development and evaluation of a telephone-based mental health program for socially isolated older adults	$117,699
Rockman-Greenberg, Cheryl (Pediatrics and Child Health)	University of British Columbia	Precision Diagnosis for Indigenous Families with Genetic Conditions (Activity 2 of Silent Genomes: Reducing health care disparities and improving diagnostic success for children with genetic diseases from Indigenous populations	$36,432
Ursel, Jane (Sociology)	Ka Ni Kanichihk Inc.	Heart medicine lodge: A promising practice in supporting Indigenous women survivors of sexualized violence	$150,001

ADMINISTRATIVE MATTERS

- The University of Manitoba received official membership in the Canadian Collaborative Procurement Initiative (CCPI) in October. Being a member of CCPI enables us to participate in Federal Government procurement contracts, building on greater public procurement buying power and reducing redundancy in competitive tendering for like commodities.

- Staff participated with the President of University College of the North and others in their interview and selection of a new Chief Administrative Officer.

- The Office of Fair Practices and Legal Affairs is committed to educating the University faculty, students and staff about our rights and obligations under various University policies, including policies relating to human rights, personal information and copyright. This fall term:

    - The Copyright Office delivered 12 presentations; three drop in sessions and one Open House focusing on Fair Dealing for educational purposes and how to use openly licensed Creative Commons materials as educational resources.
    - The Human Rights & Conflict Management Office conducted 15 presentations focusing on both Respectful Work and Learning Environment and Responding to Sexual Assault Disclosures.
    - The Access & Privacy Office delivered 18 presentations to a total of 1,153 participants focusing on FIPPA, PHIA, social media and records management.

- The Office of Sustainability has begun department organics collection at the Fort Garry campus, with 32 collection bins in addition to UM Dining Services locations collecting pre-consumer organics. 1.3 tonnes of organics have been diverted from landfill in the first four months of the program.

- At the beginning of October, 290 youth from across the City of Winnipeg attended a United Nations Sustainable Development Goals (SDG) Youth Training session. The training session was hosted by the Office of Sustainability in partnership with the Foundation for Environmental Stewardship. Steve Lee, Founder of FES, presented on the importance of partnerships to achieve the SDGs and helped students develop skills and projects to move their campuses toward SDG related projects. Approximately 220 of the attendees were from the University of Manitoba.

- The School of Art and the Desautels Faculty of Music, in partnership with Office of Sustainability, constructed a large outdoor public art platform which was made from recycled materials on campus. The platform acted as a meeting place for students to create protest signs, shirts and information about the Global Climate Strike in October, 2019.

- The BookStore is working with UMSU on a Book Fair to showcase high quality, low-cost open educational resource alternatives, and textbook affordability strategies.

- As part of the National Community Foundation Campaign, the University Centre Postal Outlet partnered with Canada Post Corporation to host the ceremony and cheque presentation to the Faculty of Education's CANU program.

EXTERNAL MATTERS

- Gifts made in the current reporting period include:

    - RTDS Technologies Inc. donated three power system simulators, valued at almost $1.2 million, to enhance research programs in the Faculty of Engineering.
    - The Associates of the Asper School of Business made a gift of $275,000 in support of projects and student awards at the I.H. Asper School of Business.
    - The late Moe Lerner [MD/1977] bequeathed $222,023 to establish a bursary in Medicine.
    - Bruce Campbell, CM [BSA/1958m KKD/2007] and Lesley Campbell made a gift of $101,380 in support of the Glenlea Research Station revitalization project.

- The Department of Surgery at the Max Rady College of Medicine made a gift of $150,000 to establish a scholarship in memory of Dr. Garth Johnson, an orthopaedic surgeon and member of the Department of Surgery.

- On November 21, University of Manitoba will host New York-based alumni at the Canadian Association of New York's Canadian Universities Alumni Reception. UM is one of 14 Canadian universities officially participating and supporting this event. UM alumna, Phyllis Yaffe [BA/69, LLD/13], Consul General of Canada in New York, will attend the event and bring greetings.

- On September 11, President Barnard hosted Mayor Brian Bowman at the new Smartpark Innovation Hub. The Mayor toured the space and engaged in discussions about the collaborations already taking place in the new facility.

- From September 16-22, UM celebrated Homecoming 2019 welcoming hundreds of alumni back to their alma mater. The week included a full calendar of activities including the Annual Homecoming Concert, Grand Opening of the Stanley Pauley Engineering Building, Homecoming Football Game, the UMSU Centennial Brunch, and 19 class reunions. Homecoming 2020 will take place from September 29-October 4, 2020 and of note, will include the Faculty of Science's 50th anniversary celebration.

- On October 12, for the second consecutive year, UM hosted an alumni team for the the Terry Fox Run in Central Park in New York. Fifteen New York-based alumni and friends participated in the event. A number of other Canadian universities also participate in the event and we expect to grow our presence at the event in the years ahead.

- On October 17, UM hosted Innovation, Science and Economic Development Canada for a tour of the Manitoba Institute of Materials, Smartpark Innovation Hub and the Richardson Centre for Functional Foods and Nutraceuticals. UM presented its research activities and priorities related to science and innovation.

- On October 24, President Barnard hosted an alumni reception in Brandon, Manitoba. Dean Martin Scanlon and Dr. Robert Duncan, Faculty of Agricultural and Food Sciences, attended the event that attracted nearly 100 alumni in the region.

- Over the summer, UM successfully launched the first phase of the redesigned umanitoba.ca website. Immediately following the launch, several faculties and departments have begun work on the migration of their website content to the new platform. Initially, 16 units will begin transitioning to the new website before the end of 2019. Remaining faculties and departments will transition content beginning in 2020. In addition to umanitoba.ca, work has begun on a new prototype for UM's intranet.

- The implementation of the new UM brand is underway as materials such as banners, flags, stationary, and PowerPoint templates are being transitioned to reflect the new visual identity. Wherever possible, items will be replaced as part of the regular business cycle to minimize costs. Tools such as brand guidelines and ongoing engagement sessions are being provided to support the UM community through this transition.

November 20, 2019

Report of the Senate Executive Committee

Preamble

The Executive Committee of Senate held its regular monthly meeting on the above date.

Observations

1. Speaker for the Executive Committee of Senate

Ms. Lynn Zapshala-Kelln, Vice-President (Administration), will be the Speaker for the Executive Committee for the December meeting of Senate.

2. Request from Faculty of Arts Senators RE: Senate Statement on the Importance of Higher Education

The Executive Committee considered a request from Faculty of Arts Senators that Senate develop a statement on the importance of higher education. The request follows recent changes to the provincial cabinet. The Committee accepted a proposal from the Chair that he and Professor Prentice (Faculty of Arts) draft a statement incorporating the Committee's feedback, for review at the December Senate Executive meeting, if not sooner. Under that plan, a statement would be forwarded to Senate in January 2020, for its consideration.

3. Comments of the Executive Committee of Senate

Other comments of the Executive Committee accompany the report on which they are made.

Respectfully submitted,

Dr. David Barnard, Chair
Senate Executive Committee
Terms of Reference:
http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/477.htm

Report of the Senate Committee on Admissions concerning a proposal from the Faculty of Kinesiology and Recreation Management to modify the advanced entry admission requirements for three degree programs (2019.06.24)

Preamble:

1. The terms of reference for this committee can be found at: *http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/490.htm.*

2. The Faculty of Kinesiology and Recreation Management is proposing to modify the advanced entry admission requirements for three degree programs: Bachelor of Kinesiology, Bachelor of Kinesiology (Athletic Therapy), Bachelor of Physical Education.

3. The proposal was approved by the Faculty of Kinesiology and Recreation Management Faculty Council on October 18th, 2018 and was endorsed by SCADM on June 24th, 2019.

Observations:

1. The addition of the proposed courses provides students with additional options regarding courses that can be presented for admission. Students are still able to present BIOL 1412 as a course; however, the addition of BIOL 2410 and BIOL 2420 as options ensures that students who have taken these 2000 level courses are not disadvantaged.

2. This modification will also ensure that transfer students from other institutions who present courses that are equivalent to BIOL 2410 and BIOL 2420 do not have to take BIOL 1412 at the U of M in order to be eligible for admission.

3. The proposed courses have been reviewed by the Department of Biological Sciences; the department is in support of the proposed change.

Recommendation:

The Senate Committee on Admissions recommends that the proposal to modify the advanced entry admission requirements for three degree programs in the Faculty of Kinesiology and Recreation Management be approved effective for the Fall 2021 intake.

Respectfully submitted
Laurie Schnarr, Chair, Senate Committee on Admissions

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

UM | Faculty of Kinesiology and Recreation Management

102 Frank Kennedy Centre
University of Manitoba
Winnipeg, Manitoba
R3T 2N2
umanitoba.ca/kinrec | @umkinrec

September 30, 2019

TO: Ms. Laurie Schnarr, Vice Provost (Students), Chair, Senate Committee on Admissions

FROM: Dr. Douglas Brown, Dean

RE: A proposal to the Senate Committee on Admissions from the Faculty of Kinesiology and Recreation Management Recommending Revised Admissions Criteria for the BKin, BKin-AT, and BPE Degrees.

As outlined in the attached Summary of Proposal, the Faculty of Kinesiology and Recreation Management is requesting admissions requirement changes to the following degrees:

Bachelor of Kinesiology
Bachelor of Kinesiology – Athletic Therapy
Bachelor of Physical Education

The BIOL 2420/2421 change was approved by FKRM Faculty Council on October 18, 2018.

Amending Year 1 Biological Science Program Requirements for the BKin, BKin-AT, and BPE degree programs, effective for Fall 2021.

FKRM is proposing that the admission requirements for the Bachelor of Kinesiology, Bachelor of Kinesiology-Athletic Therapy and Bachelor of Physical Education degrees be modified as follows:

1. KPER 1500 Foundations of Physical Education and Kinesiology (min grade C) and
2. BIOL 1410 Anatomy of the Human Body (min grade C) and
3. BIOL 1412 Physiology of the Human Body (min grade C) **or**
   BIOL 2410 Human Physiology 1 and BIOL 2420 Human Physiology 2 (min average grade C)
4. Plus an additional 15 credit hours with an AGPA minimum of 2.0

Rationale:
The current course requirements for admission to Bachelor of Kinesiology, BKin-AT, and Bachelor of Physical Education Programs include:

1. KPER 1500 Foundations of Physical Education and Kinesiology (min grade C) and
2. BIOL 1410 Anatomy of the Human Body (min grade C) and
3. BIOL 1412 Physiology of the Human Body (min grade C)
4. Plus an additional 15 credit hours with an AGPA minimum of 2.0

The proposed amendment to the admissions policy for the Bachelor of Kinesiology, Bachelor of Kinesiology – Athletic Therapy, and the Bachelor of Physical Education degrees is to include BIOL 2410 (Human Physiology I) and BIOL 2420 (Human Physiology II) to the list of courses for admission as an equivalent for BIOL 1412.

It has been the practice for some programs at the university (e.g. Nursing) to accept: BIOL 2410 (Human Physiology I) **and** BIOL 2420 (Human Physiology II) in lieu of BIOL 1412 (Physiology of the Human Body), provided the applicant achieved a grade of C or higher in both courses. These courses were evaluated a number of years ago by the appropriate departments and BIOL 2410 (Human Physiology I) and BIOL 2410 (Human Physiology II), together, were acknowledged as equivalent to BIOL 1412 (Physiology of the Human Body).

The proposed amendment to the admission requirements for the 3 degrees would mean applicants must complete **either** BIOL 1412 (Physiology of the Human Body) with a minimum grade of C, **OR** the both BIOL 2410 (Human Physiology I) and BIOL 2420 (Human Physiology II)

with an average grade of C in the courses in order to meet admission requirements to the programs.

The Department of Biological Sciences has set the prerequisite for BIOL 2420 to be BIOL 2410 (D). Requiring an average grade of C in BIOL 2410 and 2420 as an admission requirement for the BKin, BKinAT and BPE degrees means students who receive a grade of D in BIOL 2410 must receive a B or higher in BIOL 2420 to meet our requirement of an average grade of C.

The addition of BIOL 2410 and 2420 (average grade C) will allow transfer students from the Faculty of Science and other universities with physiology courses that map as equivalent to BIOL 2410 and BIOL 2420 to not have to take BIOL 1412 here at the U of M for admission to BKin, BKin-AT and BPE degrees if they have already completed 2410 & 2420 (avg grade C). It is expected that the majority of University of Manitoba direct entry and advanced entry students will not opt to take 6 CH of physiology (2410 & 2420) rather than the 3 CH BIOL 1412. Students taking BIOL 2410 and 2420 may be more prepared for KPER 3470 (Exercise Physiology) but course instructors can be confident that all students have the minimum of BIOL 1410 and 1412.

October 17, 2019

Report of the Senate Committee on Instruction and Evaluation RE: Proposed Modification to Co-op/Industrial Internship Program Requirements, Faculty of Engineering

Preamble:

1. The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) can be found at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/502.html.

2. At its meeting on October 17, 2019 SCIE considered a proposal from the Faculty of Engineering regarding proposed modifications to the requirements for its Co-op and Industrial Internship Program.

Observations:

1. The Faculty has proposed modifications that would clarify the intake requirements of the Co-operative Education and Industrial Internship Program.
2. Students would be required to successfully complete at least 42 credit hours, but no more than 90 credit hours towards the degree program, by the end of the Fall term, in order to apply to the Co-operative Education or Industrial Internship Program. This would help to ensure that students have enough time remaining in their program to complete the work term requirements for the co-op designation.

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

THAT Senate approve the proposed modifications to the Co-op and Industrial Internship Program Eligibility Requirements, effective September 1, 2020.

Respectfully submitted,

Dr. Mark Torchia, Chair
Senate Committee on Instruction and Evaluation

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

CALENDAR DRAFT:

The Faculty of Engineering offers a Co-operative education and Industrial 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 Industrial Internship Program. Applicants will complete an application package, be interviewed and attend mandatory workshops before they are approved by their Co-op/IIP coordinator.~~

A student in good academic standing, who will have successfully completed 42 credit hours but not more than 90 credit hours towards their degree program by the end of the Fall Term, may apply to participate in the Co-operative Education and Industrial Internship Program. Applicants will complete an Application Process which includes the following:

- **Creating a written application package as per the instructions;**
- **Being interviewed by a Co-op/IIP coordinator;**
- **Attending mandatory workshops;**
- **Completing the preliminary year courses and/or recommended additional courses.**

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 securing a job placement, 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.

Students who are placed on Academic Warning or Academic Probation may either be removed from Co-op/IIP or have their acceptance deferred until they have completed two consecutive terms with an Academic Standing of "Satisfactory".

Students who are Required to Withdraw will immediately become ineligible for Co-op/IIP and will remain ineligible after re-instatement to the Faculty of Engineering.

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 **eligibility, application process,** rules, regulations, and requirements, please see the Co-op/IIP office.

http://umanitoba.ca/faculties/engineering/programs/coopiip/index.html

October 17, 2019

Report of the Senate Committee on Curriculum and Course Changes, Major Curriculum Revisions, Faculty of Agricultural and Food Sciences – Submitted to Senate for Ordinary Debate

Preamble:

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are available on the University Governance website. The SCCCC is "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".
2. At its meeting on October 17, 2019, the SCCCC considered curriculum and course changes proposed by the Faculty of Agricultural and Food Sciences.
3. The curriculum and course changes were endorsed by the Faculty Council of the Faculty of Agricultural and Food Sciences at its meeting on June 20, 2019.

Observations

1. The committee considered a proposal from the Faculty of Agricultural and Food Sciences to make major modifications to the curricula of its undergraduate degree programs, as detailed in the attachments to this Report.
2. Proposed changes involve the introduction of thirteen (13) courses, the deletion of nineteen (19) courses, and the modification of forty-five (45) courses across the Faculty and in the Department of Biosystems Engineering. Also, the School of Agriculture is proposing the modification of five (5) courses. The overall number of credit hours in course offerings would decrease by 14 credit hours. (See the attachments for a description of the course changes in each Department and the School.)
3. The Faculty is proposing modifications to the degree programs listed below, including the **Co-operative Education Options**, as detailed in the attachments to the Report:
    - **Bachelor of Science in Agribusiness**
    - **Bachelor of Science in Agriculture (Agronomy)**
    - **Bachelor of Science in Agriculture (Animal Systems)**
    - **Bachelor of Science in Agriculture (Plant Biotechnology)**
    - **Bachelor of Science in Agroecology**
    - **Bachelor of Science in Food Science**
    - **Bachelor of Science in Human Nutritional Sciences**
    - **Bachelor of Science in Human Nutritional Sciences, Second Degree**
    - **Bachelor of Science in Human Nutritional Sciences, Articulation with Red River College Culinary Arts**
4. Objectives for the program modifications are to:
    - "[review], align, and renew the undergraduate curriculum in the Faculty… with a goal to produce knowledgeable, engaged, and informed graduates who are prepared to contribute to current and future food systems";

- establish core learning outcomes and technical competencies for each degree program, as detailed in section 2.3.1 of the Executive Summary;
- ensure graduates are recognized by one the following professional bodies:
  - B.Sc. in Human Nutritional Sciences: Partnership in Dietetic Education and Practice
  - B.Sc. in Food Science: Institute of Food Technologists
  - B.Sc. in Agribusiness, B.Sc. in Agriculture, B.Sc. in Agroecology: the various provincial Institutes of Agrologists, including the Manitoba Institute of Agrologists;
- consider course progression and prerequisites, to ensure programs can be completed in a timely fashion.

5. Significant program modifications include:
   - elimination of the Faculty Core requirements, including a requirement for 3 credit hours in Philosophy courses;
   - creation of a unique Degree Core for each of the B.Sc. in Agribusiness, B.Sc. in Agriculture, B.Sc. in Agrology, B.Sc. in Food Science, and B.Sc. in Human Nutritional Sciences;
   - introduction of core introductory and capstone courses to ensure required learning outcomes are addressed, including:
     - AGRI 1600 – Introduction to Agrifood Systems, which will include an Indigenous knowledge component (replacing AGRI 1500 – Natural Resources and Primary Agricultural Production in the current Faculty Core);
     - HNSC 1200 – Food: Facts and Fallacies or HNSC 1210 – Nutrition for Health and Changing Lifestyles, to provide students with a common basis for understanding food systems related to human nutrition and health;
     - AGRI 2400 – Experimental Methods in Agricultural and Food Sciences, which will cover experimental design, analyses, and ethics (replacing STAT 1000 – Basic Statistical Analysis 1 in the current Faculty core);
     - AGRI/FOOD/HNSC 4100 – Current Issues in Agricultural Systems, which will integrate learning across disciplines, to prepare students to address future challenges throughout the food system.
6. As part of the curriculum redesign and renewal, the Faculty is proposing to close the following options in the B.Sc. in Agribusiness:
   - **Agricultural Economics Option**
   - **Agribusiness Management Option**
   - **International Agribusiness Option**
7. The Faculty is proposing modifications to the following programs, as detailed in the attachments to the Report:
   - **Pre-Veterinary Program**
   - **Minor in Crop Protection**
   - **Minor in Food Science**
   - **Minor in Plant Biotechnology**
   - **Interfaculty Option in Aging**
8. The Faculty is proposing to introduce a **Minor in Agronomy**, as detailed in the attachments to the Report.

9. The Faculty provided a transition plan for continuing students, as outlined in the Executive Summary. Students would have the option of completing the either the current or revised requirements for their degree program. They would be encouraged to complete the revised requirements, if it was practical for the student to do so.
10. The Faculty has indicated that the proposed curriculum changes would not affect the overall resources of the unit.
11. Some members of SCCCC were concerned that the revised degree requirements would not include a Philosophy course. The concern related to the importance of learning about ethics in terms of the environment and animal care. The Faculty assured the committee that ethics would be covered in various courses, including AGRI 1600, AGRI 2400, and AGRI 4100.
12. Faculty representatives were asked to address several concerns raised by the Department of Statistics, Faculty of Science, concerning the introduction of AGRI 2400. The concerns included: (i) apparent content overlap with STAT 1000 and STAT 2000 without any restriction against holding these courses for credit with AGRI 2400; (ii) that the statistics content, which was to be covered in addition to discipline-specific content and objectives, would not adequately prepare students for higher-level STAT courses; and (iii) the potential for lower enrolment in STAT 1000 and STAT 2000, given that 150 – 200 students in the Faculty register for these courses each year.

    Faculty representatives indicated that: (i) AGRI 2400, STAT 1000, and STAT 2000 should not be treated as equivalent or mutually exclusive, although AGRI 2400 would cover fundamental statistics, because it would be an applications course with discipline-specific content, including experimental methods related to problems in agrology; (ii) it would encourage students to complete STAT 1000 and STAT 2000; and (iii) a significant proportion of students enter the Faculty via Advanced Entry admission having completed STAT 1000 in University 1 or another faculty.

    Faculty representatives were asked to respond to the Department of Statistics' suggestion that STAT 1000 be retained as a requirement. They responded that, given objectives to include 30 credit hours of electives in the curricula and to have degree programs recognized by various professional bodies, which made it necessary to increase agrology content, the Faculty had determined there was not room in the curricula to include STAT 1000 as a requirement.

    Some committee members commented on pedagogical benefits of offering discipline-specific statistics courses with discipline-specific content and problems. In response to a request from committee, the Faculty modified the course description for AGRI to clarify that it would focus on the application of statistics, rather than the fundamentals of statistics, and that it would not require a statistics background.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends:

THAT Senate approve curriculum and course changes proposed by the Faculty of Agricultural and Food Sciences, effective September 1, 2020.

Respectfully submitted,

Professor Greg Smith, Chair
Senate Committee on Curriculum and Course Changes

Comments of the Senate Executive Committee: The Senate Executive Committee endorses the Report to Senate.

Faculty of Agricultural and Food Sciences Curriculum Renewal
Executive Summary

Related Supporting Documents (available upon request)

- Motions to Faculty Council
- Full Curriculum Document with Consultation Details

Sections:

Overview of Renewal of Faculty of Agricultural and Food Sciences Degree Programs

The Faculty of Agricultural and Food Sciences is renewing its undergraduate degree curriculum effective Fall 2020. This follows on a recent renewal of the Diploma in Agriculture curriculum. An important aspect of the Renewal was to improve integration among the agricultural, food science, and human nutritional science disciplines, such that students will be better prepared to address future challenges throughout the food system. We followed a process recommended by the Centre for the Advancement of Teaching and Learning. The main steps were curriculum visioning, development, and alignment, with iterations among these steps. A broad group of stakeholders provided input to the process.

There was consensus to retain all current Degrees and Programs, without addition of new programs at this time. However, adjustments were made to all programs based on a set of criteria for change, which includes the requirement that all graduates from our programs are recognized by a professional body. Most criteria were met in the revised curriculum, which required some changes to core and elective groups of courses. Core Learning Outcomes were developed for all students, and a separate list of Technical Competencies were mapped for each program, providing an evidence-based guide for student progression and instruction. Overall, a total of 50 credit hours are being deleted and 36 credit hours added for a net reduction of 14 credit hours in courses. In addition, some courses are being modified to aid in student progression or to meet accreditation needs. An important feature is the requirement that all students in the Faculty have a common requirement in first-year Faculty courses, with a fourth-year Capstone issues course that provides a high learning level that prepares students to tackle integrated issues in the food system.

1. Diploma in Agriculture Course Changes

The Diploma in Agriculture program has been recently renewed and is currently being implemented. We have made a few course modifications for the Departments of Animal Science,

Soil Science, and Agribusiness and Agricultural Economics to raise the pre-requisite grade from a D to a C in eight courses, which are pre-requisites for other courses. This complies with the general standard in Section 2 of the University Calendar "Normally, a minimum grade of “C” is required in all courses listed as prerequisites, except as otherwise noted in the course descriptions". Note that there has been a historical adoption of "D" required by our Faculty, and this change will explicitly address this and be transparent to students. “May not be held with” statements have been added to course descriptions for any diploma courses that are too similar to new and existing degree courses.

2. Faculty of Agricultural and Food Sciences Undergraduate Degree Program and Course Changes

2.1. Background

The Faculty of Agricultural and Food Sciences initiated a Curriculum Renewal project in 2018 to review, align and renew the undergraduate degree curriculum for all programs. There was broad consensus that a major review and renewal would greatly benefit our students and help meet many of the goals to enhance student education. This follows a similar process during the 2015-2018 period for the Diploma in Agriculture program.

The current undergraduate degree program structure has been in place since the mid-1990s, although each program has evolved over time to meet the needs of students. In 2015, the Department of Human Nutritional Sciences joined the Faculty with the disbanding of the Faculty of Human Ecology, and the B.Sc. Human Nutritional Sciences program also became part of the Faculty of Agricultural and Food Sciences curriculum. Note that there is a long historical link among Agriculture, Food and Human Ecology programs. We currently have five 4-year B.Sc. degrees:

B.Sc. Agribusiness. Options: Agricultural Economics, Agribusiness Management, International Agribusiness
B.Sc. Agriculture. Programs: Agronomy, Animal Systems, Plant Biotechnology
B.Sc. Agroecology
B.Sc. Food Science. Options: Science, Business
B.Sc. Human Nutritional Sciences. Options: Nutrition, Foods, Food Industry

However, we have several other important programs such as the Second-Degree Program and RRC-Culinary Arts Program in Human Nutritional Sciences, the Interfaculty Option in Aging, and the Pre-Veterinary Program. The B.Sc. Textile Sciences program is now officially closed, the Internationally Educated Agrologist Program is currently on hold, and the Biosystems Engineering Program is offered through the Faculty of Engineering. Note that all degree programs offer a Cooperative Education option (with the recent inclusion of B.Sc. Human Nutritional Sciences).

2.2. Curriculum Renewal Process

2.2.1 Objectives and Approach for Curriculum Renewal

The current curriculum renewal process has the main objective to:

"Review, align, and renew the undergraduate curriculum in the Faculty of Agricultural and Food Sciences with a goal to produce knowledgeable, engaged, and informed graduates who are prepared to contribute to current and future food systems". Improved integration among the agricultural, food science, and human nutritional science disciplines, will better prepare students to address future challenges throughout the food system.

Our approach followed a process recommended by the Centre for the Advancement of Teaching and Learning (CATL) at the University based on an article by Peter Wolf "A Model for Facilitating Curriculum Development in Higher Education: A Faculty-Driven, Data-Informed, and Educational Developer–Supported Approach" (New Directions for Teaching and Learning, no. 112, Winter 2007, Published online in Wiley InterScience DOI: 10.1002/tl.294). This process was developed at the University of Guelph and has features that are common to many formal approaches to curriculum development. The main steps are curriculum visioning, development, and alignment, with iterations among these steps. Our planning and approach were also reviewed by CATL and adjustments made based on this feedback.

2.2.2 Data Gathering and Consultation (Visioning)

Our consultation process included:
- faculty visioning sessions held as workshops grouped as Food and Nutrition, Production Agriculture, New Opportunities, and Agribusiness,
- input from current students by targeting a senior class in each program, typically a required course with mostly fourth-year students,
- surveying Alumni who graduated in the 2013-2017 period through an online survey facilitated by the University of Manitoba Alumni Association,
- surveying employers of our students through an online survey,
- surveying agrologists in Manitoba through both an online survey gathered by the Manitoba Institute of Agrologists, and through working groups at their annual general meeting in 2018,
- feedback from accreditation/recognition external reports from external accreditors,
- using the results from the 2015-2017 Diploma in Agriculture review, and
- using the results from the Undergraduate Periodic Program Reviews of 2014-2016.

We also included the goals of the University of Manitoba Strategic Plan of: Inspiring Minds through innovative and quality teaching; Creating Pathways to Indigenous achievement; Building Community that creates an outstanding learning and working environment; and Forging Connections to foster high impact community engagement.

2.2.3 Accreditation/Recognition Requirements (Alignment)

Our goal is to have all of our degree programs recognized or accredited by a professional body.

2231 Dietetics Accreditation (B.Sc. Human Nutritional Sciences)

The Partnership for Dietetic Education and Practice is a national organization in Canada. It develops and maintains standards for dietetic education through a partnership with regulators, educators, and the Dietitians of Canada. A professional dietitian is one of the potential career endpoints of students completing our B.Sc. Human Nutritional Sciences degree, so the whole degree program goes through an accreditation process about every 7 years. The most recent accreditation process occurred in 2017/2018, which involved a rigorous mapping of learning outcomes for all courses, and a site visit by external reviewers. The accreditation assessed five broad areas of practice:

Professional Practice; Communication and Collaboration; Nutrition Care; Population and Public Health; Management. Within each of these broad areas there were Practice Competencies and Performance Indicators (typically 5 to 20 indicators). The most recent process mapped each course against the indicators, and also considered level of learning using Bloom's taxonomy for foundational knowledge. The process was extremely rigorous and we must retain the needed competencies and mapping as a critical part of the B.Sc. Human Nutritional Sciences degree.

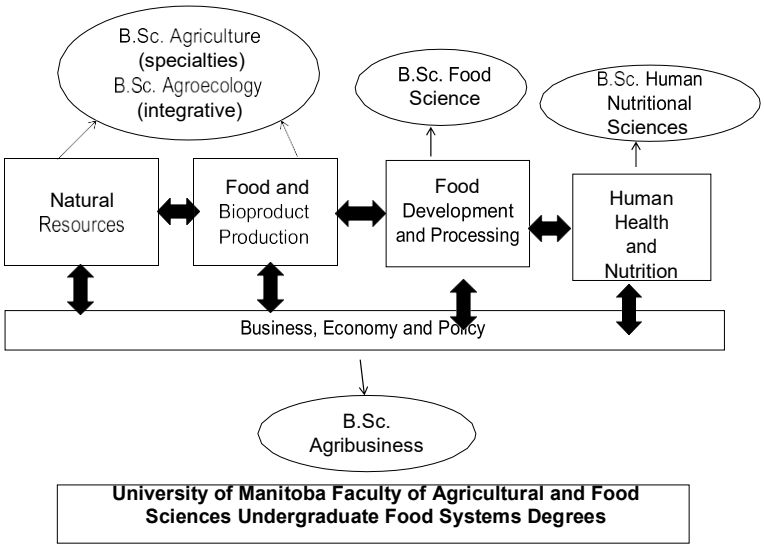
2.2.3.2 Institute of Food Technologists Recognition (B.Sc. Food Science)
The B.Sc. Food Science program is recognized by the Institute of Food Technologists, with recognition re-assessed every 5 years. The Institute is an international, non-profit scientific society of professionals in food science, food technology, and related areas in academia, government and industry. The last recognition process was in 2014, with the 2019 process being developed. Each of the core Food Science courses have been mapped with outcomes that include assessment methods and a conclusion about the level of fulfillment. Specific skills evaluated include: Management skills; Critical thinking skills; Computer skills; Communication skills; Knowledge of basic science; Awareness of Food Science issues. The process is rigorous and we must retain the needed competencies and mapping as a critical part of the B.Sc. Food Science degree.

2.2.3.3 Agrologists Manitoba Requirements (B.Sc. Agribusiness, Agriculture, Agroecology)
The Manitoba Institute of Agrologists ("Agrologists Manitoba") regulates the practice of agrology through the Agrologist Act, a statute of the Province of Manitoba. Agrology is defined as "the application of sciences to agriculture and related resources such as land and water". Historically, undergraduate degree programs were accredited through a national body, but over the past decade, the Provincial Institutes have accepted applicants for Professional Agrologist (P.Ag.) status based on having an appropriate 4-year science degree and sufficient agrology courses. Students graduating from the University of Manitoba are assessed through a course count on individual transcripts. Recently, a national working group has proposed a standard that would be consistent across Canada to facilitate movement of agrologists for acceptance among the provincial institutes. Note that it is critical that the University of Manitoba harmonizes appropriate degree requirements with this National Standard.

2.2.4 Main Findings of Consultations

The consultation process supported the continuance of the five current degrees, with no new degrees being proposed at this time (Figure 1). However, a need was identified to align the curriculum with rigorous learning outcomes and technical competencies based on stakeholder inputs.

Figure 1: Degrees contributing to Food Systems Education. Note that all rectangular boxes are inter-linked and that human welfare, along with environmental stewardship, are goals for all programs.



2.3. Revised Curriculum

2.3.1 Learning Outcomes and Technical Competencies

Five general Learning Outcomes were reinforced based on a curriculum mapping process during 2008-2011. These form the basis for our undergraduate education for all degree programs. A full description of the performance indicators for each learning outcome is given in our full supporting report. Briefly, on completion of the degree/program, the student will be:

A Scholar: The student will use sound scientific and scholarly principles to seek, critically evaluate, and communicate information on food systems for the benefit of society. They will be able to Think Critically, Solve Problems, and Engage in Lifelong Learning.

A Technical Expert: The student will develop and apply knowledge in agricultural, food or human nutritional sciences to work in, develop or advance food systems on a local, national, or international scale. They will be able to Comprehend Knowledge, Apply Knowledge and Skills, Evaluate Knowledge and Skills, and Understand Indigenous Knowledge.

Socially Accountable: The student will make a valuable contribution to society by generating and imparting knowledge in an ethical manner that is inclusive, respectful, and equitable, valuing others' opinions and diverse knowledge, skills and backgrounds. They will Demonstrate Respect, Demonstrate Ethics and Equity, Understand Impact, and Abide by Codes.

A Skilled Communicator: The student will use effective communication skills to read, write, listen, speak, counsel, view and represent information in a manner that is suitable to the intended audience and the purpose of the communication. They will be able to Communicate Effectively, Build Consensus, Evaluate and Select Communication Modes, Demonstrate Awareness and Responsibility, Demonstrate Social and Emotional Intelligence, and Demonstrate Empathy.

A Professional: The student will learn the skills required to demonstrate professionalism in their chosen careers, to serve as a trusted leader and effective team member in multidisciplinary and multicultural environments for the preservation and sustainability of healthy food systems. They will be able to Demonstrate Management Skills, Demonstrate Professionalism, Demonstrate Self-Respect, Demonstrate Resiliency, Demonstrate and Provide Leadership in the generation of knowledge and in service to the community, Advocate for Society and the Environment, Demonstrate the Ability to Work in Teams, and Understand Professional Designations.

2.3.2 Technical Competencies

In addition, each degree and program developed a set of technical competencies that are required for the degree. The level of learning expected for each of these competencies was based on Bloom's Taxonomy simplified to a three-level scale of: Level 1: Remember or Understand; Level 2: Apply or Analyse; and Level 3: Evaluate or Create. All current and proposed courses were evaluated against the General Learning Outcomes and Technical Competencies. Identified gaps were filled with a change to the course requirements or course contents. In some cases, courses were removed from the curriculum if they did not contribute to the outcomes, or if there was excessive overlap. Each degree required Level 3 competencies in their senior courses. The mapping process was undertaken by each of the Program Committees.

2.3.3 Overview of Main Revisions

2.3.3.1 Curriculum Visioning, Development and Alignment

Curriculum visioning resulted in the establishment of the general learning outcomes for all students and the specific technical competencies for each program. The mapping of the current curriculum, followed by adjustments and alignment of courses and outcomes, resulted in a revised set of course requirements. In some cases, this also meant addition of new courses. An important aspect was to consider course progression with some programs being difficult to complete in a timely fashion because of stacked pre-requisites. These impediments for completion were identified, and most were removed. Usually, this meant simplifying the number of pre-requisites required. An important driver was the requirement for accreditation/recognition by professional bodies. This required substantial adjustments for the B.Sc. Agribusiness, Agriculture, and Agroecology degrees following an audit by the Manitoba Institute of Agrologists that indicated we were not meeting the national standard. We adjusted our curriculum using the following main criteria for change:

- Add courses or content to fill current gaps in learning outcomes and technical competencies based on mapping data,
- No program should prescribe more than 30 credit hours of 1000 or 30 credit hours of 2000 level courses,
- At least one term must have flexibility to allow international exchange or co-op work experience,
- Each program has a capstone course that provides a high-level learning outcome (“create”) and prepares graduates for career or continuing study options,
- The capstone course has a multidisciplinary component whereby students collaborate and interact in groups/teams from all programs,
- Graduates from each program are recognized by a professional body (e.g., institute, association),
- Address all goals in the University Strategic Plan,
- Courses requiring field experiential activity are scheduled in Fall or Summer terms (timetabling),
- Introductory courses focus on Inspiring students in their discipline, and provide the foundation to be successful through their program, including professional and respectful conduct,
- Core courses prescribed for a program must be offered every year and have a minimum of 10 students,

- Courses that have continual issues with access and timetabling need to be removed from the core curriculum and content offered through another venue if required,
- Each program reserves 30 credit hours of free electives.

2.3.2 Core Courses

We developed a strategy to ensure that most of the required general learning outcomes were addressed through development of a new course at the 1000 level (AGRI 1600) and a set of capstone courses at the 4000 level (AGRI/FOOD/HNSC 4100). This strategy starts all students on a strong footing and then reinforces learning outcomes at a high learning level in their last year. We further reinforced this by requiring all students to also take the existing HNSC 1200 or HNSC 1210 courses, so that they have a common basis to understand food systems related to human nutrition and health. AGRI 1600 will have an Indigenous knowledge component (note that we also have a course AGRI 2300 Indigenous Issues in Food Systems that is a restricted elective in some programs). The AGRI/FOOD/HNSC 4100 course integrates among our individual disciplines to prepare students to address future challenges throughout the food system. This anchoring of the start and end of the curriculum ("book ends") provides a quality check irrespective of the divergence of programs after first year. The need for improved education on experimental design, ethics, and analyses was also identified and is now addressed through the new AGRI 2400 course.

2.3.4 Curriculum by Undergraduate Degree

The descriptions of the revised curriculum are given on the Program Modification forms. A brief summary is below.

B.Sc. Agribusiness

Summary of Changes: All previous options have been removed with students now completing the core degree requirements and selecting courses from two groups of restricted electives. Both Animal and Crop Production are now required courses. Students will now have sufficient agrology content to meet the National Standard for Agrologists. Free electives are now at 30 credit hours for all students (previously, this was variable depending on the option).

B.Sc. Agriculture

Summary of Changes: All three programs within the degree are retained. The degree core is strengthened in agrology content requiring all students to take Animal Production, Crop Production, and Soils and Landscapes. Graduates from all programs in the degree will meet the National Standard for Agrology. Some course stacking that caused bottlenecks in the Agronomy program was removed and free electives were increased from 27 to 30 credit hours. Restricted electives were adjusted in the Animal Systems program to have targeted goals and free electives were increased from 24 to 30 credit hours. Plant Biotechnology free elective credit hours were decreased from 27 to 24 credit hours because of the need to meet the National Standard in Agrology while retaining foundational courses.

Pre-Veterinary Program

Summary of changes: Small adjustments in courses were made to allow entry into the veterinary program while paralleling the Animal Systems program as an alternative option. The Western College of Veterinary Medicine has been consulted.

B.Sc. Agroecology

Summary of changes: The core "agroecology" courses that had low enrolment were removed and students will take a greater range of integrative courses. The degree core now requires courses in

all three pest categories. The restricted electives groups have been adjusted to include integrative and agrology courses. Free electives were increased from 27 to 30 credit hours. Graduates will meet the National Standard for Agrology.

B.Sc. Food Science

Summary of Changes: Ongoing discussions are planned through 2019 and 2020 about additional changes to the Options in this degree. For Fall 2020 implementation, only the Degree Core will be modified to include the Faculty-wide core courses. Free electives will be increased from 21 to 27 credit hours. The program will meet the requirements of the Institute of Food Technologists.

B.Sc. Human Nutritional Science

Summary of Changes: Ongoing discussions are planned through 2019 and 2020 about potential changes to Options. For Fall 2020 implementation, proposed changes are in response to the accreditation review by the Partnership for Dietetic Education and Practice in 2018 plus some modifications to the Degree Core to include most of the Faculty-wide core courses. The program still needs an adjustment in content (planned for a subsequent Senate submission) to fully meet the accreditation requirements for the Partnership for Dietetic Education and Practice.

Human Nutritional Sciences Second degree and the Red River College Culinary Arts Agreement.

Summary of Changes: Small program changes were made to align with the new AGRI 2400 course changes and to clean up the Second Degree concentration to better align with the 4 year degree options.

2.3.5 Minor Programs

We are introducing a new Minor in Agronomy to broaden the knowledge of students graduating from other programs who may want to have careers in the agronomy field (note that the Prairies is a net importer of agronomists).

We are modifying the Minor in Crop Protection to accommodate course changes (deletions and additions).

3. Curriculum Implementation and Transition Plan

3.1 Students **admitted** to degree programs to start in Fall Term 2020.

All students must complete the new degree requirements taking effect for Fall term 2020.

3.2 Students **currently enrolled** in degree programs

These students must elect to:

a) complete the new degree requirements taking effect for Fall term 2020,

or

b) complete the previous degree requirements in place prior to Fall term 2020.

Students will be encouraged to complete the new degree requirements if practical.

If a student elects to complete the previous degree requirements, the following substitutions can be made (cross-map) to account for deleted courses (old course substituted with new course):

- AGRI 1500 with AGRI 1600
- AGRI 1510 with HNSC 1200 or HNSC 1210
- PLNT 4600 with AGRI 4100
- ANSC 4560 with AGRI 4100

- FOOD 4120 with FOOD 4100
- HNSC 4160 with HNSC 4100
- ANSC 4540 with ANSC 4640
- PLNT 3510 with PLNT 4510
- one of: BIOE 2020, BIOE 2222, BIOE 4500, or BIOE 4520 with BIOE 3100
- AGEC 3510 with one of ENTM 3170 or PLNT 3540
- AGEC 4550 (6 credit hours) with two of PLNT 3560, PLNT/ANSC 4410, PLNT 4510, or SOIL 4400
- MATH 1200 or MATH 1310 with MATH 1210 or MATH 1300

In addition, students in B.Sc. Agribusiness, B.Sc. Agriculture or B.Sc. Agroecology degrees must complete 60 credit hours of Agrology courses with 24 credit hours at the senior Agrology level (evaluation and approval by an academic advisor).

4. Resource Implications

The curriculum changes do not affect the overall resources of the Faculty. There are no new degrees or major programs, and the Faculty of Agricultural and Food Sciences has an admissions cap (i.e., maximum number of students admitted per year). We anticipate enrollment increases in some courses, but this will be partially offset by there being no enrollment in courses being deleted, so resources can, if necessary, be shifted to accommodate student movement. It is likely that fewer of our students will take STAT 1000, STAT 2000, and PHIL courses than has previously been the case due to these courses having been removed from the core requirements of some programs. This could affect other departments modestly but many of our students transfer from other programs and will still take these courses or could take them as electives once in our Faculty. Similarly, we have lowered the Biochemistry requirement in some programs, perhaps decreasing the overall demand by about 35 students per year. In some cases, class sizes in our Faculty will increase to the point where a different teaching room is required, which could alter scheduling of physical space. One issue will be resourcing the new course AGRI 2400 (Experimental Methods in Agricultural and Food Sciences), but having the course taught in our Faculty should generate sufficient resources to support this course. If this is not the case, we will re-allocate as necessary. HNSC 1200, HNSC 1210, AGRI 1600, and ABIZ 1000 will see increases in student numbers. Three of these four courses (HNSC 1200, HNSC 1210, and ABIZ 1000) currently have on-line (distance) sections, and we plan to eventually offer AGRI 1600 on-line (distance) as well. Given past enrollment trends, it seems likely that many students will choose the on-line sections; this implies the overall use of physical space may not be greatly affected. Overall, the Faculty is committed to adjusting as necessary so that overall our planned curricular changes are resource neutral within the current budget model.

Faculty of Agricultural and Food Sciences

Faculty of Agriculture

Agriculture, General

Deletions:

AGEC 3510 Agroecology Cr.Hrs. 3 -3.0
AGEC 4550 Project in Agroecology Cr.Hrs. 6 -6.0
AGRI 1500 Natural Resources and Primary Agricultural Production Cr.Hrs. 3 -3.0
AGRI 1510 Production, Distribution and Utilization of Agricultural Products Cr.Hrs. 3 -3.0
AGRI 2190 Toxicology Principles Cr.Hrs. 1.5 -1.5

Introductions:

AGRI 1600 Introduction to Agrifood Systems Cr.Hrs. 3 +3.0
(Lab required) This course explores agricultural production systems with special focus on the Canadian Prairies. Students will develop scholarly, social, communication and professional skills that will enable them to be successful in the application of technical knowledge to food production challenges. This course will include a field trip component. May not be held with the former AGRI 1500 or the former AGRI 1510.

AGRI 2400 Experimental Methods in Agricultural and Food Sciences Cr.Hrs. 3 +3.0
(Lab required) Experimental design and data analysis using examples relevant to agricultural, food and human nutritional sciences. Ethics in research; critical thinking in data analysis; quantitative data analysis methods; applications of statistical analyses. Prerequisite: AGRI 1600 or HNSC 1200 or HNSC 1210 or the former AGRI 1500.

AGRI 2500 Managing Farm Safety Cr.Hrs. 3 +3.0
This course provides introductory information on farm safety. It is designed to raise awareness about safety issues and legislation in the agricultural industry, and to encourage students to reflect upon safety at their own worksite or in farm operation. May not be held with DAGR 0520 or DAGR 0660 when titled “Introduction to Farm Safety.”

AGRI 2510 Managing Farm Business Transition Cr.Hrs. 3 +3.0
This course is designed to provide students with the tools and knowledge to incorporate transition management into farm business management planning. Students will be introduced to profiles/dynamics, business structures, as well as financial and managerial influences that affect farm and business transition options. There will be an application of real farm examples as context to the instructional material. May not be held with DAGR 0550 or DAGR 0660 when titled “Succession/Transition Considerations in Farm Management.”

AGRI 4100 Current Issues in Agricultural Systems Cr.Hrs. 3 +3.0
Integration of current issues in agricultural systems including land, plant, and animal systems, coupled to the food and nutrition needs of society. Emphasis on ethics, equity, economics, and professional approaches to challenges in food systems using case studies, teamwork and scientific communication to specialists and the public. This is a capstone course restricted to students in year 4 of the B.Sc. Agribusiness, Agriculture, or Agroecology degree programs. May not be held with FOOD 4100 or HNSC 4100. Prerequisites: AGRI 2030 and Faculty approval.

Modification:

AGEC 2370 Principles of Ecology Cr.Hrs. 3 0.0
(Lab required) Principles of ecology at the individual, population, community, and ecosystem levels. May not be held with BIOL 2300 or BIOL 2301 or BIOL 2390. Prerequisite: BIOL 1030 (BIOL 1031) (C).

Net change in credit hours: -1.5

Program modifications:

The Faculty is proposing a program modification to the following degree programs, to eliminate the Faculty Core:

- **Bachelor of Science in Agribusiness**
- **Bachelor of Science in Agriculture**
- **Bachelor of Science in Agroecology**
- **Bachelor of Science in Food Sciences**

The faculty is also proposing the deletion of a list of Biosystems Engineering (BIOE) courses open to students registered in various degree programs offered by the Faculty of Agricultural and Food Sciences and to non-Agriculture students, as set out in section 4.10 Biosystems Engineering, in the online version of the 2019-2020 Academic Calendar and section 4.1.6 Biosystems Engineering, in the PDF version.

The above changes are described on the next 4 pages.

SECTION 4: Program and Graduation Requirements

4.1 Agriculture, Agribusiness, Agroecology, and Food Science 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

Faculty Core		
Course No.	**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
-	and 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 Notes 5 & 6)	-

-	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 Notes 5 & 6)	-
-	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)	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. MATH 1200 or MATH 1210 will be used as free electives in these two programs.

~~6) MATH 1200 and MATH 1310 are no longer offered at the University of Manitoba howeverstudents who have taken one of these courses or have had it transferred to the University of Manitoba from another university can still use it towards their Math requirement for the Faculty of Agricultural and Food Sciences. Please ensure to confirm the Math requirements for your degree program (listed above and in Note 5).~~

4.10 Biosystems Engineering

Students in the Bachelor of Science degree in Biosystems Engineering must be admitted to the Faculty of Engineering. The Biosystems Engineering program is outlined in the Faculty of Engineering chapter of this *Calendar*.

The courses below are for students studying in the various majors in Agricultural and Food Sciences and for non-Agriculture students with a special interest in the subjects.

Course No.	Credit Hours	
BIOE 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

Modifications to the following programs, including the **Co-operative Education Options**, are set out on the next 25 pages:

- **Bachelor of Science in Agriculture (Agronomy)**
- **Bachelor of Science in Agriculture (Animal Systems)**
- **Bachelor of Science in Agriculture (Plant Biotechnology)**

Program closures:

- **Agricultural Economics Option**
- **Agribusiness Management Option**
- **International Agribusiness Option**

4.1.Bachelor of Science (Agriculture) - Agronomy Program

Bachelor of Science (Agriculture) - Agronomy Program

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 are prepared to enter directly into a related graduate studies program.

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. All students are required to take the following B.Sc. (Agriculture) degree core requirements and the respective program core courses.

B.Sc. Agriculture Degree Core		
Course No.	**Course Name**	**Credit Hours**
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**
AGEC 2370/BIOL 2300	Principles of Ecology	3
AGRI 1600	**Introduction to Agrifood Systems**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
ANSC 2500	**Animal Production**	**3**
BIOL 1020	**Biology 1: Principles and Themes**	**3**
BIOL 1030	**Biology 2: Biological Diversity, Function and Interactions**	**3**
CHEM 1300	**University 1 Chemistry: Structure and Modelling in Chemistry**	**3**
CHEM 1310 or CHEM 1320 (See Note 1)	**University 1 Chemistry: An Introduction to Physical Chemistry or University 1 Chemistry: An Introduction to Organic Chemistry**	**3**
~~CHEM 2770 (MBIO 2770)~~	~~Elements of Biochemistry 1~~	~~3~~

ECON 1010	**Introduction to Microeconomic Principles**	**3**
HNSC 1200 **or** **HNSC 1210**	**Food: Facts and Fallacies** **or** **Nutrition for Health and Changing Lifestyles**	**3**
MATH 1210 **or** **MATH 1300** **or** **MATH 1500** **or** **MATH 1510** **or** **MATH 1520** **(See Note 2)**	**Techniques of Classical and Linear Algebra** **or** **Vector Geometry and Linear Algebra** **or** **Introduction to Calculus** **or** **Applied Calculus 1** **Or** **Introductory Calculus for Management and Social Sciences**	**3**
PLNT 2500	**Crop Production**	**3**
PLNT 2520/BIOL 2500	Genetics	3
SOIL 3600	**Soils and Landscapes in Our Environment**	**3**
Agronomy Core		
~~ABIZ 2510~~	~~Introduction to Agricultural and Food Marketing~~	~~3~~
~~ANSC 2500~~	~~Animal Production~~	~~3~~
BIOL 2242	The Flowering Plants	3
BIOE 3100	**Agricultural Engineering Fundamentals for Agronomists**	**3**
ENTM 3170	**Crop Protection Entomology**	**3**
~~PLNT 2500~~	~~Crop Production~~	~~3~~
~~PLNT 3400/ BIOL 3400~~	~~Plant Physiology~~	~~3~~
PLNT 3540	**Weed Science**	**3**
PLNT 4270	**Plant Disease Control**	**3**
PLNT 4510	**Advanced 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
Restricted Electives		Credit Hours
Group 1 - ~~Two courses from the following:~~ **Agriculture – Choose two courses (6 credit hours) from the following list:**		6
AGRI 2300	**Indigenous Issues in Food Systems**	
PLNT 1000	**Urban Agriculture**	
PLNT 2510	**Fundamentals of Horticulture**	
PLNT 3520	**Principles of Plant Improvement**	
PLNT 3560	**Organic Crop Production on the Prairies**	
PLNT 4410	**Grassland Agriculture: Plant, Animal and Environment**	
~~ENTM 3170~~	~~Crop Protection Entomology~~	~~-~~
~~PLNT 3540~~	~~Weed Science~~	~~-~~
~~PLNT 4270~~	~~Plant Disease Control~~	~~-~~
Group 2 – ~~One Course from the following:~~ **Soil Science – Choose one 3 credit hour course at the 3000 or 4000 level from Soil Science (SOIL). Courses required as part of the Agriculture Degree Core or Agronomy Core cannot be used to meet this requirement.**		3
~~ANSC 4410~~/ ~~PLNT 4410~~	~~Grassland Agriculture: Plant, Animal and Environment~~	~~-~~
~~PLNT 2510~~	~~Fundamentals of Horticulture~~	~~-~~
~~PLNT 3520~~	~~Principles of Plant Improvement~~	~~-~~
~~**Group 3** – One course from the following:~~		~~3~~
~~One 3000 or 4000 level course (3 credit hours) from SOIL (Soil Science), in addition to those courses that are already part of the Agronomy Core.~~		~~-~~
~~**Group 4** – One course from the following:~~		~~3~~
~~BIOE 2222~~	~~Precision Agriculture Concepts and Applications~~	~~-~~
~~BIOE 2090~~	~~Machinery for Agricultural Production~~	~~-~~

~~BIOE 4500~~	~~Water Management~~	~~-~~
~~BIOE 4520~~	~~Crop Preservation and Handling~~	~~-~~
Free Electives (See Note 3)		~~27 CH~~ **30**

Notes:

1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320

2. Students are recommended to take one the MATH courses listed in the program requirements above however may also use either MATH 1220 or MATH 1230 to meet the requirement.

3. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

Suggested Agronomy Program Progression:

~~Year 1~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~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~~
~~CHEM 1300~~	~~University 1 Chemistry: Structure and Modelling in Chemistry~~	~~3~~
~~CHEM 1310~~ ~~or~~ ~~CHEM 1320~~	~~University 1 Chemistry: An Introduction to Physical Chemistry~~ ~~University 1 Chemistry: An Introduction to Organic Chemistry~~	~~-~~ ~~3~~
~~STAT 1000~~ ~~Or~~ ~~Elective~~	~~Basis Statistical Analysis 1~~ ~~Or~~ ~~Elective~~	~~-~~ ~~3~~
~~ECON 1010~~	~~Introduction to Microeconomic Principles~~	~~3~~
~~ECON 1020~~	~~Introduction to Macroeconomic Principles~~	~~3~~
~~One Math Course from the following:~~		~~3~~
~~MATH 1200~~	~~Elements of Discrete Mathematics*~~	~~-~~
~~MATH 1210~~	~~Techniques of Classical and Linear Algebra~~	~~-~~

~~MATH 1300~~	~~Vector Geometry and Linear Algebra~~	~~-~~
~~MATH 1310~~	~~Matrices for Management and Social Sciences*~~	~~-~~
~~MATH 1500~~	~~Introduction to Calculus~~	~~-~~
~~MATH 1520~~	~~Introductory to Calculus for Management and Social Sciences~~	~~-~~
~~Total Credit Hours~~		~~30~~

~~*MATH 1200 and MATH 1310 are no longer offered at the University of Manitoba however students who have taken one of these courses or have had it transfer to the University of Manitoba from another university can still use it towards their Math requirement for the Faculty of Agricultural and Food Sciences.~~

Year 1

Course	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1600	Introduction to Agrifood Systems	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry University 1 Chemistry: An Introduction to Organic Chemistry	3
ECON 1010	Introduction to Microeconomic Principles	3
HNSC 1200 or HNSC 1210	Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles	3
MATH 1210 or MATH 1300 or MATH 1500 or MATH 1510 or MATH 1520	Techniques of Classical and Linear Algebra or Vector Geometry and Linear Algebra or Introduction to Calculus or Applied Calculus 1 Or Introductory Calculus for Management and Social Sciences	3

Free Elective		**3**
Total Credit Hours		**30**

~~Year 2~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 1000~~	~~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~~
~~PLNT2520~~/ ~~BIOL 2500~~	~~Genetics~~	~~3~~
~~SOIL 3600~~	~~Soils and Landscapes in Our Environment~~	~~3~~
~~STAT 1000~~ ~~Or~~ ~~Elective~~	~~Basic Statistical Analysis~~ ~~Or~~ ~~Elective~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~9~~
~~**Total Credit Hours**~~		~~30~~

Year 2

Course	Course Name	Credit Hours
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**
AGEC 2370/BIOL 2300	**Principles of Ecology**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**

BIOL 2242	**The Flowering Plants**	**3**
PLNT 2500	**Crop Production**	**3**
PLNT 2520/BIOL 2500	**Genetics**	**3**
SOIL 3600	**Soils and Landscapes in Our Environment**	**3**
Restricted/Free Electives/Co-op		**6**
Total Credit Hours		**30**

~~Year 3~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 2510~~	~~Introduction to Agricultural and Food Marketing~~	~~3~~
~~AGEC 2370/ BIOL 2300~~	~~Principles of Ecology~~	~~3~~
~~ANSC 2500~~	~~Animal Production~~	~~3~~
~~PLNT 3400/ BIOL 3400~~	~~Plant Physiology~~	~~3~~
~~PLNT 4590~~	~~Physiology of Crop Plants~~	~~3~~
~~STAT 1000 Or Elective if taken in Year One~~	~~Basis Statistical Analysis 1 Or Elective if taken in Year One~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~12~~
~~Total Credit Hours~~		~~30~~

Year 3

Course	**Course Name**	**Credit Hours**
ANSC 2500	**Animal Production**	**3**
BIOE 3100	**Agricultural Engineering Fundamentals for Agronomists**	**3**

ENTM 3170	**Crop Protection Entomology**	**3**
PLNT 3540	**Weed Science**	**3**
PLNT 4270	**Plant Disease Control**	**3**
PLNT 4590	**Physiology of Crop Plants**	**3**
Restricted/Free Electives/Co-op		**12**
Total Credit Hours		**30**

~~Year 4~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~PLNT 3510~~	~~Cropping systems~~	~~3~~
~~SOIL 4510~~	~~Soil and Water Management~~	~~3~~
~~SOIL 4520~~	~~Soil Fertility~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~21~~
~~Total Credit Hours~~		~~30~~

Year 4

Course	**Course Name**	**Credit Hours**
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
PLNT 4510	**Advanced Cropping Systems**	**3**
SOIL 4510	**Soil and Water Management**	**3**
SOIL 4520	**Soil Fertility**	**3**
Restricted/Free Electives/Co-op		**18**
Total Credit Hours		**30**

4.2 Bachelor of Science (Agriculture) - Animal Systems

Bachelor of Science (Agriculture) - Animal Systems

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 are prepared to enter directly into a related graduate studies program.

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. All students are required to take the following B.Sc. (Agriculture) degree core requirements and the respective program core courses.

B.Sc. Agriculture Degree Core		
Course No.	**Course Name**	**Credit Hours**
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**
AGEC 2370/BIOL 2300	Principles of Ecology	3
AGRI 1600	**Introduction to Agrifood Systems**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
ANSC 2500	**Animal Production**	**3**
BIOL 1020	**Biology 1: Principles and Themes**	**3**
BIOL 1030	**Biology 2: Biological Diversity, Function and Interactions**	**3**
CHEM 1300	**University 1 Chemistry: Structure and Modelling in Chemistry**	**3**
CHEM 1310 or CHEM 1320 (See Note 1)	**University 1 Chemistry: An Introduction to Physical Chemistry or University 1 Chemistry: An Introduction to Organic Chemistry**	**3**
~~CHEM 2770 (MBIO 2770)~~	~~Elements of Biochemistry 1~~	~~3~~

ECON 1010	**Introduction to Microeconomic Principles**	**3**
HNSC 1200 **or** **HNSC 1210**	**Food: Facts and Fallacies** **or** **Nutrition for Health and Changing Lifestyles**	**3**
MATH 1210 **or** **MATH 1300** **or** **MATH 1500** **or** **MATH 1510** **or** **MATH 1520** **(See Note 2)**	**Techniques of Classical and Linear Algebra** **or** **Vector Geometry and Linear Algebra** **or** **Introduction to Calculus** **or** **Applied Calculus 1** **Or** **Introductory Calculus for Management and Social Sciences**	**3**
PLNT 2500	**Crop Production**	**3**
PLNT 2520/BIOL 2500	Genetics	3
SOIL 3600	**Soils and Landscapes in Our Environment**	**3**
Animal Systems Core		
Course	**Course Name**	**Credit Hours**
~~ABIZ 2510~~	~~Introduction to Agricultural and Food Marketing~~	~~3~~
~~ANSC 2500~~	~~Animal Production~~	~~3~~
ANSC 2510	Anatomy and Physiology 1: Control Systems	3
ANSC 2520	Anatomy and Physiology 2: Nutrient Utilization	3
ANSC 3500	Principles of Animal Genetics	3
ANSC 3510	Feeds and Feeding	3
ANSC 3520	Animal Reproduction	3
ANSC 3530	Animal and Its Environment	3
~~ANSC 4560~~	~~Issues in Animal Agriculture~~	~~3~~
CHEM 2770/MBIO 2770 (See Note 3)	**Elements of Biochemistry 1**	**3**

~~CHEM 2780/MBIO 2780~~	~~Elements of Biochemistry 2~~	~~3~~
~~PLNT 2500~~	~~Crop Production~~	~~3~~
Restricted Electives		**Credit Hours**
Group 1 - **Ruminant Production.** Choose one 3 credit hour course from the following:		3
ANSC 4520	Ruminant Production Systems - Meat	
ANSC 4530	Ruminant Production Systems - Milk	
Group 2 – **Monogastric Production.** Choose one 3 credit hour course from the following:		3
~~ANSC 4540~~	~~Monogastric Production Systems~~	
ANSC 4550	Avian Production Systems	
ANSC 4640	**Swine Production Systems**	
Group 3 – **Advanced Animal Science**. Choose two courses from the following:		6
~~ANSC 2530 and AGRI 2190~~	~~Nutritional Toxicology and Toxicology Principles~~	~~-~~
~~ANSC 2540~~	~~Companion Animal Nutrition and Management~~	~~-~~
~~ANSC 4090~~	~~Livestock Problems~~	~~-~~
~~ANSC 4220~~	~~Animal Science Investigations~~	~~-~~
~~ANSC 4280~~	~~Applied Animal Genetics~~	~~-~~
~~ANSC 4410 / PLNT 4410~~	~~Grassland Agriculture: Plant, Animal and Environment~~	~~-~~
~~ANSC 4500~~	~~Animal Health~~	~~-~~
~~ANSC 4510~~	~~Domesticated Animal Behaviour~~	~~-~~
~~ANSC 4570~~	~~Advanced Applied Animal Nutrition~~	~~-~~
~~ENTM 3160~~	~~Veterinary and Wildlife Entomology~~	~~-~~
~~FOOD 3500~~	~~Processing or Animal Food Products~~	~~-~~

~~PLNT 2530~~	~~Plant Biotechnology~~	~~-~~
Any ANSC 2000, 3000, or 4000 course; or FOOD 3500; or ENTM 3160		
Group 4 – **Human Resources.** Choose one 3 credit hour course from the following:		3
ABIZ 2620	**Agricultural Human Resource Management**	
GMGT 2070	Organizational Behaviour	
HRIR 2440	Human Resource Management	
Free Electives (See Note 4)		~~24 CH~~ **30**

~~**Note:** ANSC 2530 Nutritional Toxicology and ANSC 4280 Applied Animal Genetics will not be offered in 2019-20.~~

Notes:

1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320

2. Students are recommended to take one the MATH courses listed in the program requirements above however may also use either MATH 1220 or MATH 1230 to meet the requirement.

3. Under required courses, students can take either CHEM 2770 / MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360 / MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

4. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

Suggested Animal Systems Program Progression:

~~Year 1~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~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~~
~~CHEM 1300~~	~~University 1 Chemistry: Structure and Modelling in Chemistry~~	~~3~~
~~CHEM 1310~~	~~University 1 Chemistry: An Introduction to Physical Chemistry~~	~~-~~

or CHEM 1320	- University 1 Chemistry: An Introduction to Organic Chemistry	3
STAT 1000 Or Elective	Basis Statistical Analysis 1 Or Elective	- 3
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
One Math Course from the following:		3
MATH 1200	Elements of Discrete Mathematics	-
MATH 1210	Techniques of Classical and Linear Algebra	-
MATH 1300	Vector Geometry and Linear Algebra	-
MATH 1310	Matrices for Management and Social Sciences	-
MATH 1500	Introduction to Calculus	-
MATH 1520	Introductory to Calculus for Management and Social Sciences	-
Total Credit Hours		30

Year 1

Course	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1600	Introduction to Agrifood Systems	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry University 1 Chemistry: An Introduction to Organic Chemistry	3
ECON 1010	Introduction to Microeconomic Principles	3

HNSC 1200 or HNSC 1210	**Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles**	**3**
MATH 1210 or MATH 1300 or MATH 1500 or MATH 1510 or MATH 1520	**Techniques of Classical and Linear Algebra or Vector Geometry and Linear Algebra or Introduction to Calculus or Applied Calculus 1 Or Introductory Calculus for Management and Social Sciences**	**3**
Free Elective		**3**
Total Credit Hours		**30**

~~*MATH 1200 and MATH 1310 are no longer offered at the University of Manitoba however students who have taken one of these courses or have had it transfer to the University of Manitoba from another university can still use it towards their Math requirement for the Faculty of Agricultural and Food Sciences.~~

~~Year 2~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~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 / BIOL 2500~~	~~Genetics~~	~~3~~

~~Restricted/Free Electives/Philosophy/Co-op~~	~~3~~
~~Total Credit Hours~~	~~30~~

Year 2

Course	Course Name	Credit Hours
AGEC 2370 / BIOL 2300	Principles of Ecology	3
AGRI 2030	Technical Communications	3
AGRI 2400	Experimental Methods in Agricultural and Food Sciences	3
ANSC 2500	Animal Production	3
ANSC 2510	Anatomy and Physiology 1: Control Systems	3
ANSC 2520	Anatomy and Physiology 2: Nutrient Utilization	3
CHEM 2770/MBIO 2770	Elements of Biochemistry 1	3
PLNT 2500	Crop Production	3
PLNT 2520/BIOL 2500	Genetics	3
Restricted/Free Electives/Co-op		3
Total Credit Hours		30

~~Year 3~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~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 Or Elective if taken in Year One	Basis Statistical Analysis 1 Or Elective if taken in Year One	- 3
Restricted/Free Electives/Philosophy/Co-op		12
Total Credit Hours		30

Year 3

Course	Course Name	Credit Hours
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**
ANSC 3510	**Feeds and Feeding**	**3**
ANSC 3520	**Animal Reproduction**	**3**
ANSC 3500	**Principles of Animal Genetics**	**3**
ANSC 3530	**The Animal and Its Environment**	**3**
SOIL 3600	**Soils and Landscapes in Our Environment**	**3**
Restricted/Free Electives/Co-op		**12**
Total Credit Hours		**30**

Year 4

Course	Course Name	Credit Hours
ANSC 3520	Animal Reproduction	3
ANSC 4560	Issues in Animal Agriculture	3
-	Restricted Elective Group 1	3
-	Restricted Elective Group 2	3

~~Restricted/Free Electives/Philosophy/Co-op~~	~~18~~
~~**Total Credit Hours**~~	~~30~~

Year 4

Course	Course Name	Credit Hours
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
Restricted/Free Electives/Co-op		**27**
Total Credit Hours		**30**

4.4 Bachelor of Science (Agriculture)- Plant Biotechnology

Bachelor of Science (Agriculture) - Plant Biotechnology

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 are prepared to enter directly into a related graduate studies program.

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. All students are required to take the following B.Sc. (Agriculture) degree core requirements and the respective program core courses.

~~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 No.	**Course Name**	**Credit Hours**
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**
AGEC 2370/BIOL 2300	Principles of Ecology	3
AGRI 1600	**Introduction to Agri-Food Systems**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
ANSC 2500	**Animal Production**	**3**
BIOL 1020	**Biology 1: Principles and Themes**	**3**
BIOL 1030	**Biology 2: Biological Diversity, Function and Interactions**	**3**
CHEM 1300	**University 1 Chemistry: Structure and Modelling in Chemistry**	**3**

CHEM 1310 or CHEM 1320 (See Note 1)	**University 1 Chemistry: An Introduction to Physical Chemistry or University 1 Chemistry: An Introduction to Organic Chemistry**	**3**
~~CHEM 2770 / MBIO 2770~~	~~Elements of Biochemistry 1~~	~~3~~
ECON 1010	**Introduction to Microeconomic Principles**	**3**
HNSC 1200 or HNSC 1210	**Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles**	**3**
MATH 1210 or MATH 1300 or MATH 1500 or MATH 1510 or MATH 1520 (See Note 2)	**Techniques of Classical and Linear Algebra or Vector Geometry and Linear Algebra or Introduction to Calculus or Applied Calculus 1 Or Introductory Calculus for Management and Social Sciences**	**3**
PLNT 2500	**Crop Production**	**3**
PLNT 2520/BIOL 2500	Genetics	3
SOIL 3600	**Soils and Landscapes in Our Environment**	**3**
Plant Biotechnology Core		
Course	**Course Name**	**Credit Hours**
BIOL 2242	The Flowering Plants	3
~~BIOL 2260~~	~~Biology of Fungi and Lichens~~	~~3~~
BIOL 2520	Cell Biology	3
CHEM 2770/ MBIO 2770 (See Note 3)	**Elements of Biochemistry 1**	**3**
CHEM 2780/MBIO 2780 **(See Note 4)**	Elements of Biochemistry 2	3

MBIO 1010	Microbiology 1	3
PLNT 2530	Plant Biotechnology	3
PLNT 3400/BIOL 3400	Plant Physiology	3
~~PLNT 4600~~	~~Issues in Agricultural Biotechnology~~	~~3~~
Restricted Electives		**Credit Hours**
Group 1 – Choose 2 courses from the following:		6
~~ANSC 2500~~	~~Animal Production~~	
~~PLNT 2500~~	~~Crop Production~~	
ANSC 4410/PLNT 4410	Grassland Agriculture: Plant, Animal and Environment	
ENTM 3170	Crop Protection Entomology	
PLNT 2510	Fundamentals of Horticulture	
PLNT 3540	Weed Science	
Group 2 – Choose 5 Courses from the following:		15
PLNT 3520	Principles of Plant Improvement	
PLNT 3570	Fundamentals of Plant Pathology	
PLNT 4310	Introductory Plant Genomics	
PLNT 4330	Intermediate Plant Genetics	
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 4610	Bioinformatics	
Free Electives (See Note 5)		~~27 CH~~ **24**

~~Within the B.Sc. (Agriculture) students will elect one of three programs of study or specialities -- Agronomy, Animal Systems or Plant Biotechnology. Students will normally begin the program of study of their choice in second year.~~

Notes:

1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320

2. Students are recommended to take one the MATH courses listed in the program requirements above however may also use either MATH 1220 or MATH 1230 to meet the requirement.

3. Under required courses, students can take either CHEM 2770 / MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360 / MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

4. Under required courses, students can take either CHEM 2780 / MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370 / MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).

5. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

Suggested Plant Biotechnology Program Progression:

~~Year 1~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~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~~
~~CHEM 1300~~	~~University 1 Chemistry: Structure and Modelling in Chemistry~~	~~3~~
~~CHEM 1310~~ ~~or~~ ~~CHEM 1320~~	~~University 1 Chemistry: An Introduction to Physical Chemistry~~ ~~University 1 Chemistry: An Introduction to Organic Chemistry~~	~~-~~ ~~3~~
~~STAT 1000~~ ~~Or~~ ~~Elective~~	~~Basis Statistical Analysis 1~~ ~~Or~~ ~~Elective~~	~~-~~ ~~3~~
~~ECON 1010~~	~~Introduction to Microeconomic Principles~~	~~3~~
~~ECON 1020~~	~~Introduction to Macroeconomic Principles~~	~~3~~

~~One Math Course from the following:~~		~~3~~
~~MATH 1200~~	~~Elements of Discrete Mathematics~~	~~-~~
~~MATH 1210~~	~~Techniques of Classical and Linear Algebra~~	~~-~~
~~MATH 1300~~	~~Vector Geometry and Linear Algebra~~	~~-~~
~~MATH 1310~~	~~Matrices for Management and Social Sciences~~	~~-~~
~~MATH 1500~~	~~Introduction to Calculus~~	~~-~~
~~MATH 1520~~	~~Introductory to Calculus for Management and Social Sciences~~	~~-~~
~~Total Credit Hours~~		~~30~~

~~*MATH 1200 and MATH 1310 are no longer offered at the University of Manitoba however students who have taken one of these courses or have had it transfer to the University of Manitoba from another university can still use it towards their Math requirement for the Faculty of Agricultural and Food Sciences.~~

Year 1

Course	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1600	Introduction to Agri-Food Systems	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry University 1 Chemistry: An Introduction to Organic Chemistry	3
ECON 1010	Introduction to Microeconomic Principles	3
HNSC 1200 or HNSC 1210	Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles	3
MATH 1210 or MATH 1300 or MATH 1500 or	Techniques of Classical and Linear Algebra or Vector Geometry and Linear Algebra or Introduction to Calculus or	3

MATH 1510 or MATH 1520	**Applied Calculus 1 Or Introductory Calculus for Management and Social Sciences**	
Free Elective		**3**
Total Credit Hours		**30**

~~*MATH 1200 and MATH 1310 are no longer offered at the University of Manitoba however students who have taken one of these courses or have had it transfer to the University of Manitoba from another university can still use it towards their Math requirement for the Faculty of Agricultural and Food Sciences.~~

~~Year 2~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~BIOL 2242~~	~~The Flowering Plants~~	~~3~~
~~BIOL 2262~~	~~Biology of Fungi and Lichens~~	~~3~~
~~CHEM 2770/ MBIO 2770~~	~~Elements of Biochemistry 1~~	~~3~~
~~CHEM 2780/ MBIO 2780~~	~~Elements of Biochemistry 2~~	~~3~~
~~BIOL 2520~~	~~Cell Biology~~	~~3~~
~~PLNT 2520/ BIOL 2500~~	~~Genetics~~	~~3~~
~~PLNT 2530~~	~~Plant Biotechnology~~	~~3~~
~~AGRI 2030~~	~~Technical Communications~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~6~~
~~Total Credit Hours~~		~~30~~

Year 2

Course	**Course Name**	**Credit Hours**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
BIOL 2242	**The Flowering Plants**	**3**

BIOL 2520	**Cell Biology**	**3**
CHEM 2770/MBIO 2770	**Elements of Biochemistry 1**	**3**
CHEM 2780/MBIO 2780	**Elements of Biochemistry 2**	**3**
PLNT 2520/BIOL 2500	**Genetics**	**3**
PLNT 2530	**Plant Biotechnology**	**3**
Restricted/Free Electives/Co-op		**6**
Total Credit Hours		**30**

~~Year 3~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 1000~~	~~Introduction to Agribusiness Management~~	~~3~~
~~AGEC 2370/ BIOL 2300~~	~~Principles of Ecology~~	~~3~~
~~MBIO 1010~~	~~Microbiology 1~~	~~3~~
~~PLNT 3400/ BIOL 3400~~	~~Plant Physiology~~	~~3~~
~~STAT 1000~~ ~~Or~~ ~~Elective if taken in Year One~~	~~Basis Statistical Analysis 1~~ ~~Or~~ ~~Elective if taken in Year One~~	~~-~~ ~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~15~~
~~Total Credit Hours~~		~~30~~

Year 3

Course	**Course Name**	**Credit Hours**
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**

AGEC 2370/BIOL 2300	**Principles of Ecology**	**3**
PLNT 3400/BIOL 3400	**Plant Physiology**	**3**
SOIL 3600	**Soils and Landscapes in Our Environment**	**3**
MBIO 1010	**Microbiology 1**	**3**
PLNT 2500	**Crop Production**	**3**
Restricted/Free Electives/Co-op		**12**
Total Credit Hours		**30**

~~Year 4~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~PLNT 4600~~	~~Issues in Agricultural Biotechnology~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~27~~
~~Total Credit Hours~~		~~30~~

Year 4

Course	**Course Name**	**Credit Hours**
ANSC 2500	**Animal Production**	**3**
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
Restricted/Free Electives/Co-op		**24**
Total Credit Hours		**30**

Modifications to the following programs are set out on the next 7 pages:

- **Bachelor of Science in Agroecology**
- **Bachelor of Science in Agroecology, Co-operative Education Option**

4.6 Bachelor of Science (Agroecology)

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.~~

B.Sc. Agroecology Degree Core		
Course	**Course Name**	**Credit Hours**
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
ABIZ 2390/ECON 2390	Introduction to Environmental Economics	3
AGEC 2370/BIOL 2300	Principles of Ecology	3
~~AGEC 3510~~	~~Agroecology~~	~~3~~
~~AGEC 4550~~	~~Project in Agroecology~~	~~6~~
AGRI 1600	**Introduction to Agrifood Systems**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
ANSC 2500	Animal Production	3
BIOL 1020	**Biology 1: Principles and Themes**	**3**
BIOL 1030	**Biology 2: Biological Diversity, Function and Interactions**	**3**
BIOL 3312	Community Ecology	3
CHEM 1300	**University 1 Chemistry: Structure and Modelling in Chemistry**	**3**

CHEM 1310 or CHEM 1320 (See Note 1)	**University 1 Chemistry: An Introduction to Physical Chemistry or University 1 Chemistry: An Introduction to Organic Chemistry**	**3**
~~CHEM 2770/ MBIO 2770~~	~~Elements of Biochemistry 1~~	~~3~~
ECON 1010	**Introduction to Microeconomic Principles**	**3**
ENTM 3170	**Crop Protection Entomology**	**3**
HNSC 1200 or HNSC 1210	**Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles**	**3**
PLNT 2500	Crop Production	3
PLNT 2520/BIOL 2500	Genetics	3
PLNT 3540	**Weed Science**	**3**
PLNT 4270	**Plant Disease Control**	**3**
SOIL 3600	Soils and Landscapes in Our Environment	3
Restricted Electives		Credit Hours
Group 1 – ~~Agricultural Science~~ **Integrated Systems**		
~~Three~~ **Choose four** courses from the following:		~~9~~ **12**
~~Any 2000, 3000 or 4000 level course from -~~		
~~ANSC~~	~~Department of Animal Science~~	
~~ENTM~~	~~Department of Entomology~~	
~~PLNT~~	~~Department of Plant Science~~	
AGRI 2300	**Indigenous Issues in Food Systems**	
ANSC 4410/PLNT 4410	**Grassland Agriculture: Plant, Animal and Environment**	
PLNT 3560	**Organic Production**	
PLNT 4510	**Advanced Cropping Systems**	
SOIL 4400	**Soil Ecology**	

Group 2 – Land Science		
~~Two~~ **Choose two** courses from the following:		6
Any 3000 or 4000 level **SOIL (Soil Science) courses**		
~~SOIL~~	~~Department of Soil Science~~	
~~or~~	~~-~~	
~~GEOG 2250~~	~~Introduction to Geographic Information Systems~~	
Group 3 – Policy and Economics		
Choose one course from the following:		3
Any **2000**, 3000 or 4000 level **ABIZ (Agribusiness) course**		
~~ABIZ~~	~~Department of Agribusiness~~	~~-~~
Group 4- ~~Applied Agriculture*~~ **Agrology**		
~~One~~ Choose **two** course**s** from the following:		6
~~ANSC 4410~~	~~Grassland Agriculture: Plant, Animal and Environment~~	
~~ENTM 4520~~	~~Physiological Ecology of Insects~~	
~~PLNT 3540~~	~~Weed Science~~	
~~PLNT 3560~~	~~Organic Crop Production on the Prairies~~	
~~Soil 4400~~	~~Soil Ecology~~	
~~* Note that courses from this group are in addition to the Group 1 requirement~~		
Any ABIZ course; AGEC 2370; AGRI 2300; Any ANSC course; BIOE 3100; Any ENTM except ENTM 3162, ENTM 4280 or ENTM 4500; Any FOOD course except FOOD 4100 and FOOD 4230; Any PLNT course except PLNT 3140 or PLNT 4380; Any SOIL course.		
Free Electives (See Note 2)		~~27 CH~~ **30**

Notes:

1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320

2. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

Suggested Agroecology Program Progression :

~~Year 1~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~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~~
~~CHEM 1300~~	~~University 1 Chemistry: Structure and Modelling in Chemistry~~	~~3~~
~~CHEM 1310~~ ~~or~~ ~~CHEM 1320~~	~~University 1 Chemistry: An Introduction to Physical Chemistry~~ ~~University 1 Chemistry: An Introduction to Organic Chemistry~~	~~3~~
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~ECON 1010~~	~~Introduction to Microeconomic Principles~~	~~3~~
~~ECON 1020~~	~~Introduction to Macroeconomic Principles~~	~~3~~
~~One Math Course from the following:~~		~~3~~
~~MATH 1200~~	~~Elements of Discrete Mathematics~~	~~-~~
~~MATH 1210~~	~~Techniques of Classical and Linear Algebra~~	~~-~~
~~MATH 1300~~	~~Vector Geometry and Linear Algebra~~	~~-~~
~~MATH 1310~~	~~Matrices for Management and Social Sciences~~	~~-~~
~~MATH 1500~~	~~Introduction to Calculus~~	~~-~~
~~MATH 1520~~	~~Introductory to Calculus for Management and Social Sciences~~	~~-~~
~~Total Credit Hours~~		~~30~~

~~*MATH 1200 and MATH 1310 are no longer offered at the University of Manitoba however students who have taken one of these courses or have had it transfer to the University of Manitoba from another university can still use it towards their Math requirement for the Faculty of Agricultural and Food Sciences.~~

Year 1

Course	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1600	Introduction to Agrifood Systems	3
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry University 1 Chemistry: An Introduction to Organic Chemistry	3
ECON 1010	Introduction to Microeconomic Principles	3
HNSC 1200 or HNSC 1210	Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles	3
Free Electives		6
Total Credit Hours		30

~~Year 2~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 1000~~	~~Agribusiness Management~~	~~3~~
~~AGRI 2030~~	~~Technical Communications~~	~~3~~
~~AGEC 2370~~/ ~~BIOL 2300~~	~~Principles of Ecology~~	~~3~~
~~ANSC 2500~~	~~Animal Production~~	~~3~~
~~CHEM 2770~~/ ~~MBIO 2770~~	~~Elements of Biochemistry 1~~	~~3~~
~~PLNT 2500~~	~~Crop Production~~	~~3~~
~~PLNT 2520~~	~~Genetics~~	~~3~~
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~

~~Restricted/Free Electives/Philosophy/Co-op~~	~~6~~
~~Total Credit Hours~~	~~30~~

Year 2

Course	Course Name	Credit Hours
ABIZ 2390/ECON 2390	**Introduction to Environmental Economics**	**3**
AGEC 2370/ BIOL 2300	**Principles of Ecology**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
ANSC 2500	**Animal Production**	**3**
PLNT 2500	**Crop Production**	**3**
PLNT 2520/BIOL 2500	**Genetics**	**3**
SOIL 3600	**Soils and Landscapes**	**3**
Restricted/Free Electives/Co-op		**6**
Total Credit Hours		**30**

~~Year 3~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 2390/ ECON 2390~~	~~Introduction to Environmental Economics~~	~~3~~
~~AGEC 3510~~	~~Agroecology~~	~~3~~
~~BIOL 3312~~	~~Community Ecology~~	~~3~~
~~SOIL 3600~~	~~Soils and Landscapes in Our Environment~~	~~3~~

~~Restricted/Free Electives/Philosophy/Co-op~~	~~18~~
~~Total Credit Hours~~	~~30~~

Year 3

Course	Course Name	Credit Hours
BIOL 3312	Community Ecology	3
PLNT 4270	Plant Disease Control	3
ENTM 3170	Crop Protection Entomology	3
PLNT 3540	Weed Science	3
Restricted/Free Electives/Co-op		18
Total Credit Hours		30

~~Year 4~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~AGEC 4550~~	~~Project in Agroecology~~	~~6~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~24~~
~~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.~~

Year 4

Course	Course Name	Credit Hours
AGRI 4100	Current Issues in Agricultural Systems	3
Restricted/Free Electives/Co-op		27
Total Credit Hours		30

Modifications to the **Pre-Veterinary Program** are set out on the next 3 pages:

4.3 Pre-Veterinary Program

~~**Intro**~~

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~~ can apply 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, University of Saskatchewan

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.~~ Refer to the University of Saskatchewan's website to review the admission requirements: https://admissions.usask.ca/veterinary-medicine.php#Admissionrequirements.

~~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.~~

The following program is designed to meet the requirements to apply to the Western College of Veterinary Medicine, while allowing students to also progress in parallel with other programs in the Faculty of Agricultural and Food Sciences.

First Year/University 1		
Course No.		**Credit Hours**
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
AGRI 1600	**Introduction to Agricultural Systems**	**3**
BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3

CHEM 1320 **(See Note 1)**	University 1 Chemistry: An Introduction to Organic Chemistry	3
ECON 1010	**Introduction to Microeconomic Principles**	**3**
ENGL 1340 **or** **ENGL 1400 (See Note 2)**	**Introduction to Literary Analysis** **or** **Thematic Approaches to the Study of Literature**	**3**
HNSC 1200 **or** **HNSC 1210**	**Food: Facts and Fallacies** **or** **Nutrition for Health and Changing Lifestyles**	**3**
~~MATH 1200~~ ~~or~~ MATH 1210 or MATH 1300 or ~~MATH 1310~~ or MATH 1500 or **MATH 1510** or MATH 1520 **(See Note 3)**	~~Elements of Discrete Mathematics~~ ~~or~~ Techniques of Classical and Linear Algebra or Vector Geometry and Linear Algebra or ~~Matrices for Management and Social Sciences~~ or Introduction to Calculus or **Applied Calculus 1** **or** Introductory Calculus for Management and Social Sciences	3
~~AGRI 1500~~	~~Natural Resources and Primary Agricultural Production~~	~~3~~
~~AGRI 1510~~	~~Production, Distribution and Utilization of Agricultural Products~~	~~3~~
~~ENGL 1200*~~ ~~or~~ ~~ENGL 1300*~~	~~Representative Literary Works (6)~~ ~~or~~ ~~Literature Since 1900 (6)~~	~~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		

AGRI 2030 **(See Note 2)**	Technical Communications	3
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
CHEM 1310	University 1 Chemistry: An Introduction to Physical Chemistry	3
CHEM 2770/MBIO 2770 **(See Note 4)**	Elements of Biochemistry 1	3
~~CHEM 2780/MBIO 2780~~)	~~Elements of Biochemistry 2~~	~~3~~
MBIO 1010	Microbiology 1	3
PHYS 1020	General Physics 1	3
PLNT 2520/BIOL 2500	Genetics	3
~~STAT 1000~~	~~Basic Statistical Analysis~~	~~3~~
Free Electives **(See Note 5)**		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.~~

Notes:

1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320

2. AGRI 2030 and ENGL 1340/1400 together meet the English requirements of 6 credit hours. Students may elect to take either ENGL 1200 or ENGL 1300 (6 ch) for the Pre-Veterinary program.

3. Students are recommended to take one the MATH courses listed in the program requirements above however may also use either MATH 1220 or MATH 1230 to meet the requirement.

4. Under required courses, students can take either CHEM 2770/MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360/MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

5. Note that ANSC 2500 (Animal Production), ANSC 2510 (Anatomy and Physiology 1), and ANSC 2520 (Anatomy and Physiology 2) are recommended as electives for students to progress in parallel with the Animal Systems program.

Modifications to the following programs are set out on the next 3 pages:

- **Minor in Crop Protection**
- **Minor in Food Science**
- **Minor in Plant Biotechnology**

4.13 - Minors

Crop Protection

Students may obtain a minor in Crop Protection by completing 18 credit hours from:

- ENTM 3170 Crop Protection Entomology or ENTM 3190 Introduction to Applied Entomology
- PLNT 3540 Weed Science
- PLNT 3570 Fundamentals of Plant Pathology
- PLNT 4270 Plant Disease Control

Plus 6 credit hours from the following list of courses:

- AGRI 2180 Introductory Toxicology
- **BIOE 3100 Agricultural Engineering Essentials for Agronomists**
- ~~BIOE 4520 Crop Preservation and Handling~~
- ENTM 2050 Introductory Entomology
- **ENTM 3180 Field Techniques in Entomology**
- ~~PLNT 3510 Cropping Systems~~
- PLNT 3520 Principles of Plant Improvement
- **PLNT 4510 Advanced Cropping Systems**
- PLNT 4570 Research Methods in Plant Pathology
- PLNT 4580 Molecular Plant-Microbe Interactions
- SOIL 3520 Pesticides: Environment, Economics and Ethics.

4.13 - Minors

Food Science

Students may obtain a minor in Food Science (18 credit hours) by completing:

- FOOD 1000 Food Safety Today and Tomorrow
- FOOD 2500 Food Chemistry

Plus an additional 12 credit hours in FOOD courses excluding FOOD 4230 Food Research and FOOD ~~4120~~ **4100** ~~Food Science Seminar~~ **Current Issues in Food and Human Nutrition**.

Prerequisites for required courses may result in more than 18 credit hours.

4.13 - Minors

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 4310 Introductory Plant Genomics
- PLNT 4330 Intermediate Plant Genetics
- 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.

Program Proposal

The Faculty is proposing to introduce a **Minor in Agronomy**, as outlined on the next 6 pages:

UNIVERSITY OF MANITOBA

Office of the Provost and Vice-President (Academic)

PROPOSAL FOR NEW ACADEMIC MINOR OR CONCENTRATION

Please enter the requested information below and submit both hardcopies and electronic copies to the Office of the University Secretary and the Vice-Provost (Integrated Planning and Academic Programs). Note: this template has been formatted using Microsoft Word 2010 for PC. Some formatting may be lost if using an earlier version of Word or Microsoft Word for Mac. Should you have any difficulties, please contact Cassandra Davidson, Program Analyst, at cassandra.davidson@umanitoba.ca.

It is advised that the unit initially discuss the proposed new minor/concentration with the Vice-Provost (Integrated Planning and Academic Programs) prior to completion of and submission of this form.

Date: 8 August 2019

Faculty: Agricultural and Food Sciences
Department:

Contact Details: Associate Dean (Academic)

Section 1: **Program Overview**

1. Program type: Minor: ☒ Concentration: ☐

2. Proposed program name: Minor in Agronomy

3. Length of program: *Indicate the required number of credit hours including associated pre-requisite requirements.*
18 credit hours. Students will need AGRI 1600 (3 credit hours) as a prerequisite for PLNT 2500. One of the course choices (optional) in the Minor requires BIOL 1030 as a prerequisite.

4. Proposed start of program:
Fall 2020

Section 2: **Program Details**

5. Description of program: *Provide a brief outline of the program, its objectives and how it will benefit student.*
The Minor in Agronomy will provide students with a basic background in the fundamentals of Agronomy, generally defined as a discipline in agricultural and food sciences that studies crops and the soil system. Manitoba, and the Prairies in general, has a large job market for agronomists and the University of Manitoba does not meet the demand. Many students educated in other programs, such as Agribusiness, Agroecology, Animal Systems and Plant Biotechnology, are working as agronomists to fill

this need but their education has large knowledge gaps. A Minor in Agronomy is intended to partially fill this need, whereby students outside of the Agronomy Major program can attain additional knowledge for them to be successful in careers.

6. Course requirements: *Provide a list of courses (include course codes) and breakdown of course requirements by level (e.g. 6 hours at the 1000 level, 3 hours at the 2000 level, etc.). Indicate whether proposed coursework is currently offered or new. Note any pre-requisite details where applicable.*
Students may obtain a minor in Agronomy (18 credit hours) by completing:

- PLNT 2500 Crop Production (3 credit hours)
- SOIL 3600 Soils and Landscapes in our Environment (3 credit hours)
- plus two courses (6 credit hours) from:
  - ENTM 3170 Crop Protection Entomology
  - PLNT 3540 Weed Science
  - PLNT 3560 Organic Crop Production on the Prairies
  - PLNT 4270 Plant Disease Control
  - PLNT 4410 Grassland Agriculture: **Plant, Animal and Environment**
  - PLNT 4510 Advanced Cropping Systems
- plus two courses (6 credit hours) from:
  - SOIL 3060 Introduction to Agrometeorology
  - SOIL 4510 Soil and Water Management
  - SOIL 4520 Soil Fertility.

All courses are currently offered. No new pre-requisites above those required for each course. Note that PLNT 2500 and SOIL 3600 are the pre-requisites for most of the other course choices. PLNT 2500 requires AGRI 1600 or AGRI 1500 as the pre-requisite.

7. Program availability: *Will this program be offered to all students eligible to declare a minor/concentration or will it be restricted to a subset of students. If the latter, provide a brief explanation as to why the program will be restricted.*
Eligible to all except students enrolled in the B.Sc. Agriculture Agronomy program (major).

8. Admission requirements: *If applicable, outline any admission requirements to the program.*
None.

Section 3: **Program Demand**

9. Strategic priorities: *Comment on how the program fits within the university's strategic priorities.*
The program supports the priority of *Inspiring Minds through innovative and quality teaching* by delivering an alternative program to achieve sufficient knowledge for students to enter careers in high demand.

10. Student demand: *Provide evidence of student demand and interest in the program.*
Our employment surveys indicate that students from many other programs (e.g., Agribusiness, Agroecology, Animal Systems, Plant Biotechnology) are working professionally as agronomists. The Minor will be of interest to many students who would like to enhance their marketability upon graduation.

11. Projected enrolment: *Based on the evidence of demand, provide projected enrolment numbers in the program.*
Our experience with Minor programs has been that students will elect a Minor when they already have taken some of the core courses required. We envisage this potential based on each program:

B.Sc. Agribusiness degree: Students in this program will complete 1 of the required courses for the Minor as part of their major requirements. They would need to take 5 additional courses as electives (3 as restricted elective; 2 as free elective). We anticipate that this would have 5 to 10 students per year completing the Minor.

B.Sc. Agroecology degree: Students in this program will already complete 4 of the required courses and would only need to select 2 of the soil science group (1 as restricted elective; 1 as free elective) to complete the minor. We anticipate that this would have 3 to 5 students per year completing the Minor.

B.Sc. Agriculture degree, Animal Systems program: Students in this program will complete the 2 required courses for the Minor as part of their major requirements. They would need to take 4 additional courses as electives (1 as restricted elective; 3 as free elective). We anticipate that this would have 1 to 2 students per year completing the Minor.

B.Sc. Agriculture degree, Plant Biotechnology program: Students in this program will complete the 2 required courses for the Minor as part of their major requirements. They would need to take 4 additional courses as electives (2 as restricted elective; 2 as free elective). We anticipate that this would have 2 to 5 students per year completing the Minor.

Other programs: We do not anticipate many students from other programs either within the Faculty of Agricultural and Food Sciences, or from other Faculties. It is possible that some students from the B.Sc. Environmental Science program could be interested, especially if they are completing a Minor in Soil Science. We estimate this to be only 1 or 2 students per year.

12. Effects on other programs: *Comment on the potential effect of the program on other existing programs. Attach letters of support for any programs/units impacted by the proposed program.*
We do not anticipate effects on other programs. The Agronomy Major program is still the best preparation for a career in agronomy and we will advise students appropriately related to programs and potential career opportunities.

13. Similar programs: *If known, describe similar programs within Manitoba, outlining any similarities or differences with*

the proposed program.
No similar Minor in Agronomy is offered within Manitoba.

14. External consultation: *Where appropriate, outline any consultations with industry, business and/or any third-party groups in development of the proposed program.*
The Agronomy Major program is well recognized by employers and the agriculture industry in general. We anticipate that the new Minor in Agronomy will be recognized as a secondary requirement for some careers where the applicant does not have a Major in Agronomy.

Section 4: **Resource Requirements**

15. Projected costs and revenues: *Provide a general overview of the projected costs and revenues of the program. Where applicable, comment in detail on the categories below.*
All courses in the Minor are currently offered.

16. Coursework: *Comment on whether the proposed program will require the offering of additional courses.*
No additional courses to be offered.

17. Staffing: *Comment on whether the proposed program will require additional academic or administrative staff.*
No additional staffing required.

18. Infrastructure / equipment: *Comment on how the proposed program will impact the use of current infrastructure and equipment.*
No changes to current infrastructure and equipment.

19. Library resources: *If the program involves new courses, or coursework that has not been offered on a regular basis in recent years, comment on the adequacy of existing library resources.*
No new courses.

20. Additional Funds: *Provide information on whether new funds are required for this program. If so, provide details.*
No new funds required.

Section 5: **Approvals**

Faculty Approvals:

Department/Program Head: Agronomy Program Committee/Curriculum Committee 14 May 2019

Dean/Director: _____ 8 August 2019

Faculty/School Council: Faculty of Agricultural and Food Sciences 20 June 2019

Institutional Approvals:

Senate Committee on Curriculum & Course Changes: Enter date.

Senate Planning & Priorities Committee (*if required*): Enter date.

Senate Approval: Enter date.

Provost Approval: _____ Enter date.

4.13 - Minors

Agronomy

Students may obtain a minor in Agronomy (18 credit hours) by completing:

- **PLNT 2500 Crop Production and**
- **SOIL 3600 Soils and Landscapes in our Environment;**

plus two courses (6 credit hours) from:

- **ENTM 3170 Crop Protection Entomology,**
- **PLNT 3540 Weed Science,**
- **PLNT 3560 Organic Crop Production on the Prairies,**
- **PLNT 4270 Plant Disease Control,**
- **PLNT 4410/ANSC 4410 Grassland Agriculture,**
- **PLNT 4510 Advanced Cropping Systems;**

plus two courses (6 credit hours) from:

- **SOIL 3060 Introduction to Agrometeorology,**
- **SOIL 4510 Soil and Water Management,**
- **SOIL 4520 Soil Fertility.**

Agribusiness and Agricultural Economics

Introductions:

ABIZ 2610 Agricultural Law Cr.Hrs. 3 +3.0
This course explores the complex set of laws affecting the agricultural and agri-food sectors, focusing upon those laws critical for effective planning and sound decision making with respect to farm operations, agribusinesses and agri-food sector institutions. Topics include but are not limited to Manitoba's and Canada's legal systems, the major laws affecting the stakeholders listed above, and the legal resolution of issues in the agricultural and agri-food sectors. May not be held with DAGR 0760.

ABIZ 2620 Agricultural Human Resource Management Cr.Hrs. 3 +3.0
Students will carry out processes such as job analysis and design, recruitment and selection, training and development, performance management and compensation management to develop a comprehensive human resource management plan for an agricultural enterprise. An overview of human resource legislation will be provided and resources to support human resource management decision making will be identified. May not be held with AGRI 3030 when titled “Agricultural Human Resource Management” or HRIR 2440 or HRIR 2441 or DAGR 0530. Prerequisite: ABIZ 1000 (D) or consent of the instructor.

Modifications:

ABIZ 0450 Agricultural Economics and Marketing 2 Cr.Hrs. 4 0.0
(Lab required) The application of economic analysis in the study of marketing: concepts, policy, practices and institutions. May not be held with ABIZ 2510. Prerequisite: ABIZ 0440 (C).

ABIZ 0730 Financial Risk Management Cr.Hrs. 3 0.0
Various approaches to managing market risk will be studied, including forward pricing, hedging using futures and options along with insurance, diversification and the use of technology to manage production risk. Prerequisite: ABIZ 0470 (C) or pre- or corequisite: ABIZ 0450 (C).

ABIZ 2210 Transportation Principles Cr.Hrs. 3 0.0
This course is a study of demand forecasting, cost analysis, regulation of carriers, role of transport in economic development, project appraisal, and transport planning focusing upon the agricultural, agri-food and other supply chains. Also offered as SCM 2210. May not be held with SCM 2210.

ABIZ 2510 Introduction to Agricultural and Food Marketing Cr.Hrs. 3 0.0
Economic principles and institutions involved in the Canadian agricultural and food marketing system with applications to farming and agribusiness. May not be held with ABIZ 0450. Prerequisite: A minimum grade of C in ECON 1010 (or ECON 1011 or the former ECON 1200 or the former ECON 1201) or both ECON 1210 (ECON 1211) and ECON 1220 (ECON 1221).

ABIZ 2520 Introduction to Management Sciences Cr.Hrs. 3 0.0
(Lab required) An introduction to management science techniques and models relevant to the agricultural and agri-food sectors. Topics include linear programming, distribution problems, decision theory and queuing models. May not be held with MSCI 2150 or MSCI 2151. Prerequisites: A minimum grade of C in [MATH 1300 (MATH 1301) or MATH 1210] and [MATH 1500 (MATH 1501) or MATH 1510 or MATH 1520]. Pre- or corequisite: AGRI 2400 or STAT 1000 or STAT 1001.

ABIZ 3080 Introduction to Econometrics Cr.Hrs. 3 0.0
(Lab required) The application of statistical tools, especially regression analysis for estimating economic relationships and testing economic hypotheses and model specification through the use of spreadsheets and data sets related to agricultural and agri-food sector applications. May not be held with ECON 3040 (or the former ECON 3180). Prerequisites: A minimum grade of D in [AGRI 2400 or STAT 2000 (STAT 2001) or ECON 2040 or the former ECON 3170] and [ECON 1010 (ECON 1011) and ECON 1020 (ECON 1021) or the former ECON 1200 (the former ECON 1201)].

ABIZ 3120 Commodity Futures Markets Cr.Hrs. 3 0.0
Theory and economic functions of commodity markets, including futures and options markets, with a focus on agricultural commodities. The roles of the various participants; the determination of inter-temporal prices and various aspects of hedging will be studied. Prerequisites: A minimum grade of C in [ECON 1010 (ECON 1011) or the former ECON 1200 (the former ECON 1201)] or [ECON 1210 (ECON 1211) and ECON 1220 (ECON 1221)] and a minimum grade of D in AGRI 2400 or STAT 2000 (STAT 2001).

ABIZ 3540 Financial Risk Management Cr.Hrs. 3 0.0
Topics explored will include risk expected returns and valuation of capital; addressing risk in the context of capital budgeting; derivative securities (i.e. futures and options) and financial risk management; the management of risk within and outside of agricultural production; and public policy. Prerequisites: A minimum grade of D in [AGRI 2400 or STAT 1000 (STAT 1001)] and [ABIZ 1000 or ABIZ 2510].

Net change in credit hours: +6.0

Program modifications:

Modifications to the following programs are outlined on the next 9 pages.

- **Bachelor of Science in Agribusiness**
- **Bachelor of Science in Agribusiness, Co-operative Education Option**

4.5 Bachelor of Science (Agribusiness)

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 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.~~

~~The international agribusiness option involves taking a minor in one of the cross disciplinary programs in the Faculty of Arts. International agribusiness requires knowledge of languages, cultures, and international political history, in addition to the other business skills required by the B.Sc. (Agribusiness) degree.~~

B.Sc. Agribusiness Degree Core		
Course	**Course Name**	**Credit Hours**
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
ABIZ 2390/ECON 2390	**Introduction to Environmental Economics**	**3**
ABIZ 2510	Introduction to Agricultural and Food Marketing	3
ABIZ 2620 **or** HRIR 2440	**Agricultural Human Resource Management** **or** Human Resource Management	3
ABIZ 2520	Introduction to Management Science	3
ABIZ 3080**/ECON 3040**	Introduction to Econometrics	3
ABIZ 3510	Economics of Food Policy	3
ABIZ 4500	Agribusiness Strategies Seminar	3
ACC 1100	Introductory Financial Accounting	3

AGRI 1600	**Introduction to Agrifood Systems**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
AGRI 4100	**Current Issues in Agricultural Systems**	**3**
ANSC 2500	**Animal Production**	**3**
BIOL 1020 (See Note 1) **or** **BIOL 1000**	**Biology 1: Principles and Themes** **or** **Biology: Foundations of Life**	**3**
BIOL 1030 (See Note 1) **or** **BIOL 1010**	**Biology 2: Biological Diversity, Function and Interactions** **or** **Biology: Biological Diversity and Interactions**	**3**
ECON 1010	**Introduction to Microeconomic Principles**	**3**
ECON 1020	**Introduction to Macroeconomic Principles**	**3**
ECON 2010	Microeconomic Theory 1	3
HNSC 1200 **or** **HNSC 1210**	**Food: Facts and Fallacies** **or** **Nutrition for Health and Changing Lifestyles**	**3**
MATH 1210 **or** **MATH 1300** **(See Note 2)**	**Techniques of Classical and Linear Algebra** **or** **Vector Geometry and Linear Algebra**	**3**
MATH 1500 **or** **MATH 1510** **or** **MATH 1520** **(See Note 3)**	**Introduction to Calculus** **or** **Applied Calculus 1** **or** **Introductory Calculus for Management and Social Sciences**	**3**
PLNT 2500	**Crop Production**	**3**
~~ECON 2020~~	~~Macroeconomic Theory 1~~	~~3~~
~~One Math from the following*:~~		

MATH 1300	Vector Geometry and Linear Algebra	-
MATH 1310	Matrices for Management and Social Sciences*	-
MATH 1500	Introduction to Calculus	-
MATH 1520	Introductory to Calculus for Management and Social Sciences	3
*Agribusiness students require one of MATH 1300 or MATH 1310 and one of MATH 1500 or MATH 1520		
STAT 2000	Basic Statistical Analysis 2	3
Restricted Electives		Credit Hours
Group 1 – Three courses from the following:		9
ABIZ 2390	Introduction to Environmental Economics	-
AGEC 2370/ BIOL 2300	Principles of Ecology	-
ANSC 2500	Animal Production	-
PLNT 2500	Crop Production	-
Group 2 – Two Courses from the following:		6
ABIZ 3120	Commodity Futures Markets	-
ABIZ 3530	Farm Management	-
ABIZ 3540	Financial Risk Management	-
ABIZ 4260	Price Analysis	-
Total Credit Hours	15	
Students must fulfill 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 Option – Minor in Asian Studies or Central and East European Studies or Latin American Studies as defined in the Faculty of Arts Chapter of the Undergraduate Calendar under cross-disciplinary programs.		18
Total credit hours		9 18

Restricted Electives		Credit Hours
Group 1 - Agribusiness: Select four courses from the following:		**12**
ABIZ 3120	**Commodity Futures Markets**	
ABIZ 3520	**Food Distribution and International Merchandising**	
ABIZ 3530	**Farm Management**	
ABIZ 3540	**Financial Risk Management**	
ABIZ 3550	**Environmental Policy**	
ABIZ 4120	**Intermediate Econometrics**	
ABIZ 4260	**Price Analysis**	
Group 2 – Agrology. Select three courses (not taken from above: i.e. cannot use the same course towards both group 1 and 2 restricted electives) from the following:		**9**
Any ABIZ course; AGEC 2370; AGRI 2300; Any ANSC course; BIOE 3100; Any ENTM except ENTM 3162, ENTM 4280 or ENTM 4500; Any FOOD course except FOOD 4100 and FOOD 4230; Any PLNT course except PLNT 3140 and PLNT 4380; Any SOIL course.		
Free Electives (See Note 4)		~~21 CH~~ **30**
~~Students are encouraged to take free electives from the following ten courses:~~		
~~ABIZ 1010~~	~~Economics of World Food Issues and Policies~~	
~~ABIZ 2210~~	~~Transportation Principles~~	
~~ABIZ 3120~~	~~Commodity Futures Markets~~	
~~ABIZ 3530~~	~~Farm Management~~	
~~ABIZ 3540~~	~~Financial Risk Management~~	
~~ABIZ 3550~~	~~Environmental Policy~~	
~~ABIZ 3560~~	~~Agribusiness Portfolio Management~~	
~~ABIZ 4120~~	~~Intermediate Economics~~	
~~ABIZ 4260~~	~~Price Analysis~~	

~~* MATH 1310 is no longer offered at the University of Manitoba however students who have taken it or have had it transfer to the University of Manitoba from another university can still use it towards their Math requirement for the Faculty of Agricultural and Food Sciences.~~

Notes:

1. BIOL 1020 and BIOL 1030 are prerequisites for many Agrology courses.

2. Students are recommended to take one of MATH 1210 or MATH 1300 however may also substitute MATH 1220 to meet the requirement.

3. Students are recommended to take one of MATH 1500 or MATH 1510 or MATH 1520 however may also substitute MATH 1230 to meet the requirement.

4. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

Suggested Agribusiness Program Progression:

~~Year 1~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 1000~~	~~Introduction to Agribusiness Management~~	~~3~~
~~AGRI 1500~~	~~Natural Resources and Primary Agricultural Production~~	~~3~~
~~AGRI 1510~~	~~Production, Distribution and Utilization of Agricultural Products~~	~~3~~
~~ECON 1010~~	~~Introduction to Microeconomic Principles~~	~~3~~
~~ECON 1020~~	~~Introduction to Macroeconomic Principles~~	~~3~~
~~One set of two Biology courses as below:~~		~~6~~
~~BIOL 1000~~ ~~And~~ ~~BIOL 1010~~	~~Biology: Foundations of Life~~ ~~And~~ ~~Biology: Biological Diversity and Interactions~~	~~-~~ ~~-~~
~~OR~~		~~-~~
~~BIOL 1020~~ ~~And~~ ~~BIOL 1030~~	~~Biology 1: Principles and Themes~~ ~~And~~ ~~Biology 2: Biological Diversity, Function and Interactions~~	~~-~~
~~One Math Course from the following:~~		~~3~~
~~MATH 1300~~	~~Vector Geometry and Linear Algebra~~	~~-~~

MATH 1310	Matrices for Management and Social Sciences	-
One Math Course from the following:		3
MATH 1500	Introduction to Calculus	-
MATH 1520	Introductory to Calculus for Management and Social Sciences	-
STAT 1000 Or Free Elective	Basic Statistical Analysis 1 Or Free Elective	- 3
Total Credit Hours		30

Year 1

Course	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
AGRI 1600	Introduction to Agrifood Systems	3
BIOL 1020* or BIOL 1000	Biology 1: Principles and Themes or Biology: Foundations of Life	3
BIOL 1030* or BIOL 1010	Biology 2: Biological Diversity, Function and Interactions or Biology: Biological Diversity and Interactions	3
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
HNSC 1200 or HNSC 1210	Food: Facts and Fallacies or Nutrition for Health and Changing Lifestyles	3
MATH 1210 or MATH 1300	Techniques of Classical and Linear Algebra or Vector Geometry and Linear Algebra	3
MATH 1500 or MATH 1510 or MATH 1520	Introduction to Calculus or Applied Calculus 1 or Introductory Calculus for Management and Social Sciences	3

Free Elective		**3**
Total Credit Hours		**30**

~~**Year 2**~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 2510~~	~~Introduction to Agricultural and Food Marketing~~	~~3~~
~~ABIZ 2520~~	~~Introduction to Management Science~~	~~3~~
~~AGRI 2030~~	~~Technical Communications~~	~~3~~
~~ACC 1100~~	~~Introductory Financial Accounting~~	~~3~~
~~ECON 2010~~	~~Microeconomic Theory 1 (previously ECON 2450)~~	~~3~~
~~ECON 2020~~	~~Macroeconomic Theory 2 (previously ECON 2470)~~	~~3~~
~~STAT 1000~~ ~~Or~~ ~~Elective if taken in Year One~~	~~Basis Statistical Analysis 1~~ ~~Or~~ ~~Elective if taken in Year One~~	~~-~~ ~~3~~
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~6~~
~~Total Credit Hours~~		~~30~~

Year 2

Course	Course Name	Credit Hours
ABIZ 2390/ECON 2390	**Introduction to Environmental Economics**	**3**
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**
ABIZ 2520	**Introduction to Management Science**	**3**
ACC 1100	**Introductory Financial Accounting**	**3**
AGRI 2030	**Technical Communications**	**3**

AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
ANSC 2500	**Animal Production**	**3**
ECON 2010	**Microeconomic Theory 1**	**3**
PLNT 2500	**Crop Production**	**3**
Restricted/Free Electives/Co-op		**3**
Total Credit Hours		**30**

~~**Year 3**~~

~~**Course**~~	~~**Course Name**~~	~~**Credit Hours**~~
~~ABIZ 3080~~	~~Introduction to Econometrics~~	~~3~~
~~ABIZ 3510~~	~~Economics of Food Policy~~	~~3~~
~~HRIR 2440~~	~~Human Resource Management~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~21~~
~~**Total Credit Hours**~~		~~30~~

Year 3

Course	**Course Name**	**Credit Hours**
ABIZ 2620 **or** **HRIR 2440**	**Agricultural Human Resource Management** **or** **Human Resource Management**	**3**
ABIZ 3080/ECON 3040	**Introduction to Econometrics**	**3**
ABIZ 3510	**Economics of Food Policy**	**3**
Restricted/Free Electives~~/~~Co-op		**21**
Total Credit Hours		**30**

~~**Year 4**~~

~~Course~~	~~Course Name~~	~~Credit Hours~~
~~ABIZ 4500~~	~~Agribusiness Strategies Seminar~~	~~3~~
~~Restricted/Free Electives/Philosophy/Co-op~~		~~27~~
~~**Total Credit Hours**~~		~~30~~

Year 4

Course	Course Name	Credit Hours
ABIZ 4500	Agribusiness Strategies Seminar	3
AGRI 4100	Current Issues in Agricultural Systems	3
Restricted/Free Electives/Co-op		24
Total Credit Hours		30

Animal Science

Deletions:

ANSC 2530 Nutritional Toxicology Cr.Hrs. 1.5 -1.5
ANSC 4540 Monogastric Production Systems Cr.Hrs. 3 -3.0
ANSC 4560 Issues in Animal Agriculture Cr.Hrs. 3 -3.0

Introduction:

ANSC 4640 Swine Production Systems Cr.Hrs. 3 +3.0
(Lab required) 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. May not be held with ANSC 0690 or the former ANSC 4540. Prerequisite: A minimum of 60 credit hours and ANSC 2500 (D).

Modifications:

ANSC 0600 Animal Health and Welfare Cr.Hrs. 3 0.0
This course explores 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 also be addressed. Additionally, animal welfare as it relates to commercial animal production will be discussed. Prerequisite: ANSC 0420 (C).

ANSC 0670 Beef Cattle Production and Management Cr.Hrs. 4 0.0
(Lab required) This course provides an overview of the beef cattle industry including 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 will be covered. May not be held with ANSC 4520. Prerequisite: ANSC 0420 (C).

ANSC 0680 Dairy Cattle Production and Management Cr.Hrs. 4 0.0
(Lab required) This course provides a study of current production practices in Canada's dairy industry with focus on nutrition, reproduction, genetics, health, replacement rearing and marketing. May not be held with ANSC 4530. Prerequisite: ANSC 0420 (C)

ANSC 0690 Swine Production and Management Cr.Hrs. 4 0.0
(Lab required) This course focuses on the swine industry, including the types of swine enterprises and factors affecting profitability of production. Application of principles of nutrition, genetics and physiology in the management of swine are covered. May not be held with ANSC 4640 or the former ANSC 4540. Prerequisite: ANSC 0420 (C) .

ANSC 0700 Poultry Production and Management Cr.Hrs. 4 0.0
(Lab required) This course provides an overview of the poultry industry, including its marketing system, breeding, hatchery practices, management and feeding within large scale turkey and chicken enterprises. May not be held with ANSC 4550. Prerequisite: ANSC 0420 (C).

ANSC 2500 Animal Production Cr.Hrs. 3 0.0
(Lab required) Production practices in the major animal industries in Canada, focusing on key factors including the biology of growth, reproduction and nutrition. Issues related to welfare,

environment, housing, and contributions to the Canadian economy are introduced. Prerequisite: AGRI 1600 (or the former AGRI 1510) (D).

ANSC 2510 Anatomy and Physiology 1: Control Systems Cr.Hrs. 3 0.0
(Lab required) This course covers the structure, functions and interactions of the coordinating/regulatory systems in the animal body, including the nervous, muscular, cardiovascular, respiratory, renal and endocrine systems.

ANSC 2520 Anatomy and Physiology 2: Nutrient Utilization Cr.Hrs. 3 0.0
(Lab required) This course deals with 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. Prerequisites: ANSC 2510 (D) and [CHEM 2360 or MBIO 2360 or CHEM 2770 or MBIO 2770] (D).

ANSC 2540 Companion Animal Nutrition and Management Cr.Hrs. 3 0.0
This course covers the functional anatomy, genetics, nutrition, reproduction, behaviour, and diseases of non-equine companion animals and ornamental fish.

ANSC 3530 The Animal and Its Environment Cr.Hrs. 3 0.0
(Lab required) This course explores how an animal is influenced by its environment with respect to effects upon health, welfare and performance. Principles of farmed animal behaviour, welfare and behavioural management, health, and facility design and modification will be considered in the context of animal/environment interactions. Prerequisite: ANSC 2510 (D).

ANSC 4520 Ruminant Production Systems-Meat Cr.Hrs. 3 0.0
(Lab required) To provide an appreciation of the ruminant 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. May not be held with ANSC 0670. Prerequisite: A minimum of 60 credit hours and ANSC 2500 (D).

ANSC 4530 Ruminant Production Systems-Milk Cr.Hrs. 3 0.0
(Lab required) This course provides a description of the ruminant milk 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 system for milk production. May not be held with ANSC 0680. Prerequisite: A minimum of 60 credit hours and ANSC 2500 (D).

ANSC 4550 Avian Production Systems Cr.Hrs. 3 0.0
(Lab required) Describes the various avian production 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. May not be held with ANSC 0700. Prerequisite: A minimum of 60 credit hours and ANSC 2500 (D).

Net change in credit hours: -4.5

Biosystems Engineering

Deletions:

BIOE 2090 Machinery for Agricultural Production Cr.Hrs. 4 -4.0

BIOE 2222 Precision Agriculture Concepts and Applications Cr.Hrs. 4 -4.0
BIOE 4500 Water Management Cr.Hrs. 3 -3.0
BIOE 4520 Crop Preservation and Handling Cr.Hrs. 3 -3.0

Introduction:

BIOE 3100 Agricultural Engineering Fundamentals for Agronomists Cr.Hrs. 3 +3.0
(Lab required) The course will provide fundamental technical competencies from the discipline of agricultural engineering for the study of agronomy. Students will be introduced to i) concepts from "smart" farming, ii) functions of machinery for production agriculture, iii) water management for production agriculture, and iv) safe storage and handling of grains and oilseeds. Prerequisite: PLNT 2500 (D).

Modification:

BIOE 4650 Textiles in Healthcare and Medical Applications Cr. Hrs. 4 0.0
This course provides students with an introduction to medical textiles and healthcare products used in current practices, as well as fundamentals for designing textile products and devices that improve the health and quality of life of human beings. The course includes both basic topics related to healthcare and medical textiles (i.e., materials and structures, nanofibers for medical uses, comfort and health problems with textiles, biocompatibility and biostability issues) and applications of textile products for healthcare and medical end uses (i.e., protective and hygiene textiles, external devices, tissue engineering and intelligent/smart textiles). Prerequisite: BIOE 2590. Pre- or corequisite: BIOE 3320.

Net change in credit hours: -11.0

Food and Human Nutritional Sciences

Deletions:

FOOD 4120 Food Science Seminar Cr.Hrs. 3 -3.0
HNSC 4160 Seminar in Foods and Nutrition Cr.Hrs. 3 -3.0

Introductions:

FOOD 4100 Current Issues in Food and Human Nutrition Cr.Hrs. 3 +3.0
Integration of current issues in food and human nutritional sciences. Emphasis on ethics, equity, economics, and professional approaches to challenges in food and human nutritional sciences using case studies, team work, and scientific communication to specialists and the public. This is a capstone course restricted to students in year 4 of the B.Sc. Food Science degree programs. May not be held with HNSC 4100 or AGRI 4100 or the former FOOD 4120. Prerequisite: AGRI 2030 and Faculty approval.

HNSC 4100 Current Issues in Food and Human Nutrition Cr.Hrs. 3 +3.0
Integration of current issues in food and human nutritional sciences. Emphasis on ethics, equity, economics, and professional approaches to challenges in food and human nutritional sciences using case studies, team work, and scientific communication to specialists and the public. This is a capstone course restricted to students in year 4 of the B.Sc. Human Nutritional Sciences degree programs. May not be held with FOOD 4100 or AGRI 4100 or the former HNSC 4160. Prerequisite: HNSC 2000 (or the former HMEC 2000) and Faculty approval.

Modifications:

FOOD 4510 Food Product Development Cr.Hrs. 3 0.0
This course will help the student 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. May not be held with HNSC 4280. Prerequisites: FOOD 3010 (D) and MKT 2210 (D) and [AGRI 2400 or STAT 2000 or STAT 2001] (D).

HNSC 1210 Nutrition for Health and Changing Lifestyles Cr.Hrs. 3 0.0
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. May not be held with HNSC 1100. Not available to students who hold credit for HNSC 2170.

HNSC 2000 Research Methods and Presentation Cr.Hrs. 3 0.0
(Lab required) 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. May not be held with HMEC 2000 or HMEC 2050. Prerequisite: AGRI 2400 (D) or STAT 1000 (STAT 1001) (D) or STAT 1150 (D).

HNSC 3260 Food Quality Evaluation Cr.Hrs. 3 0.0
(Lab required) Discussion of quality concepts and quality assurance principles for food applications, and of methods for evaluation of sensory, chemical and physical aspects of quality. The course will include food industry visits and demonstrations of food testing techniques. Prerequisites: [HNSC 2160 or FOOD 3010] (D) and [AGRI 2400 or STAT 2000 (STAT 2001)] (D).

HNSC 3330 Ingredient Technology for Designed Foods Cr.Hrs. 3 0.0
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 2770 or MBIO 2770 or CHEM 2360 or CHEM 2361 or MBIO 2360 or MBIO 2361] (D) and [HNSC 2150 or FOOD 2500] (D).

HNSC 3342 Management for Food and Nutrition Professionals Cr.Hrs. 3 0.0
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. May not be held with HNSC 3340. Prerequisites: HNSC 2150 (D) and HNSC 2160 (D) and [GMGT 1010 or ABIZ 1000] (D).

HNSC 4270 Sensory Evaluation of Food Cr.Hrs. 3 0.0
(Lab required) Sensory perception, principles of the sensory analysis of food, requirements for sensory testing, test methods, selection and training of panelists, statistical analysis and interpretation of data. Prerequisites: [HNSC 2160 or FOOD 3010] (D) and [AGRI 2400 or STAT 2000 (STAT 2001)] (D).

HNSC 4280 Food Product Development Cr.Hrs. 3 0.0
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. May

not be held with FOOD 4510. Prerequisites: MKT 2210 (D) and [AGRI 2400 or STAT 2000 or STAT 2001] (D) and [FOOD 3010 or HNSC 3330] (D).

HNSC 4290 Food, Nutrition and Health Policies Cr.Hrs. 3 0.0
Principles and applications of policies, regulations and legislation in the areas of food and health that address nutrition and health problems of populations. Prerequisites: HNSC 2150 (D) and [HNSC 2000 (or the former HMEC 2000 or the former HMEC 2050)] (D) and [HNSC 2130 or HNSC 2140] (D) and [AGRI 2400 or STAT 2000 or STAT 2001] (D).

HNSC 4364 Foods Industry Option Practicum Cr.Hrs. 6 0.0
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. This practicum course is to be completed in the final year of the Food Industry Option. Prerequisites: HNSC 3260 (D) and HNSC 3330 (D) and FOOD 4150 (D) and [GMGT 1010 or ABIZ 1000] (D). Application to Department is required. Limited enrolment.

Net change in credit hours: 0.0

Program modifications:

Modifications to the following programs are outlined on the next 11 pages:

- **Bachelor of Science in Food Science**
- **Bachelor of Science in Food Science, Co-operative Education Option**
- **Bachelor of Science in Food Science – Science Option**
- **Bachelor of Science in Food Science – Business Option**

4.7 Bachelor of Science (Food Science)

The B.Sc. ~~degree program in~~ Food Science provides the academic foundation of knowledge and skills for the wide range of ~~activities~~ **opportunities** 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 **program** 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 the two options of study. Both options have require students to complete the ~~Faculty and~~ Food Science Degree Core courses.

B.Sc. Food Science Degree Core		
Course	**Course Name**	**Credit Hours**
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
AGRI 1600	**Introduction to Agrifood Systems**	**3**
AGRI 2030	**Technical Communications**	**3**
AGRI 2400 (See Note 1)	**Experimental Methods in Agricultural and Food Sciences**	**3**
BIOL 1020	**Biology 1: Principles and Themes**	**3**
BIOL 1030	**Biology 2: Biological Diversity, Function and Interactions**	**3**
CHEM 1300	**University 1 Chemistry: Structure and Modelling in Chemistry**	**3**
CHEM 1310 **or** **CHEM 1320 (See Note 2)**	**University 1 Chemistry: An Introduction to Physical Chemistry** **University 1 Chemistry: An Introduction to Organic Chemistry**	**3**
CHEM 2770/MBIO 2770 **(See Note 3)**	Elements of Biochemistry 1	3
ECON 1010	**Introduction to Microeconomic Principles**	**3**
FOOD 2500	Food Chemistry	3
FOOD 3010	Food Process 1	3
FOOD 4100	**Current Issues in Food and Human Nutrition**	**3**
~~FOOD 4120~~	~~Food Science Seminar~~	~~3~~

FOOD 4150	Food Microbiology 1	3
FOOD 4160	Food Analysis 1	3
FOOD 4200	Quality Control in Foods	3
FOOD 4510	Food Product Development	3
HNSC 1200	**Food: Facts and Fallacies**	**3**
HNSC 1210	Nutrition for Heath and Changing Lifestyles	3
MATH 1210 **or** MATH 1300 **(See Note 4)**	**Techniques of Classical and Linear Algebra** Vector Geometry and Linear Algebra	3
MATH 1500 or **MATH 1510** or MATH 1520 **(See Note 5)**	Introduction to Calculus **Applied Calculus 1** Introduction to Calculus for Management and Social Sciences	3
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
Free Electives (See Note 6)		**27**
Total Credit Hours for Food Science Degree Core		~~33~~ **90**
Choose either the business option core or the science option core		**30**

Notes:

1. STAT 2000 Basic Statistical Analysis 2 can be substituted for AGRI 2400.

2. Students can hold CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function) in place of CHEM 1320.

3. Under required courses, students can take either CHEM 2770/MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360/MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

4. Students are recommended to take one of MATH 1210 or MATH 1300 however may also substitute MATH 1220 to meet the requirement.

5. Students are recommended to take one of MATH 1500 or MATH 1510 or MATH 1520 however may also substitute MATH 1230 to meet the requirement.

6. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

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.

Science Option Core		
Course	**Course Name**	**Credit Hours**
BIOE 3530	Engineering Fundamentals	3
CHEM 1310 Or CHEM 1320	University 1 Chemistry: Introduction to Physical Chemistry University 1 Chemistry: Introduction to Organic Chemistry	3
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~~ **Degree** Core.		
FOOD 3210	Food Engineering Fundamentals	3
FOOD 4010	Food Process 2	3
FOOD 4250	Food Analysis 2	3
MBIO 1010 **(See Note 7)**	Microbiology 1	3
MKT 2210	Fundamentals of Marketing	3
Restricted Electives		
Group 1 – Food Safety		**Credit Hours**

Choose one course from the following:		3
~~AGRI 2190~~ ~~And~~ ~~ANSC 2530~~	~~Toxicology Principles~~ ~~And~~ ~~Nutritional Toxicology~~	-
FOOD 1000	Food Safety, Today and Tomorrow	
FOOD 4310	Introduction to HAACP	
FOOD 4500	Food Safety and Regulations	
Group 2 – General		
Choose two courses from the following:		6
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	
Total Credit Hours for Science Option Core		**30**

Notes:

7. Students who already have credit for MBIO 1220 Essentials of Microbiology before entering the program can use it towards MBIO 1010.

Suggested Food Science (Science Option) Program Progression:

Year 1

Course	**Course Name**	**Credit Hours**
~~AGRI 1500~~	~~Natural Resources and Primary Agricultural Production~~	~~3~~
~~AGRI 1510~~	~~Production, Distribution and Utilization of Agricultural Products~~	~~3~~
AGRI 1600	**Introduction to Agrifood Systems**	**3**

BIOL 1020	Biology 1: Principles and Themes	3
BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry University 1 Chemistry: An Introduction to Organic Chemistry	3
ECON 1010	Introduction to Microeconomic Principles	3
~~ECON 1020~~	~~Introduction to Macroeconomic Principles~~	~~3~~
HNSC 1200	**Food: Facts and Fallacies**	**3**
HNSC 1210	**Nutrition for Health and Changing Lifestyles**	**3**
MATH 1210 or MATH 1300	**Techniques of Classical and Linear Algebra** or Vector Geometry and Linear Algebra	3
~~MATH 1310~~	~~Matrices for Management and Social Sciences~~	-
MATH 1500 or **MATH 1510** or MATH 1520	Introduction to Calculus or **Applied Calculus 1** or Introductory to Calculus for Management and Social Sciences	3
Total Credit Hours		30

Year 2

Course	Course Name	Credit Hours
ABIZ 1000	**Introduction to Agribusiness Management**	**3**
AGRI 2030	Technical Communications	3
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry or University 1 Chemistry: An Introduction to Organic Chemistry	3

CHEM 2770/MBIO 2770	Elements of Biochemistry 1	3
FOOD 2500	Food Chemistry	3
MBIO 1010	Microbiology 1	3
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
~~Restricted/~~Free Electives~~/Philosophy~~/Co-op		9
Total Credit Hours		30

Year 3

Course	Course Name	Credit Hours
BIOE 3530	Engineering Fundamentals	3
FOOD 3010	Food Process 1	3
FOOD 3210	Food Engineering Fundamentals	3
FOOD 4150	Food Microbiology 1	3
FOOD 4160	Food Analysis 1	3
FOOD 4250	Food Analysis 2	3
~~HNSC 1210~~	~~Nutrition for Health and Changing Lifestyles~~	~~3~~
MKT 2210	Fundamentals of Marketing	3
Restricted Electives		**6**
~~Restricted/~~Free Electives~~/Philosophy~~/Co-op		~~6~~ **3**
Total Credit Hours		30

Year 4

Course	Course Name	Credit Hours
FOOD 4010	Food Process 2	3

FOOD 4100	**Current Issues in Food and Human Nutrition**	**3**
~~FOOD 4120~~	~~Food Science Seminar~~	~~3~~
FOOD 4200	Quality Control in Foods	3
FOOD 4510	Food Product Development	3
Restricted Elective		**3**
~~Restricted/~~Free Electives~~/Philosophy~~/Co-op		~~18~~ **15**

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

Food Science – Business Option

The ~~B.Sc. degree Program in Food Science offers a~~ Business option ~~which now allows~~ **provides** 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 **the areas of** 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.

Business Option Core		
Course	**Course Name**	**Credit Hours**
ABIZ 3510	Economics of Food Policy	3
ACC 1100	Introductory Financial Accounting	3
ECON 1020	**Introduction to Macroeconomic Principles**	**3**
ECON 2010	Microeconomic Theory 1	3
ECON 2020	Macroeconomic Theory 1	3
FOOD 4500	Food Safety and Regulations	3
HRIR 2440	Human Resource Management	3
Restricted Electives		**Credit Hours**
Group 1 – Marketing		**6**

~~Two courses from the following:~~		~~6~~
ABIZ 2510	Introduction to Agricultural and Food Marketing	
~~ABIZ 3520~~	~~Food Distribution and International Marketing~~	~~-~~
MKT 2210	Fundamentals of Marketing	
Group 2 – General		
Choose one course from the following:		3
~~AGRI 2190~~ ~~And~~ ~~ANSC 2530~~	~~Toxicology Principles~~ ~~And~~ ~~Nutritional Toxicology~~	~~-~~
FOOD 1000	Food Safety, Today and Tomorrow	
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 4250	Food Analysis 2	
FOOD 4260	Water Management in Food Processing	
FOOD 4310	Introduction to HAACP	
FOOD 4540	Functional Foods and Nutraceuticals	
Total Credit Hours for Business Option Core		**30**

Suggested Food Science (Business Option) Program Progression:

Year 1

Course	Course Name	Credit Hours
~~AGRI 1500~~	~~Natural Resources and Primary Agricultural Production~~	~~3~~
~~AGRI 1510~~	~~Production, Distribution and Utilization of Agricultural Products~~	~~3~~
AGRI 1600	**Introduction to Agrifood Systems**	**3**
BIOL 1020	Biology 1: Principles and Themes	3

BIOL 1030	Biology 2: Biological Diversity, Function and Interactions	3
CHEM 1300	University 1 Chemistry: Structure and Modelling in Chemistry	3
CHEM 1310 or CHEM 1320	University 1 Chemistry: An Introduction to Physical Chemistry University 1 Chemistry: An Introduction to Organic Chemistry	3
ECON 1010	Introduction to Microeconomic Principles	3
ECON 1020	Introduction to Macroeconomic Principles	3
HNSC 1200	**Food: Facts and Fallacies**	**3**
MATH 1210 **or** MATH 1300 ~~or~~ ~~MATH 1310~~	**Techniques of Classical and Linear Algebra** **or** Vector Geometry and Linear Algebra ~~or~~ ~~Matrices for Management and Social Sciences~~	3
MATH 1500 or **MATH 1510** **or** MATH 1520	Introduction to Calculus or **Applied Calculus 1** **or** Introductory to Calculus for Management and Social Sciences	3
Total Credit Hours		30

Year 2

Course	Course Name	Credit Hours
ABIZ 1000	Introduction to Agribusiness Management	3
ACC 1100	Introductory Financial Accounting	3
AGRI 2030	Technical Communications	3
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
CHEM 2770/MBIO 2770	Elements of Biochemistry 1	3
FOOD 2500	Food Chemistry	3
HNSC 1210	**Nutrition for Health and Changing Lifestyles**	**3**

HRIR 2440	Human Resource Management	3
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
~~Restricted/~~Free Electives~~/Philosophy~~/Co-op		6
Total Credit Hours		30

Year 3

Course	**Course Name**	**Credit Hours**
ABIZ 2510	**Introduction to Agricultural and Food Marketing**	**3**
ECON 2010	Microeconomic Theory 1	3
ECON 2020	Macroeconomic Theory 1	3
FOOD 3010	Food Process 1	3
FOOD 4150	Food Microbiology 1	3
FOOD 4160	Food Analysis 1	3
~~HNSC 1210~~	~~Nutrition for Health and Changing Lifestyles~~	~~3~~
FOOD 4500	**Food Safety and Regulations**	**3**
MKT 2210	**Fundamentals of Marketing**	**3**
~~Restricted/~~Free Electives~~/Philosophy~~/Co-op		~~12~~ **6**
Total Credit Hours		30

Year 4

Course	**Course Name**	**Credit Hours**
ABIZ 3510	Economics of Food Policy	3
~~FOOD 4120~~	~~Food Science Seminar~~	~~3~~
FOOD 4100	**Current Issues in Food and Human Nutrition**	**3**
FOOD 4200	Quality Control in Foods	3
~~FOOD 4500~~	~~Food Safety and Regulations~~	~~3~~

FOOD 4510	Food Product Development	3
Restricted Elective		**3**
~~Restricted/~~Free Electives~~/Philosophy~~/Co-op		15
Total Credit Hours		30

Modifications to the following programs are outlined on the next 22 pages:

- **Bachelor of Science in Human Nutritional Sciences**
- **Bachelor of Science in Human Nutritional Sciences, Co-operative Education Option**
- **Bachelor of Science in Human Nutritional Sciences – Second Degree**
- **Bachelor of Science in Human Nutritional Sciences – Second Degree, Co-operative Education Option**
- **Bachelor of Science in Human Nutritional Sciences, Articulation with Red River College Culinary Arts**
- **Interfaculty Option in Aging**

4.8 Bachelor of Science (Human Nutritional Sciences)

4.8 Human Nutritional Sciences Programs

Students majoring in Human Nutritional Sciences will be admitted to the 4-year degree program, the second-degree program, or the Human Nutritional Sciences/Culinary Arts program. Students in the 4-year degree program must choose from the Nutrition Option, the Foods Option, or the Food Industry Option.

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), or through Dietitian's of Canada Program Match system 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 Agricultural and Food Sciences, the overall program must be planned with academic advising advice. All returning students in the Faculty of Agricultural and Food Sciences must submit a program plan for the succeeding year before the start of registration.

4.8.1 Program Requirements

The following are the guidelines for the program requirements for HNS students. The courses outlined for each program in the sections, which follow, meets these basic requirements.

~~All students complete a core of 9 credit hours consisting of:~~

~~Course Number~~	~~Course Name~~
~~HEAL 2600~~	~~Integration of Health Determinants of Individuals~~
~~HEAL 3000~~	~~Introduction to Social Epidemiology~~
~~HNSC 2000~~	~~Research Methods and Presentation~~

Students ~~admitted prior to September 2019 are urged~~ **are required to follow the program requirements outlined in the academic calendar year they were admitted to the program and are encouraged** to seek academic advising assistance for advice regarding completion of core course requirements.

~~**Electives**~~

~~Courses within each program fall into one of two categories:~~

- ~~Department electives must be chosen from within the program department (HNSC designation).~~
- ~~Free electives may be chosen from within or outside the Faculty of Agricultural and Food Sciences~~

4.8.2 Bachelor of Science (Human Nutritional Sciences)

~~If prerequisites permit, students must register for at least one HNSC course (3 credit hours) per year in order to stay in the Human Nutritional Sciences program.~~

Students Admitted in September 2020 and forward		
Course Number	**Course Name**	**Credit Hours**
-	~~**Courses to be taken by all Human Nutritional Sciences students**~~ -	
AGRI 1600	**Introduction to Agrifood Systems**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences (See Note 1)**	**3**
BIOL 1410 *or* BIOL 1020 and BIOL 1030	Anatomy of the Human Body *or* Biology 1: Principles and Themes *and* Biology 2: Biological Diversity, Function and Interactions ~~(if BIOL 1020 and 1030 are taken, the additional 3 credit hours are considered to be free electives)~~ **(See Note 2)**	3-6
BIOL 1412	Physiology of the Human Body (See Note ~~4~~**2**)	3
CHEM 1300	University 1 Chemistry: Structure and Modeling in Chemistry	3
CHEM 1320 or **CHEM 1310**	University 1 Chemistry: Introduction to Organic Chemistry (See Note ~~1~~**3**) *or* **University 1 Chemistry: Introduction to Physical Chemistry**	3
CHEM 2770/MBIO 2770	Elements of Biochemistry 1 (See Note ~~2~~**4**)	3
CHEM 2780/MBIO 2780	Elements of Biochemistry 2 (See Note ~~3~~**5**)	3
FOOD 4150	Food Microbiology	3
HEAL 2600	Integration of Health Determinants of Individuals	3
HEAL 3000	Introduction to Social Epidemiology	3
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3

HNSC 2000	Research Methods and Presentation	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~~
HNSC 4100	**Current Issues in Food and Human Nutrition**	**3**
PSYC 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology *or* combination of the 2 areas	6
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
All students must select one of the three following options complete the degree program		
1. Nutrition Option		
HNSC 3220	Food and Nutrition Literacy Education	3
HNSC 3300	Vitamins and Minerals in Human Health	3
HNSC 3310	Macronutrients and Human Health	3
HNSC 4320 or HNSC 4300	Nutritional Management of Disease States or Community Nutrition Intervention	3
~~Department~~ **HNSC** Electives		~~15~~ **21**
Free Electives **(See Notes 2 and 6)**		**21-**24
2. Foods Option		
HNSC 3310 or HNSC 3300	Macronutrients and Human Health or Vitamins and Minerals in Human health	3
HNSC 3260	Food Quality Evaluation	3
HNSC 3330	**Ingredient Technology for Designed Foods**	**3**

HNSC 3350	Culture and Food Patterns	3
HNSC 4270	Sensory Evaluation of Food	3
HNSC 4280	Food Product Development	3
HNSC 4290	**Food, Nutrition and Health Policies**	**3**
MKT 2210	Fundamentals of Marketing	3
Program Electives (See Note ~~5~~ **7**)		9
Free Electives **(See Notes 2 and 6)**		**21-**24
3. Food Industry Option		
FOOD 4310	Introduction to HACCP	3
GMGT 1010 **or** **ABIZ 1000**	Business and Society **or** **Introduction to Agribusiness Management**	3
HNSC 3260	Food Quality Behaviour	3
HNSC 3300 or HNSC 3310	Vitamins and Minerals in Human Health or Macronutrients and Human Health	3
HNSC 3330	**Ingredient Technology for Designed Foods**	**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~~	~~-~~
Free Electives **(See Notes 2 and 6)** ~~(see Advising website for suggested electives)~~		**12-**15
Students in the Food Industry Option must complete one of the following three 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~~	
~~AGRI 2530~~	~~Nutritional Toxicology~~	
FOOD 4160	Food Analysis 1	
FOOD 4250	Food Analysis 2	

FOOD 4500	Food Safety and Regulations	
HNSC 4270	Sensory Evaluation of Food	
STAT 3000	Applied Linear Statistical Models	
STAT 3170	Statistical Quality Control	

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.~~ **Students can hold CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function) in place of CHEM 1320.**

1. STAT 2000 Basic Statistical Analysis 2 can be substituted for AGRI 2400.

2. Students selecting BIOL 1020 and BIOL 1030 are not required to complete BIOL 1410. If BIOL 1020 and BIOL 1030 are taken, the additional 3 credit hours will be used towards free electives. Under required courses, students must take either BIOL 1412 (Physiology of the Human Body) or can substitute with BIOL 2410 (Human Physiology 1) and BIOL 2420 (Human Physiology 2). If BIOL 2410 and BIOL 2420 are taken, the additional 3 credit hours will be used towards free electives.

3. Students can hold CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function) in place of CHEM 1320.

~~2.~~ **4.** Under required courses, students can take either CHEM 2770/MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360/MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

~~3.~~ **5.** Under required courses, students can take either CHEM 2780/MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370/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 1020and BIOL 1030 are not required to complete BIOL 1410, and will decrease electives by 3 credit hours. The selection of BIOL 1020 and BIOL 1030 will have more options with regard to taking higher level Biology courses as electives.~~

6. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

~~5.~~ **7.** ~~Nine credit hours of courses from either the Asper School of Business and/or from 3rd and 4th Food Science (Food) courses.~~ **Program Electives – can be from either the Asper School of Business (any level), OR any 3000 or 4000 level FOOD (Food Science) courses (note some FOOD courses are co-taught with HNSC courses). Students must have the correct pre-requisites for the Program Elective and need to plan accordingly.**

Suggested Progression of Program: Nutrition Option		
Year 1		
Course No.		Credit Hours
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
AGRI 1600	**Introduction to Agrifood Systems**	**3**
CHEM 1300	University 1 Chemistry: Structure and Modeling in Chemistry	3
CHEM 1320 or CHEM 1310	University 1 Chemistry: Introduction to Organic Chemistry or University 1 Chemistry: Introduction to Physical Chemistry	3
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body or Biology 1: Principles and Themes and Biology 2: Biological Diversity, Function and Interactions	3-6
BIOL 1412	Physiology of the Human Body	3
PSYC 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology	6
Free Elective(s)		~~3-6~~ **0-3**
Total Credit Hours		30
Year 2		
HNSC 2000	**Research Methods and Presentation**	**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 Food	3
HNSC 2160	Food Preparation and Preservation	3
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
CHEM 2770/MBIO 2770	Elements of Biochemistry 1	3
CHEM 2780/MBIO 2780	Elements of Biochemistry 2	3
HEAL 2600	Integration of Health Determinants of Individuals	3

~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
Free Elective		3
Total credit hours		30
Year 3		
~~HNSC 2000~~	~~Research Methods and Presentation~~	~~3~~
HNSC 3220	Food and Nutrition Literacy Education	3
HNSC 3300	Vitamins and Minerals in Human Health	3
HNSC 3310	Macronutrients and Human Health	3
~~HNSC 3330~~	~~Ingredient Technology for Designed Foods~~	~~3~~
FOOD 4150	Food Microbiology	3
HEAL 3000	Introduction to Social Epidemiology	3
HNSC electives		6
Free Electives		~~3~~ **9**
Total credit hours		30
Year 4		
~~HNSC 4160~~	~~Seminar in Foods & Nutrition~~	~~3~~
~~HNSC 4290~~	~~Food, Nutrition, & Health Policies~~	~~3~~
HNSC 4100	**Current Issues in Food and Human Nutrition**	**3**
HNSC 4300 or HNSC 4320	Community Nutrition Intervention or Nutrition Management of Disease States	3
HNSC electives		~~9~~ **15**
Free electives		~~12~~ **9**
Total credit hours		30

Suggested Progression of Program: Foods Option
Year 1

Course No.		Credit Hours
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
AGRI 1600	**Introduction to Agrifood Systems**	**3**
CHEM 1300	University 1 Chemistry: Structure and Modeling in Chemistry	3
CHEM 1320 or CHEM 1310	University 1 Chemistry: Introduction to Organic Chemistry or University 1 Chemistry: Introduction to Physical Chemistry	3
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body or Biology 1: Principles and Themes and Biology 2: Biological Diversity, Function and Interactions	3-6
BIOL 1412	Physiology of the Human Body	3
PSYC 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology	6
Free Elective(s)		~~3-6~~ **0-3**
Total credit hours		30
Year 2		
HNSC 2000	**Research Methods and Presentation**	**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 Food	3
HNSC 2160	Food Preparation and Preservation	3
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
CHEM 2770/MBIO 2770	Elements of Biochemistry 1	3
CHEM 2780/MBIO 2780	Elements of Biochemistry 2	3
HEAL 2600	Integration of Health Determinants of Individuals	3
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~

~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
MKT 2210	Fundamentals of Marketing	3
Total credit hours		30
Year 3		
~~HNSC 2000~~	~~Research Methods and Presentation~~	~~3~~
~~HNSC 3300~~ ~~or~~ ~~HNSC 3310~~	~~Vitamins and Minerals in Human Health~~ ~~Macronutrients & Human Health~~	~~3~~
HNSC 3260	**Food Quality Evaluation**	**3**
HNSC 3350	Culture and Food Patterns	3
HNSC 3330	Ingredient Technology for Designed Foods	3
FOOD 4150	Food Microbiology	3
HEAL 3000	Introduction to Social Epidemiology	3
Program Electives		6
Free Electives		~~6~~ **9**
Total credit hours		30
Year 4		
HNSC 3300 **or** **HNSC 3310**	**Vitamins and Minerals in Human Health** **or** **Macronutrients and Human Health**	**3**
~~HNSC 3260~~	~~Food Quality Evaluation~~	~~3~~
~~HNSC 4160~~	~~Seminar in Foods & Nutrition~~	~~3~~
HNSC 4100	**Current Issues in Food and Human Nutrition**	**3**
HNSC 4270	Sensory Evaluation of Food	3
HNSC 4280	Food Product Development	3
HNSC 4290	Food, Nutrition, and Health Policies	3
Program Elective		3
Free electives		12
Total credit hours		30

Suggested Progression of Program: Food Industry Option		
Year 1		
Course No.	Course Name	Credit Hours
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
AGRI 1600	**Introduction to Agrifood Systems**	**3**
CHEM 1300	University 1 Chemistry: Structure and Modeling in Chemistry	3
CHEM 1320 or CHEM 1310	University 1 Chemistry: Introduction to Organic Chemistry or University 1 Chemistry: Introduction to Physical Chemistry	3
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body or Biology 1: Principles and Themes and Biology 2: Biological Diversity, Function and Interactions	3-6
BIOL 1412	Physiology of the Human Body	3
PSYC 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology	6
Free Elective(s)		~~3-6~~ **0-3**
Total credit hours		30
Year 2		
HNSC 2000	**Research Methods and Presentation**	**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 Food	3
HNSC 2160	Food Preparation and Preservation	3
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
CHEM 2770/MBIO 2770	Elements of Biochemistry 1	3

CHEM 2780/MBIO 2780	Elements of Biochemistry 2	3
HEAL 2600	Integration of Health Determinants of Individuals	3
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~MKT 2210~~	~~Fundamentals of Marketing~~	~~3~~
GMGT 1010 **or** **ABIZ 1000**	Business and Society or **Introduction to Agribusiness Management**	3
Total credit hours		30
Year 3		
~~HNSC 2000~~	~~Research Methods and Presentation~~	~~3~~
~~HNSC 3300~~ ~~or~~ ~~HNSC 3310~~	~~Vitamins and Minerals in Human Health~~ ~~Macronutrients & Human Health~~	~~3~~
HNSC 3260	**Food Quality Evaluation**	**3**
HNSC 3330	Ingredient Technology for Designed Foods	3
FOOD 4150	Food Microbiology	3
HEAL 3000	Introduction to Social Epidemiology	3
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
MKT 2210	**Fundamentals of Marketing**	**3**
Concentration Electives		6
Free Electives		~~6~~ **9**
Total credit hours		30
Year 4		
HNSC 3300 **or** **HNSC 3310**	**Vitamins and Minerals in Human Health** **or** **Macronutrients and Human Health**	**3**
~~HNSC 3260~~	~~Food Quality Evaluation~~	~~3~~
~~HNSC 4160~~	~~Seminar in Foods & Nutrition~~	~~3~~
HNSC 4100	**Current Issues in Food and Human Nutrition**	**3**
HNSC 4280	Food Product Development	3

HNSC 4364	Food Industry Option Practicum	6
FOOD 4310	Introduction to HACCP	3
Concentration Electives		9
Free elective		3
Total credit hours		30

4.8.2.1 Dietetics Preparation

1. Courses required to build into the ~~Human~~ Nutrition Option program:

Course Number	Course Name	Credit Hours	Placement in Program
GMGT 1010 **or** **ABIZ 1000**	Business and Society **or** **Introduction to Agribusiness Management**	3	Free Elective
HNSC 3400	Nutrition Assessment and Counselling	3	Free Elective
HNSC 3342	Management for Food and Nutrition Professionals	3	~~Department~~ **HNSC** Elective
HNSC 4140	Quantity Food Production and Management	3	~~Department~~ **HNSC** Elective
One of ~~HNSC 4300~~, **HNSC 4290,** HNSC 4310, HNSC 4362 or HNSC 4340	**Food, Nutrition, and Health Policies *or* Nutrition and the Elderly *or* Nutrition Option Practicum *or* Maternal and Child Nutrition**	3 – 6	~~Department~~ **HNSC** Elective
HNSC 4300	**Community Nutrition Intervention**	**3**	**HNSC elective**
HNSC 4320	Nutrition Management of Disease States	3	HNSC 4300 or HNSC 4320

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.

Students admitted to the ~~Department of~~ Human Nutritional Sciences **program** 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 Agricultural and Food Sciences' website. 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 to obtain the B.Sc. 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 and

counselling. Check with an Academic Advisor to review the supporting course requirements from previous academic work.

Suggested Progression of Program: Dietetics Preparation		
Year 1		
Course No.		Credit Hours
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
AGRI 1600	**Introduction to Agrifood Systems**	**3**
CHEM 1300	University 1 Chemistry: Structure and Modeling in Chemistry	3
CHEM 1320 or CHEM 1310	University 1 Chemistry: Introduction to Organic Chemistry or University 1 Chemistry: Introduction to Physical Chemistry	3
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body or Biology 1: Principles and Themes and Biology 2: Biological Diversity, Function and Interactions	3-6
BIOL 1412	Physiology of the Human Body	3
PSYC 1200 or SOC 1200	Introduction to Psychology or Introduction to Sociology	6
Free Elective(s)		~~3-6~~ **0-3**
Total credit hours		30
Year 2		
HNSC 2000	**Research Methods and Presentation**	**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 Food	3
HNSC 2160	Food Preparation and Preservation	3

AGRI 2400	**Experimental Methods in Agricultural and Food Sciences**	**3**
CHEM 2770/MBIO 2770	Elements of Biochemistry 1	3
CHEM 2780/MBIO 2780	Elements of Biochemistry 2	3
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
GMGT 1010 **or** **ABIZ 1000**	Business and Society **or** **Introduction to Agribusiness Management**	3
HEAL 2600	Integration of Health Determinants of Individuals	3
Total credit hours		30
Year 3		
~~HNSC 2000~~	~~Research Methods and Presentation~~	~~3~~
HNSC 3220	Food and Nutrition Literacy Education	3
HNSC 3300	Vitamins and Minerals in Human Health	3
HNSC 3310	Macronutrients and Human Health	3
~~HNSC 3330~~	~~Ingredient Technology for Designed Foods~~	~~3~~
HNSC 3342	Management for Food and Nutrition Professionals	3
HNSC 3400	Nutrition Assessment and Counselling	3
FOOD 4150	Food Microbiology	3
HEAL 3000	Introduction to Social Epidemiology	3
Free Elective		~~3~~ **9**
Total credit hours		30
Year 4		
HNSC 4100	**Current Issues in Food and Human Nutrition**	**3**
HNSC 4140	Food Production and Management	3
~~HNSC 4160~~	~~Seminar in Foods & Nutrition~~	~~3~~
~~HNSC 4290~~	~~Food, Nutrition, & Health Policies~~	~~3~~
HNSC 4300	**Community Nutrition Intervention**	**3**

HNSC 4320	Nutrition Management of Disease States	3
HNSC 4290, HNSC 4310, HNSC 4362 or HNSC 4340	**Food, Nutrition, and Health Policies *or* Nutrition and the Elderly *or* Nutrition Option Practicum *or* Maternal and Child Nutrition**	3-6
HNSC elective		3-6
Free electives		9
Total credit hours		30

4.8.3 Bachelor of Science (Human Nutritional Sciences) - Second Degree Program

~~Required Courses -- 45 Credit Hours~~

Refer to information in section ~~4.2.2.1~~ **4.8.2.1** 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. Estimated time to completion based on prerequisites is 3 years.

Course No.	**Course Name**	**Credit Hours**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences (See Note 1)**	**3**
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body or Biology 1: Principles and Themes and Biology 2: Biological Diversity, Function and Interactions **(See Note 2)**	3-6
BIOL 1412	Physiology of the Human Body (See Note ~~4~~**2**)	3
CHEM 1300	University 1 Chemistry: Structure and Modeling in Chemistry ~~(see note 1)~~	3
CHEM 1320 **or** **CHEM 1310**	University 1 Chemistry: Introduction to Organic Chemistry (See Note ~~1~~**3**) **or** **University 1 Chemistry: Introduction to Physical Chemistry**	3
CHEM 2770/MBIO 2770	Elements of Biochemistry 1 (See Note ~~2~~**4**)	3
CHEM 2780/MBIO 2780	Elements of Biochemistry 2 (See Note ~~3~~**5**)	3

HNSC 2140	Basic Principles of Human Nutrition	3
HNSC 2160	Principles of Food Preparation and Preservation	3
~~HNSC 3220~~	~~Food and Nutrition Literacy Education~~	~~3~~
~~HNSC 3300~~	~~Vitamins and Minerals in Human Health~~	~~3~~
~~HNSC 3310~~	~~Macronutrients and Human Health~~	~~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~~
Free Electives (See Notes 2 and 6)		**6-9**
Total Credit Hours		**36**
Complete one of the following concentrations: (A, B, or C):		
A. Dietetics Preparation (See Note 9)		
HNSC 3220	**Food and Nutrition Literacy Education**	**3**
HNSC 3300	**Vitamins and Minerals in Human Health**	**3**
HNSC 3310	**Macronutrients and Human Health**	**3**
HNSC 3342	Management for Food and Nutrition Professionals	3
HNSC 3400	**Nutrition Assessment and Counselling**	**3**
HNSC 4140	Quantity Food Production and Management	3
HNSC 4300	**Community Nutrition Intervention**	**3**
HNSC 4320	Nutrition Management of Disease States	3
Total Credit Hours		**24**
B. Human Nutrition		
HNSC 3220	**Food and Nutrition Literacy Education**	**3**
HNSC 3300	**Vitamins and Minerals in Human Health**	**3**
HNSC 3310	**Macronutrients and Human Health**	**3**

HNSC 4320 or HNSC 4300	Nutrition Management of Disease States or Community Nutrition Intervention	3
HNSC electives (see Note 7)		**12**
-	~~Choose 6 credit hours from:~~	~~6~~
~~HNSC 4300~~, ~~HNSC 4310~~, ~~HNSC 4340~~, ~~*or*~~ ~~HNSC 4350~~	~~Community Nutrition Intervention,~~ ~~Nutrition and the Elderly,~~ ~~Maternal and Child Nutrition, *or*~~ ~~Nutrition in Exercise and Sport~~	-
Total Credit Hours		**24**
C. Foods		
HNSC 2150	Composition, Functional and Nutritional Properties of Foods	3
HNSC 3300 **or** **HNSC 3310**	**Vitamins and Minerals in Human Health** **or** **Macronutrients and Human Health**	**3**
HNSC 3260 **or** **HNSC 4270**	Food Quality Evaluation **or** **Sensory Evaluation of Food**	3
HNSC 3330	**Ingredient Technology for Designed Foods**	**3**
HNSC 3350	**Culture and Food Patterns**	**3**
HNSC 4290	**Food, Nutrition and Health Policies**	**3**
HNSC 4540	Functional Foods and Nutraceuticals	3
Program Elective (see Note 8)		**3**
Total Credit Hours		**24**

~~**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 options A, B, or C):~~

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.~~

1. STAT 2000 (Basic Statistical Analysis 2) can be substituted for AGRI 2400.

2. Students selecting BIOL 1020 and BIOL 1030 are not required to complete BIOL 1410. If BIOL 1020 and BIOL 1030 are taken, the additional 3 credit hours will be used towards free electives. Under required courses, students must take either BIOL 1412 (Physiology of the Human Body) or can substitute with BIOL 2410 (Human Physiology 1) and BIOL 2420 (Human Physiology 2). If BIOL 2410 and BIOL 2420 are taken, the additional 3 credit hours will be used towards free electives.

3. Students can hold CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function) in place of CHEM 1320. If a student has both CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function) and CHEM 2220 (Introductory Organic Chemistry 2: Reactivity and Synthesis) they can substitute both for CHEM 1300 and CHEM 1320.

~~2.~~ **4.** Under required courses, students can take either CHEM 2770/MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360/MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

~~3.~~ **5.** Under required courses, students can take either CHEM 2780/MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370/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 1020and BIOL 1030 are not required to complete BIOL 1410, and will decrease electives to 3 credit hours. The selection of BIOL 1020 and BIOL 1030 will have more options with regard to taking higher level Biology courses as electives.~~

6. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

7. HNSC electives required in Option B: Human Nutrition must be at the 3000 or 4000 level.

8. The Program Elective required in Option C: Foods can be from either the Asper School of Business (any level), OR any 3000 or 4000 level FOOD (Food Science) courses (note some FOOD courses are co-taught with HNSC courses). Students must have the correct pre-requisites for the Program Elective and need to plan accordingly.

9. Supporting courses for Dietetics that, while not required for the degree, are required for applying to dietetic internships and for prerequisites:

- **ABIZ 1000 or GMGT 1010**
- **HNSC 2000**
- **HNSC 2130 or HNSC 2150**
- **HNSC 4100**
- **One of HNSC 4290, HNSC 4310, HNSC 4340 or HNSC 4362**
- **FOOD 4150 or MBIO 1220 or MBIO 1010**

- **Psychology or Sociology (6 credit hours)**

4.8.4 Bachelor of Science (Human Nutritional Sciences) - Agreement with Red River College Culinary Arts Program

Estimated time to completion based on prerequisites is 3 years.

Course Number	Course Name	Credit Hours
Required Courses		
AGRI 1600	**Introduction to Agrifood Systems**	**3**
AGRI 2400	**Experimental Methods in Agricultural and Food Sciences (See Note 1)**	**3**
BIOL 1410 or BIOL 1020 and BIOL 1030	Anatomy of the Human Body or Biology 1: Principles and Themes and Biology 2: Biological Diversity, Function and Interactions (See Note ~~1~~**2**)	3 – 6
BIOL 1412	Physiology of the Human Body (See Note ~~1~~**2**)	3
CHEM 1300	University 1 Chemistry: Structure and Modeling in Chemistry	3
CHEM 1320 or CHEM 1310	University 1 Chemistry: Introduction to Organic Chemistry **(See Note 3)** or University 1 Chemistry: Introduction to Physical Chemistry	3
CHEM 2770/MBIO 2770	Elements of Biochemistry 1 (See Note ~~2~~**4**)	3
CHEM 2780/MBIO 2780	Elements of Biochemistry 2 (See Note ~~2~~**5**)	3
~~STAT 1000~~	~~Basic Statistical Analysis 1~~	~~3~~
~~STAT 2000~~	~~Basic Statistical Analysis 2~~	~~3~~
HNSC 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 3220	Food and Nutrition Literacy Education	3
HNSC 3300	Vitamins and Minerals in Human Health	3

HNSC 3310	Macronutrients and Human Health	3
HNSC 3330	Ingredient Technology for Designed Foods	3
HNSC 4290	Food, Nutrition and Health Policies	3
Free Electives (See Notes 2 and 6)		**3-6**
Total Credit Hours		**54**
~~**HNS Courses for Area of Emphasis (6 credit hours from A or B)**~~ **Complete one of the following concentrations: (A or B):**		
~~Choose one from A or B:~~		
A. Human Nutrition		
HNSC 4300 or HNSC 4320	Community Nutrition Intervention or Nutrition Management of Disease States	3
HNSC 4310 or HNSC 4340 or HNSC 4350	Nutrition and the Elderly or Maternal Nutrition or Nutrition Exercise and Sport	3
Total Credit Hours		**6**
B. Foods – Choose two of:		
HNSC 3260	Food Quality Evaluation	3
HNSC 4270	**Sensory Evaluation of Food**	**3**
HNSC 4540	Functional Foods and Nutraceuticals	3
~~**Electives**~~ **Total Credit Hours**		**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 3310Macronutrients & Human Health and HNSC 3300 Vitamins and Minerals in Human Health. If BIOL 1020 and BIOL 1030 are selected then BIOL 1412 will take the place of a 3 credit hours free elective. Students can take either BIOL 1412 or BIOL 2410 and BIOL 2420.~~

~~2. Students can take either CHEM 2770 / 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 2780 (Elements of Biochemistry 2) **or** CHEM 2370 / MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).~~

~~3. PSYC 1200 / SOC 1200 & HNSC 2130 prerequisites are waived in this program for HNSC 3220. HNSC 2140 must be completed before registering for this course.~~

1. STAT 2000 (Basic Statistical Analysis 2) can be substituted for AGRI 2400.

2. Students selecting BIOL 1020 and BIOL 1030 are not required to complete BIOL 1410. If BIOL 1020 and BIOL 1030 are taken, the additional 3 credit hours will be used towards free electives. Under required courses, students must take either BIOL 1412 (Physiology of the Human Body) or can substitute with BIOL 2410 (Human Physiology 1) and BIOL 2420 (Human Physiology 2). If BIOL 2410 and BIOL 2420 are taken, the additional 3 credit hours will be used towards free electives.

3. Students can hold CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function) in place of CHEM 1320. If a student has both CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function) and CHEM 2220 (Introductory Organic Chemistry 2: Reactivity and Synthesis) they can substitute both for CHEM 1300 and CHEM 1320.

4. Under required courses, students can take either CHEM 2770/MBIO 2770 (Elements of Biochemistry 1) or CHEM 2360/MBIO 2360 (Biochemistry 1: Bio-molecules and an Introduction to Metabolic Energy).

5. Under required courses, students can take either CHEM 2780/MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370/MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).

6. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses (3 credit hours each) are used towards free electives.

4.12 Interfaculty Option in Aging

An Interfaculty Option in Aging is offered by the following faculties and colleges: Agricultural and Food Sciences, Arts, Kinesiology and Recreation Management, Medicine, Nursing, and Social Work.

To complete the option, students in the Human Nutritional Sciences Program must complete each of the following requirements:

Interfaculty Option in Aging		
Required Courses (6 credit hours):	FMLY 2650 or REC 2650 or SWRK 2650 The Social Aspects of Aging	KIN 2610 or NURS 2610 Health and Physical Aspects of Aging
At least six (6) credit hours of discipline-specific (professional) applied work in the student's department of registration	Rady Faculty of Health Sciences Courses: FMLY 4300 ~~HMEC 4090~~ Agricultural and Food Sciences Course: HNSC 4362	Application is required for all field placement or practicum courses.
Six (6) credit hours of aging-related courses from participating units (other courses are available from the participating faculties)	Rady faculty of Health Sciences Courses: FMLY 3220 FMLY 3240 FMLY 4220 Agricultural and Food Sciences Courses: HNSC 2130 HNSC 4310	

Upon completion of these requirements, a concentration will be added to the student's transcript

Plant Science

Deletions:

PLNT 3510 Cropping Systems Cr.Hrs. 3 -3.0
PLNT 4600 Issues in Agricultural Biotechnology Cr.Hrs. 3 -3.0

Introduction:

PLNT 4510 Advanced Cropping Systems Cr.Hrs. 3 +3.0
Examination and analysis of sustainable Prairie cropping systems. Emphasis will be placed on systems that optimize the benefits of crop rotation, integrate crops and livestock, conserve soil and water resources, and enhance biodiversity. Current, historical, and emerging crop production systems from the Prairies and other regions of the world will be discussed. Includes experiential learning through farm interviews and/or field tours and/or guest speakers. May not be held with PLNT 3510. Prerequisite: PLNT 2500 (D).

Modifications:

PLNT 0780 Plant Disease Management Cr.Hrs. 4 0.0
(Lab required) 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. May not be held with PLNT 4270. Prerequisite: PLNT 0410 (C) or the former DAGR 0420 (D).

PLNT 0820 Organic Crop Production on the Prairies Cr.Hrs. 3 0.0
Management principles and practices involved in the production of organic field and forage crops with a focus on the Canadian Prairie region. May not be held with PLNT 3560. Prerequisites: [PLNT 0410 (C) and SOIL 0420 (C)] or [the former DAGR 0420 (D)].

PLNT 2500 Crop Production Cr.Hrs. 3 0.0
(Lab required) 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 1600 (or the former AGRI 1500) (D).

PLNT 2510 Fundamentals of Horticulture Cr.Hrs. 3 0.0
(Lab required) 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 1030 (D) and [AGRI 1600 (or the former AGRI 1500) (D) or PLNT 1000 (D)] or consent of instructor.

PLNT 3540 Weed Science Cr.Hrs. 3 0.0
(Lab required) 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 1030 (D) and [AGRI 1600 (D) or the former AGRI 1500 (D)] or consent of instructor.

PLNT 3560 Organic Crop Production on the Prairies Cr.Hrs. 3 0.0
Management principles and practices involved in the production of organic field and forage crops with a focus on the Canadian Prairie region. May not be held with PLNT 0820. Prerequisites: PLNT 2500 (D) and SOIL 3600 (D) or consent of instructor.

PLNT 3570 Fundamentals of Plant Pathology Cr.Hrs. 3 0.0
(Lab required) 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 1030 (D).

PLNT 4270 Plant Disease Control Cr.Hrs. 3 0.0
(Lab required) Diseases attacking field crops and horticultural plants: recognition of symptoms, methods of prevention, alleviation, and control. May not be held with PLNT 0780. Prerequisite: PLNT 2500 (D) or consent of instructor.

PLNT 4590 Physiology of Crop Plants Cr.Hrs. 3 0.0
(Lab required) Concepts dealing with the physiological response of crop plants to the environment from the time of seed germination through to reproduction. Prerequisite: BIOL 2242 (D) or consent of instructor.

Net change in credit hours: -3.0

Soil Science

Modification:

SOIL 0630 Soil Fertility Cr.Hrs. 4 0.0
(Lab required) Soil nutrients and their behaviour; evaluation of soil fertility including soil testing for precision agriculture; crop response to fertilizers; the manufacture, properties, reactions and application of fertilizer. Prerequisite: SOIL 0420 (C).

Net change in credit hours: 0.0

School of Agriculture

Modifications:

DAGR 0520 Managing Agricultural Safety Cr.Hrs. 3 0.0
This course provides introductory information on farm safety. It is designed to raise awareness about safety issues and legislation in the agricultural industry, and to get students thinking about safety at their own worksite or on their family farm operations. May not be held with AGRI 2500 or DAGR 0660 when titled “Introduction to Farm Safety.”

DAGR 0530 Agricultural Human Resource Management Cr.Hrs. 3 0.0
Students will apply processes such as job analysis and design, recruitment and selection, training and development, performance management, and compensation management to develop a comprehensive human resource management plan for an agricultural enterprise. Human Resource legislation will be covered and resources to support human resource

management decision making will be identified. May not be held with ABIZ 2620 or AGRI 3030 when titled “Agricultural Human Resource Management.” Prerequisite: DAGR 0480 (C).

DAGR 0550 Managing Farm Business Transition Cr.Hrs. 3 0.0
This course is designed to provide students with the tools and knowledge to incorporate transition management into their farm business management planning. Students will be introduced to family profiles/dynamics, business structures, and financial and managerial influences that affect farm and business transition options. There will application of real farm examples to provide context for the instructional materials. May not be held with AGRI 2510 or DAGR 0660 when titled “Succession/Transition Considerations in Farm Management,” or the former DAGR 0780. Prerequisites: ABIZ 0460 (C) and DAGR 0480 (C). Pre- or corequisites: ABIZ 0470 (C) and DAGR 0490 (C).

DAGR 0760 Agricultural Law Cr.Hrs. 3 0.0
This course explores the complex set of laws affecting the agricultural and agri-food sectors, focusing upon those laws critical for effective planning and sound decision making with respect to farm operations, agribusinesses and agri-food sector institutions. Topics include but are not limited to Manitoba's and Canada's legal systems, the major laws affecting the stakeholders listed above, and the legal resolution of issues in the agricultural and agri-food sectors. May not be held with ABIZ 2610.

Net change in credit hours: 0.0

October 22, 2019

Report of the Senate Committee on Curriculum and Course Changes, Desautels Faculty of Music – Submitted to Senate for Ordinary Debate

Preamble:

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are available on the University Governance website. The SCCCC is "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".
2. At its meeting on October 22, 2019, the SCCCC considered curriculum and course changes proposed by the Desautels Faculty of Music.
3. The curriculum and course changes were endorsed by the Faculty Council of the Faculty of Music at its meeting on May 9, 2019.
4. The Senate Planning and Priorities Committee (SPPC) also considered the proposal at its meeting on August 26, 2019.

Observations

1. The Desautels Faculty of Music is proposing the deletion of eight (8) courses and the introduction of eighteen (18) courses, as outlined in the attachments to this Report, for a net increase of forty-eight (48) credit hours of course offerings.
2. Course introductions include several courses that have been regularly offered in previous years as topics courses, including MUSC 3010 – Advanced Diction 1 (3), MUSC 3020 – Advanced Diction 2 (3), MUSC 3056 – Plainchant and Liturgy in Medieval Europe (3), MUSC 3116 – Standard Orchestral Excerpts and Solos 1 (Cello and Bass), MUSC 3118 - Standard Orchestral Excerpts and Solos 2 (Cello and Bass), and MUSC 3992 – Advanced Counterpoint (3).

   Other course introductions will replace existing courses, which are proposed for deletion, but with updated content, terminology, and/or course titles, including MUSC 3772 – Vocal Pedagogy for Choirs (3), MUSC 4156 – Choral Music Literature and Programming (3), MUSC 4752 – Elementary and Middle Years Choral Methods (3), MUSC 4762 – Senior Years and Community Choral Methods (3), MUSC 4772 – Instrumental Music Methods 1 (3), and MUSC 4782 – Instrumental Music Methods 2 (3). The changes follow from the recent introduction of the Bachelor of Music (Music Education) degree (Senate, March 7, 2018; Board of Governors, March 20, 2018) and represent minor adjustments to the courses based on the Faculty's experience with the implementation and delivery of the program since the Fall 2018.
3. Two 6 credit hour courses used in the B.Mus.(Mus.Ed.), Early Years Concentration, MUSC 3200 – Orff Schulwerk 1 (6) and MUSC 3220 – Kodály Music Education 1 (6), will be introduced to replace their 3 credit hour counterparts, MUSC 3106 and MUSC 3108, respectively. In response to feedback from students and the community, the courses will be reintroduced as 6 credit hour courses, to reflect workload and the number of contact hours.
4. MUSC 3200 - Orff Schulwerk 1 and MUSC 3220 – Kodály Music Education 1 are also requirements of the Orff Schulwerk and Kodály Music Education programs, respectively,

that are offered by the Faculty in the Summer Term. Four additional course introductions, MUSC 3210 - Orff Schulwerk 2 (6), MUSC 4212 – Orff Schulwerk 3 (6), MUSC 3222 - Kodály Music Education 2 (6), and MUSC 4224 - Kodály Music Education 3 (6), would also be used in these programs. The courses could also be completed as electives in the B.Mus.(Mus.Ed.)

5. The Faculty is proposing changes to the following programs, as detailed in the proposal.
    - **Bachelor of Music (Music Education)**
    - **Bachelor of Music**
    - **Minor in Music**

    Modifications to the B.Mus.(Mus.Ed.), together with proposed course changes, would align the curriculum and course offerings. Program modifications would facilitate students' access to courses that meet the second teachable and breadth requirements for admission to the Bachelor of Education degree, within the four-year structure of the B.Mus.(Mus.Ed.). Changes to the list of third and fourth year electives follow from proposed course changes.

    Modifications to the Bachelor of Music involve changes to the Core Music History Electives and the Music Theory Electives that follow from proposed course changes.

    Modifications to the Minor in Music, for students in other Faculties, are intended to increase the rigor of the program requirements. The number of required courses would increase from two (6 credit hours) to three (9 credit hours) and the number of elective credit hours would decrease from 12 to 9 credit hours. Any MUSC course, with the exception of Major and Minor Practical Study courses, could be used to meet the elective requirements.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends:

THAT Senate approve curriculum and course changes proposed by the Desautels Faculty of Music, effective September 1, 2020.

Respectfully submitted,

Professor Dean McNeill, Vice-Chair
Senate Committee on Curriculum and Course Changes

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

August 26, 2019

Report of the Senate Planning and Priorities Committee RE: Undergraduate Course Changes Beyond Nine Credit Hours, Desautels Faculty of Music

Preamble:

1. The Senate Planning and Priorities Committee (SPPC) has the responsibility to report to Senate on curriculum changes with significant resource implications, including additions to departmental curricula of more than nine (9) credit hours.
2. At its meeting on August 26, 2019, the SPPC considered and endorsed a proposal from the Desautels Faculty of Music to introduce a net increase of forty-eight (48) credit hours.
3. The Senate Committee on Curriculum and Course Changes will also consider curriculum and course changes proposed by the Faculty, at a meeting in October 2019.

Observations:

1. The Desautels Faculty of Music is proposing the deletion of eight (8) courses and the introduction of eighteen (18) courses, as outlined in the attachments to this Report, for a net increase of forty-eight (48) credit hours.
2. No additional resources would be required to deliver the eighteen course introductions. Eight are existing courses that will be deleted and reintroduced with new course numbers, course titles, and/or a different number of credit hours. Six are courses that have been offered for many years under topics course titles. Four would be new course offerings.
3. The four new courses (MUSC 3210 Orff Schulwerk 2, MUSC 4212 Orff Schulwerk 3, MUSC 3222 Kodály Music Education 2, MUSC 4224 Kodály Music Education 3) and two existing courses to be reintroduced with different course numbers and number of credit hours (MUSC 3200 Orff Schulwerk 1, MUSC 3220 Kodály Music Education 1) would be taught by existing faculty or Sessional Instructors and would be offered on a cost-recovery basis in the Summer Term. The courses would be used by students in the Bachelor of Music, Bachelor of Music (Music Education), Post-baccalaureate Diploma in Education, Master of Education, and Master of Music programs. They are also used by community members, including recent graduates hired to teach music in Early Years contexts whose background is Middle or Senior Years, and participants who successfully complete the courses earn certification from Carl Orff Canada or the Kodály Society of Canada, respectively.
4. The Library has indicated that current collections can support the course introductions.
5. Referring to proposals to introduce several 6 credit hour courses (MUSC 3200, MUSC 3210, MUSC 3220, MUSC 3222, MUSC 4212, MUSC 4224), it was noted that, while there was no regulation against doing so and, at times, there might be particular pedagogical reasons for teaching a 6 credit hour course, 3 credit hour courses were the norm across the University. Some committee members suggested that introducing two 3-credit hour courses instead would provide greater flexibility for students, in terms of their class schedules, and for those who might elect not to complete the second half of the course. It would also provide the Faculty with greater flexibility to schedule the courses in any term.

Faculty of Music representatives at the meeting said the 6 credit hour courses would be offered only in the Summer Term as part of the Orff Schulwerk and Kodály Music Education programs. Courses would be scheduled for full days over a two-week period, which they suggested was another way to give students flexibility in course scheduling. Also, accrediting bodies for these programs required that the courses provide an immersive experience. This might be more difficult to achieve with two 3 credit hour courses scheduled in different terms. The Faculty representatives indicated they would take the committee's suggestion back to the Faculty's Music Education committee, for discussion, and would also consult with the accrediting bodies.

6. The Faculty is proposing program modifications to the Bachelor of Music and Bachelor of Music (Music Education), as detailed in the attachment to the Report. Ten of the course introductions would either replace current course requirements in various B.Mus.(Mus.Ed.) concentrations or would be added to lists of elective courses used in the B.Mus. degree.

   Modifications to the B.Mus.(Mus.Ed.) degree (i) accommodate the introduction of MUSC 3200 Orff Schulwerk 1 and MUSC 3220 Kodály Music Education 1 as 6 credit hour courses, which was done in response to concerns that 3 credit hours was not appropriate given the number of contact hours and students' workload in the courses and (ii) in various concentrations, redistribute requirements for courses in a Teachable Minor across the program, to facilitate students' access to courses in other departments, in the context of a prescribed B.Mus.(Mus.Ed.) curriculum and class schedule, and to ensure students are able to complete the program within four years.

7. The Faculty is proposing program modifications to the Minor in Music, as detailed in the attachment to the Report, which are intended to increase the rigor of the program. The number of required courses would be increased from two courses to three, and a requirement for 12 credit hours of Music electives would be reduced to 9 credit hours to be chosen from any MUSC courses, with the exception of the Major Practical Study courses, rather than from the current list of electives. No new courses would be required. The current course requirements would be replaced by three existing courses.

Recommendation:

The Senate Planning and Priorities Committee recommends:

THAT Senate approve the Report of the Senate Planning and Priorities Committee concerning undergraduate course changes beyond nine credit hours, in the Desautels Faculty of Music, effective September 1, 2020.

Respectfully submitted,

Prof. David Watt, Chair
Senate Planning and Priorities Committee

Desautels
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August 19, 2019

To whom it may concern,

I am writing to the Senate Planning and Priorities Committee to provide a statement on the resource implications of the proposed course and curriculum changes in the accompanying package. All these changes were approved at the May 9, 2019 Desautels Faculty of Music Faculty Council meeting. The changes are essentially in two categories. In the first category are a number of Music Education courses with changed titles or course descriptions. Category 2 contains special topics courses that the Faculty has regularly offered for several years and will not require additional resources in order to regularize them. In short, these changes largely represent a cleanup of a backlog of unregularized courses.

If you require any further information, please do not hesitate to contact me.

Yours sincerely,

Edward Jurkowski, Ph.D.
Dean, Desautels Faculty of Music

Faculty of Music

Deletions:

MUSC 3106 Orff Schulwerk 1 Cr.Hrs. 3 -3.0
MUSC 3108 Kodály Music Education 1 Cr.Hrs. 3 -3.0
MUSC 3770 Vocal Techniques Cr.Hrs. 3 -3.0
MUSC 4154 Choral Repertoire Cr.Hrs. 3 -3.0
MUSC 4750 Choral Techniques 1 Cr.Hrs. 3 -3.0
MUSC 4760 Choral Techniques 2 Cr.Hrs. 3 -3.0
MUSC 4770 Band and Orchestral Techniques 1 Cr.Hrs. 3 -3.0
MUSC 4780 Band and Orchestral Techniques 2 Cr.Hrs. 3 -3.0

Introductions:

MUSC 3010 Advanced Diction 1 Cr.Hrs. 3 +3.0
Advanced training in rules of pronunciation, language use and translation skills in Italian and German. May not be held with MUSC 3820 when titled Advanced Diction 1. Prerequisite: Consent of the Faculty of Music.

MUSC 3012 Advanced Diction 2 Cr.Hrs. 3 +3.0
Advanced training in rules of pronunciation, language use and translation skills in French and English. May not be held with MUSC 3820 when titled Advanced Diction 2. Prerequisite: Consent of the Faculty of Music.

MUSC 3056 Plainchant and Liturgy in Medieval Europe Cr.Hrs. 3 +3.0
Intensive study of plainchant and liturgy in medieval Europe. Topics will include the development and standardization of "Gregorian" chant, issues of style and genre, related regional repertories, and issues of historiography and performance practice. May not be held with MUSC 3830 when titled Seminar in Gregorian Chant. Prerequisite: Consent of the Faculty of Music.

MUSC 3116 Standard Orchestral Excerpts and Solos I (Cello and Bass) Cr.Hrs. 3 +3.0
An in-depth study of standard orchestral excerpts for Cello and Bass from the Baroque and Classical eras, with emphasis on technical and stylistic analysis, execution, and preparation for professional auditions and performance. May not be held with MUSC 3830 when titled Cello Orchestral Excerpts Part 1. Performance stream students (Cello and Bass) only. Prerequisite: Instructor approval.

MUSC 3118 Standard Orchestral Excerpts and Solos 2 (Cello and Bass) Cr.Hrs. 3 +3.0
An in-depth study of standard orchestral excerpts for Cello and Bass from the Romantic and Modern eras, with emphasis on technical and stylistic analysis, execution, and preparation for professional auditions and performance. May not be held with MUSC 3830 when titled Cello Orchestral Excerpts Part 2. Performance stream students (Cello and Bass) only. Prerequisite: Instructor approval.

MUSC 3200 Orff Schulwerk 1 Cr.Hrs. 6 +6.0
(Lab required) 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 working knowledge of music rudiments. May not be held with the former MUSC 3130 or the former MUSC 3106 or MUSC 3360 when titled Choral,

Recorder and Movement. Prerequisite: A grade of "C" or better in MUSC 1930 or consent of Instructor.

MUSC 3210 Orff Schulwerk 2 Cr.Hrs. 6 +6.0
(Lab required) An exploration of Orff-Schulwerk theory and pedagogy with materials and activities in Basic Orff, creative movement, recorder, aural skills, and choral techniques. This course is designed to further participants' musical growth and their understanding of lesson planning and curriculum for the elementary years. Laboratory component includes the study of both soprano and alto recorders. May not be held with the former MUSC 3140. Prerequisite: Grade of C+ or better in MUSC 3200 or the former MUSC 3106 or the former MUSC 3130 or consent of Instructor.

MUSC 3220 Kodály Music Education 1 Cr.Hrs. 6 +6.0
(Lab required) An introduction to contemporary Kodály-inspired pedagogy for preschool and early years contexts. In addition to exploring philosophy, practice, and materials for music teaching and learning, course participants will have opportunities to develop their personal vocal, musicianship, and conducting skills in the lab component. May not be held with the former MUSC 3108 or MUSC 3360 when titled Kodály 1: Pedagogy and Materials. Prerequisite: a grade of "C" or better in MUSC 1930 or consent of the Instructor.

MUSC 3222 Kodály Music Education 2 Cr.Hrs. 6 +6.0
(Lab required) Inspired pedagogy, lesson planning, and project work for upper elementary and middle years with continued development of musicianship, conducting, and ensemble music-making in the lab component. Prerequisite: MUSC 3220 or the former MUSC 3108 or consent of Instructor.

MUSC 3772 Vocal Pedagogy for Choirs Cr.Hrs. 3 +3.0
The study of basic principles of vocal pedagogy and technique as they apply to educational settings and choral contexts. Study of the anatomy and physiology of breathing, phonation, and resonant tone production. Overview of stages of vocal development and introduction to diction for choirs. Examination of materials and procedures for group vocal instruction. May not be held with the former MUSC 3770. Prerequisite: MUSC 2460 or consent of Instructor.

MUSC 3992 Advanced Counterpoint Cr.Hrs. 3 +3.0
The study of contrapuntal structures in modal, tonal, neo-tonal and/or post-tonal music. This course will include the analysis of composition in two or more parts in a variety of historical genres, and the creation of pieces modeled directly on the works studied. May not be held with MUSC 3820 when titled Advanced Counterpoint. Prerequisites: MUSC 1014 and MUSC 2120.

MUSC 4156 Choral Music Literature and Programming Cr.Hrs. 3 +3.0
Survey of historic and contemporary choral repertoire including major choral forms, composers, and performance practice, with a focus on representative works. Introduction to concert programming and planning for diverse choral ensembles. Examination of materials and resources for organizing and administering community, church, and school choral programs. May not be held with the former MUSC 4150 or the former MUSC 4154. Prerequisite: MUSC 2460 or consent of Instructor.

MUSC 4212 Orff Schulwerk 3 Cr.Hrs. 6 +6.0
(Lab required) Continues instruction in the theory, philosophy, and pedagogy related to Orff process. Students are expected to create, orchestrate and perform at a high level, and to reach a high standard of competence in the art of teaching especially at the middle school level.

Course work features mixed meters, and an exploration of medieval modes and their place in music history and in the Schulwerk. Competence in composing and arranging in the elemental style and familiarity with materials from the Schulwerk, and Medieval, Renaissance, and Contemporary sources is developed along with recorder work using the full complement of recorders. Fluency on alto and soprano recorder is expected prior to the start of the course. May not be held with the former MUSC 3140. Prerequisite: a grade of B or better in MUSC 3210 or consent of Instructor.

MUSC 4224 Kodály Music Education 3 Cr.Hrs. 6 +6.0
(Lab required) Kodály-inspired pedagogy for older beginners, senior years contexts, and community ensembles, with continued skill development in musicianship, conducting, and ensemble music-making in the lab component. Prerequisite: a grade of "C" or better in MUSC 3222 or consent of Instructor.

MUSC 4752 Elementary and Middle Years Choral Methods Cr.Hrs. 3 +3.0
Introduction to methods and pedagogical approaches for students in elementary and middle years choirs. Application of vocal technique, score preparation, and advanced conducting principles to unison, 2-part, and 3-part vocal music for unchanged and changing voices in a variety of styles. Examination of materials and resources for classroom instruction in choral music, including appropriate repertoire and methods of assessment. May not be held with the former MUSC 4750. Prerequisite: MUSC 3772 or the former MUSC 3770 or consent of Instructor.

MUSC 4762 Senior Years and Community Choral Methods Cr.Hrs. 3 +3.0
Methods and pedagogical approaches for rehearsing, evaluating, organizing, and conducting changed voices in school and community ensembles. Introduction of teaching strategies and application of vocal technique, score preparation, and advanced conducting principles to mixed voice repertoire in a variety of genres for diverse groups of singers. Examination of materials and resources related to choral music instruction. May not be held with the former MUSC 4760. Prerequisite: MUSC 2460, MUSC 3772, the former MUSC 3770, MUSC 4752, the former MUSC 4750, or consent of Instructor.

MUSC 4772 Instrumental Music Methods 1 Cr.Hrs. 3 +3.0
The study of principles and methods related to beginning and middle school instrumental pedagogy. Techniques for teaching individual instruments in a group setting and the instruction/administering of a large ensemble program. Close examination of the fundamentals of tone production, technique and instrument specific skills. The study of rehearsal techniques, lesson planning, score preparation and assessment practices. Examination of appropriate instructional materials and repertoire for beginning and middle school instrumental ensembles. May not be held with the former MUSC 4770. Prerequisite: MUSC 2460. Pre- or corequisite: MUSC 3690 or MUSC 3780 or MUSC 3790 or MUSC 3800 or MUSC 3894 or consent of the Faculty of Music.

MUSC 4782 Instrumental Music Methods 2 Cr.Hrs. 3 +3.0
The continued study of instrumental pedagogy at the high school level. Continued development of approaches to score study, rehearsal techniques and repertoire selection. Application of conducting skills for advancing instrumental ensembles. May not be held with the former MUSC 4780. Prerequisite: MUSC 3780 or MUSC 3790 or MUSC 4772 or the former MUSC 4770 or consent of the Faculty of Music. Pre- or corequisite: MUSC 3690 or consent of Instructor.

Net change in credit hours: +48.0

Program modifications:

Modifications to the **Bachelor of Music (Music Education)** are outlined on the next 27 pages:

Section 1: Degree and Diploma Programs Offered

Degree	**Year to Complete**		**Total Credit Hours**	
	Current	Proposed	Current	Proposed
Bachelor of Music	4*	4*	126	126
Bachelor of Music (Composition)	4*	4*	126	126
Bachelor of Music (History)	4*	4*	126	126
Bachelor of Music (Performance)	4*	4*	126	126
Bachelor of Music (Music Education)	4*	4*	132	132
Integrated Bachelor of Music/Bachelor of Education**	5*	5*	Currently Under Review	Currently Under Review
Bachelor of Jazz Studies	4*	4*	126	126
Post-Baccalaureate Diploma in Performance	4*	4*	30	30

*Minimum time to graduation: Four years if admission is directly from high school and five years if admission is via University 1

**Intake into the Integrated Bachelor of Music/Bachelor of Education is currently suspended.

~~**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 D: Academic Calendar Content

5.1a. Early~~/Middle~~ Years Concentration **5.1a. Early Years Concentration**

Year One

Current			**Proposed**		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3	MUSC 1014	Introduction to Music in History ~~1~~ 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	**Mathematics Requirement	3		**Mathematics Requirement	3
	**~~Witten~~ English Requirement	3		****Written** English Requirement	3
	Total Credit Hours	32		Total Credit Hours	32

**Can be used to fulfill the breadth component
Requirements for breadth component effective 2018-2019:

- 6 credit hours of English Literature and/or French Literature
- 6 credit hours of Social Studies (History and/or Geography)
- 6 credit hours of Mathematics or Statistics
- 6 credit hours from Science: Biology, Chemistry, Environmental Science, Geological Science or Physics

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3

MUSC 2180	Ensemble	2	MUSC ~~1~~2180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~2190	Ensemble	2
MUSC 2384	Musicianship 3	2	MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2	MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	Breadth requirement	~~3~~		Breadth requirement	**6**
	~~Music History Elective~~	~~3~~		Music History Elective	3
	Music History Elective	3			
Total Credit Hours		35	Total Credit Hours		35

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
~~MUSC 3106 or MUSC 3108~~	~~Orff-Schulwerk 1 (Summer Term) or Kodály Music Education (Summer Term)~~	~~3~~	**MUSC 3200 or MUSC 3220**	**Orff-Schulwerk 1 (Summer Term) or Kodály Music Education (Summer Term)**	**6**
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
~~MUSC 3770~~	~~Vocal Techniques~~	~~3~~	**MUSC 3772**	**Vocal Pedagogy for Choirs**	**3**
~~MUSC 4750~~	~~Choral Techniques 1~~	~~3~~	**MUSC 4752**	**Elementary and Middle Years Choral Methods**	**3**
	Teachable minor	6		Teachable minor	6
	Breadth requirement	6		Breadth requirement	6
~~Total Credit Hours~~		~~34~~	**Total Credit Hours**		**37**

Year Four

Current			Proposed		
~~MUSC 3360~~	~~Topics in Music Education~~	~~3~~			
MUSC 3730	Early Music Development	3	MUSC 3730	Early Music Development	3
MUSC 4160	Major Practical Study	3	MUSC 4160	Major Practical Study	3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3
	Teachable Minor	6		Teachable Minor	6
	~~Breadth requirement~~	~~9~~		**Breadth Requirement**	**6**
				Music History Elective	**3**
~~Total Credit Hours~~		~~31~~	**Total Credit Hours**		**28**
TOTAL DEGREE CREDIT HOURS		132	TOTAL DEGREE CREDIT HOURS		132

5.1b. Early~~/Middle~~ Years Concentration (With "W" or "Math" Requirement as Teachable Minor**)**

5.1b. Early Years Concentration (With "W" or "Math" Requirement as Teachable Minor)

Year One

Current			Proposed		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History ~~1~~ 2	3	MUSC 1014	Introduction to Music in History ~~1~~ 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2

MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	**Mathematics Requirement	3		**Mathematics Requirement	3
	**~~Witten~~ English Requirement	3		****Written** English Requirement	3
Total Credit Hours		32	Total Credit Hours		32

****Can be used to fulfill the breadth component (Math requirement may not be MUSC 3230 Acoustics of Music)**

Requirements for breadth component effective 2018-2019:

- 6 credit hours of English Literature and/or French Literature
- 6 credit hours of Social Studies (History and/or Geography
- 6 credit hours of Mathematics or Statistics
- 6 credit hours from Science: Biology, Chemistry, Environmental Science, Geological Science or Physics

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2	MUSC ~~1~~**2**180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~**2**190	Ensemble	2
MUSC 2384	Musicianship 3	2	MUSC ~~1~~**2**384	Musicianship ~~1~~ **3**	2
MUSC 2394	Musicianship 4	2	MUSC ~~1~~**2**394	Musicianship ~~2~~ **4**	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	~~Breadth requirement~~	~~3~~		Breadth requirement	**6**
	~~Music History Elective~~	~~3~~		Music History Elective	3
	Music History Elective	3			
Total Credit Hours		35	Total Credit Hours		35

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
~~MUSC 3106 or MUSC 3108~~	~~Orff-Schulwerk 1 (Summer Term) or Kodály Music Education (Summer Term)~~	~~3~~	**MUSC 3200 or MUSC 3220**	**Orff-Schulwerk 1 (Summer Term) or Kodály Music Education (Summer Term)**	**6**
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
~~MUSC 3770~~	~~Vocal Techniques~~	~~3~~	**MUSC 3772**	**Vocal Pedagogy for Choirs**	3
~~MUSC 4750~~	~~Choral Techniques 1~~	~~3~~	**MUSC 4752**	**Elementary and Middle Years Choral Methods**	**3**
	Teachable minor	6		Teachable minor	6
	Breadth requirement	6		Breadth requirement	6
~~Total Credit Hours~~		~~34~~	**Total Credit Hours**		**37**

Year Four

Current			**Proposed**		
~~MUSC 3360~~	~~Topics in Music Education~~	~~3~~			
MUSC 3730	Early Music Development	3	MUSC 3730	Early Music Development	3
MUSC 4470 or MUSC 4160 and	Major Practical Study or Major Practical Study Music Elective	6 3 3	MUSC 4470 or MUSC 4160 and **MUSC XXXX**	Major Practical Study or Major Practical Study Music Elective	6 or 3 3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3

	Teachable Minor	3		Teachable Minor	3
	Breadth requirement	~~9~~		Breadth requirement	**6**
				Music History Elective	**3**
~~Total Credit Hours~~		~~31~~	**Total Credit Hours**		**28**
	TOTAL DEGREE CREDIT HOURS	132		TOTAL DEGREE CREDIT HOURS	132

5.2a. ~~Senior Years~~ Instrumental Concentration **5.2a. Instrumental Concentration**

Year One

Current			**Proposed**		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3	MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	Mathematics Requirement	3		Mathematics Requirement	3
	~~Witten~~ English Requirement	3		**Written** English Requirement	3
Total Credit Hours		32			32

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2	MUSC ~~1~~2180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~2190	Ensemble	2

MUSC 2384	Musicianship 3	2	MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2	MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	~~Music History Elective~~	~~3~~			
	Music History Elective	3		Music History Elective	3
	~~Teachable Minor~~	~~3~~		**Teachable Minor**	**6**
Total Credit Hours		35			**35**

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
MUSC 3780	Woodwind Techniques	3	MUSC 3780	Woodwind Techniques	3
MUSC 3790	Brass Techniques	3	MUSC 3790	Brass Techniques	3
~~MUSC 4770~~	~~Band and Orchestral Techniques 1~~	3	**MUSC 4772**	**Instrumental Music Methods 1**	3
	Music elective	3		Music elective	3
	~~Teachable Minor~~	~~9~~		**Teachable Minor**	**6**
				History Elective	**3**
	Total Credit Hours	34		Total Credit Hours	34

Year Four

Current			**Proposed**		
MUSC 3690	Percussion Techniques	3	MUSC 3390	Percussion Techniques	3
MUSC 3884	Introduction to Jazz for Music Educators	3	MUSC 3884	Introduction to Jazz for Music Educators	3
MUSC 4470 or MUSC 4160 and	Major Practical Study or Major Practical Study and	6 3	MUSC 4470 or	Major Practical Study or	6 or 3

	Music Elective	3	**MUSC 4160 and** **MUSC XXXX**	**Major Practical Study and** Music Elective	3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2
~~MUSC 4780~~	~~Band and Orchestral Techniques 2~~	3	**MUSC 4782**	**Instrumental Music Methods 2**	3
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3
	Music Elective	3	~~MUSC XXXX~~	Music Elective	3
	Teachable Minor	6		Teachable Minor	6
	Total Credit Hours	31		Total Credit Hours	31
	TOTAL DEGREE CREDIT HOURS	132		TOTAL DEGREE CREDIT HOURS	132

5.2b. ~~Senior Years~~ Instrumental Concentration (With "W" or "Math" Requirement as Teachable Minor)

5.2b. Instrumental Concentration (With "W" or "Math" Requirement as Teachable Minor)

Year One

Current			**Proposed**		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 1	3	MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	Mathematics Requirement	3		Mathematics Requirement	3
	~~Witten~~ English Requirement	3		**Written** English Requirement	3
	Total Credit Hours	32		Total Credit Hours	32

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2	MUSC ~~1~~2180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~2190	Ensemble	2
MUSC 2384	Musicianship 3	2	MUSC ~~1~~2384	Musicianship ~~1~~ 3	2
MUSC 2394	Musicianship 4	2	MUSC ~~1~~2394	Musicianship ~~2~~ 4	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	~~Music History Elective~~	~~3~~			
	Music History Elective	3		Music History Elective	3
	~~Teachable Minor~~	~~3~~		**Teachable Minor**	**6**
	Total Credit Hours	35		Total Credit Hours	35

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
MUSC 3780	Woodwind Techniques	3	MUSC 3780	Woodwind Techniques	3
MUSC 3790	Brass Techniques	3	MUSC 3790	Brass Techniques	3
~~MUSC 4770~~	~~Band and Orchestral Techniques 1~~	3	**MUSC 4772**	**Instrumental Music Methods 1**	3
	Music elective	3		Music elective	3
	~~Teachable Minor~~	~~9~~		**Teachable Minor**	**6**
				History Elective	**3**
	Total Credit Hours	34		Total Credit Hours	34

Year Four

Current			Proposed		
MUSC 3690	Percussion Techniques	3	MUSC ~~3~~3690	Percussion Techniques	3
MUSC 3884	Introduction to Jazz for Music Educators	3	MUSC 3884	Introduction to Jazz for Music Educators	3
MUSC 4470 or MUSC 4160 and	Major Practical Study or Major Practical Study and Music Elective	6 3 3	MUSC 4470 or MUSC 4160 and **MUSC XXXX**	Major Practical Study or Major Practical Study and Music Elective	6 or 3 3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2
~~MUSC 4780~~	~~Band and Orchestral Techniques 2~~	3	**MUSC 4782**	**Instrumental Music Methods 2**	3
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3
	Music Elective	6		Music Elective	6
	Teachable Minor	3		Teachable Minor	3
	Total Credit Hours	31		Total Credit Hours	31
	TOTAL DEGREE CREDIT HOURS	132		TOTAL DEGREE CREDIT HOURS	132

5.3a ~~Senior Years~~ Choral Concentration **5.3a Choral Concentration**

Year One

Current			Proposed		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3	MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2

MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	Mathematics Requirement	3		Mathematics Requirement	3
	~~Witten~~ English Requirement	3		**Written** English Requirement	3
	Total Credit Hours	32		Total Credit Hours	32

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2	MUSC ~~1~~2180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~2190	Ensemble	2
MUSC 2384	Musicianship 3	2	MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2	MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	~~Music History Elective~~	~~3~~		Music History Elective	3
	Music History Elective	3			
	~~Teachable Minor~~	~~3~~		**Teachable Minor**	**6**
	Total Credit Hours	35		Total Credit Hours	35

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2

MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
~~MUSC 3770~~	~~Vocal Techniques~~	3	**MUSC 3772**	**Vocal Pedagogy for Choirs**	3
~~MUSC 4750~~	~~Choral Techniques 1~~	3	**MUSC 4752**	**Elementary and Middle Years Choral Methods**	3
~~MUSC 4760~~	~~Choral Techniques 2~~	3	**MUSC 4762**	**Senior Years and Community Choral Methods**	3
	Music elective	3		Music elective	3
	Teachable Minor	12		Teachable Minor	12
	Total Credit Hours	37		Total Credit Hours	37

Year Four

Current			**Proposed**		
~~MUSC 3360~~	~~Topics in Music Education~~	~~3~~	**MUSC 3730**	**Early Music Development**	**3**
~~MUSC 3730 OR MUSC 3884~~	~~Early Music Development OR Introduction to Jazz for Music Educators~~	3	**MUSC 3884**	**Introduction to Jazz for Music Educators**	3
MUSC 4470 or MUSC 4160 and	Major Practical Study or Major Practical Study and Music Elective	6 3 3	MUSC 4470 or MUSC 4160 and **MUSC XXXX**	Major Practical Study or Major Practical Study and Music Elective	6 or 3 3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2
~~MUSC 4154~~	~~Choral Repertoire~~	~~3~~	**MUSC 4156**	**Choral Literature and Programming**	3
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3
	~~Music Elective~~	~~6~~		**Music Elective**	**3**
				Music History Elective	**3**
	~~Teachable Minor~~	~~3~~			
	Total Credit Hours	31		Total Credit Hours	**28**
	TOTAL DEGREE CREDIT HOURS	~~135~~		TOTAL DEGREE CREDIT HOURS	132

5.2b. ~~Senior Years~~ Choral Concentration (With "W" or "Math" Requirement as Teachable Minor) as Teachable Minor)

5.3b. Choral Concentration (With "W" or "Math" Requirement

Year One

Current			**Proposed**		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 1	3	MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	Mathematics Requirement	3		Mathematics Requirement	3
	~~Witten~~ English Requirement	3		**Written** English Requirement	3
	Total Credit Hours	32		Total Credit Hours	32

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2	MUSC ~~1~~2180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~2190	Ensemble	2
MUSC 2384	Musicianship 3	2	MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2	MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	~~Music History Elective~~	~~3~~			
	Music History Elective	3		Music History Elective	3
	~~Teachable Minor~~	~~3~~		**Teachable Minor**	**6**
	Total Credit Hours	35		Total Credit Hours	35

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
~~MUSC 3770~~	~~Vocal Techniques~~	~~3~~	**MUSC 3772**	**Vocal Pedagogy for Choirs**	**3**
~~MUSC 4750~~	~~Choral Techniques 1~~	~~3~~	**MUSC 4752**	**Elementary and Middle Years Choral Methods**	**3**
~~MUSC 4760~~	~~Choral Techniques 2~~	~~3~~	**MUSC 4762**	**Senior Years and Community Choral Methods**	**3**
	Music elective	3		Music elective	3
	~~Teachable Minor~~	~~9~~		**Teachable Minor**	**6**
				History Elective	**3**
Total Credit Hours		34	Total Credit Hours		34

Year Four

Current			**Proposed**		
~~MUSC 3360~~	~~Topics in Music Education~~	~~3~~	**MUSC 3730**	**Early Music Development**	**3**
~~MUSC 3730 OR MUSC 3884~~	~~Early Music Development OR Introduction to Jazz for Music Educators~~	~~3~~	**MUSC 3884**	**Introduction to Jazz for Music Educators**	**3**
MUSC 4470 or MUSC 4160 and	Major Practical Study or Major Practical Study and Music Elective	6 3 3	MUSC 4470 or MUSC 4160 and **MUSC XXXX**	Major Practical Study or Major Practical Study and Music Elective	6 or 3 3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2

~~MUSC 4154~~	~~Choral Repertoire~~	3	**MUSC 4156**	**Choral Literature and Programming**	**3**
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3
	Music Elective	6		Music Elective	6
	Teachable Minor	3		Teachable Minor	3
	Total Credit Hours	31		Total Credit Hours	31
	TOTAL DEGREE CREDIT HOURS	132		TOTAL DEGREE CREDIT HOURS	132

5.4a Guitar/Strings Concentration 5.4a Guitar/Strings Concentration

Year One

Current			**Proposed**		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3	MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	Mathematics Requirement	3		Mathematics Requirement	3
	~~Witten~~ English Requirement	3		**Written** English Requirement	3
	Total Credit Hours	32		Total Credit Hours	32

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3

MUSC 2180	Ensemble	2	MUSC ~~1~~2180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~2190	Ensemble	2
MUSC 2384	Musicianship 3	2	MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2	MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	~~Music History Elective~~	~~3~~			
	Music History Elective	3		Music History Elective	3
	~~Teachable Minor~~	~~3~~		**Teachable Minor**	**6**
	Total Credit Hours	35		Total Credit Hours	35

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
MUSC 3894 or MUSC 3800	Guitar Techniques or String Techniques	3	MUSC 3894 or MUSC 3800	Guitar Techniques or String Techniques	3 or 3
~~MUSC 4750 or MUSC 4770~~	~~Choral Techniques 1 or Band and Orchestral Techniques 1~~	3	**MUSC 4752 or MUSC 4772**	**Elementary and Middle Years Choral Methods Instrumental Music Methods I**	3 or 3
	Music elective	6		Music elective	6
	~~Teachable Minor~~	~~9~~		Teachable Minor	**6**
				History Elective	**3**
	Total Credit Hours	34		Total Credit Hours	34

Year Four

Current			**Proposed**		
MUSC 3730	Early Music Development	3	MUSC 3730	Early Music Development	3

MUSC 3884	Introduction to Jazz for Music Educators	3	MUSC 3884	Introduction to Jazz for Music Educators	3
MUSC 4470 or MUSC 4160 and	Major Practical Study or Major Practical Study and Music Elective	6 3 3	MUSC 4470 or MUSC 4160 and **MUSC XXXX**	Major Practical Study or Major Practical Study and Music Elective	6 or 3 3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2
~~MUSC 4750 or 4760~~ ~~or~~ ~~MUSC 4770 or 4780~~	~~Choral Techniques 1 or 2~~ ~~or~~ ~~Band and Orchestral Techniques 1 or 2~~	~~3~~ ~~3~~	**MUSC 4752** **or** **MUSC 4762** **or** **MUSC 4772** **or** **MUSC 4782**	**Elementary and Middle Years Choral Methods** **or** **Senior Years and Community Choral Methods** **or** **Instrumental Music Methods 1** **or** **Instrumental Music Methods 2**	**3** **3**
MUSC 4894 or	Advanced Guitar Techniques or Music Elective	3	MUSC 4894 or **MUSC XXXX**	Advanced Guitar Techniques or Music Elective	3 or 3
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3
	Teachable Minor	6		Teachable Minor	6
	Total Credit Hours	31		Total Credit Hours	31
	TOTAL DEGREE CREDIT HOURS	132		TOTAL DEGREE CREDIT HOURS	132

5.2b. Guitar/Strings Concentration
(With "W" or "Math" Requirement as Teachable Minor)

5.4b. Guitar/Strings Concentration
(With "W" or "Math" Requirement as Teachable Minor)

Year One

Current			**Proposed**		
MUSC 1004	Introduction to Music in History 1	3	MUSC 1004	Introduction to Music in History 1	3
MUSC 1014	Introduction to Music in History 2	3	MUSC 1014	Introduction to Music in History 2	3
MUSC 1110	Music Theory 1	3	MUSC 1110	Music Theory 1	3
MUSC 1120	Music Theory 2	3	MUSC 1120	Music Theory 2	3
MUSC 1180	Ensemble	2	MUSC 1180	Ensemble	2
MUSC 1190	Ensemble	2	MUSC 1190	Ensemble	2
MUSC 1384	Musicianship 1	2	MUSC 1384	Musicianship 1	2
MUSC 1394	Musicianship 2	2	MUSC 1394	Musicianship 2	2
MUSC 1400	Major Practical Study	6	MUSC 1400	Major Practical Study	6
	Mathematics Requirement	3		Mathematics Requirement	3
	~~Witten~~ English Requirement	3		**Written** English Requirement	3
	Total Credit Hours	32		Total Credit Hours	32

Year Two

Current			**Proposed**		
MUSC 2100	Introduction to Music Teaching and Learning	3	MUSC 2100	Introduction to Music Teaching and Learning	3
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3
MUSC 2180	Ensemble	2	MUSC ~~1~~2180	Ensemble	2
MUSC 2190	Ensemble	2	MUSC ~~1~~2190	Ensemble	2
MUSC 2384	Musicianship 3	2	MUSC 2384	Musicianship 3	2
MUSC 2394	Musicianship 4	2	MUSC 2394	Musicianship 4	2
MUSC 2400	Major Practical Study	6	MUSC 2400	Major Practical Study	6
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
	~~Music History Elective~~	~~3~~			
	Music History Elective	3		Music History Elective	3
	~~Teachable Minor~~	~~3~~		**Teachable Minor**	**6**
	Total Credit Hours	35		Total Credit Hours	35

Year Three

Current			**Proposed**		
MUSC 3102	Composition, Technology and Improvisation for Music Educators	3	MUSC 3102	Composition, Technology and Improvisation for Music Educators	3
MUSC 3180	Ensemble	2	MUSC 3180	Ensemble	2
MUSC 3190	Ensemble	2	MUSC 3190	Ensemble	2
MUSC 3470	Major Practical Study	6	MUSC 3470	Major Practical Study	6
MUSC 3894 or MUSC 3800	Guitar Techniques or String Techniques	3	MUSC 3894 or MUSC 3800	Guitar Techniques or String Techniques	3 or 3
~~MUSC 4750 or MUSC 4770~~	~~Choral Techniques 1 or Band and Orchestral Techniques 1~~	~~3~~	**MUSC 4752 or MUSC 4772**	**Elementary and Middle Years Choral Methods or Instrumental Music Methods I**	**3 or 3**
	Music elective	6		Music elective	6
	~~Teachable Minor~~	~~9~~		**Teachable Minor**	**6**
				History Elective	**3**
	Total Credit Hours	34		Total Credit Hours	34

Year Four

Current			**Proposed**		
MUSC 3730	Early Music Development	3	MUSC 3730	Early Music Development	3
~~MUSC 3884 or MUSC 3360~~	~~Introduction to Jazz for Music Educators or Topics in Music Education~~	3	**MUSC 3884 or MUSC 4442**	**Introduction to Jazz for Music Educators or Jazz Pedagogy**	**3**
MUSC 4470 or MUSC 4160 and	Major Practical Study or Major Practical Study and Music Elective	6 3 3	MUSC 4470 or MUSC 4160 and **MUSC XXXX**	Major Practical Study or Major Practical Study and Music Elective	6 3 3
MUSC 4180	Ensemble	2	MUSC 4180	Ensemble	2
MUSC 4190	Ensemble	2	MUSC 4190	Ensemble	2

~~MUSC 4750 or 4760~~ ~~or~~ ~~MUSC 4770 or 4780~~	~~Choral Techniques 1 or 2~~ ~~or~~ ~~Band and Orchestral Techniques 1 or 2~~	~~3~~ ~~3~~	**MUSC 4752** **or** **MUSC 4762** **or** **MUSC 4772** **or** **MUSC 4782**	**Elementary and Middle Years Choral Methods** **or** **Senior Years and Community Choral Methods** **or** **Instrumental Music Methods 1** **or** **Instrumental Music Methods 2**	**3** or **3**
MUSC 4894 or	Advanced Guitar Techniques or Music Elective	3 or 3	MUSC 4894 or **MUSC XXXX**	Advanced Guitar Techniques or Music Elective	3 or 3
MUSC 4896	Cultural Perspectives for Music Educators	3	MUSC 4896	Cultural Perspectives for Music Educators	3
	Music Elective	3		Music Elective	3
	Teachable Minor	3		Teachable Minor	3
	Total Credit Hours	31		Total Credit Hours	31
	TOTAL DEGREE CREDIT HOURS	132		TOTAL DEGREE CREDIT HOURS	132

CHANGES TO SECTION 4.3: ELECTIVES THIRD AND FOURTH YEARS

Bachelor of Music Electives

CURRENT			PROPOSED		
Course Number	**Course Title**	**Credit Hours**	**Course Number**	**Course Title**	**Credit Hours**
MUSC 2072	Jazz History 1	3	MUSC 2072	Jazz History 1	3
MUSC 2082	Jazz History 2	3	MUSC 2082	Jazz History 2	3
			MUSC 2100	**Introduction to Music Teaching and Learning**	**3**
MUSC 2110	Music Theory 3	3	MUSC 2110	Music Theory 3	3
MUSC 2112	Jazz Theory 1	3	MUSC 2112	Jazz Theory 1	3
MUSC 2120	Music Theory 4	3	MUSC 2120	Music Theory 4	3
MUSC 2122	Jazz Theory 2	3	MUSC 2122	Jazz Theory 2	3
MUSC 2460	Conducting	3	MUSC 2460	Conducting	3
MUSC 3050	Research Methods (History Concentration requirement)	3	MUSC 3050	Research Methods (History Concentration requirement)	3
MUSC 3054	Medieval Music History	3	MUSC 3054	Medieval Music History	3
MUSC 3064	Baroque Music History	3	MUSC 3064	Baroque Music History	3
MUSC 3074	Classical Music History	3	MUSC 3074	Classical Music History	3
MUSC 3084	Romantic Music History	3	MUSC 3084	Romantic Music History	3
MUSC 3090	Introduction to Ethnomusicology	3	MUSC 3090	Introduction to Ethnomusicology	3
MUSC 3100	Opera Repertoire	3	MUSC 3100	Opera Repertoire	3
			MUSC 3102	**Composition, Technology, and Improvisation for Music Educators**	**3**
MUSC 3104	History of Opera 1: From Monteverdi to Mozart	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 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 3140~~	~~Music for Children 2~~	6			
MUSC 3150	Orchestration (Composition Concentration requirement)	3	MUSC 3150	Orchestration (Composition Concentration requirement)	3
			MUSC 3200	**Orff Schulwerk 1 (Summer Term)**	**6**
			MUSC 3210	**Orff Schulwerk 2 (Summer Term)**	**6**
			MUSC 3220	**Kodaly Music Education (Summer Term)**	**6**
			MUSC 3222	**Kodály Music Education 2 (Summer Term)**	**6**
MUSC 3230	Acoustics of Music (fulfills University "M" requirement)	3	MUSC 3230	Acoustics of Music (fulfills University "M" requirement)	3
MUSC 3270	Performance Skills	3	MUSC 3270	Performance Skills	3
MUSC 3360	Topics in Music Education	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 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 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 3404	From New Wave to Rave: A History of Popular Music in the Late 20th Century	3
MUSC 3480	Minor Practical Study	3	MUSC 3480	Minor Practical Study	3

MUSC 3620	Independent Study 1	3	MUSC 3620	Independent Study 1	3
MUSC 3650	Electroacoustic Music	3	MUSC 3650	Electroacoustic Music	3
MUSC 3690	Percussion Techniques	3	MUSC 3690	Percussion Techniques	3
MUSC 3730	Early Music Development	3	MUSC 3730	Early Music Development	3
~~MUSC 3770~~	~~Vocal Techniques~~	3	**MUSC 3772**	**Vocal Pedagogy for Choirs**	**3**
MUSC 3780	Woodwind Techniques	3	MUSC 3780	Woodwind Techniques	3
MUSC 3790	Brass Techniques	3	MUSC 3790	Brass Techniques	3
MUSC 3800	String Techniques	3	MUSC 3800	String Techniques	3
MUSC 3820	Topics in Music	3	MUSC 3820	Topics in Music	3
MUSC 3830	Topics in Music	3	MUSC 3830	Topics in Music	3
MUSC 3840	Topics in Music	3	MUSC 3840	Topics in Music	3
MUSC 3850	Topics in Music	3	MUSC 3850	Topics in Music	3
MUSC 3884	Introduction to Jazz for Music Educators	3	MUSC 3884	Introduction to Jazz for Music Educators	3
MUSC 3894	Guitar Techniques	3	MUSC 3894	Guitar Techniques	3
MUSC 3964	History of Western Art Music After 1900	3	MUSC 3964	History of Western Art Music After 1900	3
MUSC 3974	Music Theory After 1900	3	MUSC 3974	Music Theory After 1900	3
MUSC 4010	French Diction and Repertoire	3	MUSC 4010	French Diction and Repertoire	3
MUSC 4020	Italian Diction and Repertoire	3	MUSC 4020	Italian Diction and Repertoire	3
MUSC 4030	German Diction and Repertoire	3	MUSC 4030	German Diction and Repertoire	3
MUSC 4130	History of Women in Music	3	MUSC 4130	History of Women in Music	3
MUSC 4140	History of Canadian Music	3	MUSC 4140	History of Canadian Music	3
~~MUSC 4154~~	~~Choral Repertoire~~	3	**MUSC 4156**	**Choral Literature and Programming**	**3**

			MUSC 4212	**Orff Schulwerk 3 (Summer Term)**	**6**
			MUSC 4224	**Kodaly 3 (Summer Term)**	**6**
MUSC 4330	Advanced Analysis	3	MUSC 4330	Advanced Analysis	3
~~MUSC 4350~~	~~Music for Children 3~~	~~6~~			
MUSC 4360	Wind Repertoire	3	MUSC 4360	Wind Repertoire	3
MUSC 4370	Wind Conducting Techniques	3	MUSC 4370	Wind Conducting Techniques	3
MUSC 4380	Piano Repertoire (Required for Piano Performance Majors)	3	MUSC 4380	Piano Repertoire (Required for Piano Performance Majors)	3
MUSC 4390	Piano Chamber Music Literature Seminar	3	MUSC 4390	Piano Chamber Music Literature Seminar	3
MUSC 4430	Pedagogy and Repertoire	3	MUSC 4430	Pedagogy and Repertoire	3
MUSC 4440	Vocal Pedagogy (Required for Voice Majors in Performance and General Concentrations)	3	MUSC 4440	Vocal Pedagogy (Required for Voice Majors in Performance and General Concentrations)	3
MUSC 4480	Minor Practical Study	3	MUSC 4480	Minor Practical Study	3
MUSC 4490	Piano Pedagogy (Required for Piano and Organ Majors in Performance and General Concentrations)	3	MUSC 4490	Piano Pedagogy (Required for Piano and Organ Majors in Performance and General Concentrations)	3
MUSC 4520	Coaching Skills	3	MUSC 4520	Coaching Skills	3
MUSC 4530	Operatic Piano	3	MUSC 4530	Operatic Piano	3
MUSC 4630	20th to 21st Century Piano Repertoire	3	MUSC 4630	20th to 21st Century Piano Repertoire	3
MUSC 4650	Interactive Computer Music		MUSC 4650	Interactive Computer Music	
MUSC 4660	Computer Assisted Composition	3	MUSC 4660	Computer Assisted Composition	3

~~MUSC 4750~~	~~Choral Techniques 1~~	3	**MUSC 4752**	**Elementary and Middle Years Choral Methods**	**3**
~~MUSC 4760~~	~~Choral Techniques 2~~	3	**MUSC 4762**	**Senior Years and Community Choral Methods**	**3**
~~MUSC 4770~~	~~Band and Orchestral Techniques 1~~	3	**MUSC 4772**	**Instrumental Music Methods 1**	**3**
~~MUSC 4780~~	~~Band and Orchestral Techniques 2~~	3	**MUSC 4782**	**Instrumental Music Methods 2**	**3**
			MUSC 4896	**Cultural Perspectives for Music Educators**	**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 Registration Revision deadline. 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.

Program modifications:

Modifications to the **Bachelor of Music** are outlined on the next 2 pages.

Core Music History Electives

In addition to the required first-year History courses (MUSC 1004 and MUSC 1014) Bachelor of Music students must choose four additional courses (12 credit hours) from the chart below – two from Column A and two from Column B.	
A	B
MUSC 3034 Medieval Music History	MUSC 2072 Jazz History 1
MUSC 3044 Renaissance Music History	MUSC 2082 Jazz History 2
MUSC 3064 Baroque Music History	MUSC 3090 Introduction to Ethnomusicology
MUSC 3074 Classical Music History	**MUSC 3056 Plainchant and Liturgy in Medieval Europe**
MUSC 3084 Romantic Music History	MUSC 3104 History of Opera 1: From Monteverdi to Mozart
MUSC 3694 History of Western Art Music after 1900	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 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
	MUSC 3820 or MUSC 3830 (Topics Courses)

Note: Not all of the listed courses will be offered every year.

Music Theory Electives

Current	Proposed
• MUSC 2112 Jazz Theory 1 • MUSC 2122 Jazz Theory 2 • MUSC 3150 Orchestration • MUSC 3650 Electroacoustic Music • MUSC 4330 Advanced Analysis • MUSC 3820 and MUSC 3830 Topics Courses	• MUSC 2112 Jazz Theory 1 • MUSC 2122 Jazz Theory 2 • MUSC 3150 Orchestration • MUSC 3650 Electroacoustic Music • **MUSC 3992 Advanced Counterpoint** • MUSC 4330 Advanced Analysis • MUSC 3820 **or** MUSC 3830 Topics Courses

Program modification:

Modifications to the **Music Minor** are outlined on the next 3 pages.

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 (Current)	*Course Title (Current)*	*Credit Hours (Current)*	*Course Number (Proposed)*	*Course Title (Proposed)*	*Credit Hours (Proposed)*
~~MUSC 1280~~	~~Musical Style &~~	~~3~~	MUSC 1004	Introduction to Music in	3
~~MUSC 1290~~	~~Musical Style &~~	~~3~~	MUSC 1014	Introduction to Music in	3
~~Music courses from List A below~~		~~3~~	MUSC 1120	Music Theory 1	3
		~~9~~	Music courses*		9

* Students pursuing a Music Minor can take any of the music courses in the Academic Calendar for which they have the prerequisites or permission, if required, EXCEPT FOR MUSC 1400, MUSC 2400, MUSC 3470, MUSC 4160, MUSC 4470. Minor practical study (MUSC 1460, MUSC 2480, MUSC 3480, MUSC 4480) is possible with permission of the Dean.

For a minor in music, it is recommended that MUSC 1004, MUSC 1014, and MUSC 1120 be taken before all other courses.

Note for Ensembles:

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.

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.

October 30, 2019

Report of the Senate Committee on Curriculum and Course Changes RE: Modification of Bachelor of Science (Major) in Psychology, including a Proposal for a Co-operative Education Option, Faculty of Science

Preamble:

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are available on the University Governance website. The SCCCC is "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".
2. At its meeting on October 30, 2019, the SCCCC considered a proposal from the Faculty of Science, to modify the Bachelor of Science (Major) in Psychology to introduce a Co-operative Education Option.
3. The proposal was endorsed by the Faculty Council of the Faculty of Science at its meeting on September 6, 2019.
4. The proposal, which includes revised entrance and continuation requirements for the Bachelor of Science (Major) in Psychology, including new requirements specific to the proposed Co-operative Education Option, was also reviewed by the Senate Committee on Instruction and Evaluation (SCIE) at its meeting on October 17, 2019.

Observations

1. The Committee considered a proposal from the Faculty of Science to modify the Bachelor of Science (Major) in Psychology, to introduce a Co-operative Education Option. One objective of the proposal would be to increase experiential learning opportunities for students, consistent with a strategic priority of the University for inspiring minds through innovative and quality teaching. A second objective would be to provide qualified students in the Major program with opportunities for pre-professional development currently limited to students in the Bachelor of Science (Honours) in Psychology. Students who completed the Co-operative Education Option would graduate with stronger credentials and better preparation for employment.
2. To enter the program, students must (i) be eligible to enter the B.Sc.(Maj.) in Psychology, (ii) have completed PSYC 2250 – Introduction to Psychological Research and PSYC 2260 - Introduction to Research Methods in Psychology with a minimum grade of "C", and (iii) have a minimum Degree Grade Point Average of 3.0.
3. In order to graduate with the Co-operative Education Option, students would complete all of the requirements for the B.Sc.(Maj.) in Psychology and at least three 0 credit hour, paid work terms, with the option to complete four (SCI 3980 – Co-operative Education Work Term 1, SCI 3990 - Co-operative Education Work Term 2, and SCI 4980 - Co-operative Education Work Term 3, and SCI 4990 - Co-operative Education Work Term 4, if selected). Each work term would be four or eight months in duration, with eight-month work terms counted as two four-month work terms.

   Students would alternate between full-time academic terms and full-time work experiences in a relevant field with participating employers. Consistent with other co-operative education programs at the University and with accreditation standards for co-

operative education established by Co-operative Education and Work-Integrated Learning Canada (CEWIL), the time spent in work experience would be equivalent to at least three academic terms or 30 percent of the time spent in academic terms for a four-year degree.

4. To continue in the Co-operative Education Option, students would be required to maintain a minimum Degree Grade Point Average of 3.0 at each point of assessment. Students who did not meet the continuation requirements would be required to withdraw from the option and revert to the B.Sc.(Maj.) in Psychology.

5. The Faculty is also making several editorial changes, to clarify current requirements for the Bachelor of Science (Honours) in Psychology in the Academic Calendar.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends:

THAT Senate approve modifications to the Bachelor of Science (Major) in Psychology, including a proposal for a Co-operative Education Option, Faculty of Science, effective September 1, 2020.

Respectfully submitted,

Professor Dean McNeill, Vice-Chair
Senate Committee on Curriculum and Course Changes

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

Report of the Senate Committee on Instruction and Evaluation RE: Modification of Entrance and Continuation Requirements of the Bachelor of Science (Major) in Psychology and Proposed Co-operative Education Option Entrance and Continuation Requirements, Faculty of Science

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Preamble:

1. The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) can be found at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/502.html.

2. At its meeting on October 17, 2019 SCIE considered a proposal from the Faculty of Science to modify the entrance and continuation requirements of the Bachelor of Science (Major) in Psychology, and to introduce entrance and continuation regulations for its Co-operative Education Option, resulting from curriculum and course changes.

Observations:

1. Currently, students entering the B.Sc. (Maj.) in Psychology are normally required to have obtained a grade of C+ or better 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. The entrance requirements would be modified by removing the word “normally”.

2. Students in the B.Sc. (Maj.) in Psychology would no longer be required to obtain departmental approval of their program for each session, or for program revisions.

3. A section outlining the academic regulations of the B.Sc. (Maj.) in Psychology Co-operative Option would be added to the Academic Calendar:

    a) Entrance and continuation in the B.Sc. (Maj.) in Psychology Co-operative Option would require completion of PSYC 2250 and PSYC 2260 with a grade of “C” or better, and a Degree Grade Point Average of 3.00 or better. Students who fail to maintain the Degree Grade Point Average requirement while enrolled in the Co-operative Education Option would be required to withdraw from the option and revert to the B.Sc. (Maj.) or the B.Sc. (Gen.).

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

> ***THAT Senate approve the proposed modifications to entrance and continuation requirements for the Bachelor of Science (Major) in Psychology and the entrance and continuation requirements of the Co-operative Education Option, effective September 1, 2020.***

Respectfully submitted,

Dr. Mark Torchia, Chair
Senate Committee on Instruction and Evaluation

4.12 Psychology Program

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4.12.1 Program Information

Psychology is the scientific study of behaviour and mental processes, including the biological bases of behaviour and cognitive processes, and behavioural and cognitive neuroscience. The Honours and Major programs combine courses in Psychology with related courses in Science. Courses from the Faculty of Arts are included in this program. The Faculty of Science offers programs leading to a B.Sc. (Honours) degree in Psychology and a B.Sc. (Major **and Major Co-op**) degree in Psychology.

B.Sc. Honours Psychology

To enter the Honours program, students must have obtained a grade of "B" or better in PSYC 2260 and a grade of "B" in six credit hours in courses offered by the Faculty of Science. In addition, students must have obtained a degree grade point average of 3.50. Introductory courses in Biological Sciences, Chemistry, Computer Science, Mathematics or Statistics are highly recommended.

Students will normally take PSYC 2260 in Year 2 and enter Honours in Year 3. Students who qualify for entry to the 4-Year Major in Psychology after Year 1 should choose that option. See the 4-Year Major entry requirements for details.

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 3.50 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.

To graduate, a student must obtain 120 credit hours of courses with grades of "C" or better in each course and with a minimum degree grade point average of 3.00. In addition, students must complete the program of study in the chart below.

B.Sc. Four Year Major Psychology

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 DGPA 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 DGPA of 2.00. In addition, the student must complete the program of study as listed in the program chart below.

B.Sc. Four Year Major Psychology Co-operative Option

A co-operative education option is available for Major students. Students should refer to Section 3.5 of this chapter for further information on the Co-op programs.

Entry and continuance in the Four Year Major Co-operative require completion of PSYC 2250 and PSYC 2260 with a grade of "C" or better, and a DGPA of 3.00 or higher. Students who fail to maintain a DGPA of 3.00 while enrolled in the Co-operative Option will be required to withdraw from the option and revert to the Four Year Major or the B.Sc. General.

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~~ 1, 2 120 CREDIT HOURS (comprising courses listed in chart below, and electives)			
PSYC 1200 (or PSYC 1211 and PSYC 1221) (6) 6 credit hours **Faculty of** Science ~~1~~ 4 **courses** (B) **18 credit hours of electives**	PSYC 2250, PSYC 2260~~1~~ 1 (B) 6 credit hours 2000 or 3000 level~~2~~ 5 Psychology 15 credit hours **Faculty of** Science~~5~~ 6 **courses** 3 credit hours ~~options~~ 6 **electives**	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~~ 7 9 credit hours **Faculty of** Science~~5~~ 6 **courses**	PSYC 4520~~2~~ 2 (6) 18 credit hours Psychology~~4~~ 8 6 credit hours **Faculty of** Science~~5~~ 6 **courses**
30 Hours	30 Hours	30 Hours	30 Hours
FOUR YEAR MAJOR~~8,9~~ 1, 3 **(including Co-op Option if selected)** 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 **Faculty of** Science~~1~~ 4 **courses** (C+)	PSYC 2250, PSYC 2260~~1~~ 1 6 credit hours 2000 or 3000 level Psychology~~7~~ 9	18 credit hours 2000 or 3000 level Psychology~~7~~ 9	18 credit hours 2000 or 3000 level Psychology~~7~~ 9
	Plus 30 credit hours of ~~courses from departments in the~~ Faculty of Science **courses**, including a minimum of 18 credit hours at the 2000 level or above~~5~~ 6.		
A "W" course must be taken in Year 1 or Year 2		**Co-op Requirements (if selected):** **SCI 3980, SCI 3990, and SCI 4980, and SCI 4990 (if a 4th work term is selected)**	
MINOR			
PSYC 1200 or (PSYC 1211 and PSYC 1221)	12 credit hours in Psychology courses numbered at the 2000 or 3000 level		
NOTES: **[1] PSYC 2260 satisfies the university mathematics requirement.** **[2] PSYC 4520 satisfies the university written English requirement.**			

~~9~~ 3 IMPORTANT: The four year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

~~1~~ 4 Introductory courses in Biological Sciences, Chemistry, Computer Science, Mathematics, or Statistics are highly recommended.

~~2~~ 5 These 6 credit hours must include 3 credit hours from each of two different lettered categories of Psychology courses below.

~~5~~ 6 The Science courses ~~that are chosen must be approved by the Department of Psychology and~~ must include a minimum of 18 credit hours at the 2000 level or above.

~~3~~ 7 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~~ 8 These 18 credit hours must include 6 credit hours at the 4000 level; and 6 credit hours ~~at any level~~ **of 2000-4000 level Psychology courses** including any remaining lettered category below.

~~7~~ 9 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 the five lettered categories of courses below.

~~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.~~

~~8 The courses required in this program satisfy the university mathematics requirement.~~

(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 2490, PSYC 2530, PSYC 2540
Category B:	Developmental	PSYC 2290
Category C:	Learning	PSYC 2440, PSYC 2470
Category D:	Cognitive	PSYC 2480
Category E:	Biological	PSYC 2360

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.

Report of the Senate Committee on Instruction and Evaluation RE: Modification of Co-operative Education Option Regulations, Faculty of Science

Preamble:

1. The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) can be found at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/502.html.

2. At its meeting on October 17, 2019 SCIE considered a proposal from the Faculty of Science to modify its Co-operative Education Option regulations, resulting from curriculum and course changes.

Observations:

1. Psychology would be added to the list of programs which offer a Co-operative Education Option.

2. A minimum Degree Grade Point Average of 3.0 for the Major would be required for entrance to the B.Sc. (Maj.) in Psychology Co-operative Education Option. The Co-operative Education Option would not be available to students in the B.Sc. (Hon.) in Psychology program.

3. Currently, students in the B.Sc. (Maj.) Co-operative Education Option are required to attain a minimum Degree Grade Point Average for continuation in the program. The word “maintain” would replace “attain”.

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

THAT Senate approve the proposed modifications to the Co-operative Education Option regulations, effective September 1, 2020.

Respectfully submitted,

Dr. Mark Torchia, Chair
Senate Committee on Instruction and Evaluation

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

October 30, 2019

Report of the Senate Committee on Curriculum and Course Changes RE: Revised Academic Regulations, Co-operative Education Option, Faculty of Science

Preamble:

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are available on the University Governance website.
2. At its meeting on October 30, 2019, the SCCCC considered a proposal from the Faculty of Science to revise the academic regulations for various Bachelor of Science (Major) and Bachelor of Science (Honours) programs that offer a Co-operative Education Option, and the Bachelor of Computer Science (Honours), Co-operative Education Option.
3. At the same meeting, the SCCCC also considered a proposal to modify the Bachelor of Science (Major) in Psychology, to introduce a Co-operative Education Option, as described in the *Report of the Senate Committee on Curriculum and Course Changes Submitted to Senate RE: Modification of Bachelor of Science (Major) in Psychology to Introduce a Co-operative Education Option* (dated October 30, 2019).
4. The Senate Committee on Instruction and Evaluation (SCIE) considered the same proposal at its meeting on October 17, 2019.

Observations:

1. The SCCCC endorsed changes to the regulations concerning entrance and continuation requirements, for the Co-operative Education Options, which follow from a proposal to introduce a Bachelor of Science (Major) in Psychology, Co-operative Education Option, including more rigorous requirements for this particular program, as detailed in the proposal and in the *Report of SCIE RE: Modification of Entrance and Continuation Requirements of the Bachelor of Science (Major) in Psychology and Proposed Co-operative Education Entrance and Continuation Requirements, Faculty of Science* (dated October 17, 2019).

Recommendation:

The Senate Committee on Curriculum and Course Changes recommends:

THAT Senate approve revised Co-operative Education Option Academic Regulations: B.Sc.(Major) and B.Sc. and B.C.Sc.(Honours), Faculty of Science, effective for the Fall 2020.

Respectfully submitted,
Professor Greg Smith, Chair
Senate Committee on Curriculum and Course Changes

3.5 Co-operative Education Option Academic Regulations: B.Sc. (Major) & B.Sc. and B.C.Sc (Honours)

Co-operative education is a form of experiential learning which integrates the academic education (classroom-based learning) of interested and qualified students with relevant, supervised, and paid work experience (work-based learning) with employers. Co-op students gain valuable skills to guide them through their academic education and prepare them for future careers after graduation.

The Faculty of Science offers a Co-operative Education Option in the following Major programs: Biochemistry, Biological Sciences, Biotechnology (As of Fall 2018, admission to the Biotechnology programs has been temporarily suspended. For further information, see the Faculty of Science office.), Chemistry, Computer Science, Genetics, Mathematics, Microbiology, Physics & Astronomy, Psychology and Statistics.

The Honours programs offering a Co-operative Education Option are: Biochemistry, Biological Sciences, Biotechnology (As of Fall 2018, admission to the Biotechnology programs has been temporarily suspended. For further information, see the Faculty of Science office.), Chemistry, Computer Science, Genetics, Mathematics, Microbiology, Physics & Astronomy, Statistics, Joint Computer Science - Mathematics, Joint Computer Science – Physics and Astronomy, and the Joint Computer Science – Statistics program.

Co-operative education is optional and supplementary to academic requirements of the chosen degree. All regulations governing regular Major and Honours programs apply to the Co-operative Education Option. In addition, the following variations apply:

Entrance

To enter the Co-operative Education Option a student must be eligible to enter the Major or Honours program offered by the department. At the time of application, students must have a minimum Degree Grade Point Average (DGPA) of 2.5 for the Major and 3.0 for the Honours Programs. For Psychology, students must have a minimum Degree Grade Point Average (DGPA) of 3.0 for the Major. Co-op is not available for students in the Honours Psychology Program.

The normal point of entry to the Co-operative Education Option is following the completion of second year in the Faculty of Science. Students seeking admission will submit an application during their second year and complete an intake process with the appropriate departmental Co-op Coordinator. Application deadlines are established by the Science Co-op Office.

Students are advised that satisfying the entrance requirements does not guarantee a place in the Co-operative Education Option. The Science Co-op Office reserves the right to determine and select the best-qualified applicants.

Students admitted into the Co-operative Education Option will complete pre-employment training, including workshops, prior to the start of their first co-op work term. The structure and content of this training is developed by the Science Co-op Office. Attendance and completion of this training is mandatory.

Structure and Sequencing

The Co-operative Education Option consists of both academic terms and co-op work terms.

Each academic term can be either four months in duration or eight months in duration, as designated by the Major or Honours department.

Each co-op work term can be either four months in duration or eight months in duration, as designated by the Science Co-op Office. An eight month work term would be counted as the equivalent of two 4 month terms.

Each academic term and each co-op work term will commence in January, May or September.

The sequence of academic terms and co-op work terms is variable to suit the needs of each department, and is designated by the Science Co-op Office in conjunction with each Major or Honours department. All Faculty of Science Co-operative Education Options must end on an academic term.

Students are expected to follow the academic/co-op work term sequence defined by their Major or Honours department from admission through to graduation.

Co-op Work Term Requirements

All Co-operative Education Options require participating students to complete at least three (3) 4-month co-op work terms for a total of a minimum of 12 months' work experience. Each co-op work term is completed with one employer.

Students are required to register in the appropriate co-op work term course and pay the work term fee prior to starting their co-op work term.

Co-operative Education Option students are required to submit a work term report at the end of each co-op work term. These reports are due at times designated by the Science Co-op Office. In order to remain in the Co-operative Education program, a student must obtain a grade of "Pass" for each work term report. The Science Co-op Office will provide students with instructions regarding the content and format requirements of the work term reports.

While on a co-op work term, students are 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 Co-operative Education Option are equivalent to the coursework requirements of the four-year Major program. For students completing an Honours program, the coursework requirements of the Co-operative Education Option are equivalent to the coursework requirements of the Honours program with the exception of the Biochemistry, Biotechnology, Genetics and Microbiology programs.

Co-operative Education Option students are required to maintain full-time study while registered for an academic term.

To continue in a four year Major Co-operative Education Option, students must ~~attain~~ maintain a minimum DGPA of 2.50 at each point of assessment; except for students in Psychology where a minimum DGPA of 3.00 must be maintained 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. Please see department entries for further information. Continuation in the Major Co-operative Education Option is also contingent upon satisfactory performance during co-op work terms.

To continue in an Honours Co-operative Education Option a student must ~~attain~~ maintain a minimum DGPA 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. Please see department entries for further information. Continuation in the Honours Co-operative Education Option is also contingent upon satisfactory performance during co-op work terms.

Students may be required to withdraw from the Co-operative Education Option for any of the following reasons:

• Failure to maintain the minimum academic requirements of the Faculty of Science and/or Major/Honours program.

• Failure to maintain the minimum credit hour requirements of the academic term in the co-op option.

• Unsatisfactory performance during a co-op work term.

• Failure to submit a co-op work term report or the submitted report does not achieve a "Pass" grade.

• Failure to observe the policies outlined in university governing documents related to Behavioural Policies and Academic Misconduct.

• Having consulted with the Co-op Director and/or Faculty Advisor, in the opinion of the Co-op Coordinator, the student does not possess sufficient ability, skills, aptitude, attitude, diligence or motivation to successfully complete the Co-operative Education Option.

Students who wish to voluntarily withdraw from the Co-operative Education Option must obtain the written approval from their Co-op Coordinator and the Science Co-op Director. Students must submit their withdrawal request to their Co-op Coordinator and receive approval by the withdrawal dates set by the Science Co-op Office for each co-op work term.

Students are not normally permitted to withdraw from the Co-operative Education Option once they have secured a position for their co-op work term; whether the position was obtained through the Science Co-op Office or through students' own self-directed job search. Enrollment in the applicable co-op course(s) will be maintained and students are responsible for all assessed fees for the duration of the co-op work term and for meeting all academic requirements.

Students who accumulate more than 18 credit hours of failed courses after entering the four-year Major program (regardless of the origin of the grade or if the course has been repeated) will be required to withdraw from the Major Co-op program. Students are also subject to the academic assessment policy found in 3.1 Regulations Applicable to all Programs.

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 Honours Co-op 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 Programs.

Four year Major Co-operative Education Option students who are required to withdraw, or voluntarily revert to an alternative degree program must fulfil all academic requirements of that degree.

Honours Co-operative Education Option students who are required to withdraw or voluntarily revert to an alternative degree program must fulfill all academic requirements of that degree.

Report of the Senate Committee on Instruction and Evaluation RE: Modification of Continuation Requirements in Bachelor of Science Major and Honours programs in Computer Science, and the Bachelor of Science (Joint Honours) in Computer Science – Physics and Astronomy, and Graduation Requirements of the Bachelor of Science (Honours) in Mathematics, Faculty of Science

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Preamble:

1. The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) can be found at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/502.html.

2. At its meeting on October 17, 2019 SCIE considered a proposal from the Faculty of Science to modify the continuation requirements for the Bachelor Honours and Major programs in Computer Science and the Bachelor of Science (Joint Honours) in Computer Science and Physics and Astronomy, and graduation requirements of the Bachelor of Science (Honours) in Mathematics.

Observations:

2. The Faculty is proposing to modify the continuation requirements for the Bachelor programs in Computer Science and the B.Sc. (Joint Honours) in Computer Science – Physics and Astronomy, as outlined below:

    a) Students in the Computer Science Major and Honours programs would no longer be required to obtain departmental approval prior to registration for each Fall/Winter term, or for revisions to their program.

    b) Students in the B.Sc. (Joint Honours) in Computer Science-Physics and Astronomy would no longer be required to obtain departmental approval prior to registration or prior to revisions to their program.

3. The Faculty is proposing to modify the graduation requirements for the B.Sc. (Hon.) in Mathematics, as outlined below:

    a) Currently, to graduate with a B.Sc. (Hon.) degree in Mathematics, a student required to maintain a minimum Degree Grade Point Average of 3.00. The word “maintain” would be replaced with “achieve”.

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

THAT Senate approve the proposed modifications to the continuation requirements of the Bachelor Major and Honours programs in Computer Science and the Bachelor of Science (Joint Honours) in Computer Science

and Physics and Astronomy and the graduation requirements of the Bachelor of Science (Honours) in Mathematics, effective September 1, 2020.

Respectfully submitted,

Dr. Mark Torchia, Chair
Senate Committee on Instruction and Evaluation

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

4.6 Department of Computer Science

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 paid employment experience. The co-operative (co-op) option in Computer Science is well established with the first class graduating in October 1983.

~~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 Co-op programs, and the Software Engineering area of specialization, are accredited by the Computer Science Accreditation Council.

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 and Astronomy program, the student must have a minimum grade of "B" in each of PHYS 1050 (or "B+" in PHYS 1020), PHYS 1070 (or B+ in PHYS 1030), MATH 1300, MATH 1500, MATH 1700 (or any equivalent), COMP 1010 (or COMP 1012) and COMP 1020 and a minimum DGPA of 3.00. Students must complete a minimum of 9 credit hours per term in each Fall and Winter term.

To continue in the Honours program, students must maintain a minimum DGPA of 3.00, complete a minimum of 9 credit hours during each Fall and Winter term (or equivalent for students in the Co-operative option).

To graduate with the Honours degree, a student must obtain a minimum DGPA of 3.00 and present a minimum grade of "C" in each course that contributes to the degree

~~The departments must approve a student's Honours program each session. Students must also obtain departmental approval for any and all revisions to their program.~~

4.9 Department of Mathematics

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.

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 DGPA of 3.00, and also obtained a minimum grade of “B” in either MATH 1232 or MATH 1690, or a minimum grade of "A" in MATH 1700.

To continue in the 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 ~~maintain~~ achieve a minimum 3.00 DGPA and achieve a minimum grade of “C” on all courses that make up the 120 credit hours of the degree.

List of Year 2 Mathematics electives (of which two are required for the core requirements): MATH 2030, MATH 2040, MATH 2070, ~~MATH 2140~~, MATH 2160, MATH 2170.

Students are encouraged to discuss potential electives with a departmental advisor.

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.

Four Year Major Requirements

To enter the four year Major in Mathematics, a student must have a “C+” in either MATH 1232 or MATH 1690 or a minimum grade of "B" in MATH 1700, 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 DGPA of 2.00, and a minimum grade of “C” in each of the Major Program Specific courses (see below).

Major Program Specific Courses

MATH 1220, MATH 1230, MATH 1232, MATH 1240, MATH 2020, MATH 2030, MATH 2080, MATH 2090, MATH 2150, MATH 2160, MATH 2180, MATH 3320, ~~MATH 3322,~~ MATH 3340, MATH 3360, MATH 3390, MATH 3440, MATH 3460~~.~~, and the 6 credit hours ~~List~~ of Year 2 Mathematics Electives ~~(of which two are required for the core requirements)~~: ~~MATH 2030,~~ MATH 2040, MATH 2070, ~~MATH 2140~~, ~~MATH 2160,~~ MATH 2170. A student may substitute any 3000/4000 level Math course for either of these two electives.

Other electives can be chosen.

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 1232 or MATH 1690 or a minimum grade of "B" in 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 DGPA of 2.00, and a minimum grade of “C” in each of the Major Program Specific courses (see below).

Applied Mathematics Major Program Specific Courses

MATH 1220, MATH 1230, MATH 1232, MATH 1240, MATH 2070, MATH 2080, MATH 2090, ~~MATH 2140~~, MATH 2150, MATH 2160, MATH 2180, MATH 3340, MATH 3420, MATH 3440, MATH 3460, ~~and~~ MATH 3470, and MATH 3610.

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 1230, MATH 1232 and MATH 1220. See the individual charts below for additional requirements for each option.

Options List: MATH 2030, MATH 2040, MATH 2170, or any 3000/4000 level MATH course.

Honours and Major Co-operative Options

A co-operative education option is available for both Major and Honours students. Students should refer to Section 3.5 of this chapter for further information on the Co-op programs.

Honours Co-op

The course, grade requirements and minimum DGPA requirement for entry and continuation in the Co-operative Option are the same as that for regular Honours program.

Students will need to have completed MATH 2020, MATH 2080, MATH 2090, MATH 2150 and MATH 2180 (or their equivalents as approved by the department of Mathematics) before entrance into the Co-op Program. Students who plan on, or are required to, take MATH 3470 and MATH 3472 are recommended to take these in the Fall and Winter (respectively) of Year 3 (similarly with MATH 3320 and MATH 3322).

Major Co-op

The course and minimum grade requirements for entry and continuation in the Co-operative Option are the same as those required for the regular Major program. However, the entry and continuation DGPA requirement is set at a minimum of 2.5.

Students will need to have completed MATH 2020, MATH 2080, MATH 2090, MATH 2150 and MATH 2180 (or their equivalents as approved by the department of Mathematics) before entrance into the Co-op Program. Students who plan on, or are required to, take MATH 3470 and MATH 3472 are recommended to take these in the Fall and Winter (respectively) of Year 3 (similarly with MATH 3320 and MATH 3322).

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.

Report of the Senate Committee on Instruction and Evaluation RE: Modification of B.Sc. (Maj.) in Statistics Degree Requirements and B.Sc. (Major) and (Honours) in Statistics Co-operative Education Option Requirements, Faculty of Science

Preamble:

1. The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) can be found at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/502.html.

2. At its meeting on October 17, 2019 SCIE considered a proposal from the Faculty of Science to modify the Bachelor of Science (Major) in Statistics graduation requirements and the Bachelor of Science (Major) and (Honours) Co-operative Education Option requirements. The proposed changes are the result of a number of proposed curriculum and course changes.

Observations:

1. In the section titled Four Year Major Requirements, a correction would be made in the second sentence, by removing the reference to the Honours program, and replacing this with reference to the Major program.

2. The graduation requirements of the B.Sc. (Maj.) would be modified to require students to obtain a minimum Degree Grade Point Average of 2.00 and a minimum grade of "C" in the Major Program Specific Courses, which include all program required courses and optional courses selected from lists C, D and E in the program charts.

3. Currently, students in the B.Sc. (Maj.) and (Hon.) in Statistics Co-operative Education Options are required to complete STAT 3470 and STAT 3480 prior to beginning their first work term. These courses would be replaced with STAT 2300 and STAT 3450

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

> ***THAT Senate approve the proposed modifications to the Bachelor of Science (Major) in Statistics requirements and the Bachelor of Science (Major) and (Honours) in Statistics Co-operative Education Option requirements, Faculty of Science, effective September 1, 2020.***

Respectfully submitted,

Dr. Mark Torchia, Chair
Senate Committee on Instruction and Evaluation

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

4.13 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 Computer Science, Mathematics, Economics and Actuarial Mathematics.

Honours Requirements

To enter the Honours program in Statistics, 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 STAT 2150.

STAT 1150, MATH 1220, MATH 1230, MATH 1232 and MATH 1240 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 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 and minimum grade of "C" in each course that contributes to the 120 credit hours of the degree.

Four Year Major Requirements

To enter the Major Degree program in Statistics, 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 STAT 2150.

STAT 1150, MATH 1220, MATH 1230, MATH 1232 and MATH 1240 are all requirements of the Statistics ~~Honours~~ **Major** 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 DGPA of 2.00.

To graduate from the four year Major program a student must obtain a minimum DGPA of 2.00, and a minimum grade of "C" in ~~each of~~ the Major Program Specific courses ~~(see below).~~ **, which include all program required courses (see program chart) and optional courses selected from lists C, D and E.**

~~**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 one of the following sequences of courses in Economics or Computer Science.~~

~~*Economics*: ECON 1010, ECON 1020, ECON 2010, ECON 2020, ECON 2030, ECON 3010, ECON 3020, ECON 3030, ECON 3040, ECON 4040, ECON 4042. (This list of courses is effective as of Fall 2015.)~~

~~*Computer Science (Software and Artificial Intelligence):* COMP 1010, COMP 1020, COMP 1500, COMP 1600, COMP 2080, COMP 2130, COMP 2140, COMP 3380, COMP 3440, COMP 4200, COMP 4380.~~

~~*Computer Science (Numerical Analysis and Graphics):* COMP 1010, COMP 1020, COMP 1500, COMP 1600, COMP 2080, COMP 2130, COMP 2140, COMP 2190, COMP 3140 or COMP 3490.~~

Honours and Major Co-operative Options

A co-operative education option is available for both B.Sc. (Honours) and B.Sc. (Major) students in Statistics. Students should refer to Section 3.5 of this chapter for further information on the Co-op programs.

Honours Co-op

The course, grade requirements and minimum DGPA requirement for entry and continuation in the Co-operative Option are the same as that for regular Honours program.

Students are required to complete the first and second year requirements of the program; and ~~STAT 3470 and STAT 3480~~ **STAT 2300 and STAT 3450** before beginning their first co-op work term.

Major Co-op

The course and minimum grade requirements for entry and continuation in the Co-operative Option are the same as those required for the regular Major program. However, the entry and continuation DGPA requirement is set at a minimum of 2.5.

Students are required to complete the first and second year requirements of the program; and ~~STAT 3470 and STAT 3480~~ **STAT 2300 and STAT 3450** before beginning their first co-op work term.

Optional courses for Honours and Major Programs

The following lists of options are used in the Honours and Major programs.

List A: Statistics options for the Honours program

STAT 3170, STAT 3380, STAT 3490, STAT 3550, STAT 4150, STAT 4170, STAT 4250, STAT 4520, STAT 4530, STAT 4600, STAT 4630, STAT 4700

List B: Mathematics options for the Honours program

MATH 2030, MATH 2070, MATH 2090, MATH 2160, MATH 2180, MATH 2740, MATH 3330, MATH 3340, MATH 3360, MATH 3440, MATH 3460, MATH 3470, MATH 3490, MATH 3610, MATH 4370, MATH 4390

List C: Computer Science options for the Honours and Major programs

COMP 2080, COMP 2140, COMP 3170, COMP 3190, COMP 3380, COMP 3820, COMP 4190, COMP 4360, COMP 4380, COMP 4420, COMP 4710

List D: Statistics options for the Major program

STAT 3030, STAT 4100 and all options in List A

List E: Mathematics options for the Major program

MATH 2080 and all options in List B

Report of the Faculty Council of Graduate Studies on Course, Curriculum and Regulation Changes

Preamble

1. The Faculty of Graduate Studies (FGS) has responsibility for all matters relating to the submission of graduate course, curriculum, program and regulation changes. Recommendations for such are submitted by the Faculty Council of Graduate Studies for the approval of Senate.

2. The Faculty Council of Graduate Studies met on the above date to consider a proposal from the Faculty of Agricultural & Food Sciences.

Observations

1. The **Faculty of Agricultural & Food Sciences** proposes the permanent closure of the M.Sc. in Textile Science in the Dept. of Biosystems Engineering.

   The decision was made to cease the undergraduate and graduate programs in Textile Sciences, and as of July 1, 2015 to formally merge the remaining members of the Department of Textile Sciences with the Department of Biosystems Engineering. This decision was based on declining enrolment in the Textile Sciences programs accompanied by a number of staff retirements. The former members of the Department of Textile Sciences have been fully integrated into the Department of Biosystems Engineering and now supervise graduate students (both M.Sc. and Ph.D.) in graduate programs in Biosystems Engineering. There is no need to preserve the M.Sc. program in Textile Sciences because the Department of Biosystems Engineering already has a vibrant M.Sc. program.

   Course Deletions

TXSC 7042 Preparations for Research in Textile Sciences	**-6**
TXSC 7120 Topics in Textile and Apparel Marketing	**-3**
TXSC 7162 Topics in Textile Sciences - Physical Properties	**-3**
TXSC 7164 Topics in Textile Sciences - Chemical Properties	**-3**
TXSC 7166 Seminar in Textile Sciences	**-3**
TXSC 7168 Problems in Textile Sciences	**-3**
NET CREDIT HOUR CHANGE	**-21**

Recommendations

Faculty Council of Graduate Studies recommends THAT the program changes from the unit listed below be approved by Senate:

Faculty of Agricultural & Food Sciences

Respectfully submitted,

Dr. Louise Simard, Chair
Faculty Council of Graduate Studies

/ak

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

Application

PERMANENT CESSATION OF A PROGRAM OF STUDY

Under The Advanced Education Administration Act

Manitoba Education and Training

Universities and colleges requesting approval for the **permanent cessation** of a program of study from Education and Training must apply using this application form. This form reflects the requirements set out in the Programs of Study Regulation (MR 134/2015) under The Advanced Education Administration Act.

UM INTERNAL REQUIREMENTS

University of Manitoba

1. Please complete the application below and submit one (1) electronic copy (.pdf format) each to the Vice-Provost (Integrated Planning & Academic Programs) and the Office of the University Secretary, along with the following supplemental documentation:
   a. A cover letter justifying and summarizing the rationale behind the request for permanent cessation.
   b. Letters of support from external stakeholders that were consulted as part of this proposal, if applicable.
   c. Course Deletion forms, where applicable. To access the course deletion forms, please visit:
      - Undergraduate Courses: http://umanitoba.ca/admin/governance/forms/index.html
      - Graduate courses: http://umanitoba.ca/faculties/graduate_studies/admin/course_delete.htm
2. Please refer to the policy, Submission of Course, Curriculum and Program changes for further information. http://umanitoba.ca/admin/governance/governing_documents/academic/356.html
3. Please direct questions to Cassandra Davidson, Academic Programs Specialist, Office of the Provost and Vice-President (Academic) at Cassandra.Davidson@umanitoba.ca or 204.474.7847.

SECTION A – PROPOSAL DETAILS

Institution: **University of Manitoba**

Applicable faculties/department with responsibility for the program: Department of Biosystems Engineering, Faculty of Agricultural & Food Sciences

If program is a joint program, list all participating institutions and the roles of each in delivering the program to be ceased:

Program name: MSc in Textile Sciences

Credential awarded: MSc

Proposed start date for permanent cessation: September 2019

Institutional Program Code(s) (PSIS reporting number):

Office Use Only

One-time funding:
On-going funding:

SECTION B – PROGRAM DESCRIPTION AND DELIVERY

B-1 Provide a general description of the program and its objectives: *(Include intended purpose, curriculum design, and highlight distinctive attributes)*

The Textile Sciences graduate program offers opportunities for in-depth study and technical and social dimensions of textile product development. The technical dimension includes research in the physical and chemical properties of textiles, and polymer science. The social dimension includes research in consumer behaviour toward textiles or textile products and marketing of textiles or textile products. The program comprises course work and a thesis.

B-2 Length of Program: *(Define the length of the proposed program using measures appropriate to the schedule and delivery format. This will include total course credits and weeks/months, and, where relevant, hours and semesters of instruction)*

The Master's program comprises a minimum of 18 credit hours of courses and a thesis. The expected time to graduate is two years.

B-3 Provide a description of the intended outcomes of the program being permanently ceased:

Permanent cessation of the MSc program in Textile Sciences reflects the fact that the Department of Biosystems Engineering does not have the capability to deliver an MSc program in Textile Sciences. The academics who joined the Department of Biosystems Engineering in the merger have the opportunity to supervise graduate students in the existing MSc and PhD programs in Biosystems Engineering.

B-3.1 - Describe how this program serves and advances the academic, cultural, social and economic needs and interests of students and the province:

B-3.1 - Describe the existing and anticipated post-secondary learning needs of students in Manitoba that this program addresses and responds to.

Graduates from the program have found challenging careers in diverse fields. These include: technical product developer for medical/healthcare, industrial, and exercise and sports end uses, textile testing in industry or government research laboratories, post-secondary education, quality assurance, or a stepping stone to a Ph.D. degree.

B-4 Describe the mode of delivery for this program:

Coursework is delivered in the standard fashion. Supervision of thesis work is provided by academics within the Department.

SECTION C – INFORMATION REGARDING PERMANENT CESSATION DEVELOPMENT PHASE

C-1 Identify and provide a detailed description of the rationale for the permanent cessation of this program of study:
(Such as changes in applications, enrolment, employer demand.)
The Department of Textile Sciences merged with the Department of Biosystems Engineering in July 2015. The academic members who joined the Department of Biosystems Engineering are able to supervise graduate students using the MSc and PhD programs in Biosystems Engineering. There is no need for the MSc program in Textile Sciences.

C-2 If applicable, describe any program reviews, evaluations, or other program review processes that occurred during the temporary cessation of this program:
None

C-3 Describe how the permanent cessation of this program aligns with the strategic plans of your institution:
The decision was made to cease the undergraduate and graduate programs in Textile Sciences, and to merge the remaining members of the Department of Textile Sciences with the Department of Biosystems Engineering (merger formally occurred on July 1, 2015). This decision was based on declining enrolment in the Textile Sciences programs accompanied by a number of staff retirements. The former members of the Department of Textile Sciences have been fully integrated into the Department of Biosystems Engineering and now supervise graduate students (both MSc and PhD) in the graduate programs in Biosystems Engineering. There is no need to preserve the MSc program in Textile Sciences because the Department of Biosystems Engineering already has a vibrant MSc program.

C-4 Outline the internal approval process (i.e. committees, governing bodies) for approving the permanent cessation of this program of study within your institution and indicate any dates of decision: *(Governing Council, Board of Governors, Board of Regents, Senate, other)*

UM INTERNAL REQUIREMENTS: Please note date(s) of Faculty/College/School Approval. Approval dates through the governing bodies will be inserted by the Provost's Office prior to submission to government.

Decision-Making Body	Date of Approval
Faculty/College/School	March 13, 2019 - Biosystems Engineering Department Council April 29, 2109 - Faculty of Agricultural and Food Science Council
SCCCC *(undergrad only)*	_____
SPPC (*if applicable*)	_____
Senate Executive	_____
Senate	_____
Board of Governors	_____

C-5 Responsibility to consult

C-3.1. Is this program subject to mandatory review or approval by organizations external to the institution (such as regulatory bodies, Apprenticeship Manitoba, etc.)? *(If yes, please describe consultation process and provide copies of reports or letter from these organizations.)*

No

C-3.2 What agencies, groups, or institutions have been consulted regarding the permanent cessation of this program?

None

C-3.3 How have students and faculty been informed of the intent to permanently cease this program?

The initial intent to close the MSc in Textile Sciences program when the merger was being proposed and finalized (in 2015). All students who were in the MSc in Textile Sciences program at the time of the merger have since graduated. A formal motion to permanently cease the MSc in Textile Sciences program was approved by the Biosystems Engineering Department Council in March 2019.

C-6 Describe the impact that the permanent cessation of this program may have on developing a skilled workforce and on labour market need in Manitoba:

There should be minimal impact on the workforce and labour market need in Manitoba because the former members of the Department of Textile Sciences can continue to supervise graduate students using the MSc and PhD programs in Biosystems Engineering.

SECTION D – SYSTEM IMPACTS

D-1 Describe how the permanent cessation of this program will affect any specific laddering, articulation and/or credit transfer options for students in Manitoba and Canada:

N/A

D-2 Describe how the permanent cessation of this program may affect the academic, cultural, social and economic needs and interests of students and the province:

It has already been several years since the last individual graduated from the MSc program in Textile Sciences. We are not aware of any negative impacts on students or on the province.

D-3 UM INTERNAL REQUIREMENTS: Describe how the permanent cessation of this program will impact course offerings in the unit. Provide a list of courses that are to be deleted (indicate subject code, course number, course title, number of credit hours) as a result of the permanent cessation and append the appropriate deletion forms.

The following graduate-level TXSC courses are to be deleted.

TXSC 7042 Preparations for Research in Textile Sciences Cr.Hrs. 6

TXSC 7120 Topics in Textile and Apparel Marketing Cr.Hrs. 3

TXSC 7162 Topics in Textile Sciences – Physical Properties Cr.Hrs. 3

TXSC 7164 Topics in Textile Sciences – Chemical Properties Cr.Hrs. 3

TXSC 7166 Seminar in Textile Sciences Cr.Hrs. 3

TXSC 7168 Problems in Textile Sciences Cr.Hrs. 3

D-4 UM INTERNAL REQUIREMENTS: Describe how the permanent cessation of this program and the deletion of any related courses may affect other academic programs at the institution. For undergraduate programs, include Request for Statement of Support forms, or for graduate programs, append letters of acknowledgement from those units/programs that may be impacted.

There is no effect anticipated on other academic programs at the institution.

SECTION E – STUDENT IMPACTS

E-1 Provide a program completion plan for students currently enrolled in the program that is being permanently ceased:

Year 1 There are no longer any students enrolled in the MSc program in Textile Sciences.

Year 2

Year 3

Year 4

UM Internal Requirements: Is there a potential for students who are currently not registered and who may not have been registered for one or more years to return to the program? If so, outline any plans on how these students will be accommodated.

No, all of the MSc students who were in the Textile Sciences program at the time of the merger have since completed their degree requirements and graduated.

E-2 Will previous graduates of this program be negatively affected by its cessation?

No

E-3 What was the maximum seat capacity of the program that is being permanently ceased?

I do not believe there was a maximum seat capacity.

E-4 What was the enrolment and graduation rate for this program over the past 5 years?

No new students were admitted since the merger in July 2015. Students who were already started in the MSc program in Textile Sciences were allowed to complete their program (total of 7 students).

SECTION F – FINANCIAL REALLOCATION

F-1 What portion of ongoing funding is allocated to this program?

There is no funding allocated to this program.

F-2 Please provide a detailed description of how these funds will be reallocated:

N/A

SECTION G – SIGNATURES

(A second signature section is provided for joint programs only)

SUBMITTED BY:

President:	***Vice-President/Academic:***
Name:	*Name:*
Signature:	*Signature:*
Date:	*Date:*

For use by joint programs only:

President:	***Vice-President/Academic:***
Name:	*Name:*
Signature:	*Signature:*
Date:	*Date:*

SUBMIT COMPLETED FORM

PROVOST'S OFFICE ONLY Once completed and signed, please submit this application form to Post-Secondary Education and Labour Market Outcomes at PSE-LMO@gov.mb.ca with the following attachments *(double-click to engage check box):*

- ☐ Cover letter
- ☐ Any supporting documentation *(reviews, letters of support, etc.)*

If you have any questions or require further information, please contact:

Post-Secondary Education and Labour Market Outcomes
Manitoba Education and Training
400-800 Portage Avenue Winnipeg MB R3C 0C4
(204) 945-1833
PSE-LMO@gov.mb.ca

October 23, 2019

Report of the Faculty Council of Graduate Studies on Course, Curriculum and Regulation Changes

Preamble

1. The Faculty of Graduate Studies (FGS) has responsibility for all matters relating to the submission of graduate course, curriculum, program and regulation changes. Recommendations for such are submitted by the Faculty Council of Graduate Studies for the approval of Senate.

2. The Faculty Council of Graduate Studies met on the above date to consider a proposal from the Dept. of Curriculum, Teaching and Learning.

Observations

1. The **Dept. of Curriculum, Teaching & Learning** proposes changes to its M.Ed. supplemental regulations, specifically, Sections 4.4.1. and 4.4.2. Whereas EDUB 7530 *Curriculum Development and Implementation in Language and Literacy* was a required course, it is now an option from a list of core EDUB courses for the fulfillment of the Language and Literacy specialization. See attached.

   Students who apply to the Master's in Language and Literacy Education specialization often come into the program with a variety of interests and goals for their M.Ed. programs. These graduate students are largely part-time because they are working full-time in the K-12 school system. Being part-time means that students typically enroll in one course per semester. The area group professors find that they cannot always offer these three suggested core courses at times that fit with L & L students' programs of study. This situation can result in delays to students' time to completion. Also, some students' interests in developing their literacy leadership, pursuing certification as Reading Clinicians, or developing a research project to best meet their professional, cultural, or linguistic contexts would be better served by a more diverse option for one of their core courses. By opening three-credit hours to additional 7000-level courses in language and literacy education, students and their advisors can pick the most suitable course to meet the pedagogical and research goals of the students, as well as offer more paths to completing their program in an efficient and timely manner.

Recommendations

Faculty Council of Graduate Studies recommends THAT the program changes from the unit listed below be approved by Senate:

Dept. of Curriculum, Teaching and Learning

Respectfully submitted,

Dr. Louise Simard, Chair
Faculty Council of Graduate Studies

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

/ak

	All programs consist of a minimum of 18 credit hours of coursework. At least 12 credit hours must be at the 7000 level or equivalent. The remaining 6 credit hours may be at the 5000 level or above in the Faculty of Education, and/or at the 3000 level or above in other Faculties. *Required Research Courses* EDUA 5800 *Introduction to Educational Research* (3 credit hours), or its equivalent, is a requirement of all M.Ed. programs in the Faculty of Education. In addition, thesis-based students must take 3 credit hours of research methods at the 7000 level in Education. In special circumstances research courses at the 3000 level or above in other Faculties may be approved as an appropriate alternative to this requirement. *Specific Course Requirements* In addition to the two 3 credit hour courses, specific course requirements for each program area/ specialization are as follows: Studies in Curriculum, Teaching and Learning *Studies in CTL General Courses (6 credit hours):* From the list below, students select a total of six credit hours of 7000 level coursework in consultation with their advisor. • EDUB 7550 Historical and Contemporary Approaches to Curriculum (3 credit hours) • EDUB 7420 Study of Teaching (3 credit hours) or • EDUB 7560 Theory and Practice of Curriculum Design and Development (3 credit hours) • EDUB 7330 Inquiry in Curriculum and Instruction (3 credit hours) • EDUB 7142 Topics in Curriculum, Teaching and Learning (3 credit hours) *Concentration: (6* credit hours*)* Students select a total of 6 credit hours of 7000 level coursework or a combination of three credit hours of 7000 level and three credit hours of 5000 level concentration coursework in consultation with their advisor. In addition, students may select up to 6 more credit hours of coursework from any Faculty of Education 5000 or 7000 level courses. Language and Literacy *Core Courses:* ~~• EDUB 7530 Curriculum Development and Implementation in Language and Literacy (3 credit hours), and **one** of~~ ~~o EDUB 7070 Classical Research in Reading (3 credit hours) or~~

	~~o EDUB 7100 Language and Literacy Curriculum Inquiry in the Early Years (3 credit hours) or~~ ~~o EDUB 7180 Research in Written Composition (3 credit hours)~~ From the list below, students select 6 credit hours of core courses in consultation with their advisor. • EDUB 7530 Curriculum Development and Implementation in Language and Literacy (3 credit hours) • EDUB 7070 Classical Research in Reading (3 credit hours) • EDUB 7100 Language and Literacy Curriculum in Inquiry in the Early Years (3 credit hours) • EDUB 7180 Research in Written Composition (3 Credit Hours) • Or any other EDUB 7000-level courses in language and literacy in consultation with their advisor and department head. *Concentration:* Students select 6 credit hours of coursework in consultation with their advisor. These courses are normally selected from EDUB 7060, EDUB 7070, EDUB 7090, EDUB 7100, EDUB 7110, EDUB 7150, EDUB 7180, EDUB 7190, EDUB 7290, EDUB 7420, EDUB 7550, EDUB 7560, or other courses approved by the Program Advisor and Department Head. In addition, students may select up to 6 more credit hours of coursework from any Faculty of Education 5000 or 7000 level courses. Second Language Education *Core Courses:* • EDUB 7210 Seminar in ESL Theory and Practice (3 credit hours) • EDUB 7220 Research Issues and Application in TESL (3 credit hours) • EDUB 7580 Theory and Research in Second Language Acquisition (3 credit hours) *Concentration:* In addition, students select 3 credit hours of coursework in consultation with their advisor. These courses are normally selected from EDUA 7270, EDUA 7280, EDUA 7420, EDUB 7270, EDUB 7420, EDUB 7550, or other courses approved by the Program Advisor and Department Head. In addition, students may select up to 6 more credit hours of coursework from any Faculty of Education 5000 or 7000 level courses.

4.4.2 Course-based/Comprehensive Examination Route A minimum of twenty-four (24) credit hours of coursework and comprehensive examination(s) is required. The minimum must include at least eighteen (18) credit hours at the 7000 level or above with the balance of the coursework at the 3000 level or above. A maximum of forty-eight (48) credit hours of coursework is allowed unless a department/unit's supplemental regulations indicate otherwise.	***Note: The number of credit hours required in the M.Ed. Program (Course-Based/Comprehensive Route) differs from that required by Faculty of Graduate Studies.*** **Coursework and Comprehensive Examination Route (Course-Based)** Typically students complete a set of *core* courses, a *research* course, and a set of *concentration* courses in this program route. The culminating activity is a comprehensive examination. *Coursework* The course-based route to the M.Ed. in the Department of Curriculum, Teaching and Learning involves a minimum of 30 credit hours of approved courses. At least 18 credit hours must be at the 7000 level; the remaining 12 credits may be at the 5000 level or above in the Faculty of Education and/or at the 3000 level or above in other Faculties. *Required Research Course* EDUA 5800 *Introduction to Educational Research* (3 credit hours) or its equivalent, is a requirement of all M.Ed. programs in the Department. In addition, all students must complete 9 credit hours of core courses and 18 credit hours of concentration. *The Capstone Course Option* Course-based route students have the option of including a capstone course [EDUB 7540 Final Seminar in Curriculum, Teaching and Learning (3 credit hours)] as part of their 30 credit hours of required coursework. Normally, the capstone course is taken by students as preparation for the culminating activity. Students taking this course can expect to complete significant work towards fulfilling the comprehensive examination requirement. *Specific Course Requirements* Specific course requirements for each program area/specialization are as follows: <u>Studies in Curriculum, Teaching and Learning</u> *Studies in CTL General Courses (9 credit hours):* From the list below, students select a total of nine credit hours of 7000 level coursework in consultation with their advisor. • EDUB 7550 Historical and Contemporary Approaches to Curriculum (3 credit hours) • EDUB 7420 Study of Teaching (3 credit hours) • EDUB 7560 Theory and Practice of Curriculum Design and Development (3 credit hours)

	• EDUB 7330 Inquiry in Curriculum and Instruction (3 credit hours) • EDUB 7142 Topics in Curriculum, Teaching and Learning (3 credit hours) *Concentration Courses (18 credit hours):* Students select 9 credit hours of 7000 level concentration coursework in consultation with their advisor. In addition, students select 9 more credit hours of coursework from any Faculty of Education 5000 or 7000 level courses. Language and Literacy *Core Courses:* ~~• EDUB 7530 Curriculum Development and Implementation in Language and Literacy (3 credit hours),and **two** of~~ ~~o EDUB 7070 Classical Research in Reading (3 credit hours) or~~ ~~o EDUB 7100 Language and Literacy Curriculum Inquiry in the Early Years (3 credit hours) or~~ ~~o EDUB 7180 Research in Written Composition (3 credit hours)~~ From the list below, students select a total of nine credit hours of 7000 level core courses in consultation with their advisor. • EDUB 7530 *Curriculum Development and Implementation in Language and Literacy* (3 credit hours) • EDUB 7070 *Classical Research in Reading* (3 credit hours) • EDUB 7100 *Language and Literacy Curriculum in Inquiry in the Early Years* (3 credit hours) • EDUB 7180 *Research in Written Composition* (3 Credit Hours) • Or any other EDUB 7000-level courses in language and literacy in consultation with their advisor and department head. *Concentration:* Students select 18 credit hours of coursework in consultation with their advisor. These courses are normally selected from EDUB 7060, EDUB 7070, EDUB 7090, EDUB 7100, EDUB 7110, EDUB 7150, EDUB 7180, EDUB 7190, EDUB 7290, EDUB 7330, EDUB 7420, EDUB 7540, EDUB 7550, EDUB 7560, or other courses approved by the Program Advisor and Department Head. Second Language Education *Core Courses:*

	• EDUB 7210 Seminar in ESL Theory and • Practice (3 credit hours) • EDUB 7220 Research Issues and Application in TESL (3 credit hours) • EDUB 7580 Theory and Research in Second Language Acquisition (3 credit hours) *Concentration:* In consultation with their advisors, students select 18 credit hours of coursework, with a minimum of 9 credit hours at the 7000 level, from EDUA 7270, EDUA 7280, EDUA 7420, EDUB 5510, EDUB 5520, EDUB 5530, EDUB 5540, EDUB 5580, EDUB 7070, EDUB 7180, EDUB 7330, EDUB 7420, EDUB 7540, EDUB 7550, EDUB 7560, or other courses approved by the Program Advisor and Department Head.
4.4.3 Accredited Professional Route The credit hours and course requirements shall reflect the requirements of the department/unit's external accrediting body.	
4.4.4 Language Reading Requirements Some department/units specify a language requirement for the Master's degree. Students should check department/unit supplemental regulations regarding this requirement.	None required.
4.4.5 Advanced Credit Advance credit for courses completed prior to admission to a Master's program will be considered on a case-by-case basis. The student's department/unit must make a request to the Faculty of Graduate Studies by completing the "Advance Credit-Transfer of Courses" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). • Application for advance credit must be made within the first year of the program (see section 4.7.2 Lapse of Credit of Courses) • No more than 50% of the required coursework for the program can be achieved using advance credit. • A course may not be used for credit toward more than one (1) degree, diploma, or certificate. • The student must register at The University of Manitoba for at least two (2) terms within a single academic year and must also complete the thesis/practicum/project/comprehensive exam at The University of Manitoba. Regardless of the extent of advanced credit granted, all students are required to pay all applicable program fees.	
4.4.6 Transfer Credit	

October 23, 2019

Report of the Faculty Council of Graduate Studies on Course, Curriculum and Regulation Changes

Preamble

1. The Faculty of Graduate Studies (FGS) has responsibility for all matters relating to the submission of graduate course, curriculum, program and regulation changes. Recommendations for such are submitted by the Faculty Council of Graduate Studies for the approval of Senate.

2. The Faculty Council of Graduate Studies met on the above date to consider a proposal from the Dept. of Pharmacology & Therapeutics.

Observations

1. The **Dept. of Pharmacology & Therapeutics** proposes changes to its supplemental regulations, specifically, Sections 1.1.7. *Proficiency in English* and 5.1.4. *Provisional Admission to the Ph.D.* See attached.

   These sections state that, *"The Graduate Committee will not recommend for admission a student with a TOEFL exam score less than 590 (243 on computer based exam) unless written permission has been provided by the Department Head. Tests for language proficiency for the TOEFL as well as other exams require the minimum scores set by the Faculty of Graduate Studies."* This portion of the department's supplemental regulations is both confusing and outdated. The department refers to a minimum score of 590 (or 243 on computer based) TOEFL exam. The 590 score is higher than the required minimum score for Faculty of Graduate Studies. In addition, the computer based TOEFL exam is no longer an option. Thus, to update and clarify, the department would like to delete these sections to remove ambiguity and bring requirements in line with FGS.

Recommendations

Faculty Council of Graduate Studies recommends THAT the program changes from the unit listed below be approved by Senate:

Dept. of Pharmacology & Therapeutics

Respectfully submitted,

Dr. Louise Simard, Chair
Faculty Council of Graduate Studies

/ak

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

1.1.4 Transcripts Unofficial copies of transcripts and final degree certificates are acceptable for initial assessment and provisional admission purposes. Upon admission to the Faculty of Graduate Studies, applicants must arrange for official transcripts from all post-secondary institutions attended to be sent to the Faculty of Graduate Studies within one (1) month of the date on the admission letter. Applicants will be placed on hold, which prevents registration until all admission requirements have been submitted. **All transcripts must arrive in sealed, university-stamped envelopes sent directly from the issuing institution(s) and be accompanied by official and literal English translations (where applicable, see 1.1.5).** For international degrees or where the transcripts does not or will not clearly state that a degree has been conferred, a copy of the official degree certificate is also required.	
1.1.5 Transcripts: International Where academic records from a country other than Canada are produced in a language other than English, the applicant must arrange for the submission of official literal English translations of all records**.** To be official, original language documents and English translations must arrive together in envelopes which have been sealed and endorsed by the issuing institution. For international degrees or where the transcript does not or will not clearly state that a degree has been conferred, a copy of the official degree certificate is also required.	
1.1.6 Transcripts: University of Manitoba University of Manitoba students are not required to submit University of Manitoba transcripts.	
1.1.7 Proficiency in English A successfully completed English Language Proficiency Test from the approved list is required of all applicants unless they have received a secondary school diploma and/or university degree from Canada or one of the countries listed on the English Language Proficiency Test Exemption List (see 1.1.8). The Faculty of Graduate Studies requires a passing, acceptable English Language Test score in order to offer admission. **Please note:** In all cases, test scores older than two (2) years (from the time of completing the test) are invalid. Thresholds required for successful completion are indicated in parentheses. • University of Michigan English Language Examination Assessment Battery (MELAB) (80%) • Test of English as a Foreign Language (TOEFL)– Internet based -iBT (86; minimum score of 20 in each of reading, writing, listening and speaking categories) • Canadian Test of English for Scholars and Teachers (CanTEST) (band 4.5 in listening and reading and band 4.0 in writing and oral interview) • International English Language Testing System (IELTS) (6.5) • Academic English Program for University and College Entrance (AEPUCE) (65%) • Canadian Academic English Language Assessment (CAEL) (60 overall and 60 on each subset)	~~The Graduate Committee will not recommend for admission a student with a TOEFL exam score less than 590 (243 on computer based exam) unless written permission has been provided by the Department Head. Tests for language proficiency for the TOEFL as well as other exams require the minimum scores set by the Faculty of Graduate Studies.~~

credit hours at the 7000 level must be at the 3000 level or above. A maximum of 48 credit hours of coursework is allowed toward the Ph.D. program.	
5.1.3 Transfer from the Master's to the Ph.D. program Students who have not completed a Master's program may transfer to the Ph.D. program within the same department/unit upon the recommendation by the Head of the department/unit to the Faculty of Graduate Studies. The recommendation should be made within sixteen (16) months or four (4) terms (including Summer term) from the start of the Master's program. The coursework completed and time spent in the Master's program will normally be credited towards the Ph.D. program. Students must complete at least 24 credit hours of coursework, unless the individual department/unit's approved supplemental regulations specify otherwise. A minimum of 18 credit hours at the 7000 level or higher is required. Any further coursework beyond the minimum 18 credit hours at the 7000 level must be at the 3000 level or above. A maximum of 48 credit hours of coursework is allowed toward the Ph.D. program. The request to transfer from a Master's to the Ph.D. program must be submitted to the Faculty of Graduate Studies at least one (1) month prior to the term for which the student intends to commence the Ph.D. program. The following are required when making the request: • must indicate a request for transfer on the online Application for Admission; • If the transfer is made within one (1) year, no additional application fee will be required; If the transfer occurs within 12 months of the initial registration in the Master's program, the student will be assessed Ph.D. fees for three (3) years. If the transfer occurs after 12 months, the student will be assessed Ph.D. program fees for two (2) years (as they will have already paid fees for the Master's program). Students are cautioned that such transfers may impact on The University of Manitoba Graduate Fellowship duration. Where a student with a Master's degree or equivalent is initially admitted and registered in a Master's program, that student may be transferred to the Ph.D. program within the same department/unit on the recommendation of the student's advisor/co-advisor and Head of the department/unit, provided that follow up transfer recommendation occurs within 12 months of the initial registration in the Master's program. In such a case, the application fee is waived and fees assessed towards the Master's program will be deducted from the full two (2) years of Ph.D. program fees. Transfers later than 12 months must pay an application fee and their fees will be assessed as a three (3) year Ph.D. Where a student holds a Master's degree that would be sufficient for admission to the Ph.D. program, students must complete at least 12 credit hours of coursework, unless the individual department/unit's approved supplemental regulations specify otherwise.	
5.1.4 Provisional Admission to the Ph.D. Students nearing the completion of the Master's degree may be accepted provisionally to the Ph.D. program for a 12 month period (commencing with the first registration in the Ph.D. program). Further registration in the Ph.D. program is contingent upon completion of all requirements of the Master's degree within the 12 months. Students must maintain continuous registration in their Master's program until its completion. Students will require assistance from the department/unit and the Faculty of Graduate Studies to complete dual registration on the "Concurrent	~~The Graduate Committee will not recommend for admission a student with a TOEFL exam score less than 590 (243 on computer based exam) unless written permission has been provided by the Department Head. Tests for language proficiency for the TOEFL as well as other exams require the minimum scores set by the Faculty of Graduate Studies.~~

October 23, 2019

Report of the Faculty Council of Graduate Studies on Course, Curriculum and Regulation Changes

Preamble

1. The Faculty of Graduate Studies (FGS) has responsibility for all matters relating to the submission of graduate course, curriculum, program and regulation changes. Recommendations for such are submitted by the Faculty Council of Graduate Studies for the approval of Senate.

2. The Faculty Council of Graduate Studies met on the above date to consider a proposal from the Faculty of Social Work.

Observations

1. The **Faculty of Social Work** proposes the following changes to its supplemental regulations, which also include the supplemental regulations for the Master of Social Work-Indigenous Knowledges program. See attached.

   The current "cluster" structure within the MSW program has a common core set of courses and five separate cluster sub-programs, with different courses offered in each of the cluster sub-programs. Students are required to take nine credit hours of prescribed core courses, nine credit hours of prescribed courses in one of the cluster sub-programs, and an additional six credit hours of elective courses. The "cluster" program began in Fall 2014.

   The following changes are recommended for the structure of the MSW Program:

   • The number of core required courses is changed from 9 to 12 credit hours. SWRK 7600 has been retained as a core theory course. The other current required and core course, SWRK 7610, has been replaced with two research method courses, SWRK 6010 and SWRK 6070.

   Rationale: With the current cluster program, graduate level students are completing few research courses, only three or six credit hours. When offered as electives, few students have registered in the SWRK 6010 and SWRK 6070 courses, which has left MSW students unprepared to understand the interrelationship between theory development and research. The proposed change to the program structure will ensure that all MSW students are required to take nine credit hours of research courses that includes the SWRK 7620, SWRK 6010, and SWRK 6070 courses. These changes to the program structure are reflected in the attached supplemental regulations in section 4.4.1.

   • Remove the cluster structure from the MSW program.

   Rationale: The current "cluster" program has five clusters. Over the five years in which students were admitted to the program, there has been uneven enrollment in the various cluster programs. As a result, the unit must offer each course in each cluster in each academic year, even if few students actually enroll in the cluster and/or the cluster courses (some courses with 20-25 students and others with only 4-5 students enrolled). The current MSW program structure prescribes 18 credit hours of courses (9 credit hours of core and cluster sub-program courses with 6 credit hours of electives). Removing the cluster structure will allow the unit to: 1) offer what are the current cluster courses over a two year period to ensure greater enrollment in the courses and 2) over time, add courses that reflect changes in the social work practice field. Students will benefit from increased flexibility in course choice, as the proposed changes include 12 credit hours of required courses and 12 credit hours of elective courses with 3credit hours that can be taken in another academic unit. Removing

the cluster structure will also end the Indigenous Practice Cluster. With this cluster, student in the MSW Program would apply to take three courses that are offered in the MSW-IK Program. Over the past years, student interest in accessing these courses has increased beyond the ability of the MSW-IK Program to accommodate students in the courses (maximum enrollment for the MSW-IK courses is capped at 20 students and the annual intake of MSW-IK students is 18, leaving only two additional spots for MSW students). The three courses, SWRK 7780, 7810, and 7750 will be offered through the MSW Program. These changes to the program structure are reflected in the attached supplemental regulations in section 4.4.1. Because the MSW-IK courses are co-taught with an academic faculty member and an elder/knowledge holder, the unit anticipates that some MSW students will still want to access these courses (even if they are taught by academic faculty members through the MSW Program). However, because there is limited space in the MSW-IK Program courses, the language in the supplemental regulations is being changed to state that access to these MSW-IK courses by MSW students is only provided in exceptional circumstances, and when students meet the admission requirements of the MSW-IK Program. Admission requirements for the MSW-IK Program require that potential students participate in an interview process that demonstrates their readiness to take courses that includes traditional teachings provided by Indigenous Knowledge Holders (see section 4.3). The changes to the program structure are reflected in the attached supplemental regulations in section 1.4.3.1.

• Change the current structure for the course-based option from individualized enrollment in SWRK 7180 and SWRK 7190 to these courses being offered at specific times (coinciding with term start and end dates).

Rationale: The courses, SWRK 7180 and SWRK 7190 for the course-based option are currently individual courses that students take after they have secured their own practicum placement for SWRK 7180 and written an independent proposal that articulates the practice they will undertake and examine in the chosen agency setting. The current SWRK 7190 course is also an individual course in which students write a final report about their activities in the field setting (SWRK 7180) and demonstrate increased understanding of how theory applies to practice in that setting. Review of student progress through the MSW program reveals that many students experience difficulty in both finding an agency setting and then writing the required proposal that fits both academic requirements and standards, and fits the social work practice approach in the chosen agency setting. With the proposed change, the unit will develop contracts with specific community agencies. For SWRK 7180, students will choose a practicum setting from a list of the contracted agencies and they will complete the required 450 hours in that setting. SWRK 7190 will become a practice seminar course in which students will meet as a group every two weeks. The proposed change will provide needed structure for students in finding a community agency in which to complete the required field hours (SWRK 7180) and complete the academic assignments for SWRK 7190.

Recommendations

Faculty Council of Graduate Studies recommends THAT the program changes from the unit listed below be approved by Senate:

Faculty of Social Work

Respectfully submitted,

Dr. Louise Simard, Chair
Faculty Council of Graduate Studies

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

/ak

The Faculty of Graduate Studies Academic Guide contains all the rules and policies pertaining to the Faculty of Graduate Studies. Adherence to these rules is of utmost importance for the effective functioning/operation of programs and for guiding and monitoring the progress of students. The integrity of the process is at stake. The major goal of this guide is to prevent potential problems that may affect the completion of a student's program. It is the responsibility of students and the department/unit offering a graduate program to read and follow the policies contained herein. All regulations as laid out in the Faculty of Graduate Studies Academic Guide are subject to revision by the appropriate bodies of the Faculty of Graduate Studies. This compendium is presented as the most recent set of regulations as a guideline for students and staff. Individual departments/units may have additional regulations that supplement these general regulations. All such supplementary procedures and regulations must be approved as specified by the By-Laws of the Faculty of Graduate Studies, be published and available to students, and kept on file in the Faculty of Graduate Studies Office. For those programs that are administered through a Faculty (as opposed to a Department) the term "Department" should be substituted by "Unit" within this document (i.e. Department Head becomes Unit Head.) **PREFACE** The Faculty of Graduate Studies is a pan-University faculty charged with the oversight of the administration of all graduate programs at the University. Therefore these regulations apply to all graduate students in all programs in all academic units. Individual units may require specific requirements above and beyond those in the following document, and students should consult unit supplemental regulations for these specific regulations. All unit supplemental regulations require approval of the Faculty of Graduate Studies. **Definitions** The "Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies" shall be taken to mean the Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies or designate. "Unit" shall be taken to mean the academic unit where the graduate student is pursuing his/her studies. Generally, this is the department. For Faculty-based programs, the Dean is the *de facto* Head of the unit. The term "unit" shall also include Schools of Faculties within the University. The Dean of the Faculty of Graduate Studies is the *de facto* Head of interdisciplinary programs administered by the Faculty of Graduate Studies. The Head of any unit may designate any of his/her responsibilities in this policy to another member of the unit, such as the Graduate Chair.	
1.1 Application and Admission Procedures The application (and all required documentation) is to be submitted directly to the Faculty of Graduate Studies, via the online application system. **Applicants should**	Student Services and Admissions/Advising Office Faculty of Social Work University of Manitoba

contact the department/unit to which they are applying for the procedures and requirements of that department/unit. Contact information for each unit can be found at http://umanitoba.ca/faculties/graduate_studies/admissions/programs/index.html.

1.1.1 Process:

1.1.1 (a) A completed official application for admission form must be submitted, together with the application fee and supporting documentation, to the Faculty of Graduate Studies, via the online application system.

NOTE: International students must pay special attention to the appropriate requirements with respect to transcripts (see application form for details).

1.1.1 (b) Applications are subsequently reviewed by the unit offering the program which will decide whether the applicant meets the unit's criteria including, but not limited to, availability of advisors, space, and facilities.

1.1.1 (c) Notification of recommended/rejected applications is sent by the Head of the unit to the Faculty of Graduate Studies. Applications recommended for admission are checked to determine if they meet the Faculty of Graduate Studies' eligibility requirements. The Faculty of Graduate Studies then notifies applicants of their acceptance or rejection.

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Ph: (204) 474-8350
Fax: (204) 474-7594
social_work@umanitoba.ca

http://umanitoba.ca/faculties/social_work/

M.S.W.-IK Program:

Faculty of Social Work
University of Manitoba
William Norrie Centre
485 Selkirk Avenue
Winnipeg, Manitoba Canada
R2W 2M6
Phone: (204) 668-8160
Fax: (204) 663-8857
Email: mswik@umanitoba.ca

1.1.2 Deadlines for Recommended Applications (from Departments/Units to the Faculty of Graduate Studies)

The following are the deadlines for receipt by the Faculty of Graduate Studies of recommendations from departments/units.

Term	Start Date	Canadian/US	International
FALL	September	July 1	April 1
WINTER	January	November 1	August 1
SUMMER	May	March 1	December 1

IMPORTANT: These are not application deadlines. Applicants are **required** to submit the application and documentation to the Faculty of Graduate Studies to meet the application deadline in place for a particular department/unit. Applicants are advised to confirm the deadline of the department/unit to which the application is being made; deadlines can be found on the application program page at http://umanitoba.ca/faculties/graduate_studies/admissions/programs/index.html.

Deadline Dates for Pre-M.S.W., M.S.W., and Ph.D. Applications:

Session	Start Date	Canadian/ US	International
Fall	September	December 1	December 1

Deadline Dates for M.S.W.-IK Applications:

Session	Start Date	Canadian/US	International
Fall	September	December 1	October 15

1.1.3 Application Fee

A $100.00 (CDN) non-refundable fee must accompany admission applications from all Canadian, Permanent Resident, and International applicants.

1.1.4 Transcripts

M.S.W. Program:

Applicants who convocate with a B.SW. in February or later in the year of application must

Unofficial copies of transcripts and final degree certificates are acceptable for initial assessment and provisional admission purposes. Upon admission to the Faculty of Graduate Studies, applicants must arrange for official transcripts from all post-secondary institutions attended to be sent to the Faculty of Graduate Studies within one (1) month of the date on the admission letter. Applicants will be placed on hold, which prevents registration until all admission requirements have been submitted. **All transcripts must arrive in sealed, university-stamped envelopes sent directly from the issuing institution(s) and be accompanied by official and literal English translations (where applicable, see 1.1.5).** For international degrees or where the transcripts does not or will not clearly state that a degree has been conferred, a copy of the official degree certificate is also required.	submit a special letter from their home university and/or faculty indicating that the applicant will be in possession of the B.SW. degree (convocated) by June 30 of the admission year.
1.1.5 Transcripts: International Where academic records from a country other than Canada are produced in a language other than English, the applicant must arrange for the submission of official literal English translations of all records**.** To be official, original language documents and English translations must arrive together in envelopes which have been sealed and endorsed by the issuing institution. For international degrees or where the transcript does not or will not clearly state that a degree has been conferred, a copy of the official degree certificate is also required.	
1.1.6 Transcripts: University of Manitoba University of Manitoba students are not required to submit University of Manitoba transcripts.	
1.1.7 Proficiency in English A successfully completed English Language Proficiency Test from the approved list is required of all applicants unless they have received a secondary school diploma and/or university degree from Canada or one of the countries listed on the English Language Proficiency Test Exemption List (see 1.1.8). The Faculty of Graduate Studies requires a passing, acceptable English Language Test score in order to offer admission. **Please note:** In all cases, test scores older than two (2) years (from the time of completing the test) are invalid. Thresholds required for successful completion are indicated in parentheses. • University of Michigan English Language Examination Assessment Battery (MELAB) (80%) • Test of English as a Foreign Language (TOEFL)– Internet based -iBT (86; minimum score of 20 in each of reading, writing, listening and speaking categories) • Canadian Test of English for Scholars and Teachers (CanTEST) (band 4.5 in listening and reading and band 4.0 in writing and oral interview) • International English Language Testing System (IELTS) (6.5) • Academic English Program for University and College Entrance (AEPUCE) (65%) • Canadian Academic English Language Assessment (CAEL) (60 overall and 60 on each subset) • PTE Academic (61% overall)	

Note: In addition, foreign language students may be asked by the department/unit to complete the CanTEST prior to or following registration in the Faculty of Graduate Studies and, if need be, the department/unit may recommend remedial measures in language skills based on the results of the CanTEST. Some units may require a specific test or test scores greater than those indicated above. Students should check department/unit supplemental regulations for details.	
1.1.8 English Language Proficiency Test Exemption List Applicants holding secondary school diplomas and/or recognized university degrees from countries on the Faculty of Graduate Studies English Language exemption list are not required to submit an English Language Proficiency score. For more information please see our website at http://umanitoba.ca/faculties/graduate_studies/admissions/english_exemption_list.htm	
1.1.9 Letters of Recommendation Letters of Recommendation are to be completed via the online application. Applicants are required to add their 'Recommendation Provider(s)' contact information so that each recommender is sent an automated email notification. Generally, two (2) Letters of Recommendation must be submitted to the Faculty of Graduate Studies. For the number of recommendation letters necessary, applicants should review their specific Program webpage at http://umanitoba.ca/faculties/graduate_studies/admissions/programs/index.html.	**Pre-M.S.W. and M.S.W. programs:** Two reference forms for letters of recommendation are required. **M.S.W.-IK program**: Three references are required for application to the M.S.W.-IK program, including an Academic, an Employment, and an Indigenous Community reference. **Ph.D. program:** Three letters of recommendation are required.
1.1.10 Admission Tests Some departments/units require admissions tests, such as the Graduate Record Examination (GRE) or the Graduate Management Aptitude Test (GMAT). These requirements are listed in the supplemental regulations of the particular department/unit, and if required, the scores must be submitted at the time of application.	
1.1.11 Entrance Requirements The minimum standard for acceptance into any category in the Faculty of Graduate Studies is a 3.0 Grade Point Average (GPA) or equivalent in the last two (2) previous years of full time university study (60 credit hours). **Note:** This is the minimum requirement of the Faculty of Graduate Studies and departments/units may have higher standards and additional criteria.	Applicants who self-identify as members of one or more of the Educational Equity priority groups and who possess a Grade Point Average between 2.5 and 2.99 will be reviewed for special consideration. Applicants with adjusted Grade Point Averages below 2.5 will not be considered. For more information on the Education Equity Initiative see below. **The Faculty of Social Work Educational Equity Initiative:** The purpose of this 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

	fulfillment of this goal, the aim is to correct the conditions of disadvantage in professional education experienced by Canadian Aboriginal peoples, persons with disabilities, immigrants and refugees to Canada, LGBTTQ 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, but also requires special measures and the accommodation of difference. (Adapted from the *Canadian Employment Equity Act*.) *To qualify under this program applicants must identify themselves at point of application using the definitions below.* **Definitions of Educational Equity Priority Groups:** *Indigenous Peoples* Aboriginal peoples are all indigenous people of Canada including: First Nations, Métis, and Inuit. *Visible Minorities* Persons other than Aboriginal Peoples who are, because of their colour, a visible minority in Canada. *Immigrants* Immigrants are those who do not record Canadian citizenship by birth, and whose native tongue is not English. *Refugees* A refugee is an individual who has left his/her country of residence because of persecution for belonging to a particular social, cultural, religious and/or national group, and/or for holding particular political beliefs and has been accepted for residence 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. *LGBTTQ* LGBTTQ are persons who self-identify as lesbian, gay, bisexual, transgender/transsexual, two-spirited, queer or questioning. The Educational Equity Initiative applies to Canadian Citizens and Permanent Residents in Canada. Educational Equity Priority Groups do not pertain to International Applicants and Visa Students. **Eligibility consideration for M.S.W. , M.S.W.-IK, and Pre-M.S.W. programs under the**

	Educational Equity Initiative for applicants with less than 3.0 adjusted Grade Point Average: • If you have identified yourself at point of application as a member of one or more of the Educational Equity priority groups, and have a Grade Point Average between 2.50 to 2.99, you will be required to submit an additional form and your application will be reviewed for special consideration. Applicants with adjusted Grade Point Averages below 2.5 will not be considered; • Special consideration applications will be scored identically to other applications on their non-academic components: paid and unpaid work experience (see section 3 below for more information). The M.S.W. and M.S.W.-IK Admissions Committees refer all Educational Equity Initiative applications to the Faculty of Social Work Educational Equity (EE) Committee (comprised of faculty members, student representatives, and community members representing equity groups), which may request additional information from applicants. The EE committee reviews each EE application and makes a recommendation to the M.S.W. and M.S.W.-IK Admissions Committees. The M.S.W. and M.S.W.-IK Admissions Committees will make a recommendation to the Dean of the Faculty of Social Work. The final decision on admission rests with the Dean of the Faculty of Graduate Studies. The Faculty undertakes to ensure that persons admitted to the Faculty, and the profession, have not engaged in behavior that is regarded as physically and mentally harmful to others. In this regard, **all applicants offered admission** will be required to submit a **Criminal Record Statement** and a **Child Abuse Registry (CAR) check** (for a record of those registered as an offender). The Faculty reserves the right, based on its findings, to interview all applicants selected for admission with an assurance of confidentially regarding same. The existence of such a record will not automatically exclude the applicant, but the Admissions Committee may declare a candidate ineligible based on its findings.
1.1.12 Eligibility of University of Manitoba Staff Members A staff member at The University of Manitoba at the rank of Assistant Professor or above is not eligible to apply for admission to a graduate program in the department/unit in which the appointment is held.	
1.2 Registration Procedures	

1.2.1 Registration

Pre-Master's students are not normally allowed to register in 7000-level courses or above, with the exception of GRAD 7500, unless prior permission is granted by the Dean of the Faculty of Graduate Studies or designate.

Undergraduate students may be permitted to register in 7000-level courses or above on recommendation of the department/unit offering the graduate course, subject to the conditions listed below:

- Undergraduate students must obtain permission from the department/unit head and course instructor before registering for a graduate course.
- Only undergraduate students completing an undergraduate degree at the University of Manitoba are eligible to enroll in a graduate course.
- Undergraduate students are not eligible for admission to any graduate course that is cross-listed with an undergraduate course, or that is scheduled to be taught at the same time and location as an undergraduate class.
- Undergraduate students will only be eligible to receive graduate-level credit for a course designated as 7000-level or above if at least 75% of the students registered in the course are graduate students.
- Undergraduate students who complete a graduate course are not guaranteed admission to a graduate program.

On admission to a graduate program at the University of Manitoba, application may be made to the Faculty of Graduate Studies to apply any previously completed graduate courses toward meeting program requirements, subject to the restrictions listed below.

- No more than 50% of the coursework required in a graduate program may be imported.
- Only courses in which a C+ grade or higher, or the minimum grade required by the program to which the course would be applied, is achieved are eligible to be considered to be used toward may be applied to meeting the requirements of any graduate program.
- Any graduate course completed by an undergraduate student may subsequently be applied to a graduate program only if it has not been used toward completion of any other degree program.
- Any graduate course completed by an undergraduate student for which a passing grade has been obtained (i.e., C+ or higher) may not be repeated should the student later gain admission to a graduate program.
- Courses completed more than seven (7) years prior to the date of awarding a degree may not normally be used for credit towards the degree (see section 4.7.2 Lapse of Credit of Courses)

All graduate students must initially register in the term specified in their letter of acceptance as specified in the Academic Schedule of the Graduate Calendar. Any student not registering by the registration deadline for the term specified in their letter of offer will be required to re-apply for admission. In exceptional circumstances and with prior approval from the department/unit, a student may defer registration for up to one (1) term following acceptance into the Faculty of Graduate Studies. In the case of international students, admission may be deferred, with prior approval from the department/unit, for up to one (1) year following acceptance.

All newly admitted and returning graduate Social Work students are required to register on the University of Manitoba web-site. In-person registration is not permitted for Social Work; graduate students are eligible to register by Aurora Student.

Steps to Register:

1. Consult the Faculty of Social Work section of the Graduate Calendar regarding the course requirements for your program of studies. Graduate Calendar is available on the University website;
2. Contact your Pre-Master's advisor or your M.S.W., M.S.W.-IK or Ph.D. program Faculty advisor to discuss and/or review your program of studies;
3. Obtain written approval of your program of studies from your advisor. Any changes to your program must be approved by your advisor. It is advisable to determine your program well in advance of registration.

For ***Pre-Master's Students***, if you have completed your Pre-Master's program and are intending to submit an application to the M.S.W. program, you may do so provided you have:

i. met all program requirements;

ii. maintained a cumulative Grade Point Average of B (3.0);

iii. completed an online application form and paid the application fee;

iv. completed a transfer survey form which is sent by the Student Services and Admissions/Advising Office.

The application and application fee are to be submitted on-line directly to the Faculty of Graduate Studies, and the transfer survey is to be submitted directly to the Graduate Programs Student Advisor by January 15 of the year you intend to transfer to the M.S.W. or M.S.W.-IK program. Once you are notified of your admission to the M.S.W. or M.S.W.-IK program, and you have accepted the offer of admission, you will be able to register for M.S.W. or M.S.W.-IK courses.

4. Once having met with your advisor to select and approve the courses you require, familiarize yourself with Aurora Student ***prior*** to your scheduled initial registration access date. Please refer to the Aurora Student on the University website to determine your Initial Access Time to register.

All programs must be approved by the Head of the major department/unit or designate. Approval to take courses from departments/units outside the major department/unit must be obtained from the outside department/unit. The approval or denial of admission and registration to two (2) programs rests with the Dean of the Faculty of Graduate Studies in consultation with the department/unit concerned. The approval/denial must be submitted to the Faculty of Graduate Studies prior to the student's admission/registration on the "Concurrent Curriculum Permission" form (http://intranet.umanitoba.ca/student/records/2323.html). Where a student does register in two (2) programs, it is important to note that dual registration may affect funding, and that completing a graduate program as a part-time student will affect eligibility for The University of Manitoba Graduate Fellowship (UMGF) and may limit other funding possibilities.	5. Register by using the University of Manitoba web-site. www.umanitoba.ca click on Aurora Student. 6. Identify fee assessment on Aurora Student. 7. Pay fees or arrange to pay fees. Registration is complete. If you have only your thesis or course based specialization (SWRK 7180/SWRK 7190) to complete, **you still must register.** **Steps to Register – M.S.W.-IK Program:** a) Consult the Faculty of Social Work section of the University of Manitoba Graduate Calendar regarding the course requirements for your program of studies. The Graduate Calendar is available on the University website: http://umanitoba.ca/student/records/academiccalendar.html b) Contact your M.S.W.-IK advisor council to discuss and/or review your program of studies. c) Obtain the written approval of your program of studies from your advisor council. Any changes to your program must be approved by your advisor council. It is advisable to determine your program well in advance of registration. d) Having met with your advisor council to select your program of studies and having the courses you require approved, read the Faculty of Social Work Registration Instructions and Program Information in the Graduate Studies section of the Registration Guide in order to familiarize yourself with Aurora Student prior to your scheduled initial registration access date. Please refer to Aurora Student on the University website to determine your Initial Access Time to register. e) Register by using the University of Manitoba website. www.umanitoba.ca Click on Aurora Student. f) Identify fee assessment on Aurora Student. g) Pay fees or arrange to pay fees. Registration is complete once fees are paid. If you have only SWRK 7820 Project Seminar 3 (for Project option students) or GRAD 7000 Master's Thesis (for Thesis option students) to complete, you still must register.
1.2.2 Re-Registration All students must re-register in all Fall, Winter, and Summer terms of their program until a degree is obtained. **Failure to re-register will result in the student being**	For ***returning MSW and MSW-IK students***, ensure that you and your Faculty advisor have completed and signed the Faculty of Graduate Studies Progress Report form and for students in a

discontinued from their graduate program. A student who has been discontinued and would like to be considered for continuation in a program must apply for re-admission, which is not guaranteed**.** The re-registration requirement does not apply to occasional students, visiting students, Pre-Master's students or students on an Exceptional or Parental Leave of Absence (please refer to "Leave of Absence", Section 8 of this Guide). The notation 'Discontinued Graduate Program' will be placed on the academic record of any graduate student who has failed to maintain continuous registration.	thesis route, the Advisor Student Agreement. Students who have not completed these forms will be blocked from registering for the following year by the Faculty of Graduate Studies.
1.2.3 Registration Revisions For designated periods subsequent to registration, approved revisions may be made. It is required that students adhere to dates and deadlines as published in the Academic Schedule of the Graduate Academic Calendar. **Note:** Graduate students are not permitted to withdraw from courses without written permission from their Department/Unit Head on recommendation from their advisor/co-advisor (and/or advisory committee). The notation "Required to Withdraw" may be placed on the academic record of any graduate student who has withdrawn from courses without such approval.	
1.2.4 Advisor Student Guidelines All students in thesis/practicum programs, in consultation with their advisor/co-advisor, are required to complete the Advisor Student Guidelines as soon as possible after registration but no later than at the time of submission of the first Progress Report. If a student does not have an advisor/co-advisor at this time, the interim advisor will be required to complete the Advisor Student Guidelines. The Advisor Student Guidelines is to be completed again if there is a change in advisor/co-advisor. The Advisor Student Guidelines form is available through JUMP only.	
1.2.5. Western Deans' Agreement This agreement was established in 1974 as an expression of co-operation and mutual support among universities offering graduate programs in western Canada. Its primary purpose is the reciprocal enrichment of graduate programs throughout western Canada. This agreement is not intended to preclude other agreements between participating institutions. A list of the participating Universities can be found at http://wcdgs.ca. 1.2.5.1 The Western Deans' Agreement normally provides an automatic tuition fee waiver for visiting students. Graduate students paying normal required tuition fees to their home institution will not pay tuition fees to the host institution. 1.2.5.2 Only degree level courses from recognized post-secondary institutions will be considered; courses that are part of certificate or diploma programs will not be approved. 1.2.5.3 Program fees are always to be paid to the home institution, regardless of coursework taken at another institution. Students may be required to pay student, activity, application, or other ancillary fees to the host institution, according to general	

Student status should be determined by the student and advisor/co-advisor, and changes must be requested on the "Part-Time Status" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). The form must be approved by the department/unit Head and submitted to the Faculty of Graduate Studies. Declaration of full/part time status must be made prior to the end of the registration revision period in the Fall and/or Winter terms and within one (1) month of the start of the Summer term. Part-time students may revert to full-time but will not be permitted to return to part-time studies. For every full year (12 months) a Master's student is declared as part time they will receive an additional four (4) months in time to complete their program. For every two (2) years (24 months) a Master's student is declared as part time they will receive an additional year (12 months) in time to complete their program. For every two (2) years (24 months) a Ph.D. student is declared as part time they will receive an additional four (4) months in time to complete their program. Retroactive status changes will not be made.	
1.4.2 Pre-Master's Or Qualifying Students In specific cases where the academic background of the student is judged to be insufficient for the given program in a department/unit, the department/unit may recommend that the student be admitted to a Pre-Master's program of study. The Pre-Master's program is intended to bring the student's standing to approximately the level of an Honours graduate in the major department/unit, and to provide any necessary prerequisites for courses.	The Pre-M.S.W. program is designed to prepare students who do not have a B.SW. degree from an accredited university or its equivalent for entry to the M.S.W. program. It is intended to build on the existing background and experience of students by providing them with an opportunity for focused study on Canadian social welfare policy, generalist social work practice, the philosophy and values of the profession of social work, including content on diversity and anti-oppression and supervised practice in the field of social work.
1.4.3 Occasional Students A student wishing to take graduate courses with no intention of applying them toward an advanced degree at the University of Manitoba is classified as an occasional student. Occasional students must meet the same degree and grade point average entrance requirements as regular graduate students and must write final examinations in the courses taken (unless audited), but will not receive credit toward a degree. In special circumstances, an occasional student may apply for permission to proceed to a degree program and also apply for transfer, for credit, of courses previously taken in the "occasional" category. **Note:** 1. Transfer of courses from the "occasional" category to a degree program is not automatic: request for advance credit must be made within the first year of a degree program on the "Advance Credit – Transfer of Credit" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). 2. Fees paid by a student while registered as an occasional student are not transferable, at a later date, to a degree program.	**Occasional Students in the Pre-M.S.W. Program:** Applicants who hold a 4-year degree in a discipline other than Social Work at the point of application from an accredited university which is recognized by the University of Manitoba may apply as Pre-M.S.W. Occasional students. Admission requirements to apply as Pre-M.S.W. Occasional students include: • a minimum Grade Point Average of 3.0 (B) in the last 60 credit hours of university study. If courses have been taken as a special student, occasional student and/or in a subsequent degree or Pre-Master's program, they will be calculated into the Grade Point Average as part of the last 60 credit hours; • possession of a 4-year degree in a discipline other than Social Work at the point of application from an accredited university which is recognized by the University of Manitoba.

3. Registration in the occasional student category can be for no more than one (1) academic year (September 1 - August 31) without reapplication. 4. At least 60% of coursework per academic year must be taken at the graduate level while registered as an occasional student.	<u>Social Work courses available to Pre-M.S.W. Occasional students:</u> • SWRK 3100 Systematic Inquiry in Social Work (3 CH) • SWRK 6030 Canadian Social Welfare Policy Analysis (6 CH) • SWRK 6040 Anti-Oppressive Social Work Practice (3 CH) • SWRK 6060 Social Work and Aboriginal People (3 CH) The maximum number of credit hours (CH) permitted is 6 CH plus SWRK 3100 (3 CH) **Occasional Students in the M.S.W. Program:** Applicants who hold a degree in Social Work at the point of application from an accredited university which is recognized by the University of Manitoba may apply as M.S.W. Occasional students. <u>Admission requirements to apply as M.S.W. Occasional students include:</u> • possession of a B.SW., M.S.W., Ph.D. in Social Work at point of application from an accredited university which is recognized by the University of Manitoba; • a minimum Grade Point Average of 3.0 (B) in the last 60 credit hours of university study. If courses have been taken as a special student, occasional student and/or in a subsequent degree or Pre-Master's program, they will be calculated into the Grade Point Average as part of the last 60 credit hours. <u>Social Work courses available to M.S.W. Occasional students:</u> • SWRK 6010 Data Analysis for Social Work Research (3 CH) • SWRK 6070 Qualitative Research in Social Work (3 CH) • SWRK 7300 Clinical Evaluation of Social Work Interventions (3 CH) • SWRK 7430 Evaluation Research in Social Work Practice (3 CH) • SWRK 7440 Policy Analysis in Social Work Practice (3 CH) • SWRK 7230 Problem Seminar (3 CH) The maximum number of credit hours (CH) permitted is 6 CH plus SWRK 6010 (3 CH) or SWRK 6070 (3 CH). All occasional and non-social work students are required to abide by the same pre/co-requisite policy that applies to Social Work students.

	All occasional students register online using the Aurora Student system. M.S.W. students are given priority in registration and space allocation. Occasional students must seek written permission of the instructor to register for all courses except for SWRK 3100, SWRK 6010 and SWRK 6070 (permission not required). The written permission must be submitted to the Student Services and Admissions/Advising Office, Faculty of Social Work, at least 5 working days prior to one's registration access date. **Occasional Students in the M.S.W.-IK Program:** • possession of a B.SW., M.S.W., or Ph.D. in Social Work at point of application from an accredited university which is recognized by the University of Manitoba; • a minimum grade point average of 3.0 (B) in the last 60 credit hours of university study. If courses have been taken as a special student, occasional student and/or in a subsequent degree or Pre-Master's program, they will be calculated into the grade point average as part of the last 60 credit hours. **Social Work courses available to M.S.W.-IK Occasional students:** • SWRK 7720 Critical Theory and Indigenous Peoples (3 CH) • SWRK 7730 Indigenous Research Methodologies and Knowledge Development (3 CH). All occasional and non-social work students are required to abide by the same pre/co-requisite policy that applies to MSW-IK students. All occasional students register online using the Aurora Student system. MSW-IK students are given priority in registration and space allocation. Occasional students must seek written permission of the instructor to register for all courses. **Occasional Students in the Ph.D. Program:** Applicants who hold a Master's degree at the point of application from an accredited university which is

	recognized by the University of Manitoba may apply as Ph.D. Occasional students. There are two categories of admission for Occasional students dependent on the applicant's previous degree: 1. Applicants who do not hold a prior degree in social work: • must have a Master's degree; • must have a minimum of 3.0 Grade Point Average of 3.0 (B) in the last 60 credit hours of University study; and • must have permission of the instructor of any Ph.D. level course in social work in which they wish to enrol. 2. Applicants who hold a prior degree in social work: • must have a Master's degree; and • must have a minimum of 3.0 Grade Point Average of 3.0 (B) in the last 60 credit hours of University study. <u>Social Work courses available to Ph.D. Occasional students:</u> Ph.D. Occasional students in Social Work are limited to taking the core courses in the Social Work Ph.D. Program. The maximum number of credit hours a student may take as an occasional student from the core is 3 credit hours.
1.4.4 Joint Masters (With the University of Winnipeg) The University of Manitoba and the University of Winnipeg offer four (4) joint Master's programs: History, Religion, Public Administration, and Peace and Conflict Studies. The University of Manitoba, Faculty of Graduate Studies is responsible for the administration of the joint programs, and students must complete the regular University of Manitoba application and registration forms. Students taking Pre-Master's qualifying work for these programs register at the university where the courses are being taken.	
1.4.5 Visiting Students Visiting students are students who are registered at another institution who are taking one (1) or more courses at The University of Manitoba on a Letter of Permission from their home university. Visiting students must submit an online application, along with a $100.00 (CDN) non-refundable application fee, in addition to copies of transcripts from all institutions attended and a successfully completed English Language Proficiency Test from the approved list, if applicable. Applications must be submitted to the Faculty of Graduate Studies a minimum of one (1) month prior to the start of the intended term of study.	

Note: 1. Fees paid by a student while registered as a visiting student are not transferable, at a later date, to a degree program. 2. Registration in the visiting student category can be for no more than one (1) academic year (September 1 - August 31) without reapplication. 3. At least 60% of coursework per academic year must be taken at the graduate level while registered as a visiting student.	
1.5. Student Accessibility See Student Accessibility Procedure: http://umanitoba.ca/admin/governance/governing_documents/students/accessibility.html	
SECTION 2: Academic Performance - General **2.1 General Note** **Students are responsible for ensuring that they meet all degree and program requirements.** The advisor (and if appropriate co-advisor), advisory committee, and department/unit must ensure that each student follows Faculty of Graduate Studies and department/unit guidelines and meets all program requirements. The Faculty of Graduate Studies performs a final check of Faculty of Graduate Studies minimum requirements for each student just prior to graduation. Students are cautioned, therefore, to periodically check all regulations with respect to their degree requirements. Failure to meet all the requirements will render a student ineligible to graduate. Departments/units may make recommendations with respect to the regulations concerning minimum academic performance; however, enforcement of academic regulations rests with the Faculty of Graduate Studies. The following procedures apply to recommendations made by departments/units: The department/unit is responsible for informing the Faculty of Graduate Studies when a student's performance is unsatisfactory in research or coursework and the department/unit must outline any recommended remedial action(s). The department/unit must notify the student of the deficiency and of its recommendation. If the student fails to satisfy any remedial action recommended, the student may be required to withdraw from the Faculty of Graduate Studies. **Note:** When a graduate student is required to withdraw from a program of study, the notation on the academic record will be: "Required to withdraw".	Decisions regarding student status and/or progress in the graduate program are made by the Graduate Standings Committee. The Chair of the Graduate Standings Committee will forward the recommendation of the Faculty of Social Work to the Dean of the Faculty of Graduate Studies. M.S.W.-IK Program: The Faculty of Social Work can only recommend a particular action to the Faculty of Graduate Studies with regard to student progress and/or status in the program. The following outlines the procedures for review of these Faculty of Social Work decisions and recommendations: a) When a Faculty of Social Work decision is made with regards to a student's status and/or progress in the M.S.W.-IK Program, the student will be informed by the Program Director of the nature of the decision and of the possible consequences. b) Within one week of receiving the decision/recommendation, the student may request a review of the decision by the M.S.W.-IK Faculty and Elder Collective. c) The M.S.W.-IK Faculty and Elder Collective will review the case within one month of receipt of the request. The Chair of the Graduate Program Standings Committee is a member of the M.S.W.-IK Faculty and Elder Collective.

A student who has been required to withdraw from a graduate program may be permitted to apply for admission to another graduate program only if the application for admission is approved by the Dean of the Faculty of Graduate Studies.

Voluntary withdrawal from a program is only permitted if the student is in good academic standing.

Recommendations of departments/units will supersede student requests for voluntary withdrawal.

d) The Chair of the Graduate Program Standings Committee will forward the recommendation to the Dean of the Faculty of Graduate Studies.

2.2 BONAFIDE ACADEMIC REQUIREMENTS (BFAR)

The following Bona Fide Academic Requirements (BFAR) represent the core academic requirements a graduate student must acquire in order to gain, and demonstrate acquisition of, essential knowledge and skills. Students must also meet additional requirements that may be specified for their program.

Students must meet requirements as outlined in both BFARs and Supplementary Regulation documents as approved by Senate.

Unless otherwise indicated, students may elect to complete any/all of the following requirements with or without appropriate and authorized assistive technology/aids. Students must consult Student Accessibility Services (SAS) regarding authorization for these procedures.

BFAR Statement	Taught	Assessed
Student must successfully complete a co-operative experience or practicum, if required by their program.	Master's GRAD 7030	GRAD 7030
Student must successfully complete a comprehensive exam, project, studio exhibition, or equivalent, as required by their program and determined by the assigned examining committee.	GRAD 7010 GRAD 7050 GRAD 7090 GRAD 7200	GRAD 7010 GRAD 7050 GRAD 7090 GRAD 7200 Examining/Adjudication Committee
Student must produce a recorded/published thesis commensurate with degree being sought.	Master's GRAD 7000 Doctoral GRAD 8000	GRAD 7000 GRAD 8000
Student must successfully defend their thesis (where required), as determined by the assigned examining committee, in real-time.	Master's GRAD 7000 Doctoral GRAD 8000	GRAD 7000 GRAD 8000
Student in doctoral program must complete a candidacy exam (or equivalent) as required by their program and determined by the assigned examining committee.	GRAD 8010	GRAD 8010
Student must demonstrate knowledge of the University of Manitoba's policy on academic integrity, plagiarism, and cheating.	GRAD 7500	GRAD 7500

Student must conduct research in a safe and ethical manner, referring to their respective ethics board and supervisor(s) to ensure respect is maintained for: human dignity and/or animal welfare; vulnerable persons; informed consent; justice and diversity; confidentiality and privacy; beneficence and non-maleficence in the work that they conduct	GRAD 7300	GRAD 7300
Student must complete coursework as required by their program.		

Individual unit BFARs available at: http://umanitoba.ca/graduate_studies/

2.3 Academic Performance

Student progress shall be reported ***at least*** annually, (but not to exceed once every four months), to the Faculty of Graduate Studies on the "Progress Report" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html).

Students who fail to maintain satisfactory performance may be required to withdraw on the recommendation of the Graduate Chair and/or department/unit Head to the Dean of the Faculty of Graduate Studies on the "Progress Report" form. Two (2) consecutive "in need of improvement" or an "unsatisfactory" rating will normally result in withdrawal of the student from the Faculty of Graduate Studies.

2.4 Performance in Coursework

A minimum degree grade point average (DGPA) of 3.0 with no grade below C+ must be maintained to continue in the Faculty of Graduate Studies. Departments/Units may specify, in their supplementary regulations, standards that are higher than those of the Faculty of Graduate Studies. Students who fail to maintain the specified grades will be required to withdraw unless a department/unit recommends remedial action. Any such action must be approved by the Dean of the Faculty of Graduate Studies.

A student may be permitted to remove deficiencies in grades by repeating the course or replacing it with an equivalent substitute course. In the event that a substitute course is used for remediation, then this must be at the same or higher level as the failed course (e.g., at the graduate level for a failed graduate-level course). Each failed course may be repeated or replaced only once, to a maximum of six (6) credit hours of coursework. If a course is repeated or replaced, the highest grade obtained will be used in the determination of the degree grade point average. Students receiving a grade of C or less in more than six (6) credit hours of coursework are normally required to withdraw, unless otherwise stated in the department/unit's supplemental regulations.

Graduate students are not permitted to repeat a previously passed course.

Note:

NEW 2019/20! Remediation of a failed course with a substitute course must be at the same level or higher (e.g. at the 7000 or 8000 level for a failed 7000 or 8000 level course)

Decisions regarding student status and/or progress in the graduate program are made by the Graduate Standings Committee.

The Chair of the Graduate Standings Committee will forward the recommendation of the Faculty of Social Work to the Dean of the Faculty of Graduate Studies.

M.S.W.-IK Program:
Any failure to meet these coursework performance requirements will result in the matter being forwarded to the M.S.W.-IK Faculty and Elder Collective. The Chair of the Faculty of Social Work Graduate Standings Committee is a member of the M.S.W.-IK Faculty and Elder Collective for reviewing issues related to students. The options for the M.S.W.-IK Faculty and Elder Collective include, but are not necessarily limited to, recommending to the Faculty of Graduate Studies that the student repeat the course, complete other remedial action(s), or be required to withdraw from the program.

In exceptional circumstances, the department/unit may appeal to the Faculty of Graduate Studies for approval of remedial recommendation(s) falling outside those prescribed above. Supplemental exams are not permitted to students in the Master's or Ph.D. program, unless otherwise stated in the department/unit's supplemental regulations. A summary of all actions taken administratively are to be reported, in summary form, to the Faculty of Graduate Studies Executive Committee.	If any other issues related to students arise, the M.S.W.-IK advisor council will inform the M.S.W.-IK Faculty and Elder Collective. Together they will review the issues and make a recommendation to the Chair of the Faculty of Social Work Graduate Standings Committee. The Chair of the Faculty of Social Work Graduate Standings Committee will forward any recommendations of the M.S.W.-IK Faculty and Elder Collective to the Dean of the Faculty of Graduate Studies.
2.5 Mandatory Academic Integrity Course All students, including those in a Pre-Master's program, are required to successfully complete GRAD 7500 Academic Integrity Tutorial (0 credit hours) within their first term of initial registration. **Notes:** Students who successfully complete GRAD 7500 Academic Integrity Tutorial at the Master's level are not normally required to repeat the course at the Ph.D. level so long as no more than one (1) term separates one graduate degree program from another graduate degree program. Failure to complete this course will result in suspension of registration privileges and a grade of "F/NP" being assigned to the course which may lead to being "Required to withdraw" from the graduate program. Students on an exceptional/parental/regular leave of absence must register in GRAD 7500 upon return from leave if it has not already been completed. Visiting and Occasional students are not expected to complete GRAD 7500. For further information see GRAD 7500 FAQ: http://umanitoba.ca/faculties/graduate_studies/registration/grad7500FAQ.html).	
SECTION 3: General Regulations: Pre-Master's **3.1 Admission and Program Requirements** Graduates of bachelor degree programs with a minimum grade point average (GPA) of 3.0 in the last two (2) full years of university study will be considered for admission to a Pre-Master's program. These are the minimum requirements of the Faculty of Graduate Studies. Departments/Units may specify higher or additional criteria. Admission to a Pre-Master's program does not guarantee future admission to a Master's program. As the pre-Master's program of study is intended to bring a student's background up to the equivalent of the required four (4)-year degree, departments/units should assign to students, as part of their Pre-Master's program of study, an appropriate number of applicable upper level (3000 or 4000) undergraduate courses. Pre-Master's students are not normally allowed to register in 7000-level courses or above, with the exception of GRAD 7500, unless prior permission is granted by the Dean of the Faculty of Graduate Studies or designate.	**Eligibility Requirements:** • Possession of, or eligible for the granting of, a minimum three-year degree other than Social Work at point of application from an accredited university which is recognized by the University of Manitoba. Persons who plan to graduate in May of the year of application are not eligible for admission; • One year (1680 hours) of relevant social work experience paid or volunteer (see application package for details); • A minimum Grade Point Average of 3.0 (B) is required in the last 60 credit hours of the degree. Applicants who self-identify as members of one or more of the Educational Equity priority groups and who possess a Grade Point Average between 2.5

	and 2.99 will be reviewed for special consideration. Applicants with Grade Point Averages below 2.5 will not be considered. For more information on the Education Equity Initiative please see section 1.1.11 above. If courses have been taken subsequent to the degree as a Special Student and/or Occasional Student and/or in a subsequent degree or Pre-Master's program, they will be calculated into the Grade Point Average as part of the last 60 credit hours. The program is offered on a part-time basis. Students have a maximum of three years to complete the program. **Coursework:** Thirty-three credit hours (CH) of course work are required for the Pre-M.S.W. program. Course Requirements are: • SWRK 3100 Systematic Inquiry in Social Work (3 CH) • SWRK 6020 Social Work Practice Seminar (6 CH) • SWRK 6030 Canadian Social Welfare Policy Analysis (6 CH) • SWRK 6040 Anti-Oppressive Social Work Practice (3 CH) • SWRK 6050 Field Practice (6 CH) • SWRK 6060 Social Work and Aboriginal People (3 CH) • SWRK 4200 One section of Field/Focus Seminar (6 CH) One Pre-M.S.W. Faculty advisor is appointed to advise students in the Pre-M.S.W. program. This advisor approves a program of study for each student and can be consulted on an "as need" basis by the student during their studies in the Pre-M.S.W. program. **Challenge for Credit Policy:** The Faculty of Social Work accommodates those students who are qualified and who can demonstrate an acceptable level of knowledge and skill, by allowing them to challenge certain social work courses. In this regard, evaluation methods have been devised to assure that challenge students possess the values, knowledge, and skill expected at the exit level of the course as it is commonly taught and to assist qualified students to undertake an academic program which is responsive to their individual circumstances. <u>Courses Available for Challenge for Credit for Pre-M.S.W. students:</u>

	• SWRK 3100 Systematic Inquiry in Social Work (3 CH) No course which appears on a student's transcript as a previously failed attempt may be challenged. Challenge for credit is only available to students registered in the Pre-M.S.W. program of the Faculty of Social Work at the University of Manitoba. <u>Procedures for challenge for credit:</u> • A student must inform the Pre-M.S.W. advisor of their intent to challenge. The advisor will arrange for the student to consult with an instructor teaching the course to determine course content and general expectations of a challenge for credit. In this regard, the instructor shall provide the student with a course outline, and the date, time and place for the Challenge Credit Examination. Where an examination is not the basis for any or part of the evaluation, the instructor shall provide the student in writing with the required assignments(s), due date(s) and weighting of each assignment where applicable. • If a student is confident in proceeding with the Challenge for Credit the student will secure the Challenge for Credit form from the instructor and submit it to the Student Advising Officer who will complete the registration for the student. Registration deadlines and examination periods are listed in the Academic Schedule of the current University of Manitoba General Calendar. An instructor may not refuse a student Challenge for Credit. • The minimum passing grade for a challenge for credit is C+ (2.5). • Once the examination or assessment has been administered, the result will be entered on the student's academic record as a final grade. The student may not choose whether or not the result will be recorded. **Equivalency Policy:** *<u>Guidelines for the Granting of Equivalency Credit:</u>*

	• Pre-M.S.W. students may request for equivalency for SWRK 3100 Systematic Inquiry in Social Work. As well, students who have completed SWRK 1310 Introduction to Social Welfare Policy Analysis, SWRK 2110 Emergence of the Canadian Welfare State and SWRK 3130 Contemporary Canadian Social Welfare may request equivalency for SWRK 6030 Canadian Social Welfare Policy Analysis. To request consideration of equivalency transfer, the student must contact the Pre-M.S.W. advisor. • Only courses taken in the last nine years with a minimum grade of C+ (2.5) will be considered for equivalency transfer. Requests for equivalency transfer will normally be considered only in the first six months after the student has been admitted into the Faculty. • Students will be advised to provide the Faculty with descriptive and evaluative information related to courses they have completed. Information should include: o Course outlines, assignments and bibliographies; o Evaluative feedback; o Students who are refused social work equivalency may initiate a challenge for credit (applicable to SWRK 3100 only). **Waiver of Field Practice Requirement – Pre-M.S.W. Program:** Criteria to Judge Requests for Waivers of Field Practice Requirement in the Pre-Master's Program: Background: Students must complete Field Practice (SWRK 6050) as part of their program. This course may be waived if the student has had sufficient experience to build knowledge equivalent to that expected from this course. The Criteria to Waive SWRK 6040: • The student will have completed at least 3 years in paid employment carrying a full professional social work role including all the assessment, planning, implementation and evaluative functions required of the role; AND • Such credited time will have included supervision by, or consultation with, a professional social worker, of such a nature as to permit reflection on the student's practice, and allow for growth in skill and knowledge grounded in that practice; AND • Such credited time will have included continuing education or professional

	development hours in accordance with the current requirement for ongoing certification by MIRSW. (40 hours); AND • The student's existent or a revised statement of intent in regard to a thesis or practicum, should demonstrate specificity and feasibility and generally sufficient pre-existing knowledge of the area such that a preparatory field component to the Pre-M.S.W. program is redundant. <u>Process for Waiver of Field Practice Requirement:</u> • The student shall be provided with a form (or briefing notes) and solicit comment from at least one supervisor or two colleagues providing corroboration that the criteria are met. • The Pre-M.S.W. advisor shall receive the student's and the supporting documentation, and will make the final determination after receiving appropriate advice. **If you have completed your Pre-Master's program and are intending to enter the M.S.W. program, you may do so provided you have:** i. met all program requirements; ii. maintained a cumulative Grade Point Average of B (3.0); iii. completed an online application form and paid the application fee; iv. completed a transfer form which is available from the Student Services and Admissions/Advising Office. The application and application fee are to be submitted on-line directly to the Faculty of Graduate Studies, and the transfer survey is to be submitted directly to the Graduate Programs Student Advisor by January 15 of the year you intend to transfer to the M.S.W. program. Once you are notified of your admission to the M.S.W. program you will be able to register for M.S.W. courses.
3.2 Academic Performance **3.2.1.** The department/unit Head is responsible for assigning the courses and monitoring the progress of each student. **3.2.2.** A minimum degree grade point average of 3.0 with no grade below C+ must be maintained to continue in a pre-Master's program. Students who fail to maintain this standing will be required to withdraw unless remedial action recommended by the department/unit (as described below) is approved by the Dean of the Faculty of Graduate Studies.	

The regulations for the Master's program shall also prevail for diploma programs. All students should consult the department/unit supplemental regulations regarding diploma programs.	
4.3 Admission **4.3.1 General Criteria** Students who are eligible to be considered for direct admission to a program of study leading to the Master's degree include: • Graduates of four (4)-year undergraduate degree programs (or equivalent as deemed by the Faculty of Graduate Studies) from: o Canadian institutions empowered by law to grant degrees; or o Colleges and universities outside Canada which are officially recognized by the Faculty of Graduate Studies. • Graduates from first-cycle Bologna compliant degrees. • Students who have completed a Pre-Master's program from: o The University of Manitoba; or o Canadian institutions empowered by law to grant degrees; or o Colleges and universities outside Canada which are officially recognized by The Faculty of Graduate Studies. All students applying for a Master's degree program must have attained a minimum GPA of 3.0 in the last two (2) full years (60 credit hours) of study. This includes those applying for direct admission and those entering from a Pre-Master's program. Students who meet the minimum requirements for admission to the Faculty of Graduate Studies are not guaranteed admission. **Note:** This is the minimum requirement of the Faculty of Graduate Studies and departments/units may have higher standards and additional criteria.	**M.S.W. Program:** **Eligibility Requirements:** • Possession of a B.SW. degree (convocated) by June 30 of the application year from an accredited university, which is recognized by the University of Manitoba or successful completion of the Pre-Master's program in social work at the University of Manitoba. • A Minimum Grade Point average of 3.0 (B) is required in the last 60 credit hours of a B.SW. degree. • Applicants who self-identify as members of one or more of the Educational Equity priority groups and who possess a Grade Point Average between 2.5 and 2.99 will be reviewed for special consideration. Applicants with a Grade Point Average below 2.5 will not be considered. For more information on the Education Equity Initiative see section 1.1.11 above. • If courses have been taken subsequent to the degree as a Special Student and/or Occasional Student and/or in a subsequent degree or Pre-Master's program, they will be calculated into the Grade Point Average as part of the last 60 credit hours. **M.S.W.-IK Program:** **Eligibility Requirements** Possession of a B.SW. degree (convocated) by June 30 of the application year from an accredited university, which is recognized by the University of Manitoba; or completion of all Pre-M.S.W. requirements at the University of Manitoba. A Minimum Grade Point average of 3.0 (B) is required in the last 60 credit hours of a B.SW. degree. Applicants are required to participate in an admission interview process and program orientation, and submit a well-developed statement of intent and a declaration of whether they intend to follow the thesis option or the project option. Applicants who self-identify as members of one or more of the Educational Equity priority groups and who possess a Grade Point Average between 2.5

	and 2.99 will be reviewed for special consideration. Applicants with adjusted grade point averages below 2.5 will not be considered. For more information on the Education Equity Initiative see Section 1.1.11. If courses have been taken subsequent to the degree as a Special Student and/or Occasional Student and/or in a subsequent degree or Pre- Master's program, they will be calculated into the Grade Point Average as part of the last 60 credit hours.
4.3.2 Pre-Master's Programs In specific cases where the academic background of the student is judged to be insufficient for the given program in a department/unit, the department/unit may recommend that the student be admitted to a Pre-Master's program of study (Section 3). The Pre-Master's program of study is intended to bring a student's background up to the equivalent of the required 4-year degree in the major department/unit, and to provide the student with any necessary prerequisites for courses to be taken in the Master's program.	
4.4 Program Requirements In general, students must complete one of the programs of study described below for the Master's degree. However, the program of study is determined by the department/unit and may follow the department/unit's supplemental regulations. Any single course cannot be used for credit toward more than one program.	
4.4.1 Thesis/Practicum Route A minimum of twelve (12) credit hours of coursework, unless otherwise stated in the department/unit's supplemental regulations, plus a thesis or practicum is required. The minimum must include at least six (6) credit hours at the 7000 level or above, with the balance of the coursework at the 3000 level or above. A maximum of twenty-four (24) credit hours of coursework is allowed unless the department/unit's supplemental regulations indicate otherwise. The student must complete the thesis/practicum at The University of Manitoba.	The M.S.W. program structure includes both common core and specialized courses. This structure ensures that students have knowledge and skills required to meet the standards of our accreditation body, the Canadian Association for Social Work Education (CASWE). The program offers students flexibility in designing a program that meets their learning objectives. Students may take the M.S.W. program on a full-time or part-time basis. There is a four-year time limit to complete the M.S.W. program on a full-time basis and a six-year time limit to complete the M.S.W. program on a part-time basis. The program requires at least 12-18 months of full-time study (students who choose the thesis option may require more time depending on the nature of their research).

	The credit hour requirement is 27 credit hours in the course-based option and 24 credit hours in the thesis option. All students must complete four core courses (12 CH), and an additional 9 CH of specialized courses from within Social Work. All students must complete an additional 3 credit hours of electives which may be taken within Social Work or other departments. Students choose either the course-based option, which includes the completion of SWRK 7180 (0 CH) and SWRK 7190 (3 CH), or the thesis option (GRAD 7000, 0 CH). **COURSE REQUIREMENTS** **Core Courses (12 CH):** **These courses are required for all students.** • SWRK 7600 Critical Perspectives and Social Work (3 CH); • SWRK 7620 Paradigms, Methodologies, and Methods for Social Work Research (3 CH); • SWRK 6010 Data Analysis for Social Work Research (3 CH); • SWRK 6070 Qualitative Research in Social Work (3 CH). **Specialized Courses (9 CH)** All students are required to take 9 credit hours from this list of specialized courses. Not all of the courses will offered in each academic year. • SWRK 7630 Advanced Social Work Practice with Individuals and Families (3 CH); • SWRK 7640 Application and Critique of Theory and Research in Social Work Practice with Individuals and Families (3 CH); • SWRK 7300 Clinical Evaluation of Social Work Interventions (3 CH); • SWRK 7650 Advanced Social Work Practice with Groups (3 CH); • SWRK 7660 Social Work Perspectives on Practice with Networks, Neighbourhoods, and Communities (3 CH); • SWRK 7670 Community Mobilization: Application of Concepts in Social Work Practice with Groups, Networks, and Communities (3 CH); • SWRK 7430 Evaluation Research in Social Work Practice (3 CH); • SWRK 7440 Policy Analysis in Social Work Practice (3 CH); • SWRK 7680 Management of Human Resources in Social Service Organizations (3 CH);

- SWRK 7690 Leadership, Strategic Program Planning, and Financial Management in Social Service Organizations (3 CH);

M.S.W.-IK Courses open to students in the M.S.W. Program:

- SWRK 7750 Indigeneity, Power, Privilege, and Social Work (3 CH)
- SWRK 7780 Social Work, Social Challenges, and Indigenous Peoples (3 CH)
- SWRK 7810 Anti-Colonial Social Work (3 CH)

M.S.W.-IK students are given priority in registration and space allocation. All other students must seek written permission of the course instructor to register for the above M.S.W.-IK courses.

STUDENTS ADMITTED PRIOR TO 2014

1. Students admitted to the M.S.W. program concentrate their studies in one of two streams: Social Clinical Intervention Stream OR Social Services Administration Stream.

Students must complete 24 credit hours of courses in one stream plus a thesis or course-based specialization option.

Major course requirements for each stream are outlined below. Course descriptions are provided in the Graduate Calendar.

Social Clinical Stream:

Core Courses:

- SWRK 6010 Data Analysis for Social Work Research (3 CH) or SWRK 6070 Qualitative Research for Social Work (3 CH);
- SWRK 7290 Family-Focused Social Work Practice (6 CH);
- SWRK 7300 Clinical Evaluation (3 CH);
- SWRK 7390 Advanced Social Work Practice Seminar (3 CH)

Elective Courses (9 credit hours may be selected from the following):

- SWRK 7230 Problem Seminar (3 CH);
- SWRK 7220 Selected Topics in Social Work (3 CH);
- SWRK 7280 Readings in Social Work and Social Welfare Research (3 CH);
- courses in the Social Services Administration Stream OR another department.

Thesis GRAD 7000 Master's Thesis (0 CH)

	OR Course-based option: SWRK 7180 Advanced Field Practice (0 CH) and SWRK 7190 Integrating Theory and Research in Advanced Field Practice (3 CH). **Social Services Administration Stream:** <u>Core Courses:</u> • SWRK 6010 Data Analysis for Social Work Research (3 CH) or SWRK 6070 Qualitative Research in Social Work (3 CH); • SWRK 7310 Social Service Administration Practice (6 CH); • SWRK 7400 Theoretical Foundations of Social Service Administration (3 CH); • SWRK 7420 Theoretical Foundations of Social Policy Analysis, Planning and Evaluation (3 CH); • SWRK 7430 Evaluation Research in Social Work Practice (3 CH); • SWRK 7440 Policy Analysis in Social Work Practice (3 CH). <u>Elective Courses (3 credit hours may be selected from the following):</u> • SWRK 7220 Selected Topics in Social Work (3 CH); • SWRK 7280 Readings in Social Work and Social Welfare Research (3 CH); • SWRK 7230 Problem Seminar (3 CH); • courses offered in the Social Clinical Stream OR another department. Part-time students enrolled in the Social Services Administration Stream are normally required to take SWRK 7400 Theoretical Foundations of Social Service Administration (3 CH) and SWRK 7310 Social Service Administration Practice (6 CH) as co-requisites; as well, SWRK 7420 Theoretical Foundations of Social Policy Analysis, Planning and Evaluation (3 CH), SWRK 7430 Evaluation Research in Social Work Practice (3 CH) and SWRK 7440 Policy Analysis in Social Work Practice (3 CH) should be taken in the same academic year. SWRK 6010 Data Analysis for Social Work Research (3 CH) or SWRK 6070 Qualitative Research in Social Work (3 CH) is a pre/co-requisite to SWRK 7430. Thesis GRAD 7000 Master's Thesis (0 CH) OR course-based option: SWRK 7180 Advanced Field Practice (0 CH) and SWRK 7190 Integrating Theory and Research in Advanced Field Practice (3 CH).

Elective Courses

Electives must be chosen in consultation with, and approved by, the faculty advisor. Students must seek written approval of their electives prior to registration. Courses chosen as electives may be at the 3000, 4000, 5000, 6000, or 7000 level.

The selection of electives outside the Faculty of Social Work can be a time-consuming procedure. Students may be required to obtain written permission from their faculty advisor and/or instructor offering the course. It is advisable to attend to this well in advance of registration.

Students choosing an outside elective(s) should:

- Consult the Undergraduate and Graduate Calendars for course offerings and descriptions;
- Contact the appropriate faculty or department directly to determine when and if the course is being offered in the current year; and
- Find out if/how you will be able to register for the course (i.e.: by written consent of instructor, written consent of department head, etc.).

  Students are normally permitted to take one readings course as an elective.

Thesis or Course-Based Specialization Option

Specialized study in an area of practice or a field of interest is accomplished through either a course-based option or the completion of a thesis for those admitted in 2004 or later.

If the course-based option is selected, the, advisor acts as the faculty Coordinator for the *Advanced Field Practice* course and teaches the *Integrating Theory and Research in Advanced Field Practice* as a tutorial. An advisory committee consisting of one or two additional individual, including an agency-based supervisor may be established but is not required.

If a thesis is selected, a committee consisting of a minimum of two individuals, in addition to the advisor, must be established. The selection of a thesis committee should be made jointly by the student and the advisor.

The advisor is responsible for recommending a thesis committee for approval by the Faculty of Graduate Studies, preferably not later than December 1st of the academic year in which the student undertakes to do her/his thesis.

It is the role of the thesis committee to:

	• Approve the student's thesis proposal; • Monitor and evaluate the student's progress regarding his/her thesis; • Examine the completed thesis report. • Generally advise and assist the student in the process of completing the thesis and to clarify for the student in which way it will perform this function. **M.S.W.-IK Program:** **Core course requirements**: Students admitted to the M.S.W.-IK program concentrate their studies in Indigenous knowledges, practices, and ways of being. Courses in the M.S.W.-IK program will be offered in Fall, Winter, and Summer terms. It is expected that the program will require 12 to 18 months of full-time study. Students who choose the thesis option may require more time depending on the nature of their research. Students must complete 30 credit hours coursework in the project option and 27 credit hours in the thesis option. All courses are at the 7000 level. Course descriptions are provided in the Graduate Calendar. • SWRK 7700 Grounding Our Foundation in Indigenous Knowledges and Social Work (3 CH); • SWRK 7710 Remembering Our Histories (3 CH); • SWRK 7720 Critical Theory and Indigenous Peoples (3 CH); • SWRK 7730 Indigenous Research Methodologies and Knowledge Development (3 CH); • SWRK 7740 Indigenous Peoples, Identity, and Social Work (3 CH); • SWRK 7750 Indigeneity, Power, Privilege, and Social Work (3 CH); • SWRK 7760 Project/Thesis Seminar (0 CH); • SWRK 7770 Social Challenges and Indigenous Helping Practices (3 CH); • SWRK 7780 Social Work, Social Challenges, and Indigenous Peoples (3 CH); • SWRK 7790 Project/Thesis Seminar 2 (0 CH); • SWRK 7800 Indigenism (3 CH); • SWRK 7810 Anti-Colonial Social Work (3 CH). Students in the project option must complete SWRK 7820 Project Seminar 3 (3 CH). Students in the thesis option must complete GRAD 7000 Master's Thesis (0 CH).
4.4.2 Course-based/Comprehensive Examination Route	

A minimum of twenty-four (24) credit hours of coursework and comprehensive examination(s) is required. The minimum must include at least eighteen (18) credit hours at the 7000 level or above with the balance of the coursework at the 3000 level or above. A maximum of forty-eight (48) credit hours of coursework is allowed unless a department/unit's supplemental regulations indicate otherwise.	The credit hour requirement for the course-based option in the MSW Program is 27 credit hours and 30 credit hours for the MSW-IK Program.
4.4.3 Accredited Professional Route The credit hours and course requirements shall reflect the requirements of the department/unit's external accrediting body.	
4.4.4 Language Reading Requirements Some department/units specify a language requirement for the Master's degree. Students should check department/unit supplemental regulations regarding this requirement.	Social Work does not have a foreign language requirement.
4.4.5 Advanced Credit Advance credit for courses completed prior to admission to a Master's program will be considered on a case-by-case basis. The student's department/unit must make a request to the Faculty of Graduate Studies by completing the "Advance Credit-Transfer of Courses" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). • Application for advance credit must be made within the first year of the program (see section 4.7.2 Lapse of Credit of Courses) • No more than 50% of the required coursework for the program can be achieved using advance credit. • A course may not be used for credit toward more than one (1) degree, diploma, or certificate. • The student must register at The University of Manitoba for at least two (2) terms within a single academic year and must also complete the thesis/practicum/project/comprehensive exam at The University of Manitoba. Regardless of the extent of advanced credit granted, all students are required to pay all applicable program fees.	**M.S.W. Program:** Advance Credit Students who have previously attended another university or faculty may request advance credit if the course(s) in question have not been used towards a previous degree and have a grade of C+ or higher. A decision on advance credit cannot be determined until official transcripts and complete course descriptions have been reviewed by the student's faculty advisor. If approval is recommended by the advisor, s/he advises the Coordinator of Student Services and Admission/Advising Office in writing, who in turn presents a written recommendation to the Faculty of Graduate Studies. Once approval has been granted, the appropriate transfer of credit should be recorded on the student's transcript. It is the student's responsibility to ensure that this information has been recorded on the transcript.
4.4.6 Transfer Credit Courses within a program of study may be taken elsewhere and transferred for credit at The University of Manitoba. All such courses: • must be approved for transfer to the program of study by the department/unit and the Faculty of Graduate Studies before the student may register for them; • are considered on an individual basis; • cannot be used for credit towards another degree;	

• may be taken at other universities while registered in a program at The University of Manitoba, provided that the credit does not exceed 50% of the minimum credit hours of coursework required. Permission is granted in the form of a Letter of Permission which may be obtained by making an application to the Registrar's Office (http://umanitoba.ca/student/records/leave_return/710.html); an original transcript and course equivalency must be provided.	
4.4.7 Time in Program The minimum time for students in the Master's program is equivalent to two (2) terms. Completion of most programs requires more than this and students should check department/unit supplemental regulations regarding specific requirements. The maximum time allowed for the completion of the Master's degree is four (4) years for students declared as full-time and six (6) years for students declared as part-time (see section 1.4.1 for information on calculating maximum time for students). Individual department/units and/or programs may have specified minimum and maximum time limits, and students should periodically check department/unit supplemental regulations regarding these specific requirements. Requests for extensions of time to complete the degree will be considered on an individual basis and must be submitted to the Dean of the Faculty of Graduate Studies using the "Time Extension Request" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html) **at least three (3), but no more than four (4), months** prior to expiration of the respective maximum time limit. A student who has not completed the degree requirements within the time limit or within the time limit of the extension will be required to withdraw from the Faculty of Graduate Studies and the notation on the student record will be "Required to withdraw".	
4.5 Student's Advisor/Co-Advisor **4.5.1 Student's Advisor** Each student should have an advisor upon entry into the program, and must have one assigned no later than one (1) term following registration. The advisor must: • hold an appointment in the student's department/unit; • be a member of the Faculty of Graduate Studies*; • hold at least a Master's degree or equivalent**; • be active in research; • have expertise in a discipline related to the student's program. *(http://umanitoba.ca/faculties/graduate_studies/governance/academic_membership.html) **Equivalency will be approved by the Dean of the Faculty of Graduate Studies and determined on a case by case basis and assessed by the potential advisor's demonstrated research record and current research activities. Note that M.D., D.M.D. and J.D. are undergraduate degrees and are not equivalent to a Master's or Ph.D.	**M.S.W. Program** Choosing Faculty Advisors This program has been designed to allow students to select a topic or area of special focus for study. Thus, students have an opportunity to select one or more electives and a thesis or advanced field practice based on their professional interest. Faculty members who are members of the Faculty of Graduate Studies are eligible to advise M.S.W. students. Faculty advisors are matched with students during the admission process. The advisor must approve the student's initial course plan and any changes that are made during the student's program of study. The student may take the initiative in selecting a faculty advisor. The faculty advisor should be a person who is willing and able to work with the

It is the responsibility of the department/unit Head to determine whether faculty members meet these criteria, and also to report to the Dean of the Faculty of Graduate Studies on equivalency as necessary. Any exceptions or special circumstances must be recommended by the department/unit Head and approved by the Dean of the Faculty of Graduate Studies who considers each case on an individual basis.

In department/units where the choice of thesis/practicum topic and thesis/practicum advisor are postponed after a student's entry into the program, the department/unit Head, within one (1) term, shall appoint a faculty member to advise the student in the interim period before the regular advisor is assigned or chosen.

student in her/his major personal academic and professional field of study. Students who have not reached an agreement with a faculty advisor by the time of formal admission to the M.S.W. Program will be assigned an advisor by the Faculty of Social Work.

The student may find that s/he wants to change advisors after a contract has been made with the faculty advisor. This can be done after the student has found that another advisor is willing to work with her/him. The student should notify the first advisor in writing when a new advisor has consented to enter into a contract. As well, the student must fill out a Change of Advisor form to notify the Chair of the Graduate Program Committee. These forms are available in the General Office of the Faculty of Social Work and on the Faculty website. If difficulties arise in advising, the chair of the Graduate Program Committee may be consulted. If the chair of the Graduate Program Committee is not able to provide the help needed, the Dean of the Faculty of Social Work should be consulted.

The Role of the Faculty Advisor

Consistent with the objectives of the program, the specific role of the advisor is to assist the student to develop a theoretical and methodological approach to her/his selected area of enquiry. In order to accomplish this, the following steps are to be taken:

- The student contracts a faculty member regarding the area of study s/he wants to pursue. This contract includes a discussion of the student's overall program with particular reference to outside course work, which is intended to complement the student's area of specialization;
- The student designs, with the advisor, a program of study that will lay the base for her/his theoretical and methodological approach to her/his area of enquiry. The program needs to be approved by the advisor;
- The advisor assists the student in selecting electives that best support and enrich her/his area of interest and expected expertise. Before a student can register for an elective course in or outside the Faculty, the advisor must approve the student's selection. If a student wishes to transfer a course taken prior to entry in the M.S.W. program, approval of the advisor is required. Excluding courses taken during the Pre-M.S.W. program, only those courses that have not been used towards a prior degree and appear on the student's transcript with a grade of C+ or higher can be considered;
- A Progress Report form must be completed by the student and the advisor by the end of May

	every year. This form must be submitted to the Faculty of Graduate Studies by June 1 of each year. Failure to do so will prevent students from registering, leading to discontinuation of the student from her/his program; • The advisor acts as the Chair of the student's thesis committee if the thesis-based option has been selected. If the student chooses the specialized course-based option, the advisor is the faculty coordinator for the *Advanced Field Practice* course and teaches the *Integrating Theory & Research in Advanced Field Practice* course as a tutorial; • When an advisor leaves the Faculty or will be absent for more than 4 months a considerable period of time, s/he will be responsible for finding a suitable replacement or substitute, and will advise the Chair of the Graduate Program Committee of her/his absence; • The Chair of the Graduate Program Committee is responsible for ensuring that the student has an advisor; • The advisor may teach a tutorial through the "Selected Topics" course, but is not required to do so; • The advisor acts as a link to the Graduate Program Committee regarding situations in which the student is not maintaining sufficient grades. **M.S.W.-IK Program:** **Advisor Councils:** **1. Choosing Faculty Advisors and Advisor Council Members** This program provides maximum support to students in the M.S.W.-IK courses. Thus, students will be assigned an MSW-IK advisor council. The advisor council consists of: one of the program's Elders, one of the Faculty members within the MSW-IK program (advisor), and a third individual from the agency or organization where the student is completing the project or in the case of a project where a student is working with an Elder in the community, the Elder will be the third member of the advisor council (for students in the project option) or another faculty member ~~from a Faculty other than Social Work~~ (for students in the thesis option). Two of the thesis committee members must be members of the Faculty of Graduate Studies. The Faculty member (advisor) will act as chair of the advisor council. 2. **The Role of the Advisor Council**

	The advisor council is to connect with the student for at least three reviews, occurring at the end of each term in the program. The purpose of the reviews is to address not only the student's progress on the project or thesis component of the program, but also how the individual is holistically developing (mind, body, spirit, emotions, and relationships with others) as the student moves through the program. This means that all aspects of the student are reviewed with the student through a focus on the student's interactions with peers and others involved in the program. This aspect of the review process is not meant to be penalizing, but intended to identify those areas in which an individual has to give further attention before the advisor council gives approval that each program requirement (i.e. acceptance of the proposal, follow-up on the thesis or project activities, and final paper for the thesis or project) has been successfully completed. Consistent with the objectives of the M.S.W.-IK program, the advisor council assists the student to develop a theoretical and methodological approach to the student's selected area of enquiry. If a student wishes to transfer a course taken prior to entry in the M.S.W.-IK program, approval of the advisor council and the Program Director are required. Only those courses that have not been used towards a prior degree and appear on the student's transcript with a grade of C+ or higher can be considered. A Progress Report form must be completed by the student and the advisor council by the end of May every year. This form is then forwarded to the Faculty of Graduate Studies. Failure to submit the completed Progress Report to the Faculty of Graduate Studies by June 1 may prevent students from registering for the subsequent term, leading to discontinuation of the student from her/his program. The advisor council collectively determines the grade for a student's participation in the SWRK 7820 course Project Seminar 3. The Faculty member (advisor) is responsible for submitting the grade on behalf of the advisor council. The advisor council will serve as the student's thesis/project committee. When an advisor leaves the Faculty or will be absent for more than 4 months s/he will be responsible for finding a suitable replacement or substitute, and will advise the Program Director of her/his absence. The Program Director is responsible for ensuring that the student has an advisor council.

	The Faculty member (advisor) acts as a link to the M.S.W.-IK Faculty and Elder Collective regarding situations in which the student is not maintaining sufficient grades.
4.5.2 Student's Co-advisor In special circumstances, upon approval of the Head of the department/unit, an advisor and a maximum of one (1) co-advisor may advise a student. The co-advisor must: • be a member of the Faculty of Graduate Studies*; • hold a Master's or equivalent**; • be active in research; • have expertise in a discipline related to the student's program; *(http://umanitoba.ca/faculties/graduate_studies/governance/academic_membership.html) **Equivalency will be approved by the Dean of the Faculty of Graduate Studies and determined on a case by case basis and assessed by the potential co-advisor's demonstrated research record and current research activities. Note that M.D., D.M.D. and J.D. are undergraduate degrees and are not equivalent to a Master's or Ph.D. The co-advisor may be identified either at the beginning of, or mid-way through, a student's program. In all instances, the Faculty of Graduate Studies must be informed of, and approve, the co-advisor arrangement. When an advisor and co-advisor are assigned, together they shall fulfill the role of the advisor (that is, neither shall fulfill any other advisory or examining committee membership requirements for that student). One (1) advisor must be identified as the primary advisor; however, both the advisor and co-advisor's signatures are required on all documents where the advisor's signature is required.	*NEW 2019-20! The student's co-advisor no longer needs to be a member of the unit offering the program*
4.5.3 Student's Advisor/Co-advisor A student who also holds an appointment at The University of Manitoba at the rank of Assistant Professor or above cannot have an advisor or co-advisor with an appointment in the same department/unit. The advisor, co-advisor (if applicable) and student must discuss, and complete, the Faculty of Graduate Studies Advisor Student Guidelines (ASG) prior to the commencement of any research and no later than the submission of the first Progress Report for the student. If a student does not have an advisor/co-advisor, then the interim advisor will be required to complete the Advisor Student Guidelines. The advisor/co-advisor and the student are required to approve the agreement. If the parties cannot agree on any component(s) of the ASG, the matter should be referred to the department/unit Head, Graduate Chair, or the Dean of the Faculty of Graduate Studies. The Advisor Student Guidelines is to be completed again if there is a change in advisor/co-advisor or when a co-advisor is added mid-way through the student's program. Should, during the student's program, the relationship between the student and advisor/co-advisor significantly deteriorate, the matter should be referred to the department/unit Head, Graduate Chair, or the Dean of the Faculty of Graduate	

Studies. It is the responsibility of the unit offering the program in which the student is studying to arrange an alternate advisor if this is appropriate and necessary. All students should consult department/unit supplemental regulations for specific details regarding advisor/co-advisor requirements.	
4.6 Advisory Committee **4.6.1 Thesis/Practicum Route** Advisory committees are selected by the advisor/co-advisor in consultation with the student and should consist of individuals whose expertise is consistent with that necessary to provide additional advice and guidance to the student during his/her research program. The advisory committee must consist of a minimum of three (3) members (including the advisor/co-advisor), at least two (2) of whom must be members of the Faculty of Graduate Studies (*http://umanitoba.ca/faculties/graduate_studies/governance/academic_membership.html*). All examiners must be deemed qualified by the department/unit Head and be willing to serve. It is expected, under normal circumstances, that Advisory Committee members will possess at least a Master's degree or equivalent. Advisory committees may include one (1) non-voting guest member who has expertise in a related discipline but is not a member of the Faculty of Graduate Studies. A student who also holds an appointment at the University of Manitoba at the rank of Assistant Professor or above cannot have an advisor or co-advisor with an appointment in the same department/unit. Graduate students, Post-Doctoral fellows, and Research Assistants or Associates may not serve on graduate student advisory committees. The composition of, and any changes to, the advisory committee, including the advisor/co-advisor, must be approved by the Faculty of Graduate Studies. The advisor/co-advisor is the Chair of the advisory committee. Disclosure is required if two or more committee members are in a personal relationship. Additional specifications, if any, regarding the advisory committee are found in the department/unit supplemental regulations and students should consult these regulations for specific requirements.	*NEW 2019-20! There is no longer a requirement for an "internal-external" advisory committee member* **M.S.W. Program:** For students who are in the thesis-based option, the Thesis Committee normally serves as the student's advisory committee and is usually developed by the student's Faculty advisor in consultation with the student. This committee is comprised of three (3) members: the advisor as chair, one faculty member of the Faculty of Social Work, a third member that the advisor and Dean or designate deem qualified. At least two examiners must be members of the Faculty of Graduate Studies. The advisory committee is formed as soon as possible, but no later than when the student begins work on her/his thesis proposal. Students in the course-based specialization option are not required to have an advisory committee. **M.S.W.-IK Program:** For students who are in the thesis-based option, the advisor council normally serves as the student's thesis committee. The advisor council is comprised of one of the program's Elders, one of the Faculty members within the M.S.W.-IK program (advisor), and a third individual. Two of the thesis committee members must be members of the Faculty of Graduate Studies.
4.6.2 Course-based or Comprehensive Examination Route Normally, advisory committees are not required in these routes, however any appropriate specifications regarding an advisory committee can be found in the department/unit's supplemental regulations and students should consult these regulations for specific requirements.	
4.6.3 Accredited professional programs Normally, advisory committees are not required in these routes, however any appropriate specifications regarding an advisory committee can be found in the	

department/unit's supplemental regulations and students should consult these regulations for specific requirements.	
4.7 Courses and Performance **4.7.1 Course or Program Changes** Students are not permitted to change their program of study, including withdrawal from individual courses, without the approval of their advisor/co-advisor (and/or advisory committee) and department/unit Head. Withdrawal from courses or changes of course category without such approval may result in the student being required to withdraw from the Faculty of Graduate Studies.	
4.7.2 Lapse of Credit of Courses Courses completed more than seven (7) years prior to the date of awarding of a degree may not normally be used for credit toward that degree. A Department or Unit may request an exception to this limit on behalf of the student. Such requests, which will be evaluated on a case by case basis, must be accompanied by supporting information including a detailed summary of the content of the course as taken initially and as offered most recently, and a detailed rationale explaining how the student has maintained knowledge of the course content. Courses completed more than ten (10) years prior to the date of awarding of a degree can not be used for credit toward that degree. In the event that course-work is no longer considered current, students must take additional course-work (as recommended by the Department/Unit Head, or designate, and as approved by the Dean of the Faculty of Graduate Studies) to meet the minimum credit hour requirements for their program.	
4.7.3 Academic Performance Student progress shall be reported ***at least*** annually (but no more than once every four (4) months) to the Faculty of Graduate Studies on the "Progress Report" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). Students who fail to maintain satisfactory performance may be required to withdraw on the recommendation of the Graduate Chair and/or department/unit Head to the Dean of the Faculty of Graduate Studies on the "Progress Report" form. Two (2) consecutive "in need of improvement" ratings or one (1) "unsatisfactory" rating will normally result in withdrawal of the student from the Faculty of Graduate Studies.	See section 2.1
4.7.4 Performance in Coursework A minimum degree grade point average (DGPA) of 3.0 with no grade below C+ must be maintained to continue in the Faculty of Graduate Studies. Departments/units may specify, in their supplementary regulations, standards that are higher than those of the Faculty of Graduate Studies. Students who fail to maintain the specified grades will be required to withdraw unless a department/unit recommends remedial action. Any such action must be approved by the Dean of the Faculty of Graduate Studies.	See section 2.3

4.7.5 Performance not related to Coursework In some departments/units, students are required to demonstrate satisfactory academic performance in areas not related to performance in courses, such as attendance at or participation in course lectures, seminars and in laboratories and progress in research, thesis or practicum. The specific nature of satisfactory academic performance is outlined in individual department/unit supplemental regulations and students should consult these supplemental regulations for specific requirements. Unacceptable performance must be reported to the Faculty of Graduate Studies on the "Progress Report" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). Students who fail to maintain satisfactory performance may be required to withdraw on the recommendation of the department/unit Head to the Dean of the Faculty of Graduate Studies.	Students are expected to follow the Social Work Code of Ethics (https://www.casw-acts.ca/sites/default/files/attachements/casw_code_of_ethics.pdf). A student may be required to withdraw from the Faculty when the student has been found guilty by the Professional Unsuitability Review Committee of the Faculty of Social Work of such conduct which, if participated in by practicing social workers, would result in a serious violation of the Code of Ethics of the Canadian Association of Social Workers. Detailed information on the provisions of the Professional Unsuitability By-Law may be found in the on-line version of the Pre-M.S.W. / M.S.W. Student Handbook on the Faculty of Social Work website.
4.8 Requirements for Graduation All students must: • maintain a minimum degree grade point average of 3.0 with no grade below C+; • meet the minimum and not exceed the maximum course requirements; and • meet the minimum and not exceed the maximum time requirements. Individual department/units may have additional specific requirements for graduation and students should consult department/unit supplemental regulations for these specific requirements.	
4.8.1 Thesis/Practicum Route **4.8.1.1 Thesis vs. Practicum** Students must demonstrate their mastery of the field and that they are fully conversant with the relevant literature through their thesis/practicum. The thesis or practicum will normally be written in English unless the student is studying in a program at the Université de Saint-Boniface, or departmental/unit supplemental regulations allow a different language to be used. A practicum differs from the thesis in its emphasis on the application of theory, it is however similar in scope, span, and rigour. The practicum takes the form of an exercise in the practical application of knowledge and skill. It usually involves the careful definition of a problem, the application of appropriate knowledge and skills to the problem, and a report of the results in a manner suitable for evaluation by an examining committee. Individual department/units have specific requirements for graduation and students should consult department/unit supplemental regulations for specific requirements. Research must be approved by the appropriate Human Research Ethics Board or Animal Care Committee, if applicable, before the work has begun on the thesis research. The thesis is developed under the mentorship of the advisor/co-advisor. Individual department/units may have specific guidelines regarding the thesis proposal and its acceptance by the student's advisory committee and department/unit Head; students should consult department/unit supplemental regulations for specific requirements.	**M.S.W. Program:** Students in the thesis-based option must submit a written proposal to their Thesis Committee. This proposal should present the rationale underlying their proposed study, cite relevant literature to support their research intent, and provide a planned methodology for the thesis research. Students will work closely with their advisors in the preparation of the proposal. Details of the requirements of the proposal can be found in the M.S.W. Student Handbook. Students require approval from all members of their Thesis Committee before proceeding with the research. This approval is granted at a thesis proposal meeting attended by the student and her/his Thesis Committee. The student is asked to present a summary of the proposed research and answer questions about the proposal. Following the presentation, questions, and discussion, Thesis Committee members meet in camera (in private) to decide if the proposal is accepted as written, accepted with required revisions, or failed.

Research must be approved by the appropriate Human Research Ethics Board or Animal Care Committee, if applicable, before the work has begun on the thesis research.	Should a proposal be failed, the student can revise and resubmit the proposal a second time. Failure of the proposal a second time will constitute a failure of the thesis proposal, and the student may be required to withdraw from the program. **M.S.W.-IK Program:** Students in the thesis-based option must submit a written proposal to their advisor council. This proposal is a requirement for the Project/Thesis Seminar 1 course (SWRK 7760). It should present the rationale underlying their proposed study/project, cite relevant literature to support their research/practice/project intent, and provide a planned methodology for the thesis research/knowledge development. Students will work closely with their advisor council in the preparation of the proposal. Details of the requirements of the proposal can be found in the M.S.W.-IK Student Handbook. Students require approval from all members of their advisor Council before proceeding with the research/project. This approval is granted at a thesis/project proposal meeting attended by the student and his/her advisor council. The student is asked to present a summary of the proposed research/project and answer questions about the proposal. Following the presentation, questions, and discussion, advisor Council members meet in camera (in private) to decide if the proposal is accepted as written, accepted with required revisions, or failed. Should a proposal be failed, the student can revise and resubmit the proposal a second time. Failure of the proposal a second time will constitute a failure of the thesis/project proposal, and the student may be required to withdraw from the program.
4.8.1.2 Examining Committee The advisor/co-advisor will recommend an examining committee to the department/unit Head for approval, which shall then be reported to the Faculty of Graduate Studies on the "Master's Thesis/Practicum Title and Appointment of Examiners" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). This form must be approved by the Dean of the Faculty of Graduate Studies at least two (2) weeks prior to the distribution of the thesis. Under normal circumstances, the examining committee will be the same as the advisory committee unless otherwise stipulated in the department/unit's supplemental regulations. The examining committee must consist of a minimum of three (3) members (including the advisor/co-advisor), at least two (2) of whom must be members of the Faculty of Graduate Studies. All examiners must be deemed qualified by the department/unit Head and be willing to serve. It is expected that, under normal circumstances, Examination Committee members will have a Master's degree or equivalent. The composition of, and any changes to, the examining committee, including the advisor/co-advisor, must be approved by the Faculty of Graduate Studies. Individual department/units establish specific requirements for examination	*NEW 2019-20! There is no longer a requirement for an "internal-external" examining committee member* **M.S.W. Program:** The student's advisory committee normally serves as the Thesis Examining Committee. **M.S.W.-IK Program:** The student's advisor council normally serves as the Thesis Examining Committee.

and students should consult department/unit supplemental regulations for specific requirements. The Head of the department/unit arranges for the distribution of the thesis/practicum to the examiners. It is the duty of all examiners to read the thesis/practicum and report on its merits according to the following categories: • Acceptable, without modification or with minor revision(s); or • Acceptable, subject to modification and/or revision(s); or • Not acceptable. If two or more examiners do not approve the thesis, then the student is deemed to have failed the distribution. Note that in the case of an advisor and co-advisor, both together have a single vote on the examining committee.	
4.8.1.3 Oral Examination For department/units requiring students to pass an oral examination on the subject of the thesis/practicum and matters relating thereto, the format of the oral examination is described in the supplementary regulations of the department/unit. Students should consult these supplemental regulations for specific requirements. A student has the right to an examination of the thesis/practicum if he/she believes it is ready for examination. It is the department/unit's responsibility to advise the student of any risk involved should he/she decide to proceed against the department/unit's recommendation. All members of the examining committee are required to be present at the examination. Under exceptional circumstances, and with the prior approval of the Dean of the Faculty of Graduate Studies, one (1) member may participate electronically. Under no circumstances can the student or the Advisor/Co-advisor participate electronically. No recording devices will be permitted. The oral examination must be held at either the University of Manitoba Fort Garry or Bannatyne campus, or the St. Boniface Research Centre during normal business hours. The oral examination shall be open to all members of The University of Manitoba community except in exceptional cases. The oral examination may be closed, for example, when the results of the thesis/practicum research must be kept confidential for a period of time. In such cases, the examining committee and department/unit Head shall recommend such action to the Dean of the Faculty of Graduate Studies who shall then decide whether to grant that the final examination be closed to all but the examining committee and the Dean of the Faculty of Graduate Studies. The oral examination will normally be held in English unless the student is studying in a program at the Université de Saint-Boniface, or departmental/unit supplemental regulations allow a different language to be used. Following completion of the examination of the thesis/practicum, examiners will consider the oral examination and the written thesis/practicum. The examiners will also determine the nature of and procedures for approval of any revisions that will be required prior to submission of the thesis/practicum to the Faculty	**M.S.W. Program:** Each student is required to make an open oral defence of her/his thesis following its distribution to the Examining Committee. Normally, the oral defence should occur within one month of its distribution to the committee. If the written thesis report is deemed unacceptable, the student shall be advised against making an oral defence. Notwithstanding this provision, the student has the right to examination of the thesis if s/he believes it is ready for examination. The defence is undertaken in the following manner: 1. The thesis is presented to a meeting open to the faculty and graduate students of the Faculty of Social Work as well as members of the University and community. The oral examination is chaired by the student's thesis advisor; 2. The first part of the oral examination shall consist of an oral presentation by the student that includes a summary of the salient points of the research within a time span of 25 to 30 minutes. This is followed by the questioning and examination of the student by the Thesis Examining Committee, which does not normally exceed one and one-half hours. The Chair may exercise discretion in inviting questions from guests following completion of the formal examination; 3. The Thesis Examining Committee meets after the open meeting in camera (in private) to review both the oral defence and the written thesis report and make a disposition. The decision to pass the student must be unanimous;

of Graduate Studies. The advisor/co-advisor is normally responsible for ensuring that revisions are completed according to the instructions from the examining committee. The judgment of the examiners shall be reported to the Faculty of Graduate Studies in the qualitative terms “approved” or “not approved” on the "Thesis/Practicum Final Report" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). Each examiner must indicate his/her opinion by his/her signature. If two (2) or more examiners do not approve the thesis, then the student is deemed to have failed the defence.	4. The Thesis Examining Committee then meets in camera with the student to discuss any changes that may be required before the thesis is finally accepted; 5. If the presentation and defence of the thesis is failed on two separate attempts, a recommendation will be forwarded to the Dean of the Faculty of Graduate Studies who will require the student to withdraw from the program. **M.S.W.-IK Program:** Each student is required to make an open oral defense of her/his thesis following its distribution to the advisor council. Normally, the oral defense should occur within one month of its distribution to the advisor council. If the written thesis report is deemed unacceptable, the student shall be advised against making an oral defense. Notwithstanding this provision, the student has the right to examination of the thesis if s/he believes it is ready for examination. The defense is undertaken in the following manner: 1. The thesis is presented to a meeting open to the faculty and graduate students of the Faculty of Social Work as well as members of the University and community. The oral examination is chaired by a faculty member (advisor) of the student’s advisor council; 2. The first part of the oral examination shall consist of an oral presentation by the student that includes a summary of the salient points of the research within a time span of 25 to 30 minutes. This is followed by the questioning and examination of the student by the advisor council, which does not normally exceed one and one-half hours. The Chair may exercise discretion in inviting questions from guests following completion of the formal examination; 3. The advisor council meets after the open meeting in camera (in private) to review both the oral defense and the written thesis report and make a disposition. The decision to pass the student must be unanimous; 4. The advisor council then meets in camera with the student to discuss any changes that may be required before the thesis is finally accepted; *5.* If the presentation and defense of the thesis is failed on two separate occasions, a recommendation will be forwarded to the Dean of the Faculty of Graduate Studies who will require the student to withdraw from the program.
4.8.1.4 Failure	

In the case of a failure of the thesis/practicum at the Master's level, a detailed written report will be prepared by the Chair of the examination committee and submitted to the Faculty of Graduate Studies, who will make the report available to the student and advisor/co-advisor. A student will be required to withdraw when the thesis/practicum has been rejected twice at the stage where: • The examining committee reports on the merits of the written thesis; • The defence; or • A combination of both stages. The examining process should be completed within one (1) month of distribution of the thesis/practicum to the examining committee.	
4.8.2 Course-based/Comprehensive Examination Route Students must demonstrate their mastery of their field. The specific procedures for evaluation of this mastery are stated in individual department/unit supplemental regulations. Students should consult the department/unit supplemental regulations for specific requirements. In those department/units where comprehensive examinations are required, students should consult the department/unit's supplemental regulations for specific requirements. The results of the comprehensive examinations shall be submitted to the Faculty of Graduate Studies on the "Report on Comprehensive Examination" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html) in the terms "pass" or "fail." No student may sit comprehensive examinations more than twice. Any student who receives a "fail" on the comprehensive examination twice will be required to withdraw from the Faculty of Graduate Studies.	**M.S.W. Program:** **The Specialization Course-Based Option:** On June 30, 2004, the Senate of the University of Manitoba approved a new course-based route to completion of the M.S.W. program. Two courses were designed by the Faculty of Social Work to replace the practicum route to completion of the M.S.W. program: SWRK 7180 Advanced Field Practice (0CH) and SWRK 7190 (3CH). This is intended as an alternate route for a practicum placement only. The courses SWRK 7180 and SWRK 7190 are not available as electives to meet the course requirements for the 24 credit hours required independent of the thesis or advanced field placement. They are not open to students electing the thesis-based option. For those students taking the advanced placement route to completing the M.S.W., SWRK 7180 and SWRK 7190 must be completed in addition to 24 credit hours of other coursework required by the program. Core courses for the student's program must be completed prior to or concurrently with SWRK 7180 and SWRK 7190. **M.S.W.-IK Program:** **M.S.W.-IK Project Option** Students completing the project-based option will take SWRK 7820 Project Seminar 3. This course is in addition to the 12 required courses of the program for a total of 13 courses. Students must complete a minimum total of 450 hours of work towards their project. These hours are reported to their advisor council during Project/Thesis Seminar1, Project/Thesis Seminar

	2, and Project Seminar 3. The amount of hours to be completed in each Project/Thesis or Project Seminar course is to be determined by the student and the student's advisor council. The advisor council and Student must pay attention to what can be realistically completed in the given time frame. Students should have completed the majority of their required 450 hours (about 300 hours) when the Project/Thesis Seminar 2 is completed.
4.9 Style and Format The thesis/practicum must be written according to a standard style acknowledged by a particular field of study (see Appendix 1).	
4.10 Deadlines for Graduation The final requirements of the degree, in the form of the final report on the thesis/practicum (and the corrected copy of the thesis/practicum and Copyright License Declaration); comprehensive examination; M. Eng. project; or Design thesis, must be submitted to the Faculty of Graduate Studies by the appropriate deadline. For those programs that do not have a culminating exercise (thesis/practicum/comprehensive examination/M.Eng. project/Design thesis) the department/unit must forward a list of potential graduate names to the Faculty of Graduate Studies by the deadline. The deadline for each of the graduation dates is published on the Faculty of Graduate Studies website at umanitoba.ca/faculties/graduate_studies/deadlines/index.html.	
4.11 Details for Submission of the Final Copy Following the approval of the thesis/practicum by the examining committee and the completion of any revisions required by that committee, the thesis/practicum, must be submitted to the Faculty of Graduate Studies as follows: • One digital version submitted as an e-thesis/practicum at the MSpace website (http://mspace.lib.umanitoba.ca/xmlui/login); • Thesis/Practicum final report; • Copyright License Declaration form (located within MSpace).	
4.12 Publication and Circulation of Thesis/Practicum Every graduate student registering in a thesis/practicum Master's program at The University of Manitoba shall be advised that, as a condition of being awarded the degree, he/she will be required to grant a license of partial copyright to the University and to the Library and Archives Canada for any thesis or practicum submitted as part of their degree program.	

5.1.1 General criteria Normally, the completion of a Master's degree or equivalent from a recognized university and a cumulative GPA of 3.0 or equivalent in the last two (2) previous years of full time university study (60 credit hours) is the minimum requirement for admission to the Ph.D. program. **Note:** This is the minimum requirement of the Faculty of Graduate Studies and department/units may have higher standards and additional criteria. However, the criteria for admissions into the Ph.D. program are more stringent than for Master's programs; therefore, the completion of a Master's program does not guarantee admission into the Ph.D. program. Some department/units require completion of a thesis-based Master's program prior to admission to a Ph.D. program.	**Ph.D. Program:** **Eligibility Requirements:** Master of Social Work degree, or equivalent, from an accredited degree-granting university, with a minimum grade point average of 3.0 (B) (as defined by the University of Manitoba). Minimum research competency in both qualitative and quantitative methods equivalent to the level required for the Masters of Social Work degree from the University of Manitoba, with a minimum grade of 3.0 (B) within the last 10 years. A student not meeting this entrance requirement can be recommended for conditional admission with the stipulation that the student take the necessary course or courses. The course or courses will be an additional requirement beyond the 24 credit hours required for the program. Evidence of educational and professional experience that will indicate a capacity to undertake research-oriented post-graduate work. Applicants will be asked to submit a curriculum vitae. The candidate is required to submit a two page summary of their proposal for the PhD program which includes: 1. Rationale for the proposed research 2. Research questions 3. A concise literature review of the topic 4. Proposed methodology for the research 5. Outline a plan to complete the research The proposal should be clear enough that a potential faculty advisor can be identified and, in addition, the applicant must present a letter (email confirmation is acceptable) of an agreement with a proposed advisor who agrees to serve as the advisor. Selection of students for admission is based on the recommendations of a Selection Committee of a minimum of three persons appointed by the Ph.D. Program Committee (for composition of this committee, please refer to the Faculty of Social Work) to evaluate each applicant's qualifications and report on his/her suitability for Ph.D. studies. Acceptance is subject to approval by the Ph.D. Program Committee and the Graduate Program Committee; however, the Graduate Program Committee may delegate this responsibility to the Ph.D. Program Committee. Selection decisions made by the Faculty of Social Work are presented as recommendations that must be approved by the Faculty of Graduate Studies.

5.1.2 Direct Admission from the Bachelor's Honours or equivalent With special recommendation of the department/unit concerned, applicants with an honours Bachelor's degree or equivalent may be considered for entry to Ph.D. study. These students must be outstanding in their academic background (GPA well above 3.0 in the last two full years of undergraduate study). **Note:** This is the minimum requirement of the Faculty of Graduate Studies and department/units may have higher standards and additional criteria. Once admitted, these students must complete at least 24 credit hours of coursework, unless the individual department/unit's approved supplemental regulations specify otherwise, and will be assessed Ph.D. fees for three (3) years. A minimum of 18 credit hours at the 7000 level or higher is required. Any further coursework beyond the minimum 18 credit hours at the 7000 level must be at the 3000 level or above. A maximum of 48 credit hours of coursework is allowed toward the Ph.D. program.	
5.1.3 Transfer from the Master's to the Ph.D. program Students who have not completed a Master's program may transfer to the Ph.D. program within the same department/unit upon the recommendation by the Head of the department/unit to the Faculty of Graduate Studies. The recommendation should be made within sixteen (16) months or four (4) terms (including Summer term) from the start of the Master's program. The coursework completed and time spent in the Master's program will normally be credited towards the Ph.D. program. Students must complete at least 24 credit hours of coursework, unless the individual department/unit's approved supplemental regulations specify otherwise. A minimum of 18 credit hours at the 7000 level or higher is required. Any further coursework beyond the minimum 18 credit hours at the 7000 level must be at the 3000 level or above. A maximum of 48 credit hours of coursework is allowed toward the Ph.D. program. The request to transfer from a Master's to the Ph.D. program must be submitted to the Faculty of Graduate Studies at least one (1) month prior to the term for which the student intends to commence the Ph.D. program. The following are required when making the request: • must indicate a request for transfer on the online Application for Admission; • If the transfer is made within one (1) year, no additional application fee will be required; If the transfer occurs within 12 months of the initial registration in the Master's program, the student will be assessed Ph.D. fees for three (3) years. If the transfer occurs after 12 months, the student will be assessed Ph.D. program fees for two (2) years (as they will have already paid fees for the Master's program). Students are cautioned that such transfers may impact on The University of Manitoba Graduate Fellowship duration. Where a student with a Master's degree or equivalent is initially admitted and registered in a Master's program, that student may be transferred to the Ph.D. program within the same department/unit on the recommendation of the student's advisor/co-advisor and Head of the department/unit, provided that follow up transfer recommendation occurs within 12 months of the initial registration in the Master's program. In such a case, the application fee is waived and fees assessed towards the Master's program will be deducted from the full two (2) years of Ph.D. program fees. Transfers later than 12 months must pay an application fee and their fees will be assessed as a three (3) year Ph.D. Where a student holds a Master's degree that would be sufficient for admission to the Ph.D. program, students must complete at	Selection of students for admission is based on the recommendations of a Selection Committee of a minimum of three persons appointed by the Ph.D. Program Committee to evaluate each applicant's qualifications and report on her/his suitability for Ph.D. studies. Acceptance is subject to approval by the Ph.D. Program and the Graduate Program Committee; however, the Graduate Programs Committee may delegate this responsibility to the Ph.D. Program Committee. Selection decisions made by the Faculty of Social Work are presented as recommendations to the Faculty of Graduate Studies.

least 12 credit hours of coursework, unless the individual department/unit's approved supplemental regulations specify otherwise.	
5.1.4 Provisional Admission to the Ph.D. Students nearing the completion of the Master's degree may be accepted provisionally to the Ph.D. program for a 12 month period (commencing with the first registration in the Ph.D. program). Further registration in the Ph.D. program is contingent upon completion of all requirements of the Master's degree within the 12 months. Students must maintain continuous registration in their Master's program until its completion. Students will require assistance from the department/unit and the Faculty of Graduate Studies to complete dual registration on the "Concurrent Curriculum Permission" form (http://intranet.umanitoba.ca/student/records/2323.html) in the Master's and Ph.D. program simultaneously.	
5.1.5 Students with Disabilities See Accommodation Policy for Students with Disabilities: http://umanitoba.ca/admin/governance/governing_documents/students/281.html	
5.2 Student's Advisor, Co-advisor and Advisory Committee **5.2.1 Student's Advisor** Every Ph.D. student must have an advisor, appointed by the Head of the department/unit. The advisor is responsible for supervising the student's graduate program. The advisor is the student's first point of contact at the University of Manitoba, and therefore should be familiar with the general policies and regulations of the Faculty of Graduate Studies as well as the specific supplementary regulations of their academic department/unit. In this capacity, the advisor assists the student in planning the graduate program, and ensures that the student is aware of all graduate program requirements, degree regulations, and general regulations of the academic department/unit, the Faculty of Graduate Studies, the university, and external funding agencies. The advisor provides counsel for all aspects of the graduate program, and stays informed of the student's scholarly activities and progress. The student's advisor also acts as a channel of communication to the student's advisory committee, the department/unit and the Faculty of Graduate Studies. The advisor must: • hold an appointment in the student's department/unit; • be a member of the Faculty of Graduate Studies*; • hold a Ph.D. or equivalent**; • be active in research; and • have expertise in a discipline related to the student's program. *(http://umanitoba.ca/faculties/graduate_studies/governance/academic_membership.html) **Equivalency will be approved by the Dean of the Faculty of Graduate Studies and determined on a case by case basis and assessed by the potential advisor's	It is the advisor's responsibility to advise the student on a program and courses, direct research and supervise thesis work. The advisor must be a member of the Faculty of Graduate Studies, be active in research, have expertise in the area related to the student's focus of study and hold a Ph.D. or equivalent. The student's advisor is the chair of the student's advisory committee, and acts as a channel of communication to the student's advisory committee, the Faculty of Social Work and the Faculty of Graduate Studies. Students may change advisors based on agreement of a new advisor and approval of the Ph.D. Coordinator. The new advisor must have established expertise in the area of the student's specialization. The student must request the change after discussion with the advisor of record, and complete the Change of Advisor form, which must be signed by the advisor of record, the proposed advisor, the Ph.D. Coordinator and the student. If the proposed change is approved, a revised Program of Study and Appointment of Advisory Committee form from the Faculty of Graduate Studies must be completed and submitted.

demonstrated research record and current research activities. Note that M.D., D.M.D. and J.D. are undergraduate degrees and are not equivalent to a Ph.D. Usually the student and the advisor choose to work together by mutual agreement. In department/units where the choice of thesis topic advisor is postponed for some time after entry into the program, the Head of the department/unit or the selection committee shall appoint a faculty member to advise the student as to the rules and regulations and on a program and course requirements. This interim period must not exceed eighteen (18) months after entry in to the program before a permanent advisor is chosen.	
5.2.2 Student's Co-advisor In special circumstances, upon approval of the Head of the department/unit, an advisor and a maximum of one (1) co-advisor may advise a student. The co-advisor must: • be a member of the Faculty of Graduate Studies*; • hold a Ph.D. or equivalent**; • be active in research; and • have expertise in a discipline related to the student's program; *(http://umanitoba.ca/faculties/graduate_studies/governance/academic_membership.html) **Equivalency will be approved by the Dean of the Faculty of Graduate Studies and determined on a case by case basis and assessed by the potential co-advisor's demonstrated research record and current research activities. Note that M.D., D.M.D. and J.D. are undergraduate degrees and are not equivalent to a Ph.D. The co-advisor may be identified either at the beginning of, or mid-way through, a student's program. In all instances, the Faculty of Graduate Studies must be informed of, and approve, the co-advisor arrangement. When an advisor and co-advisor are assigned, together they shall fulfill the role of the advisor (that is, neither shall fulfill any other advisory or examining committee membership requirements for that student). One (1) advisor must be identified as the primary advisor; however, both the advisor and co-advisor's signatures are required on all documents where the advisor's signature is required.	*NEW 2019-20! The student's co-advisor no longer needs to be a member of the unit offering the program*
5.2.3 Student's Advisor/Co-advisor A student who also holds an appointment at the University of Manitoba at the rank of Assistant Professor or above cannot have an advisor or co-advisor with an appointment in the same department/unit. The advisor, co-advisor (if applicable) and student must discuss, and complete, the Faculty of Graduate Studies Advisor Student Guidelines (ASG) prior to the commencement of any research and no later than the submission of the first Progress Report for the student. If a student does not have an advisor/co-advisor the interim advisor will be required to complete the Advisor Student Guidelines. If the parties cannot agree on any component(s) of the ASG, the matter should be referred to the department/unit Graduate Chair, the Head of the department/unit, or the Dean of the Faculty of Graduate Studies. The Advisor Student Guidelines is to be completed again if there is a change in advisor/co-advisor or when a co-advisor is added mid-way through the student's program.	

Should, during the student's program, the relationship between the student and advisor significantly deteriorate, the matter should be referred sequentially to the department/unit Graduate Chair, the Head of the department/unit, then to the Dean of the Faculty of Graduate Studies. It is the responsibility of the unit offering the program in which the student is studying to arrange an alternate advisor if this is appropriate and necessary. All students should consult department/unit supplemental regulations for specific details regarding advisor/co-advisor requirements.	
5.2.4 Advisory Committee The Head of the department/unit is responsible for the establishment of an advisory committee for each Ph.D. student. Advisory committees are selected by the advisor/co-advisor in consultation with the student and should consist of individuals whose expertise is consistent with that necessary to provide additional advice and guidance to the student during his/her program. The advisory committee must consist of a minimum of three (3) members all of whom must be members of the Faculty of Graduate Studies (http://umanitoba.ca/faculties/graduate_studies/governance/academic_membership.html). Advisory committees may, in addition, include one (1) non-voting guest member who has expertise in a related discipline but is not a member of the Faculty of Graduate Studies. It is expected that Advisory Committee members will have a Ph.D. degree or equivalent. Equivalency will be determined by the Dean of the Faculty of Graduate Studies. Graduate students, Post-Doctoral Fellows, and Research Assistants or Associates may not serve on graduate student advisory committees. A student who also holds an appointment at the University of Manitoba at the rank of Assistant Professor or above cannot have an advisor or co-advisor with an appointment in the same department/unit. The composition of, and any changes to, the advisory committee, including the advisor/co-advisor, must be approved by the Faculty of Graduate Studies on the "Program of Study and Appointment of Advisory Committee" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). Disclosure is required if two or more committee members are in a personal relationship. The advisor/co-advisor is the Chair of the advisory committee. Advisory committee meetings must be held at least annually, and are not intended to take the place of meetings between the student and advisor/co-advisor which should occur with much greater frequency than the advisory committee meetings.	*NEW 2019-20! There is no longer a requirement for an "internal-external" advisory committee member* As soon as possible, but no later than the end of the Winter term of the student's first year of study, an advisory committee for the student shall be established to assist the advisor in the performance of responsibilities related to advising the student on a program of studies, approving annual progress reports, advising on thesis research and providing general supervision to the student throughout the Ph.D. Program. The committee must meet with the student at least once each year to review the student's progress and report on this to the Faculty of Graduate Studies. Normally, members of the advisory committee also serve as internal members of the student's Thesis Examination Committee. Although the advisor is required to serve as one member of the student's Candidacy Examination Committee, other members of the advisory committee may be asked to serve in this capacity. However, it is important to note that members of the advisory committee, other than the advisor, are not required to serve as members of the Candidacy Examination Committee. The advisory committee must consist of a minimum of three members of the Faculty of Graduate Studies. Committees may also include one guest member who has expertise in a related discipline, but is not a member of the Faculty of Graduate Studies. The membership of the committee, including the advisor, as well as any changes, must be approved by the Ph.D. Coordinator and the Dean of the Faculty of Graduate Studies. Membership of the student's advisory committee may be changed with the agreement of the advisor and the advisory committee. If the proposed change is approved, a revised Program of Study and Appointment of Advisory Committee form from the Faculty of Graduate Studies must be completed and submitted.

5.3 Program of Study As soon as possible, but no later than 24 months after a student has commenced their program, the student's program of study should be registered with the Faculty of Graduate Studies on the "Program of Study and Appointment of Advisory Committee" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html) and should include: • information about the minimum or expected time for completion of the degree; • coursework to be taken along with course classification ("S", "X", "A" or "O"); • any foreign language requirement; • the research area in which the thesis will be written. The approval of the student's advisor/co-advisor and the Head of the department/unit are sufficient for registration. The program of study, including withdrawal from individual courses and any subsequent changes, must be approved by the student's advisor/co-advisor, the advisory committee, and the Head of the department/unit. Withdrawal from courses or changes of course category without such approval may result in the student being required to withdraw from the Faculty of Graduate Studies.	As soon as possible following admission, but no later than the Winter term following admission, the advisor and student are required to complete the Ph.D. Program of Study and Appointment of advisory committee form and submit this to the Faculty of Graduate Studies. The student's advisory committee is normally appointed at this time and identified on this form. If the appointment of the student's advisory committee is delayed beyond the beginning of the Winter term of the first year of study, the Ph.D. Program of Study and Appointment of Advisory Committee form shall be completed, and then re-submitted later when the advisory committee is selected. Students may request a change in some of the courses involved in their approved program of study, and courses may be changed with the approval of the student's advisory committee and the Ph.D. Program Committee. If the proposed change is approved, a revised Ph.D. Program of Study and Appointment of Advisory Committee form must be completed and submitted to the Faculty of Graduate Studies. Students may apply to change their area of specialization through submitting to the Ph.D. Program Committee evidence of an agreement with an advisor with expertise in the proposed new area of specialization, recommending the members of an advisory committee, preparing a statement as to how the new area of specialization relates to her/his goals in taking the program, preparing a statement describing the proposed new specialization, preparing a recommended program of individualized courses, and preparing a statement of proposed thesis research. This should be done in consultation with the proposed advisor. Changes in area of specialization can be made only after the approval of the Ph.D. Program Committee. If the proposed change is approved, a revised Ph.D. Program of Study and Appointment of Advisory Committee form must be completed and submitted to the Faculty of Graduate Studies.
5.4 Program Requirements All students must complete one of the following programs of study for the Ph.D. degree, unless otherwise specified in the approved department/unit supplemental regulations: • Where admission to the Ph.D. is directly from a Master's degree, a minimum of 12 credit hours at the 7000 level or higher plus a thesis is required. Any further coursework beyond the minimum 12 credit hours at the 7000 level must be at the 3000 level or above. For those students who hold a Master's degree, a maximum of 24 credit hours of coursework is allowed toward the Ph.D. program.*	Students must complete 24 credit hours of approved courses at the 7000 level or higher. **Course requirements include:** • SWRK 8010 Perspectives on Knowledge for Social Work (3 CH); • SWRK 8100 Social Work Past and Present: Trends, Institutions and Practices (3 CH); • Research Courses (9 CH); • Specialization-Focused Courses (9 CH).

• Where admission to the Ph.D. is directly from an Honours Bachelor degree or equivalent, a minimum of 24 credit hours plus a thesis is required. The coursework must include a minimum of 18 credit hours at the 7000 level or higher with the balance of the coursework at the 3000 level or higher. For those students who do not hold a Master's degree, a maximum of 48 credit hours of coursework is allowed toward the Ph.D. program.* *Unless professional accreditation requirements and/or the department/unit's supplemental regulations indicate otherwise.	Courses selected by the student in consultation with her or his advisory committee serve to establish expertise in a particular area of specialization defined as a field of policy, theory, practice or practice method. The main criterion for selection is the appropriateness of the methodologies covered in selected courses for the area of specialization being pursued. It is strongly recommended that courses focusing on both quantitative and qualitative methodologies be included. The course selection must be approved by the Ph.D. Program Committee.
5.4.1 Language Reading Requirements Some department/units specify a language requirement for the Ph.D. degree. Students are advised to check department/unit supplemental regulations regarding this requirement.	
5.4.2 Advance Credit Advance credit for courses completed prior to admission to a Ph.D. program will be considered on a case-by-case basis. The student's department/unit makes the request to the Faculty of Graduate Studies by completing the "Advance Credit - Transfer of Courses" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). • Application for advance credit must be made within the first year of the program (see section 5.4.4 Lapse of Credit of Courses) • No more than 50% of the required coursework for the program can be achieved using advance credit. • A course may not be used for credit toward more than one degree, diploma or certificate. • The student must register at the University of Manitoba for at least two consecutive terms and must also complete the thesis and candidacy examination at the University of Manitoba. Regardless of the extent of advanced credit received, all students are required to pay applicable program fees.	
5.4.3 Transfer Credit Courses within a program of study may be taken elsewhere and transferred for credit at the University of Manitoba. All such courses: • must be approved for transfer to the program of study by the department/unit and the Faculty of Graduate Studies before the student may register for them; • are considered on an individual basis; • cannot be used for credit towards another degree;	

Faculty of Graduate Studies **at least three (3), but no more than four (4),** months prior to expiration of the respective maximum time limit. A student who has not completed the degree requirements within the time limit or within the time limit of any extension that has been granted (see also sections "Extension of Time to Complete Program of Study" and "Leave of Absence") will be required to withdraw from the Faculty of Graduate Studies and the notation on the student record will be "Required to withdraw".	
5.6 Academic Performance Student progress shall be reported ***at least*** annually (but no more than once every four (4) months) to the Faculty of Graduate Studies on the "Progress Report" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). Students who fail to maintain satisfactory performance may be required to withdraw on the recommendation of the Graduate Chair and/or department/unit Head to the Dean of the Faculty of Graduate Studies on the "Progress Report" form. Two (2) consecutive "in need of improvement" or an "unsatisfactory" rating will normally result in withdrawal of the student from the Faculty of Graduate Studies.	See section 2.1
5.6.1 Performance in Coursework A minimum degree grade point average (DGPA) of 3.0 with no grade below C+ must be maintained to continue in the Faculty of Graduate Studies. Departments/Units may specify, in their supplementary regulations, standards that are higher than those of the Faculty of Graduate Studies. Students who fail to maintain the specified grades will be required to withdraw unless a department/unit recommends remedial action. Any such action must be approved by the Dean of the Faculty of Graduate Studies.	See section 2.3
5.6.2 Performance Not Related to Coursework Students may be required to withdraw from their Ph.D. program for reasons of unsatisfactory performance other than those related to failing grades. These include, but are not restricted to, unsatisfactory attendance and lack of progress in research and/or thesis preparation. Unacceptable performance must be reported to the Faculty of Graduate Studies on the "Progress Report" form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). Students who fail to maintain satisfactory performance may be required to withdraw on the recommendation of the department/unit Head to the Dean of the Faculty of Graduate Studies.	Students are expected to follow the Social Work Code of Ethics (https://www.casw-acts.ca/sites/default/files/attachements/casw_code_of_ethics.pdf). A student may be required to withdraw from their program when the student has been found guilty by the Professional Unsuitability Review Committee of the Faculty of Social Work of such conduct which, if participated in by practicing social workers, would result in a serious violation of the Code of Ethics of the Canadian Association of Social Workers (https://www.casw-acts.ca/sites/default/files/attachements/casw_code_of_ethics.pdf). Detailed information on the provisions of the Professional Unsuitability By-Law may be found in the on-line version of the Pre-M.S.W. / M.S.W. Student Handbook on the Faculty of Social Work website.
5.7 Academic Requirement for Graduation	

A cumulative degree grade point average of 3.0 or greater is required in those courses that constitute the program of study for graduation in the Faculty of Graduate Studies.	
5.8 Candidacy Examination The candidacy examination is an absolute requirement of the Faculty of Graduate Studies and, as such, cannot be waived under any circumstances. However, the format and content of the candidacy exam varies from unit to unit. The purpose of the candidacy exam in doctoral programs is to determine the student's competence in the discipline with respect to understanding and absorbing a broad spectrum of material, and then researching, identifying, analyzing, synthesizing, and communicating ideas about that material in depth. At the time specified by the advisory committee, normally within the first year after the completion of the Ph.D. program coursework but in no case later than one year prior to expected graduation, the student must successfully complete the formal candidacy examination. The examination is conducted according to a procedure established by the department/unit and approved by the Programs and Guidelines Committee of the Faculty of Graduate Studies. Please see the department/unit supplemental regulations for the format and composition of the examination committee for the candidacy examination. The candidacy examination must be held at The University of Manitoba. This examination, which must be independent from the thesis proposal, may be oral, written, or both and may cover subjects relevant to the general area of the candidate's research. The structure of the exam must be made known to the student well in advance of the exam. In the case where there is a required oral component, the student must be physically present. A “pass” decision of the examiners must be unanimous. Students must be provided with feedback on their performance and access to the reasons for the pass/fail. The Dean of the Faculty of Graduate Studies must be informed whether the candidate has “passed” or “failed” the candidacy examination on the “Report on Ph.D. Candidacy Examination” form (http://umanitoba.ca/faculties/graduate_studies/forms/index.html). Any student who fails the candidacy examination twice will be required to withdraw from the Faculty of Graduate Studies. On successful completion of this examination, the student will be considered a candidate for the Ph.D. degree.	The candidacy examination in the Faculty of Social Work is initiated after the student has successfully completed all required course work and consists of two components: 1. a major paper that assesses the student’s mastery of a major topic; and 2. an oral examination of the topic covered in the paper. A Candidacy Examination Committee that may differ in composition from the student’s advisory committee is appointed to approve and evaluate the candidacy exam. The advisor, who serves as one member of the Candidacy Examination Committee, may recommend members of the Candidacy Examination Committee to the PhD Coordinator who must approve the committee membership. All members of the Candidacy Examination Committee must be members of the Faculty of Graduate Studies, at least two must be members of the Faculty of Social Work, and at least two members must hold a PhD or equivalent. Members of the student’s advisory committee may be recommended as members of the Candidacy Examination Committee;. Once a committee has been selected, an Appointment of Examiners form is completed and provided to the advisor and student. One copy is also placed on the student’s file. The Assessment of Written Candidacy Paper Criteria form outlines the format and general criteria to be used in grading the written candidacy paper. The topic selected by the student may be discussed with the student’s advisor, and the student will develop a proposal that outlines the focus of study, the major theoretical approaches to be considered and the planned approach to the examination of literature pertaining to the topic. The topic to be examined in the candidacy paper must be of significant breadth to require consideration of a range of theoretical perspectives and detailed review of relevant research studies related to these theoretical perspectives. A student must pass both the written and oral components of the examination to pass the candidacy examination. The student must pass the written component in order to proceed to the oral component.

	The written paper, which is based on the proposal as approved by the student's Candidacy Examination Committee, must thoroughly examine a topic with respect to the following: • selection and use of relevant literature from a variety of areas of knowledge; • critical analysis and synthesis of relevant theories; and • research studies and development of an extended, revised or new conceptualization of the topic supported by analysis of theories and research. The written component of the candidacy examination shall normally be completed within four months of the date of approval of the student's proposal by the Candidacy Examination Committee. Written feedback on the major paper will normally be provided to the student within one month of receiving the paper, and the oral examination will normally be scheduled within one month of the date feedback is provided to the student on the major paper. Following completion of the oral examination, written feedback will be provided to the student. Reasons for assigning a failure on the examination must be provided to the student. A pass is granted only if the decision of the examiners is unanimous. A student who submits a paper that is assessed as unacceptable shall not be permitted to proceed to the oral component of the candidacy examination and shall be assigned a failure on the candidacy examination. On successful completion of both components of the candidacy examination, the student will be considered a candidate for the Ph.D. degree. Any student who fails either the written component of the candidacy examination twice, or the oral component twice, or the written once and the oral once, will be required to withdraw from the Ph.D. program and the Faculty of Graduate Studies. <u>Assessment Criteria for the Candidacy Paper:</u> • Logical development and presentation of relevant aspects of the topic; • Selection and use of relevant literature from a variety of knowledge areas and methods of research; • Critical analysis of relevant theories and research studies;

	• Articulation of an extended, revised or new conceptualization of the topic which integrates issues identified in the analysis of theories and research; • Quality and organization of writing; • Reference to social work literature. Criteria are not necessarily weighted equally but written comments from the Candidacy Examination Committee should reflect each of these major points. A paper is graded as either 'Approved' or 'Not Approved'. A paper graded as 'Approved' permits the student to proceed to the oral examination stage. A paper that requires major revisions will not be approved. <u>Assessment Criteria for the Candidacy Oral Examination:</u> The maximum length of the oral examination shall be two hours, and will include questions on content included in the paper or material important to the topic that was omitted.
5.9 Thesis Proposal Some departments/units have specific procedures in place for approval of thesis proposals and students are advised to refer to the specific department/unit supplemental regulations. If departments/units require thesis proposal approval, this exercise must be independent from the candidacy examination. Regardless, the proposed thesis research must be approved by the advisory committee and, if necessary, by the Human Research Ethics Board or Animal Care Committee before the work has begun on the thesis research or project.	The thesis proposal must outline the research to be undertaken by the student. Normally the thesis proposal will include the following: • an overview chapter outlining the study, its contribution to knowledge development and a rationale for the study; • a comprehensive review of the literature pertaining to the topic under study including a review of related research and theories; • a detailed description of the research design, data collection procedures, and approach to analysis. Copies of the proposal are distributed to members of the advisory committee following feedback from the advisor on initial drafts of the proposal. The thesis proposal must be approved by the advisory committee in a formal meeting of the committee organized for this purpose. Procedures include the formal presentation of an overview of the study by the student and questions from the advisory committee. Based on discussion, requirements for revision of the proposal may be specified by the committee. Required revisions are to be communicated to the student orally and in writing. Once the final proposal is approved, this is to be noted on the student's annual Progress Report. As well, the Faculty of Graduate Studies Ph.D. Thesis Proposal form is to be completed and forwarded to the Faculty of Graduate Studies. Normally the Ph.D. proposal should be completed

	within 36 months of the student's initial registration in the Ph.D. program.
5.10 Thesis An essential feature of Ph.D. study is the candidate's demonstration of competence to complete a research project and present the findings. The thesis must constitute a distinct contribution to knowledge in the major field of study, and the research must be of sufficient merit to be, in the judgement of the examiners, acceptable for publication. The thesis must be written in English. The thesis must be written according to a standard style acknowledged within the candidate's particular field of study and recommended by the department/unit, be lucid and well-written, and be reasonably free from errors of style and grammar (including typographical errors). The final version of the thesis must be submitted by the candidate to the Faculty of Graduate Studies following the guidelines found at: http://umanitoba.ca/faculties/graduate_studies/thesis/guidelines.html	
5.11 Thesis Examination Procedures The final examination for the Ph.D. degree proceeds in two (2) stages: 1. Examination of the candidate's thesis by an internal and external examiner; 2. Oral examination of the candidate by all examiners on the subject of the thesis and any matters relating thereto.	
5.11.1 Formation of the Examining Committee - University of Manitoba (Internal) Examiners The candidate's advisor (and, if appropriate, co-advisor) is considered to be a voting member of the examining committee. All voting members of the advisory committee are expected to serve on the examining committee; any exceptions must be approved in advance by the Dean of the Faculty of Graduate Studies. All examiners must be members of the Faculty of Graduate Studies (http://umanitoba.ca/faculties/graduate_studies/governance/academic_membership.html). It is expected that Examining Committee members will have a Ph.D. degree or equivalent. Equivalency will be determined by the Dean of the Faculty of Graduate Studies. Note that in the case of an advisor and co-advisor, both together have a single vote on the examining committee.	*NEW 2019-20! There is no longer a requirement for an "internal-external" examining committee member*
5.11.2 Formation of the Examining Committee - External Examiner The candidate's advisor/co-advisor, in consultation with the advisory committee, will recommend the names of three (3) distinguished scholars from outside The University of Manitoba with particular experience in the field of the thesis research and significant Ph.D. student advisory/examination experience to serve as the external examiner to the Dean of the Faculty of Graduate Studies for approval via the Thesis Submission Portal on JUMP. The recommendations should, if possible, include a brief CV of each of the prospective external examiners and a short statement detailing the rationale behind the recommendations, the prospective external examiners' qualifications, including a current list of his/her scholarly publications and research activities and, importantly, their experience with graduate student education. No	

suspended at the onset of the leave and reinstated at the termination of the leave period (4 to 12 months) provided that the student returns to full time study at that time. **Note:** Other awards will be paid according to the conditions established by the donor or granting agency.	
8.5 Graduate Student Vacation Entitlement Students are entitled to 21 calendar days of vacation over a twelve (12) month period. • For the purposes of calculating vacation entitlement, the academic year means the period from September 1 to August 31. • Vacation entitlement will be prorated for the portion of the year in which a student is registered. • Any vacation time taken during an official closure of the University is not included as part of the 21 calendar day vacation entitlement. In addition, attendance at academic conferences shall not be considered vacation time. • Student vacation requests should have minimal impact on the student's research, coursework, and other obligations to the University. Any requests provided ahead of time and within these guidelines will not be unreasonably denied. • Should a conflict arise between a student's vacation request and a supervisor's expectations, the Department/Unit Head (or designate) shall make a final determination.	*NEW 2019-20! Additional details concerning vacation entitlement*
SECTION 9: Appeals – Procedures and Guidelines **9.1 General** Students who disagree with a decision have access to appeal routes as laid out by various Faculty of Graduate Studies and University of Manitoba appeal procedures. Student appeals may be limited by the scope of the inquiry available at each level and category of appeal, as well as by the time limitations for submission of appeals. A further limitation is that the Faculty of Graduate Studies rules and regulations, established to uphold the academic rigour of the University of Manitoba, are generally not subject to appeal unless an appeal route is otherwise stipulated. In situations where no appeal route is available, a student may make a written request to the Dean of the Faculty of Graduate Studies. Students are referred to the appeals section of the University of Manitoba Governing Documents (http://umanitoba.ca/admin/governance/governing_documents/index.html) for further details. For students registered in Joint Master's Programs (University of Manitoba and University of Winnipeg) there is a different process for handling academic and disciplinary appeals than for University of Manitoba students in regular programs (not Joint Programs). This process is outlined in the Joint Master's Program Governing Documents available at http://umanitoba.ca/faculties/graduate_studies/media/JMP_Regulations2017.pdf.	**FACULTY OF SOCIAL WORK GRADE APPEAL POLICIES AND PROCEDURES** **Faculty of Social Work Appeals Committee** **Purpose** The purpose of this committee is to promote consistency related to student appeals at the Graduate and Undergraduate program levels. The Faculty of Social Work Appeals Committee is the first level of appeal for both Graduate and Undergraduate students in the Faculty related to appeals of term and final grades. This committee does not deal with matters of student discipline or professional unsuitability as identified by the University of Manitoba Student Discipline By-laws. **Membership** The Appeals Committee shall be comprised of 3 members: the Chair, a Faculty of Social Work member, and a Faculty Content Specialist. The Chair of the Appeals Committee shall be appointed by the Dean of the Faculty of Social Work for a 3-year term. The Chair shall be a tenured faculty member at the minimum rank of Associate Professor.

	A second committee member shall be elected to the Committee by Faculty Council. Sessional lecturers are not eligible to serve. A third faculty member shall be appointed by the Dean of the Faculty of Social Work as the Faculty Content Specialist for the course that is under appeal. This member shall have knowledge of the course content, having either instructed the course or contributed to the development of the course content. Should the appeal be made regarding a grade assigned by one of the standing members of the Appeals Committee, that member shall step down and the Dean shall appoint an alternative to hear that appeal only. The Dean of the Faculty of Social Work, while ex-officio on all committees, is not normally part of the Appeals Committee. He or she does, however, have some residual responsibility to monitor the work of the committee, thus providing an additional safeguard to ensure justice. **Terms of Reference** These policies and procedures apply to all programs offered at the Faculty of Social Work sites: Fort Garry, Distance Delivery, Northern Social Work Program at Thompson, and the Inner-city Program at the William Norrie Centre. The Appeals Committee will review the final grade assigned as well as term work grades for a particular course. Appeals are heard at the initiative of the student upon application to the Registrar's office. The Appeals Committee's duties are to process student appeals related to pass-fail, grade re-calculation, and re-evaluation of term and final grades in the Faculty of Social Work. Grades in electives courses that are required for Social Work degrees, but are provided by other Faculties, should be appealed to the appropriate Faculty. This Committee is the only appeal body within the Faculty of Social Work, and its decision is final within the context of the Faculty. **<u>Procedures for Students Launching an Appeal</u>** **Appeals of Grades Received for Term Work** The appeal of term work returned or made available to students before the last day of classes shall be subject to the policies and procedures established by faculty or school councils.

	Students may formally appeal a grade received for term work provided that the matter has been discussed with the instructor in the first instance in an attempt to resolve the issue without the need of formal appeal. Term work grades normally may be appealed up to ten working days after the grades for the term work have been made available to the student. If the consultation between the student and instructor does not result in an outcome that is satisfactory to the student, the student may make application for a formal appeal of the term grade. Applications must be made on the Application for Appealing a Grade Given for Term Work form available at the Registrar's Office, 400 University Centre or online. On payment of the prescribed fee, the appeal will be forwarded to the Dean of the Faculty of Social Work. **Appeal of Final Grades** Prior to filing a formal appeal, students are expected to consult with the instructor of record of the course in question to see if any remedy exists at that level. This appeal to the instructor must normally occur within 10 working days of receiving the final grade. If the consultation between the student and instructor does not result in an outcome that is satisfactory to the student, the student may make application for a formal appeal of the final grade. Applications must be made on the Final Grade Appeal form available at the Registrar's Office, 400 University Centre or online. On payment of the prescribed fee, the appeal will be forwarded to the Dean of the Faculty of Social Work. A student wishing to make an appeal of a final grade received in a first term course must do so within 15 working days of the first day of classes of the second term. For second term and full term courses, the appeal must be made within 15 working days following the Victoria Day holiday. 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. **Graduate Student Appeals** The Faculty of Social Work will only hear appeals regarding academic matters. Appeals stemming from departmental actions on academic matters (i.e.: failure in a course) will be heard by the Faculty of Graduate Studies Appeal Panel only after they have been dealt with by the appropriate department-level appeal process. The Appeal Panel will handle an appeal of Faculty of Graduate Studies actions.

	Please note that decisions on academic matters such as qualifying examinations, candidacy examinations, thesis examinations, etc. that have been made by a student's home unit (i.e.: department, school or program) should first be appealed to the home unit. If a unit denies a student's appeal, the appeal may be made to the Faculty of Graduate Studies. **Action by Committee Chair** Upon receiving the documentation from the Registrar's Office, the Chair will first consult with the instructor of record of the course to ascertain that the student had initiated a discussion with the instructor and to determine the outcome of this consultation. The Chair of the Committee will notify the student in writing (email notification is acceptable) advising of the receipt of the appeal from the Registrar's Office. The notification will address the following issues: • Advise the student of the deadline for the Faculty's response to the Dean which is 15 working days from the date of the receipt of the appeal; • After consulting with the student, establish a time and place for the hearing, and confirm the information in writing to the student (email notification is acceptable) of the date, time, and location of the appeal hearing at least one week prior to the scheduled meeting; • Include a copy of the Appeal Procedures of the Faculty of Social Work, highlighting the provision that the student has the right to appear before the Appeals Committee, as well as their right to be accompanied by a representative from Student Advocacy and Accessibility; • Request that the student forward to the Chair within 3 working days, all materials relevant to the review (syllabus, assignments, exams, evaluation assessment forms, grading procedures) as well as documentation of the student's efforts to resolve the issue with the instructor. The student shall also inform the committee if they will be accompanied by a representative from the Student Advocacy and Accessibility office; • Advise the student of their right to be accompanied by a support person. This person's role is limited to observer status and they do not have the right to participate in the appeal hearing; • The Appeals Committee Chair shall inform the instructor in writing (email notification is

	acceptable) of the time and place of the hearing, the grounds for the student's appeal, and the documentation that will be reviewed in considering the appeal; • The instructor in the course being appealed will have the right to appear before the committee. The Appeals Committee Chair will also request from the instructor their response to the matter under appeal. If they do not wish to appear they have the right to submit to the Appeals Committee Chair all documentation and information regarding the matter under appeal. **Guidelines and Procedures for the Appeal Hearing** At the commencement of the appeal hearing, the Appeals Committee Chair will: • Identify the case, date, time, and provide notice that the meeting will be recorded; • Introduce the student, the faculty member or instructor whose decision is being appealed, the accompanying support person, and the members of the Appeals Committee; • Briefly outline the decision being appealed and remedy sought; • Ensure that the proceedings are recorded. Where a student is questioning the procedures of the grading process, all documentation related to the student's performance in the course may be considered as evidence in the hearing. At the conclusion of the meeting, the Appeals Committee Chair will summarize the issues before the committee and the information that was presented during the hearing. A majority vote of the Appeals Committee will determine the final decision. The final grade may remain as was assessed, or raised, but cannot be lowered as a result of the appeal. The student has no further right to appeal the decision of the Faculty of Social Work Appeals Committee for term work. All presentations, discussion and deliberations of the appeal process will be kept confidential. **Disposition** The Appeals Committee Chair shall inform the student, the instructor, and the Dean of the Faculty of Social Work of the committee's decision in writing. The decision shall be accompanied by the committee's rationale for its decision.

	Students will receive the committee's decision in writing (email notification is acceptable) generally within 3 working days. A copy of the letter will be placed on the student's file. The decision of the Appeals Committee will be provided to the Registrar's office within 30 days of submission. The Chair is responsible for the completion and signing of decision form to be returned to the Registrars' office. All the material in connection with this appeal shall be held by the office of the Dean of the Faculty of Social Work for six months after the expiration of the appeal period, at which point it will be destroyed. Should the student launch a further appeal, all material in connection with this appeal shall be made available to the Senate Committee on Appeals. See section 9.5.4.1 for appeals beyond the unit. **Responsibility to Faculty Council** The Chair of the Appeals Committee will provide an annual report to Faculty Council at the June meeting summarizing the work of the committee during the previous year. This report shall include the number and type of appeals heard and their disposition. It shall also include, where deemed appropriate, any recommendations for change in these procedures, or any other matters arising out of the committee's experience of concern to the Council.
9.2 Definitions • "Appellant" – the graduate student appealing a decision affecting the student's own admission to, academic standing in, awards from or disciplinary action by a department/unit or the Faculty of Graduate Studies; • "Appeal Panel" – a panel convened from the members of the Faculty of Graduate Studies Appeals Committee by the Executive Committee of the Faculty of Graduate Studies empowered to deal with appeals stemming from decisions of departments/units or the Faculty of Graduate Studies, or individuals designated to make such decisions; • "Unit" – the department/unit council, or appeal body, whose decision is being appealed. This is understood to include decisions taken by individuals or committees acting in the name of the department/unit and also to the supplementary regulations pertinent to a department/unit's operation which have been approved by the Faculty of Graduate Studies; • "Respondent" – a representative of the department/unit or the Faculty of Graduate Studies designated by the department/unit Head/Dean of the Faculty of Graduate Studies to represent the department/unit or Faculty of Graduate Studies.	
9.3 Types of Appeal	

• stemming from a decision of the Faculty of Graduate Studies following the recommended action of a department/unit (e.g., qualifying examinations, candidacy examinations, thesis proposals, thesis examinations), only after they have been dealt with by the appropriate department/unit-level appeal process (if any), as outlined in its supplementary regulations; • stemming from a decision of the Faculty of Graduate Studies. In all cases, appeals should be directed to the Dean of the Faculty of Graduate Studies. A decision of the Appeal Panel is appealable only to the Senate Committee on Appeals (see http://umanitoba.ca/admin/governance/governing_documents/students/senate_committee_on_appeals_policy.html).	
9.5.3 Grounds for an Academic Appeal The Appeal Panel shall only consider an appeal if there is some evidence that: • the department/unit or the Faculty of Graduate Studies failed to follow the rules of natural justice; • the department/unit or the Faculty of Graduate Studies failed to follow procedures; • a department/unit or Faculty of Graduate Studies regulation has been unfairly or improperly applied, or has become inapplicable through lapse of time; • there are documented mitigating circumstances (e.g. medical, compassionate); • there is apparent conflict between a Senate Regulation, a Faculty of Graduate Studies policy and/or a department/unit regulation. **Note:** It shall be the responsibility of the appellant to indicate clearly and specifically the grounds warranting consideration of the appeal.	
9.5.4 Academic Appeal Deadlines **9.5.4.1 Appeal of Faculty of Graduate Studies Decision:** An appeal of action taken by any department/unit, committee, administrator or faculty member within the Faculty of Graduate Studies must be submitted in writing by the appellant to the Dean of the Faculty of Graduate Studies within fifteen (15) working days of the date from the date that the appellant was informed in writing of the action to be appealed.	There are two avenues of appeal available to students within the Faculty of Social Work. Appeal of a Grade: If a student has reason to believe that a mistake has been made in the assessment of a grade assigned in a course taken within the Faculty of Social Work, the student should, in the first instance attempt to resolve the issue with the course instructor. If there is no satisfactory resolution at this level, and the student wishes to take further action, an appeal will be heard by the Appeals Committee of the Faculty of Social Work, upon notification from the Registrar's Office that a formal appeal has been filed. Appeals may also be heard if a failure is assigned in the candidacy examination. The Appeals Procedures of the Graduate Program of the Faculty of Social Work are described in Section 9.1.

	An appeal of a grade beyond the Faculty of Social Work Appeals Committee may be made to the Dean of the Faculty of Graduate Studies. A decision of the Appeal Panel of the Faculty of Graduate Studies is appealable only to the Senate Committee on Appeals. <u>Appeal Against a Decision of the Graduate Standings Committee:</u> The Graduate Standings Committee rules on such matters as failing grades, performance, requests for extensions, admissions and actions regarding failed grades. In these matters, the Graduate Standings Committee recommends a course of action to the Faculty of Graduate Studies. Normally, appeals of these decisions are made to the Dean of the Faculty of Graduate Studies. However, in some cases where the original decision is made at the level of the Faculty of Social Work and where University policy on appeals requires it (i.e.: admissions), procedures require the student to first request a re-consideration by the Graduate Programs Committee or Ph.D. Committee. In these circumstances procedures that are generally consistent with the process outlined in the Appeals Procedures (section 9.1) shall be followed. It is also important to note that some decisions, such as decisions pertaining to a requirement to withdraw, are made directly by the Faculty of Graduate Studies. In these circumstances, the student must appeal directly to the Faculty of Graduate Studies within the appropriate timelines.
9.5.4.2 Appeals to Senate: As per the University of Manitoba Governing Documents: Students: Policy: Appeals Procedures (http://umanitoba.ca/admin/governance/media/Senate_Committee_on_Appeals_Procedures_-_2014_11_05_RF.pdf), appeals to the Senate Committee on Appeals shall be filed with the University Secretary within twenty (20) working days after the mailing of the notice of decision from which the appeal is made.	
9.5.5 Academic Appeals Process **9.5.5.1 Documentation** Upon receipt of a formal appeal the Dean of the Faculty of Graduate Studies may, at his/her discretion, consider the appeal or forward it to an Appeal Panel. If the Dean considers the appeal, the student shall be informed of the outcome, in writing.	

November 7, 2019

Report of the Senate Committee on Nominations

Preamble

The terms of reference for the Senate Committee on Nominations may be found on the University Governance website at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/507.html

The Committee met (electronically) on November 5, 2019 to consider nominations to fill vacancies on the standing committees of Senate.

Observations

1. The Committee was advised that a graduate student had resigned as a member of the Graduate Students' Association (GSA) Executive team, and as a member of several Senate committees. A replacement for the Executive team was found, and GSA recommended that the same replacement be made for each of the Senate committees.

   The Senate Committee on Nominations agreed with the importance of filling the vacancies with as little delay or disruption to the work of the committees as possible.

2. Listed below are the Senate committees with vacancies to be filled, along with the name of the nominee being proposed. Following the list is the membership list for each of those committees, including the name of the nominee, which has been highlighted.

Recommendations

The Committee recommends to Senate the following:

COMMITTEE	NOMINEE(S)	FACULTY/ SCHOOL	TERM END DATE
Senate Committee on Admission Appeals	Tanjit Nagra (S)	Graduate Studies	2020.05.31
Senate Committee on Appeals	Tanjit Nagra (S)	Graduate Studies	2020.05.31
Senate Committee on Awards	Tanjit Nagra (S)	Graduate Studies	2020.05.31

* (S) indicates a member of Senate

Respectfully submitted,

Professor M. Edwards, Chair
Senate Committee on Nominations

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

SENATE COMMITTEE ON ADMISSION APPEALS
last updated November 5, 2019

Composition	Incumbents	Faculty/School	Term
One member holding academic appointment in the University appointed as Chair of the Committee for a three year term by the Senate Executive Committee*	Dean David Mandzuk, Chair	Education	2021.05.31
One member holding academic appointment in the University appointed as Vice-Chair of the Committee for a three year term by the Senate Executive Committee.* The Vice-Chair shall not be from the same Faculty/School/College as the Chair	Prof. Brenda Hann, Vice-Chair	Science	2021.05.31
Eight members with broad representation across Faculties/Schools/Colleges holding academic appointments in the University	Prof. Jitendra Paliwal	Engineering	2020.05.31
	Prof. Karen Wilson Baptist	Architecture	2020.05.31
	Prof. Malcolm Smith *(I/r for Prof. Subbu Sivaramakrishnan)*	Management *(Management)*	2019.12.31 *(2020.05.31)*
	Prof. Ryan Cardwell	Agricultural and Food Sciences	2021.05.31
	Prof. Silvia Alessi-Severini *(leave replacement for Prof. Leisha Strachan)*	Health Sciences *(Kin. & Rec. Mgt.)*	2020.06.30 *(2021.05.31)*
	Prof. Lucas Tromly	Arts	2021.05.31
	Prof. Mike Domaratzki	Science	2022.05.31
	Prof. Jennifer Schulz	Law	2022.05.31
Two students	Mr. Tyrese Gibbes	Engineering	2020.05.31
	Ms Tanjit Nagra	Graduate Studies	2020.05.31
President of UMSU (or designate)	Ms Kyra Fanning, designate		*Ex-officio*
Director (Admissions), Enrolment Services (non-voting)	Ms Erin Stone		*Ex-officio*
Resource: Marcia Yoshida 474-6166 Terms of Office: three-year terms; students = one-year terms			

* the Chair and Vice-Chair shall not be members of a Faculty/School/College admission selection committee

SENATE COMMITTEE ON APPEALS
last updated November 5, 2019

Composition	Incumbents	Faculty/School	Term
One academic member appointed as Chair by Senate Executive	Prof. Charlotte Enns	Education	2022.05.31
Two elected academic members appointed as Vice-Chairs by Senate Executive (not from same faculty/school as Chair or each other)	Prof. Peter Blunden	Science	2022.05.31
	Prof. Derek Oliver	Engineering	2022.05.31
Three members from among Deans of Faculties or Colleges and Directors of Schools appointed by the President	Dean Douglas Brown	Kinesiology & Rec. Mgt.	2020.05.31
	Dean Jonathan Black-Branch	Law	2022.05.31
	Dean Lalitha Raman-Wilms	Health Sciences	2022.05.31
Five academic members of Senate	Prof. Christine Van Winkle (S)	Kinesiology & Rec. Mgt.	2020.05.31
	Prof. Peter Blunden (S)	Science	2021.05.31
	Prof. Rusty Souleymanov (S) *(leave replacement for Lisa Landrum (S))*	Social Work *(Architecture)*	2019.12.31 *(2022.05.31)*
	Prof. Derek Oliver (S)	Engineering	2022.05.31
	Prof. Jitendra Paliwal (S)	Agricultural & Food Science	2022.05.31
Six academic members	Dr. Rod Lastra	Extended Education	2020.05.31
	Prof. Charlotte Enns	Education	2021.05.31
	Prof. Vanessa Swain	Health Sciences	2021.05.31
	Prof. Michael Campbell	Environment Earth & Res.	2022.05.31
	Dr. Nicholas Harland	Science	2022.05.31
	Prof. Melanie Soderstrom	Arts	2022.05.31
President of UMSU (or desig.)	Ms Jelynn Dela Cruz, designate		*Ex-officio*
Six students (four undergrads from different Faculties or Schools, and two grads)	TBD		2020.05.31
	Ms Jaime McNicholl	Science	2020.05.31
	TBD		2020.05.31
	TBD		2020.05.31
	Ms Julia Minarik	Graduate Studies	2020.05.31
	Ms Tanjit Nagra	Graduate Studies	2020.05.31
One member of USB	Dr. Jules Rocque		2020.05.31
One student of USB	Ms Elizabeth Labbé		2020.05.31
Resource: Marcia Yoshida 474-6166 Terms of Office: three-year terms; students = one-year terms			

SENATE COMMITTEE ON AWARDS
last updated November 5, 2019

Composition	Incumbents	Faculty/School	Term
Six members of the academic staff, at least one shall be a Senator; at least one from Arts and one from Science; and at least two from professional faculties/schools	Dr. Jennifer McLeese	Science	2020.05.31
	Prof. Darcy MacPherson (S)	Law	2020.05.31
	Prof. Michelle Faubert (S)	Arts	2021.05.31
	Prof. Jared Carlberg, Chair	Agricultural and Food Sciences	2022.05.31
	Prof. Peter Cattini	Health Sciences	2022.05.31
	Prof. Laura Loewen, Vice-Chair	Music	2022.05.31
Two students (one graduate and one undergraduate)	Ms Lilja Best	Arts	2020.05.31
	Ms Tanjit Nagra	Graduate Studies	2020.05.31
Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies (or designate)	Ms Sara Sealey, designate		*Ex-officio*
Director, Financial Aid and Awards (or delegate)	Ms Jane Lastra, designate Ms Lesli Lucas-Aseltine		*Ex-officio*
Associate Vice-President (Alumni & Donor Relations) (or delegate)	Ms Stephanie Levene, designate Ms Carolyn Basha		*Ex-officio (non-voting)*
Executive Director, Enrolment Services (or delegate)	Mr. Jeff Adams		*Ex-officio (non-voting)*
Up to three Awards Establishment Coordinators and one Awards Selection Coordinator from Financial Aid and Awards	Ms Pamela Gareau		*Non-voting*
	Ms Mabelle Magsino		*Non-voting*
	Ms Regan Sarmatiuk		*Non-voting*
	Ms Mandy Laing		*Non-voting*

Resource: Pamela Gareau 474-9261
Terms of Office: three-year terms; students = one-year terms

University of Manitoba

Message from
Dr. Mark G. Torchia, Vice-Provost (Teaching and Learning)

Date: October 25, 2019

To: Jeff Leclerc, University Secretary, Office of the University Secretary

Re; Introduction of a new Co-operative Education Policy

The Co-operative Education Advisory Council was established to consider the report and recommendations of the Co-operative Education/Work Integrated Learning Review Team. The Council met several times to create a definition and establish a standard of practice for co-operative education at the University of Manitoba. At its meeting on June 6, 2018, Provost's Council agreed to moving forward with an institutional definition and common minimum of standard of practice, as shown in the attached policy, for co-operative education across all academic programs, new and existing. All current undergraduate co-operative education programs meet the minimum criteria outlined in the proposed policy.

I request that the proposed policy on Co-operative Education be considered by the appropriate Senate committee.

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

UNIVERSITY OF MANITOBA

UNIVERSITY OF MANITOBA
POLICY

Policy:	**Co-operative Education**
Effective Date:	
Revised Date:	
Review Date:	September 1, 2029
Approving Body:	Senate
Authority:	
Responsible Executive Officer:	Provost and Vice-President (Academic)
Delegate: (If applicable)	
Contact:	Vice Provost (Teaching and Learning)
Application:	Students, Staff and Faculty

Part I
Reason for Policy

1.1 The reason for this policy is to establish a common understanding of Co-operative Education and identify minimum standards across co-operative education programs, for students, staff, faculty and the employer community. This allows students to participate in Co-operative Education opportunities that provide a similar depth of experience. Established minimum criteria will also promote increased employer partnerships by providing the employer with an opportunity to access resources to support student placements.

Part II
Policy Content

Introduction

2.1 The University of Manitoba has a long history of offering co-operative education within its faculties. Co-operative Education has been recognized as pedagogically valuable as it allows students to put theory into practice while deepening learning as students test skills learned in the classroom. The University is committed to

delivering an exceptional student experience inclusive of Co-operative Education, which is a form of work integrated learning.

Definition

2.2 The following term is defined for the purpose of this policy:

(a) "**Co-operative Education**" is a Senate approved academic program which combines academic study with paid work experience. It is linked to the student's area of study in appropriate fields of business, industry, government, social services, academic research and the professions in accordance with the minimum criteria laid out in section 2.4.

2.3 Only programs that meet the definition and minimum criteria identified in section 2.4 will be called Co-operative Education. Programs that do not meet the definition and all minimum criteria in section 2.4 will be named to another form of experiential learning.

2.4 Co-operative Education programs will adhere to the following minimum standards:

(a) Each work situation is developed and/or approved by the co-operative educational institution as a suitable learning situation.

(b) Each work situation will be for a term of at least 10 consecutive weeks.

(c) The student will be employed by the employer on a full-time basis (at least 35 hours per week) throughout the term of a work placement.

(d) The student receives remuneration (salary or wages) for the work performed.

(e) The student will be engaged in productive work and not just observing the work of others.

(f) The institution will inform employers about available tax credits and subsidies, of which the programs are aware.

(g) The institution delivering the co-operative program will ensure that most of the student's work will provide training or work experience that is directly related to and reinforces the goals of the co-operative education program.

(h) The satisfactory completion of the work placement will earn the student a credit toward his or her degree or other certification in the Senate approved academic program.

(i) The time spent in periods of work experience makes up at least 20% of the time spent in academic study.

2.5 The above standards are the minimum criteria for existing or new Co-operative Education programs. Programs will meet or exceed the minimum criteria and strive toward the standards set by Co-operative Education and Work-Integrated Learning Canada (CEWIL).

Part III
Accountability

3.1 The Office of Legal Counsel is responsible for advising the Provost and Vice-President (Academic) that a formal review of this Policy is required.

3.2 The Vice-Provost (Teaching and Learning) is responsible review of this Policy.

3.3 All Staff, Faculty and Students are responsible for complying with this Policy.

Part IV
Authority to Approve Procedures

4.1 The Provost and Vice-President (Academic) may approve Procedures, if applicable, which are secondary to and comply with this Policy.

Part V
Review

5.1 Governing Document reviews shall be conducted every ten (10) years. The next scheduled review date for this Policy is September 1, 2029.

5.2 In the interim, this Policy may be revised or repealed if:

(a) the Provost and Vice-President (Academic), deems it necessary or desirable to do so;

(b) the Policy is no longer legislatively or statutorily compliant; and/or

(c) the Policy is now in conflict with another Governing Document.

5.3 If this Policy is revised or repealed all Secondary Documents, if applicable, shall be reviewed as soon as possible in order that they:

(a) comply with the revised Policy; or

(b) are in turn repealed.

Part VI
Effect on Previous Statements

6.1 This Policy supersedes all of the following:

(a) all previous Board of Governors/Senate Governing Documents on the subject matter contained herein; and

(b) all previous Administration Governing Documents on the subject matter contained herein.

Part VII
Cross References

7.1 This Policy should be cross referenced to the following relevant Governing Documents, legislation and/or forms:

(a) Academic Calendar.