Senate
Senate Chamber
via Zoom audio conference
WEDNESDAY, May 19, 2021
1:30 p.m.

A G E N D A

I CANDIDATES FOR DEGREES, DIPLOMAS AND CERTIFICATES – MAY 2021

This report will be available at the Senate meeting. The report will also be available for Senators to review through a request to the Office of the University Secretary.

II REPORT ON MEDALS AND PRIZES TO BE AWARDED AT THE SPRING CONVOCATION

The report will be available for Senators to review through a request to the Office of the University Secretary.

III ELECTION OF SENATE REPRESENTATIVES

- Senators should come prepared to make nominations for these positions.
- If elections are required, candidates will be invited to speak for about one minute to introduce themselves prior to the vote.

IV MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE

V MATTERS FORWARDED FOR INFORMATION

8. Reports of the Senate Committee on Curriculum and Course Changes

a) RE: Annual Update on Academic Program Listing: March 2020 – February 2021 Page 326

b) RE: Corrections to Report of November 20, 2020 [May 19, 2021] Page 330

9. Correspondence from the Provost and Vice-President (Academic) RE: Closure of Integrated Bachelor of Music/ Bachelor of Education Program Page 331

10. Items Approved by the Board of Governors [April 21, 2021] Page 332

VI REPORT OF THE PRESIDENT Page 333

VII QUESTION PERIOD

Senators are reminded that questions related to matters not on the agenda shall normally be submitted in writing to the University Secretary no later than 10:00 a.m. of the Monday preceding the meeting.

Senators are reminded that questions pertaining to items on the agenda can be asked during the Senate meeting and do not require submission in advance.

VIII CONSIDERATION OF THE MINUTES OF THE MEETING OF APRIL 7, 2021

IX BUSINESS ARISING FROM THE MINUTES - none

X REPORTS OF THE SENATE EXECUTIVE COMMITTEE AND THE SENATE PLANNING AND PRIORITIES COMMITTEE

1. Report of the Senate Executive Committee Page 341

2. Report of the Senate Planning and Priorities Committee

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

XI REPORTS OF OTHER COMMITTEES OF SENATE, FACULTY AND SCHOOL COUNCILS

1. Reports of the Faculty Council of the Faculty of Agricultural and Food Sciences RE: Diploma to Degree Transfer Pathway Page 344

(a) RE: Proposed Admission Category for Graduates of Diploma in Agriculture Applying to B.Sc. in Agribusiness, B.Sc. in Agriculture, B.Sc. in Agroecology Page 345

7. **Report of the Senate Committee on Nominations [April 19, 2021]** Page 454

XII ADDITIONAL BUSINESS

1. **Recommendations from the COVID-19 Recovery Steering Committee**

   a) **RE: Extension of Temporary Revisions to Graduation Requirements for Bachelor of Commerce (Honours), Including the Co-operative Education Option** Page 476

   b) **RE: Revisions to the 2021 – 2022 Academic Schedule**

      (i) **Bachelor of Education, Faculty of Education** Page 491

      (ii) **Master of Occupational Therapy, College of Rehabilitation Sciences** Page 494

   c) **RE: Temporary Revision to Supplemental Examination Regulation for the Doctor of Dental Medicine Degree, College Council of the College of Dentistry** Page 497

2. **Report of the Faculty Council of the Faculty of Arts RE: Message to Members of Laurentian University Community** Page 501

3. **Summary and Presentation on Senate Assessment Survey** Page 503

XIII MATTERS TO BE CONSIDERED IN CLOSED SESSION

1. **Report of the Senate Committee on Honorary Degrees [May 3, 2021]**

   The report will be provided to members of Senate at the meeting.

XIV ADJOURNMENT

Please send regrets to shannon.coyston@umanitoba.ca.

April 26, 2021

Election of Senate Representative to the Board of Governors

1. General

   (a) The procedures to be followed for the election of members of Senate to the Board of Governors can be found on the web at:

   http://umanitoba.ca/admin/governance/governing_documents/governance/senate_rules/524.html

   (b) The procedures provide that if the person being nominated is not present, the nominator must state that the person nominated has consented to the nomination.

   (c) At least one of the three individuals representing Senate on the Board of Governors shall not have administrative responsibilities greater than those of department head at the time of election.

   (d) Should the term of office on Senate for the member of Senate elected to the Board of Governors expire before the term of office on the Board, the member shall become a member-at-large of Senate for the remainder of the term of office on the Board of Governors, unless re-elected to Senate.

2. Election

   (a) One member of Senate is to be elected by Senate to the Board of Governors for a three-year term (June 1, 2021 to May 31, 2024) to replace John Anderson, whose term on the Board of Governors expires on May 31, 2021, and who is eligible for re-election.

   (b) Current Senate representatives on the Board of Governors are:

John Anderson	Science	2021
Susan Prentice	Arts	2022
Jeffrey Taylor	Arts	2023

   (c) Not eligible for election are the Chancellor, the President, or the Board of Governors' representatives on Senate.

3. Procedures

   (a) Nominations for the position shall be received from the floor.

   (b) In the case that an election is required, Senators shall vote for no more than one candidate on the ballot provided. For the May 2021 election, this election will be done via an electronic vote. Members of Senate will be sent a message during the meeting providing a link to cast their vote electronically.

   (c) The candidate receiving the largest number of votes shall be declared elected for a three-year term.

   (d) In the event of a tie, the question shall be resolved by another ballot involving those candidates who have tied.

Election of Senate Representatives to the Senate Executive Committee

1. Subsection 34(1) of *The University of Manitoba Act* provides that:

   The senate has general charge of all matters of an academic character; and, without restricting the generality of the foregoing, the senate shall …

   (y) elect an executive committee, which shall include

      (i) the president, who shall be chairman of the committee;

      (ii) the member of the senate designated by the president to be vice-chairman of the committee;

      (iii) three members of senate from among the vice-presidents of the university, the deans of faculties and directors of schools;

      (iv) a member of the board who has been appointed to be a member of the senate;

      (v) a member elected by the students to be a member of senate;

      (vi) eight other members of the senate from those elected under section 27 [i.e., elected by faculty/school councils];

2. Three Senators are to be elected as follows:

   (a) One Senator from among the Vice-Presidents, Deans of Faculties and Directors of Schools for a three-year term from June 1, 2021 to May 31, 2024 to replace Dean Jeffrey Taylor, whose term expires on May 31, 2021:

      (i) Eligible for election are:

Vice-Presidents:	N. Andrew, J. Kearsey, D. Jayas
Deans/Directors:	M. Scanlon, J. Taylor, S. Pflugmacher Lima, D. Mandzuk, K. Main, G. Jacoby, D. Brown, M. Friesen, B. Postl, M. Yellow Bird,

      (ii) Presently serving:

Dean Jeffery Taylor	Arts	2021
Vice-President Catherine Cook	Vice-President (Indigenous)	2022
Dean Ed Jurkowski	Music, School of Art	2023

(b) Four Senators for three-year terms from June 1, 2021 to May 31, 2024 to replace Rusty Soulemanov (Social Work), Robert Biscontri (Management), Peter Blunden (Science) and Derek Oliver (Engineering) whose terms expire on May 31, 2021; and

(c) Two Senators for the balance of a three year-term from June 1, 2021 to May 31, 2022 to replace Cary Miller (Arts) and Annette Schultz (Health Sciences), whose terms on Senate expire on May 31, 2021; and

(d) One Senator for the balance of a three-year term from June 1, 2021 to May 31, 2023 to replace Mark Gabbert whose term on Senate expires on May 31, 2021:

(i) eligible for election are members of Senate elected by faculty/school councils;

(ii) presently serving:

Prof. Rusty Souleymanov	Social Work	2021
Prof. Robert Biscontri	Management	2021
Prof. Peter Blunden	Science	2021
Prof. Derek Oliver	Engineering	2021
Prof. Cary Miller	Arts	2022
Prof. Annette Schultz	Health Sciences	2022
Prof. Tina Chen	Arts	2023
l/r Prof. John Anderson	*Science*	*2021*
Prof. Mark Gabbert	Arts	2023

3. Procedures:

(a) Nominations for the positions shall be received from the floor.

(b) Senators shall vote for no more than one candidate in each category on the ballot provided. For the May 2021 election, this election will be done via an electronic vote. Members of Senate will be sent a message during the meeting providing a link to cast their vote electronically.

(c) The candidates receiving the largest number of votes shall be elected.

(d) In the event of a tie, the question shall be resolved by another ballot involving those candidates who have tied.

April 1, 2021

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 Senate Committee on Curriculum and Course Changes (SCCCC) met on March 18, 22, 23, 25, and 30, and on April 1, 2021, 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.
4. Proposed course deletions, introductions, and modifications, and program modifications are described in detail in the attachment to the Report.

Observations:

1. **General**

   In keeping with past practice, most changes for departments totalling less than ten 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. The committee received, for information, the Senate Committee on Curriculum and Course Changes – 2021/2022 Timetable for Faculty/College/School Submissions to the Office of the University Secretary.

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

   KPER 2120 Academic Skills in Kinesiology and Recreation Management - 3 cr

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

   KPER 2170 History of Physical Activity and Leisure - 3 cr

5. **Courses to be Added to the Recommended Introductory Course List**

   CDN 1000 Introduction to Canada - 3 cr
   CHEM 1018 Chemistry -The Central Science - 3 cr
   MATH 1018 Pre-Calculus in Practice - 3 cr
   MUSC 1010 Music Matters: Excursions in Western Musical Culture - 3 cr
   MUSC 1020 Introduction to Popular Music - 3 cr

MUSC 1030 History of Musical Theatre - 3 cr
PHYS 1018 The Mechanics of Nature - 3 cr

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

CDN 1130 Introduction to Canadian Studies - 6 cr

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

Agriculture, General

The faculty is proposing the modification of two (2) courses. There would be no change to the overall number of credit hours offered by the faculty.

The faculty is proposing modifications to the following programs, as detailed in the attachment to the report, to reflect recent course changes made by the Department of Chemistry, Faculty of Science (Senate, May 13, 2020).

- **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**
- **Pre-Veterinary Program**

Animal Science

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.

Food and Human Nutritional Sciences

The department is proposing the modification of thirteen (13) courses. There would be no change to the overall number of credit hours offered by the department.

The department is proposing modifications to the following programs, as detailed in the attachment to the Report, to reflect recent course changes made by the Departments of Chemistry and Microbiology, Faculty of Science (Senate, May 13, 2020), and the Department of Sociology and Criminology, Faculty of Arts (Senate, December 2, 2020).

- **Bachelor of Science in Food Science** (degree core)
- **Bachelor of Science in Food Science – Science Option**
- **Bachelor of Science in Food Science – Business Option**
- **Bachelor of Science in Human Nutritional Sciences**
    - **Nutrition Option**
    - **Foods Option**
    - **Food Industry Option**
- **Bachelor of Science in Human Nutritional Sciences – Dietetics Preparation**
- **Bachelor of Science in Human Nutritional Sciences – Second Degree**
- **Bachelor of Science in Human Nutritional Sciences – Articulation with Red River College Culinary Arts Program**

Plant Science

The department is proposing the modification of two (2) courses. There would be no change to the overall number of credit hours offered by the department.

School of Agriculture

The school is proposing modifications to the **Diploma in Agriculture**, as detailed in the attachment to the report. AGRI 3030 – Modern Topics in Agriculture would be added to the list of approved Program Electives.

8. **School of Art**

The school is proposing the introduction of two (2) courses. The overall number of credit hours offered by the school would increase by 6 credit hours.

The school is proposing modifications to the programs listed below, as detailed in the attachment to the Report. The requirements for Year 1, for all four programs, would be modified to allow students to complete EVDS 1660 - History of Culture, Ideas and Environment 1 and EVDS 1670 - History of Culture, Ideas and Environment 2 in lieu of FAAH 1030 – Introduction to Art 1A and FAAH 1040 – Introduction to Art 2A, respectively, as the courses have been determined to be equivalent. Changes to Year 1 of the Art History programs also involve an expanded list of electives that could be used to meet a requirement for 6 credit hours of electives from this list.

The curricula for the Studio programs would be modified to require FAAH 2090 – Art of the North American Aboriginal Peoples and STDO 3710 - Special Topics in Indigenous Contemporary Art Practices or STDO 3720 - Special Topics in BIPOC Contemporary Art, in order to introduce all students to Indigenous and/or BIPOC content and help to decolonize the curriculum.

- **Bachelor of Fine Arts (General) in Art History**
- **Bachelor of Fine Arts (Honours) in Art History**
- **Bachelor of Fine Arts (General)**
- **Bachelor of Fine Arts (Honours)**

9. **Faculty of Arts**

Canadian Studies

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

Economics

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.

French, Spanish and Italian

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.

German and Slavic Studies

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.

History

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

Labour Studies

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

Native Studies

The department is proposing the introduction of two (2) courses and the modification of one (1) course. The overall number of credit hours offered by the department would increase by 6 credit hours.

Political Studies

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

Sociology and Criminology

The department is proposing modifications to the following programs, as detailed in the attachment to the Report. In Year 3, SOC 3762 – Law, Justice, and Indigenous Peoples would be added to the list of courses that could be completed toward the requirement for 15 credit hours of SOC courses at the 3000-level.

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

Women's and Gender Studies

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

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 6 credit hours.

11. **Faculty of Engineering**

Faculty of Engineering

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

The faculty is proposing to modify the description of the **Minor in Management**, to clarify that students who have not been granted a reserve space in the Minor may be awarded the Management Minor at the time of graduation, if they have successfully completed the requirements for the program.

Biosystems Engineering

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 department is proposing modifications to the programs listed below, as detailed in the attachment to the Report. Several modifications follow from recent course changes made by the Department of Chemistry, Faculty of Science (Senate, May 13, 2020). Among these, CHEM 1310 – University 1 Chemistry: An Introduction to Physical Chemistry will be replaced by a requirement for CHEM 1110 – Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties and CHEM 1126 – Introduction to Chemical Techniques for Engineering 2. The revised Chemistry course requirements would increase the number of credit hours required in the program to: 153 – 155 from: 150 – 152. An Indigenous knowledge course requirement will be introduced, to ensure every student in the program completes one course with substantial Indigenous content. One of three complementary studies elective courses would be restricted to courses on the Indigenous Knowledge Courses list.

- **Bachelor of Science in Engineering (Biosystems)**
- **Bachelor of Science in Engineering (Biosystems), Co-operative Education Option**
- **Biomedical Specialization**
- **Bioresource Specialization**
- **Environmental Specialization**

Civil Engineering

The department is proposing the introduction of two (2) courses and the modification of two (2) courses. The overall number of credit hours offered by the department would increase by 8 credit hours.

The department is proposing the modification of the programs listed below, as detailed in the attachment to the Report. Modifications to technical elective course lists follow from proposed course changes. An Indigenous knowledge course requirement will be introduced, to ensure every Civil Engineering student completes one course with substantial Indigenous content. Students would be required to complete one 3 credit hour course from the Indigenous Knowledge Courses list. The new requirement would replace a current requirement for a complementary studies elective.

- **Bachelor of Science in Engineering (Civil)**

- **Bachelor of Science in Engineering (Civil), Co-operative Education Option**
- **Bachelor of Science in Engineering (Civil) with Environmental Option**

Mechanical Engineering

The department is proposing the modification of two (2) courses. There would be no change to the overall number of credit hours offered by the department.

The department is proposing the modification of the programs listed below, as detailed in the attachment to the Report. Modifications follow from recent course changes made by the Department of Chemistry, Faculty of Science (Senate, May 13, 2020). An Indigenous knowledge course requirement will be introduced, to ensure every Mechanical Engineering student completes one course with substantial Indigenous content. Students would be required to complete one 3 credit hour course from the Indigenous Knowledge Courses list. The new requirement would replace a current requirement for a complementary studies elective course from the Faculty of Arts or Management.

- **Bachelor of Science in Engineering (Mechanical)**
- **Bachelor of Science in Engineering (Mechanical), Co-operative Education Option**

12. **Faculty of Environment, Earth, and Resources**

Faculty of Environment, Earth, and Resources

The faculty is proposing modifications to the Science and Faculty of Arts Course Requirements, which pertain to all undergraduate programs offered by departments in the faculty, as detailed in the attachment to the Report. Specifically, GEOL 3310 – Paleontology would be removed from the list of Geology courses that could be used toward the requirement for 6 credit hours of science coursework.

Environment and Geography

The department is proposing the introduction of one (1) course and the modification of eight (8) courses. The overall number of credit hours offered by the department would increase by 3 credit hours.

The department is proposing modifications to the programs listed below, as detailed in the attachment to the Report. Several changes respond to course changes made by the Departments of Chemistry and Statistics, Faculty of Science (Senate, May 13, 2020).

Proposed revisions to the Advanced Entry admission requirements for the Bachelor of Environmental Science (Honours) and Bachelor of Environmental Science (Major) degrees, which align with revisions to Year 1 course requirements, were also considered by the Senate Committee on Admissions (March 23, 2021) and are reported under Item XI 3 (b) on the May 19, 2021 Senate Agenda. Several changes to the Year 1 curriculum and admission requirements follow from course changes made by the Department of Chemistry, Faculty of Science, that were approved by Senate, May 13, 2020. Other changes would allow students to use MATH 1230 – Differential Calculus in lieu of MATH 1500 – Introduction to Calculus, and STAT 1150 – Introduction to Statistics and Computing and STAT 2150 Statistics and Computing in lieu of STAT 1000 – Basic Statistical Analysis 1 and STAT 2000 – Basic Statistical Analysis 2.

- **Bachelor of Environmental Science (Honours)**
- **Bachelor of Environmental Science (Honours), Cooperative Option**
- **Bachelor of Environmental Science (Major)**
- **Bachelor of Environmental Science (Major), Cooperative Option**
- **Bachelor of Science (Honours) in Physical Geography**
- **Bachelor of Science (Honours) in Physical Geography, Cooperative Option**
- **Bachelor of Science (Major) in Physical Geography**
- **Bachelor of Science (Major) in Physical Geography, Cooperative Option**

Geological Sciences

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

The department is proposing modifications to the programs listed below, as detailed in the attachment to the Report. Some changes respond to course changes previously made by the Department of Chemistry, Faculty of Science (Senate, May 13, 2020). The revised Geophysics programs would no longer require COMP 2190 – Introduction to Scientific Computing, and a requirement for 6 credit hours of Geological Sciences Geophysics Electives from List P would be reduced to 3 credit hours.

- **Bachelor of Science (Honours) in Geological Sciences (Geology)**
- **Bachelor of Science (Major) in Geological Sciences (Geology)**
- **Bachelor of Science (Honours) in Geological Sciences (Geophysics)**
- **Bachelor of Science (Major) in Geological Sciences (Geophysics)**

Transition plan for the Geophysics programs: (i) Students who had previously completed CHEM 1300 would not be required to complete the additional chemistry course. (ii) Students who had previously completed COMP 2190 (or MATH 2160) would complete the current program requirements. Students who had not completed one of these courses could be given the option to complete the revised program requirements. (iii) Students who had previously completed 6 credit hours of Geological Sciences Geophysics Electives from List P could complete the current program requirements, with the extra P elective counting toward a free elective, if necessary. Students who had not completed 6 credit hours from List P could opt to complete the revised program requirements.

13. **Faculty of Health Sciences**

Interdisciplinary Health Program

The program is proposing the introduction of two (2) courses and the modification of two (2) courses. The overall number of credit hours offered by the program would increase by 6 credit hours.

The program is proposing modifications to the programs listed below, as detailed in the attachment to the Report.

- **Bachelor of Health Sciences**
- **Bachelor of Health Studies**

Modifications to the Bachelor of Health Sciences include revisions to required courses, to reflect course changes recently made by the Department of Chemistry, Faculty of Science (Senate, May 13, 2020), and the Department of Sociology and Criminology, Faculty of Arts (Senate, December 2, 2020), and to introduce more science and health science course requirements. These would include HEAL 1500 - Foundations of Human Biology 1 and HEAL 1502 - Foundations of Human Biology 2, which would replace current Biological Sciences course requirements, and several other courses developed specifically for the program by Departments in the College of Medicine. Consequently, a requirement for 21 credit hours of science electives would be reduced to 6 credit hours and the number of Science Electives included on the Bachelor of Health Sciences Electives List would be significantly reduced. The number of Social Sciences Electives would also be reduced; the courses with the most relevance to the program would be retained and upper-year courses with one or more prerequisites would be removed.

Program closure:

The SCCCC is recommending that the **Biomedical Sciences Concentration** be closed. The committee noted that, with recent changes to the curriculum of the Bachelor of Health Sciences degree, including those changes made in the current proposal, a significant proportion of the course requirements for the Concentration are now also required for the degree. A proposal to revise the Concentration included only two courses (9 credit hours) that were unique to the Concentration (CHEM 2750 and HEAL 4640). The committee's position was that two courses do not constitute a concentration. Normally, a concentration would require at least 18 credit hours, as do the various concentrations available to students in the Bachelor of Health Studies degree. The committee also observed that, because the two remaining courses were not in the same or related disciplines, they would not provide the depth required for a concentration or specialization in a particular field of study. Finally, the committee was concerned about the value for students, of having the two courses (CHEM 2750 and HEAL 4640) appear on the transcript as a concentration. The committee suggested that the original value of the Concentration would now be found in the B.H.Sc. degree, with recent and proposed changes.

Modifications to the Bachelor of Health Studies include revisions to required courses to reflect course changes recently made by the Department of Sociology and Criminology and the addition of HEAL 1500 and HEAL 1502, which would replace the current requirement in Year 1, for 6 credit hours of science electives.

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

The faculty is proposing the modification of seven (7) courses. There would be no change to the overall number of credit hours in course offerings.

The faculty is proposing modifications to the **Bachelor of Recreation Management and Community Developmen**t, as outlined in the attachment to the Report. Requirements for 3 credit hours of Advanced Recreation Electives, in Year 3 and Year 4, would be replaced with requirements for 3 credit hours of Advanced Faculty Electives, which include REC and KPER courses at the 3000- or 4000- level. The List of Approved Advanced Recreation Electives would be deleted.

15. **Faculty of Management**

The faculty is proposing a modification to the **Bachelor of Commerce (Honours)**, as set out in the attachment to the Report. Specifically, MATH 1510 – Applied Calculus 1 would be accepted in lieu of the requirement for MATH 1520 – Introductory Calculus for Management or Social Sciences or MATH 1500 – Introduction to Calculus or MATH 1230 – Differential Calculus, for students admitted under Track 1 who presented the course for admission to the B.Comm.(Hons.). Occasionally, Direct Entry applicants, including, primarily, students transferring from the Faculty of Engineering, have completed MATH 1510, which is equivalent to MATH 1520 and to MATH 1500. *The change would take effect for September 2022.*

A corresponding change to the admission requirements for the B.Comm.(Hons.) was considered by the Senate Committee on Admissions at its meeting on January 19, 2021, and is reported under item XI 3 (c) on the May 19, 2021 Senate agenda.

16. **College of Medicine**

Biochemistry and Medical Genetics

The department is proposing the introduction of three (3) courses and the modification of two (2) courses. The overall number of credit hours offered by the department would increase by 8 credit hours.

Community Health Sciences

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.

Immunology

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.

17. **Faculty of Music**

The faculty is proposing the introduction of three (3) courses. The overall number of credit hours offered by the department would increase by 9 credit hours.

The faculty is proposing several modifications to the **Bachelor of Music**, including the General, Performance, Composition, and History concentrations, involving changes to the list of Core Music History Electives, as outlined in the attachment to the Report. The current division of core Music History electives into Lists A and B would be eliminated, and replaced by a single list of eligible courses. The rationale for the change is: to give students more freedom in choosing music history electives; to remove any curricular structures that imply a hierarchy between different categories of music (such as classical, jazz, popular, etc.); and to include two of the three new courses (MUSC 1020 – Introduction to Popular Music and MUSC 1030 – History of Musical Theatre) in the list of music history electives.

18. **College of Nursing**

The college is proposing the modification of one (1) course. There would be no change to the overall number of credit hours in course offerings.

The college is proposing modifications to the **Bachelor of Nursing**, as detailed in the attachment to the Report. The list possible electives for Year 1 will be modified, to reflect recent course changes (Senate, May 15, 2019), including to add FMLY 2650 - The Social Aspects of Aging and to reflect the deletion of HMEC 2650 – The Social Aspects of Aging.

The college is proposing modifications to the **Bachelor of Midwifer**y, as detailed in the attachment to the Report. The curriculum for Year 1 will be modified to: (i) reflect recent Chemistry course changes (Senate, May 13, 2020), (ii) allow students who have completed STAT 1150 – Introduction to Statistics and Computing to use the course in lieu of STAT 1000 – Basic Statistical Analysis 1, (iii) permit students who have completed BIOL 2410 – Human Physiology 1 and BIOL 2420 – Human Physiology 2 to use these courses in lieu of a requirement for BIOL 1412 – Physiology of the Human Body, and (iv) replace the Native Studies Elective with a requirement for (NATV 1220 – Indigenous Peoples in Canada, Part 1 and NATV 1240 - Indigenous Peoples in Canada, Part 2) or NATV 1200 – The Native Peoples of Canada.

The Senate Committee on Admissions considered corresponding changes to the admission requirements at its meetings on February 23 and April 20, 2021. A report from the committee will be included on the June 2021 Senate agenda.

19. **College of Pharmacy**

The college is proposing modifications to the **Doctor of Pharmacy,** as outlined in the attachment to the Report. In Year 2, a requirement for HNSC 2170 – Nutrition for Health Professionals would be replaced by a requirement for BGEN 2010 – Applied Nutrition for Pharmacy Practice. BGEN 2010 is a new course that focuses on how nutrition can be applied in the management of disease or enhancement of health in pharmacy practice, including interactions/impact on drug therapy. There would be no change to the number of credit hours required in the program.

20. **Faculty of Science**

Faculty of Science

The faculty is proposing the introduction of three (3) interdisciplinary topics courses with laboratories (SCI 1002, SCI 2002, SCI 3002). In response to a recommendation from SCCCC, the faculty will modify four (4) courses (SCI 1000, SCI 2000, SCI 3000, SCI 4000), so certain language used in these interdisciplinary topics course descriptions is consistent with that in the course introductions. The overall number of credit hours offered by the faculty would increase by 9 credit hours.

The faculty is proposing substantive modifications to the **Bachelor of Science (General)**, as detailed in the attachment to the Report. The introductory course requirements would be revised to require 9 credit hours from Computer Science/Mathematics/Statistics, 6 credit hours from Chemistry/Physics and Astronomy,

and 6 credit hours from Biological Sciences/Microbiology. The advanced level requirements would include 36 hours of 2000 level or higher Faculty of Science courses, with at least 9 credit hours at the 3000 level or higher. It would no longer be mandatory to split these credit hours over two departments or to complete one of the Biological Sciences or Chemistry focus areas. The proposal responds to recommendations in a recent external undergraduate program review. Objectives of the changes are to: (i) allow students to receive a broader general science education, with an opportunity to have exposure to all the major areas in Science and (ii) provide flexibility for students to choose courses based on their interests and career aspirations throughout their program.

Transition plan: Students enrolled in the B.Sc.(Gen.) degree at the time the proposed changes come into effect would have the option to complete either the current or the modified program requirements.

Biochemistry

The program is proposing modifications to the programs listed below, as detailed in the attachment to the Report. The modifications follow from recent and proposed course changes made by the Department of Microbiology.

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

Biological Sciences

The department is proposing the modification of two (2) courses. There would be no change to the overall number of credit hours in course offerings.

The department will make revisions to its Academic Calendar content, to remove mention of the requirements for the Bachelor of Science (General) degree and the optional Biological Sciences focus within that program. The change follows from the Faculty's proposal to modify the requirements for the B.Sc. General degree.

Biotechnology

The Departments of Chemistry and Microbiology are proposing modifications to the programs listed below, as detailed in the attachment to the Report. The changes follow from recent and proposed course changes made by the two departments. Admission to these programs has been temporarily suspended since the Fall 2018.

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

Transition Plan: Following the February 2021 Convocation there would be only a few students remaining in the programs. With these proposed revisions, the Departments of Chemistry and Microbiology and the Dean's Office, Faculty of Science, would work with the student(s) to identify their route to degree completion.

Chemistry

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

The department will revise its Academic Calendar content, to remove mention of the requirements for the Bachelor of Science (General) degree and the optional Chemistry focus within that program. The change follows from the Faculty's proposal to modify the requirements for the B.Sc. General degree.

Computer Science

The department will revise its Academic Calendar content, to remove mention of the requirements for the Bachelor of Science (General) degree. The change follows from the Faculty's proposal to modify the requirements for the degree program.

Mathematics

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 department will revise its Academic Calendar content, to remove the requirements for the Bachelor of Science (General), including the Mathematics focus. The change follows from the Faculty's proposal to modify the requirements for the degree program.

Microbiology

The department is proposing the deletion of one (1) course and the modification of three (3) courses. The overall number of credit hours offered by the department would decrease by 3 credit hours.

The department will revise its Academic Calendar content, to remove the requirements for the Bachelor of Science (General), Microbiology focus. The change follows from the Faculty's proposal to modify the requirements for the degree program.

Physics and Astronomy

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 department will revise its Academic Calendar content, to remove the requirements for the Bachelor of Science (General), Physics and Astronomy focus. The change follows from the Faculty's proposal to modify the requirements for the degree program.

Statistics

The department will revise its Academic Calendar content, to remove the requirements for the Bachelor of Science (General), Statistics focus. The change follows from the Faculty's proposal to modify the requirements for the degree program.

21. **Université de Saint-Boniface**

Faculté des arts

département de sciences humaines et sociales

The département is proposing the deletion of two (2) courses, the introduction of seven (7) courses, and the modification of nineteen (19) courses. The overall number of credit hours offered by the département would increase by 12 credit hours.

The département is proposing modification to the following programs, as detailed in the attachment to the Report. Several modifications follow from proposed course changes. A new requirement for ANTH 2041 – Les Amérindiens de l'Amérique du Nord : une étude socioculturelle in the B.A. avec majeure générale en anthropologie would better serve Arts students and would reflect the institutional priority of the Université to support efforts toward reconciliation with Indigenous Peoples.

- **Baccalauréat ès arts avec majeure générale en anthropologie**
- **Baccalauréat ès arts avec majeure générale en sociologie**

Faculté des sciences

département des sciences expérimentales

The département is proposing the deletion of thirteen (13) courses, the introduction of twenty-two (22) courses, and the modification of twenty-two (22) courses. The overall number of credit hours offered by the department would increase by 25 credit hours.

The département is proposing modifications to the programs listed below, as detailed in the attachment to the Report. Following changes made by the Department of Chemistry, Faculty of Science, at the University of Manitoba (Senate, May 13, 2020), some course changes involve the separation of laboratories from lectures, to create stand-alone laboratory courses. Proposed program modifications follow from proposed changes to chemistry and microbiology courses.

- **Baccalauréat ès sciences général**
- **Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie**
- **Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, volet coopératif**
- **Mineure en chimie**
- **Mineure en microbiologie**

Recommendation

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

Faculty of Agricultural and Food Sciences

School of Art
Faculty of Arts
Faculty of Education
Faculty of Engineering
Faculty of Environment, Earth, and Resources
Faculty of Health Sciences
Program closure: Biomedical Sciences Concentration
Faculty of Kinesiology and Recreation Management
Faculty of Management (I.H. Asper School of Business)
Faculty of Music
College of Medicine
College of Nursing
College of Pharmacy
Faculty of Science
Université de Saint-Boniface

Respectfully submitted,

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

Faculty of Agricultural and Food Sciences

Faculty of Agricultural and Food Sciences

Program modifications:

Modifications to the following programs are outlined on the next 16 pages:

- **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**
- **Pre-Veterinary Program**

4.1.Bachelor of Science (Agriculture)- Agronomy

Bachelor of Science (Agriculture) - Agronomy Program

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 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 1)**	**Introductory Chemistry 2: Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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 (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		
BIOL 2242	The Flowering Plants	3
BIOE 3100	Agricultural Engineering Fundamentals for Agronomists 3	3
ENTM 3170	Crop Protection Entomology	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 4510	Soil and Water Management	3
SOIL 4520	Soil Fertility	3

Restricted Electives		
Group 1 - 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	
Group 2 – 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
Free Electives (See Note 3)		30

NOTES:

~~1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320.~~

1. **Students can hold CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry) in place of CHEM 1130 (Introduction to Organic Chemistry).**

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.

4. **Students considering graduate school in agriculture or a related field in the natural sciences are recommended to take CHEM 1120 (Introduction to Chemical Techniques) and CHEM 2730 (Elements of Biochemistry 1) as free electives.**

Suggested Agronomy Program Progression:

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~~
CHEM 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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 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
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
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

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 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 1)**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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 (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	
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
~~CHEM 2770~~ / ~~MBIO 2770~~~~(See Note 3)~~	~~Elements of Biochemistry 1~~	~~3~~
CHEM/MBIO 2730 (See Note 3)	**Elements of Biochemistry I**	**3**

CHEM 2740 (See Note 3 & 4)	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
Restricted Electives		
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 4550	Avian Production Systems	
ANSC 4640	Swine Production Systems	
Group 3 – Advanced Animal Science. Choose two courses from the following:		6
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 5)		~~30~~ **27**

Notes:

~~1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320.~~

1. Students can hold CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry) in place of CHEM 1130 (Introduction to Organic Chemistry).

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 **use** ~~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).~~ **CHEM/MBIO 2700: Biochemistry I: Biomolecules and an Introduction to Metabolic Energy in place of CHEM/MBIO 2730: Elements of Biochemistry I and may use CHEM 2720: Principles and Practices of the Modern Biochemistry Laboratory (Lab course) in place of CHEM 2740: Introduction to the Biochemistry Laboratory (Lab course).**

4. While CHEM 2740 is the recommended lab course for this program, student who are completing the Pre-Vet requirements may use either CHEM 1120 or CHEM 2740 to complete this requirement for Animal Systems as well. If a student has both courses, one is used towards free electives.

~~4.~~ **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 Animal Systems Program Progression:

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~~
CHEM 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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
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~~
CHEM/MBIO 2730	**Elements of Biochemistry I**	**3**
CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**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
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
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

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 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 1)**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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 (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		
BIOL 2242	The Flowering Plants	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~~
CHEM/MBIO 2730 (See Note 3)	**Elements of Biochemistry I**	**3**
CHEM 2740 (See Note 4)	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**

CHEM/MBIO 2750 (See Note 5)	**Elements of Biochemistry II**	**3**
MBIO 1010	Microbiology 1	3
PLNT 2530	Plant Biotechnology	3
PLNT 3400 / BIOL 3400	Plant Physiology	3
Restricted Electives		
Group 1 – Choose 2 courses from the following:		6
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 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~~ **6**)		~~24~~ **21**

Notes:

~~1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320.~~

1. Students can hold CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry) in place of CHEM 1130 (Introduction to Organic Chemistry).

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 **use** ~~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).~~ **CHEM/MBIO 2700: Biochemistry I: Biomolecules and an Introduction to Metabolic Energy in place of CHEM/MBIO 2730: Elements of Biochemistry I**

4. Under required courses, student can use CHEM 2720: Principles and Practices of the Modern Biochemistry Laboratory (Lab course) in place of CHEM 2740: Introduction to the Biochemistry Laboratory (Lab course).

~~4.~~ **5.** Under required courses, students can **use** ~~take either CHEM 2780/MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370/MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).~~ **CHEM/MBIO 2710: Biochemistry II: Catabolism, Synthesis, and Information Pathway in place of CHEM/MBIO 2750: Elements of Biochemistry II.**

~~5.~~ **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.

Suggested Plant Biotechnology Program Progression:

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~~
CHEM 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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
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~~
CHEM/MBIO 2730	**Elements of Biochemistry I**	**3**
CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM/MBIO 2750	**Elements of Biochemistry II**	**3**
PLNT 2520 / BIOL 2500	Genetics	3
PLNT 2530	Plant Biotechnology	3

~~Restricted /~~ Free Electives ~~/ Co-op~~	~~6~~ **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
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
ANSC 2500	Animal Production	3
AGRI 4100	Current Issues in Agricultural Systems	3
Restricted / Free Electives / Co-op		24
Total Credit Hours		30

4.6 Bachelor of Science (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
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 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 1)**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**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		
Group 1 – Integrated Systems		
Choose four courses from the following:		12
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		
Choose two courses from the following:		6
Any 3000 or 4000 level SOIL (Soil Science) courses		
Group 3 – Policy and Economics		
Choose one course from the following:		3
Any 2000, 3000 or 4000 level ABIZ (Agribusiness) course		
Group 4 - Agrology		

Choose two courses from the following:	6
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~~ **1**)	30

Notes:

~~1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320~~

1. Students can hold CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry) in place of CHEM 1130 (Introduction to Organic Chemistry).

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.

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~~
CHEM 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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 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
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
AGRI 4100	Current Issues in Agricultural Systems	3
Restricted/Free Electives/Co-op		27
Total Credit Hours		30

4.3 Pre-Veterinary Program

A pre-veterinary program is offered to students who plan to take the degree Doctor of Veterinary Medicine. Pre-veterinary students whose academic standing is acceptable 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, Saskatoon

Two full years of university training are required for admission comprised of **a minimum** 60 credit hours. Refer to the University of Saskatchewan's website to review the admission requirements.

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. **CHEM 1120 is required for admission to WCVM, however, does not count towards the 60 credit hours therefore students must take a total of 63 UM credit hours.**

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~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1130 (See Note 1)	**Introduction to Organic Chemistry**	**3**
CHEM 1120	**Introduction to Chemical Techniques (Lab course)**	**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 1210 or MATH 1300 or MATH 1500 or MATH 1510 or MATH 1520 (See Note 3)	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
Total credit hours		~~30~~ **33**
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 1110	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties**	**3**
~~CHEM 2770/MBIO 2770~~(~~See Note 4~~)	~~Elements of Biochemistry 1~~	~~3~~
CHEM/MBIO 2730 (See Note 4)	**Elements of Biochemistry I**	**3**
MBIO 1010	Microbiology 1	3
PHYS 1020	General Physics 1	3
PLNT 2520/BIOL 2500	Genetics	3
Free Electives (See Note 5)		9
Total credit hours		30

Notes:

~~1. CHEM 2210 Introductory Organic Chemistry 1: Structure and Function can be substituted for CHEM 1320.~~

1. Students can hold CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry) in place of CHEM 1130 (Introduction to Organic Chemistry).

2. AGRI 2030 and ENGL 1340 / ENGL 1400 together meet the English requirements of 6 credit hours. Students may instead 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 **use** ~~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).~~ **CHEM/MBIO 2700: Biochemistry I: Biomolecules and an Introduction to Metabolic Energy in place of CHEM/MBIO 2730: Elements of Biochemistry I.**

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.

Agriculture, General

Modifications:

AGEC 2370 Principles of Ecology - 3 cr 0.0
(Lab required) Principles of ecology at the individual, population, community, and ecosystem levels. May not be held with BIOL 2300, BIOL 2301 or BIOL 2390. Prerequisite: BIOL 1030 (BIOL 1031) or BIOE 2590.

AGRI 2180 Introductory Toxicology - 3 cr 0.0
A survey of general principles underlying the effects of toxic substances on biological systems, including history, scope and applications of toxicology, the mechanisms of toxic action, and some major types of toxicants. Also offered as BIOL 2380 and ENVR 2180. May not be held with BIOL 2380 (BIOL 2381), the former BIOL 2382, ENVR 2180, ENVR 2190, or the former AGRI 2190. Prerequisites: [BIOL 1030 (BIOL 1031) or HEAL 1502] and [(CHEM 1100 (CHEM 1101) and CHEM 1120 (CHEM 1121)) or one of CHEM 1110 (CHEM 1111) or CHEM 1130 or the former CHEM 1320 or the former CHEM 1310 (the former CHEM 1311)].

NET CHANGE IN CREDIT HOURS: 0.0

Animal Science

Modification:

ANSC 2520 Anatomy and Physiology 2: Nutrient Utilization - 3 cr 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 and [CHEM/MBIO 2730 and one of CHEM 2740 or CHEM 1120 (CHEM 1121)] or [the former CHEM/MBIO 2770] or [CHEM/MBIO 2700 (CHEM/MBIO 2701) and one of CHEM 2720 (CHEM 2721) or CHEM 1120 (CHEM 1121)] or [the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361)].

NET CHANGE IN CREDIT HOURS: 0.0

Food and Human Nutritional Sciences

Modifications:

FOOD 2500 Food Chemistry - 3 cr 0.0
(Lab required) The chemical components of food. Chemical problems and chemical changes which exist uniquely in foods. Prerequisites: [(CHEM/MBIO 2730 and CHEM 2740) or the former CHEM/MBIO 2770] or [(CHEM/MBIO 2700 (CHEM/MBIO 2701) and CHEM 2720 (CHEM 2721)) or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361)].

FOOD 3200 Baking Science and Technology - 3 cr 0.0
The science and technology of transforming wheat into quality baked foods. Focus will be on the biophysical and biochemical basis for the functionality of intrinsic wheat constituents, e.g.

starch, and gluten proteins, and extrinsic ingredients, e.g. yeast, chemical leaveners, fats, oxidants, enzymes and other improvers. Principles of product formulations and modern processing techniques used to add value to wheat as diverse foods will also be covered. Prerequisite: [CHEM/MBIO 2730 and CHEM 2740 (or the former CHEM/MBIO 2770)] or [CHEM/MBIO 2700 (CHEM/MBIO 2701) and CHEM 2720 (CHEM 2721) (or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361))].

FOOD 3500 Processing of Animal Food Products - 3 cr 0.0
(Lab required) Processing of materials of animal origin will be studied with emphasis on product quality and safety. The impact of initial characteristics and further processing will be discussed as factors that can affect nutritive value, convenience, functionality, appearance, palatability, and food safety of the final product. Additionally, the course will provide practical experience in identifying the quality parameters, detecting defects, and applying technologies to obtain different foods of animal origin, through labs and field trips. Prerequisite: [CHEM/MBIO 2730 and CHEM 2740 (or the former CHEM/MBIO 2770)] or [CHEM/MBIO 2700 (CHEM/MBIO 2701) and CHEM 2720 (CHEM 2721) (or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361))].

FOOD 4540 Functional Foods and Nutraceuticals - 3 cr 0.0
This course will examine the bioactive components of functional foods and nutraceuticals, their sources, chemistry, process technology, efficacy, safety and regulation. Also offered as HNSC 4540. May not be held with HNSC 4540. Prerequisite: [CHEM/MBIO 2730 and CHEM 2740 (or the former CHEM/MBIO 2770)] or [CHEM/MBIO 2700 (CHEM/MBIO 2701) and CHEM 2720 (CHEM 2721) (or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361))].

HNSC 2140 Basic Principles of Human Nutrition - 3 cr 0.0
The scientific principles underlying nutrient function and dietary requirements. Prerequisites: (CHEM/MBIO 2700 (CHEM/MBIO 2701) or CHEM/MBIO 2730, or the former CHEM/MBIO 2770 or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361)) and [(HNSC 1200 and HNSC 1210) or FOOD 2500]. Pre- or corequisites: CHEM 2720 (CHEM 2721) or CHEM 2740 or the former CHEM/MBIO 2770 or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361).

HNSC 2150 Composition, Functional and Nutritional Properties of Foods - 3 cr 0.0
Food composition, food market forms, food composition data for nutritional assessment and labelling. Prerequisites: HNSC 1200 and HNSC 1210 and CHEM 1100 (CHEM 1101) (or the former CHEM 1300 or the former CHEM 1301).

HNSC 2160 Principles of Food Preparation and Preservation - 3 cr 0.0
(Lab required) Food preparation, preservation, handling and storage; quality and safety implications; scientific basis for culinary practice; use and application of equipment. Prerequisites: [HNSC 1200 or HNSC 1210] and CHEM 1100 (or the former CHEM 1300 or the former CHEM 1301).

HNSC 3220 Food and Nutrition Literacy Education - 3 cr 0.0
Students will develop a critical understanding of the influences on food and nutrition behaviours and how to impact these positively through evidence-informed food and nutrition education strategies. May not be held with the former HNSC 3320. Prerequisites: [PSYC 1200 or SOC 1000 (or the former SOC 1200)] and HNSC 2130 and HNSC 2140.

HNSC 3300 Vitamins and Minerals in Human Health - 3 cr 0.0
The physiological importance of vitamins and minerals in the human body, including factors affecting dietary requirements, metabolism and roles in disease progression and prevention. Prerequisites: [(CHEM/MBIO 2750 and CHEM 2740 (or the former CHEM/MBIO 2780)) or (CHEM/MBIO 2710 (CHEM/MBIO 2711) and CHEM 2720 (CHEM 2721) (or the former CHEM/MBIO 2370 (the former CHEM 2371))] and HNSC 2140 and [BIOL 1412 (BIOL 1413) or BIOL 2420 (BIOL 2421)].

HNSC 3310 Macronutrients and Human Health - 3 cr 0.0
Macronutrient functions and metabolic roles in human health, including the prevention and pathogenesis of various diseases. Prerequisites: [(CHEM/MBIO 2750 and CHEM 2740 (or the former CHEM/MBIO 2780)) or (CHEM/MBIO 2710 (CHEM/MBIO 2711) and CHEM 2720 (CHEM 2721) (or the former CHEM/MBIO 2370 (the former CHEM 2371))] and HNSC 2140 and [BIOL 1412 (BIOL 1413) or BIOL 2420 (BIOL 2421)].

HNSC 3330 Ingredient Technology for Designed Foods - 3 cr 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/MBIO 2700 (CHEM/MBIO 2701) or CHEM/MBIO 2730, or the former CHEM/MBIO 2770 or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361)) and [HNSC 2150 or FOOD 2500]. Pre- or corequisites: CHEM 2720 (CHEM 2721) or CHEM 2740 or the former CHEM/MBIO 2770 or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361).

HNSC 3350 Culture and Food Patterns - 3 cr 0.0
(Lab required) A study of the cultural, sociological and psychological aspects of food patterns and behaviour. Prerequisites: (PSYC 1200 or SOC 1000 or the former SOC 1200) and (HNSC 1200 or HNSC 1210).

HNSC 4540 Functional Foods and Nutraceuticals - 3 cr 0.0
This course will examine the bioactive components of functional foods and nutraceuticals, their sources, chemistry, process technology, efficacy, safety and regulation. Also offered as FOOD 4540. May not be held with FOOD 4540. Prerequisites: CHEM/MBIO 2730 and CHEM 2740 (or the former CHEM/MBIO 2770) or CHEM/MBIO 2700 (CHEM/MBIO 2701) and CHEM 2720 (CHEM 2721) (or the former CHEM/MBIO 2360 or the former CHEM/MBIO 2361).

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are set out on the next 7 pages.

- **Bachelor of Science in Food Science**
- **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. 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 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~~ ~~or~~ ~~University 1 Chemistry: An Introduction to Organic Chemistry~~	~~3~~
~~CHEM 2770 / MBIO 2770(See Note 3)~~	~~Elements of Biochemistry 1~~	~~3~~
CHEM 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 2)**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**3**
CHEM 2730 /MBIO 2730 (See Note 3)	**Elements of Biochemistry I**	**3**
CHEM 2740 (See Note 3)	**Introduction to the Biochemistry Laboratory (Lab course)**	**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 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 or Vector Geometry and Linear Algebra	3
MATH 1500 or MATH 1510 or MATH 1520 (See Note 5)	Introduction to Calculus or Applied Calculus 1 or Introduction to Calculus for Management and Social Sciences	3
Free Electives (See Note 6)		~~27~~ **24**
Total Credit Hours for Food Science Degree Core		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 (Experimental Methods in Agricultural and Food Sciences).

2. Students can hold **CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry)** ~~CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function)~~ in place of ~~CHEM 1320~~ **CHEM 1130 (Introduction to Organic Chemistry).**

3. Under required courses, students can **use** ~~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).~~ **CHEM/MBIO 2700: Biochemistry I: Biomolecules and an Introduction to Metabolic Energy in place of CHEM/MBIO 2730: Elements of Biochemistry I and may use CHEM 2720: Principles and Practices of the Modern Biochemistry Laboratory (Lab course) in place of CHEM 2740: Introduction to the Biochemistry Laboratory (Lab course).**

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

In addition to the courses required for 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~~ ~~or~~ ~~University 1 Chemistry: Introduction to Organic Chemistry~~	~~3~~
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**3**
Both ~~CHEM 1310~~ ~~and~~ ~~CHEM 1320~~ **CHEM 1110 and CHEM 1130** are required for the Food Science – Science Option program. One of these courses will be credited as part of the 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		
Choose one course from the following:		3
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 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~~
CHEM 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**3**
ECON 1010	Introduction to Microeconomic 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 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 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**3**
~~CHEM 2770~~/~~MBIO 2770~~	~~Elements of Biochemistry 1~~	~~3~~
CHEM 2730 /MBIO 2730	**Elements of Biochemistry I**	**3**
CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
FOOD 2500	Food Chemistry	3
MBIO 1010	Microbiology 1	3
Free Electives/Co-op		~~9~~ **6**
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
MKT 2210	Fundamentals of Marketing	3
Restricted Electives		6
Free Electives/Co-op		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 4200	Quality Control in Foods	3
FOOD 4510	Food Product Development	3
Restricted Elective		3
Free Electives/Co-op		15

While both ~~CHEM 1310~~ **CHEM 1110** and ~~CHEM 1320~~ **CHEM 1130** are required for the Food Science-Science Option program, normally only one is taken at a time.

Food Science – Business Option

In addition to the courses required for 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		
Group 1 – Marketing		6
ABIZ 2510	Introduction to Agricultural and Food Marketing	
MKT 2210	Fundamentals of Marketing	
Group 2 – General		
Choose one course from the following:		3
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 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~~
CHEM 1100	**Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **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	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 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~~
CHEM 2730 /MBIO 2730	**Elements of Biochemistry I**	**3**
CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
FOOD 2500	Food Chemistry	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
HRIR 2440	Human Resource Management	3
Free Electives/Co-op		~~6~~ **3**
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
FOOD 4500	Food Safety and Regulations	3
MKT 2210	Fundamentals of Marketing	3
Free Elective/Co-op		6
Total Credit Hours		30

Year 4

Course	Course Name	Credit Hours
ABIZ 3510	Economics of Food Policy	3
FOOD 4100	Current Issues in Food and Human Nutrition	3
FOOD 4200	Quality Control in Foods	3

FOOD 4510	Food Product Development	3
Restricted Elective		3
Free Electives/Co-op		15
Total Credit Hours		30

Program modifications:

Modifications to the following programs are set out on the next 14 pages:

- **Bachelor of Science in Human Nutritional Sciences**
  - **Nutrition Option**
  - **Foods Option**
  - **Food Industry Option**
- **Bachelor of Science in Human Nutritional Sciences – Dietetics Preparation**
- **Bachelor of Science in Human Nutritional Sciences – Second Degree**
- **Bachelor of Science in Human Nutritional Sciences – Articulation Agreement with Red River College Culinary Arts Program**

4.8 Bachelor of Science (Human Nutritional Sciences)

Students majoring in Human Nutritional Sciences (HNS) 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 practicums 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 Dietetics Preparation and supporting courses. Students should review the Partnership for Dietetic Education and Practice website for a listing of accredited post-degree practicum options in Canada**.**

4.8.1 Bachelor of Science (Human Nutritional Sciences) - Nutrition Option, Foods Option, Food Industry Option

Course Number	Course Name	Credit Hours
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 2)	3-6
BIOL 1412	Physiology of the Human Body (See Note 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 4)~~	~~3~~
~~CHEM 2780~~ / ~~MBIO 2780~~	~~Elements of Biochemistry 2 (See Note 5)~~	~~3~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 3)**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**3**
CHEM/MBIO 2730 (See Note 4)	**Elements of Biochemistry I**	**3**
CHEM 2740 (See Note 5)	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM/MBIO 2750 (See Note 6)	**Elements of Biochemistry II**	**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 4100	Current Issues in Food and Human Nutrition	3

PSYC 1200 or ~~SOC 1200~~ **SOC 1000**	Introduction to Psychology or Introduction to Sociology ~~or combination of the 2 areas~~	**3-**6
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 4300 or HNSC 4500	Community Nutrition Intervention or Clinical Nutrition 1	3
~~HNSC~~ **Restricted** Electives **(See note 7)**		21
Free Electives (See Notes 2 and ~~6~~ **8**)		~~21-24~~ **18-24**
2. Foods Option		
HNSC 3300 or HNSC 3310	Vitamins and Minerals in Human Health or Macronutrients and 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 ~~7~~ **9**)		9
Free Electives (See Notes 2 and ~~6~~ **8**)		~~21-24~~ **18-24**
3. Food Industry Option		
ABIZ 1000 or GMGT 1010	Introduction to Agribusiness Management or Business and Society	3
FOOD 4310	Introduction to HACCP	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
Free Electives (See Notes 2 and ~~6~~ **8**)		~~12-15~~ **9-15**
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
FOOD 4160	Food Analysis 1	3
FOOD 4250	Food Analysis 2	3
FOOD 4500	Food Safety and Regulations	3
HNSC 4270	Sensory Evaluation of Food	3
STAT 3000	Applied Linear Statistical Models	3
STAT 3170	Statistical Quality Control	3
Food Product Development Concentration		15

FOOD 4160	Food Analysis 1	3
FOOD 4250	Food Analysis 2	3
FOOD 4500	Food Safety and Regulations	3
One of: FOOD 3160, FOOD 3170, *or* FOOD 3200	Frozen Dairy Product, Cheese and Milk Products, *or* Baking Science	3
HNSC 4270	Sensory Evaluation of Food	3
HNSC 4290	Food, Nutrition and Health Policies	3
HNSC 4540	Functional Foods and Nutraceuticals	3
STAT 3000	Applied Linear Statistical Models	3
Food Industry Management Concentration		15
ACC 1100	Introductory Financial Accounting	3
GMGT 2060	Management and Organization Theory	3
GMGT 3010	Management Decision-Making	3
HRIR 2440	Human Resource Management	3
MKT 3220	Marketing Research	3
HNSC 3342	Management for Food and Nutrition Professionals	3
GMGT 3xxx	3000 level	3

NOTES:

1. STAT 2000 (Basic Statistical Analysis 2) can be substituted for AGRI 2400 (Experimental Methods in Agricultural and Food Sciences).

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). Students can substitute with both BIOL 1410 and BIOL 1412 with both BIOL 2410 (Human Physiology 1) and BIOL 2420 (Human Physiology 2).

3. Students can hold **CHEM 2100: Organic Chemistry I (Foundations of Organic Chemistry)** ~~CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function)~~ in place of ~~CHEM 1320~~ **CHEM 1130 (Introduction to Organic Chemistry).**

4. Under required courses, students can **use** ~~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).~~ **CHEM/MBIO 2700 (Biochemistry I: Biomolecules and an Introduction to Metabolic Energy) in place of CHEM/MBIO 2730 (Elements of Biochemistry I)**

5. **Under required courses, student can use CHEM 2720 (Principles and Practices of the Modern) Biochemistry Laboratory in place of CHEM 2740 (Introduction to the Biochemistry Laboratory).**

6. Under required courses, students can **use** ~~take either~~ ~~CHEM 2780/MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370/MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).~~ **CHEM/MBIO 2710 (Biochemistry II: Catabolism, Synthesis, and Information Pathway) in place of CHEM/MBIO 2750 (Elements of Biochemistry II).**

7. **Restricted Electives can be AGRI 2300 and/or any 3000/4000 level HNSC courses not already required as part of the Nutrition Option.**

8. 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.

9. 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~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic 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~~ **SOC 1000**	Introduction to Psychology or Introduction to Sociology	**3**-6
Free Elective(s)		0-~~3~~ **6**
Total Credit Hours		30

Year 2

Course No.		**Credit Hours**
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~~
CHEM 2730/MBIO 2730	**Elements of Biochemistry I**	**3**
CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM 2750/MBIO 2750	**Elements of Biochemistry II**	**3**
HEAL 2600	Integration of Health Determinants of Individuals	3
~~Free Elective~~		~~3~~
Total credit hours		30

Year 3

Course No.		Credit Hours
HNSC 3220	Food and Nutrition Literacy Education	3
HNSC 3300	Vitamins and Minerals in Human Health	3
HNSC 3310	Macronutrients and Human Health	3
FOOD 4150	Food Microbiology	3
HEAL 3000	Introduction to Social Epidemiology	3
~~HNSC~~ **Restricted** electives		6
Free Electives		9
Total credit hours		30

Year 4

Course No.		Credit Hours
HNSC 4100	Current Issues in Food and Human Nutrition	3
HNSC 4300 or HNSC 4500	Community Nutrition Intervention or Clinical Nutrition 1	3
~~HNSC~~ **Restricted** electives		15
Free electives		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~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic 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~~ **SOC 1000**	Introduction to Psychology or Introduction to Sociology	**3-**6

Free Elective(s)	0-~~3~~ **6**
Total credit hours	30

Year 2

Course No		Credit Hours
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~~
CHEM 2730/MBIO 2730	**Elements of Biochemistry I**	**3**
CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM 2750/MBIO 2750	**Elements of Biochemistry II**	**3**
HEAL 2600	Integration of Health Determinants of Individuals	3
~~MKT 2210~~	~~Fundamentals of Marketing~~	~~3~~
Total credit hours		30

Year 3

Course No.		Credit Hours
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
MKT 2210	**Fundamentals of Marketing**	**3**
Program Electives		6
Free Electives		~~9~~ 6
Total credit hours		30

Year 4

Course No.		Credit Hours
HNSC 3300 or HNSC 3310	Vitamins and Minerals in Human Health or Macronutrients and Human Health	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.		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~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic 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~~ **SOC 1000**	Introduction to Psychology or Introduction to Sociology	**3-**6
Free Elective(s)		0-~~3~~ **6**
Total credit hours		30

Year 2

Course No.		Credit Hours
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
ABIZ 1000 or GMGT 1010	Introduction to Agribusiness Management or Business and Society	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~~
CHEM 2730/MBIO 2730	**Elements of Biochemistry I**	**3**
CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM 2750/MBIO 2750	**Elements of Biochemistry II**	**3**
~~HEAL 2600~~	~~Integration of Health Determinants of Individuals~~	~~3~~

Total credit hours	30

Year 3

Course No.		Credit Hours
HNSC 3260	Food Quality Evaluation	3
HNSC 3330	Ingredient Technology for Designed Foods	3
FOOD 4150	Food Microbiology	3
HEAL 2600	**Integration of Health Determinants of Individuals**	**3**
HEAL 3000	Introduction to Social Epidemiology	3
MKT 2210	Fundamentals of Marketing	3
Concentration Electives		6
Free Electives		~~9~~ **6**
Total credit hours		30

Year 4

Course No.		Credit Hours
HNSC 3300 or HNSC 3310	Vitamins and Minerals in Human Health or Macronutrients and Human Health	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 Bachelor of Science (Human Nutritional Sciences) – Nutrition Option - Dietetics Preparation

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 a dietetic practicum program.

For those intending to apply for a dietetic practicum, the Second Degree's Dietetics Preparation program (see Section 4.8.3) 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.

Courses required to build into the Nutrition Option program:

Course Number	Course Name	Credit Hours	Placement in Program
ABIZ 1000 or GMGT 1010	Introduction to Agribusiness Management or Business and Society	3	Free Elective
HNSC 3342	Management for Food and Nutrition Professionals	3	HNSC Elective
HNSC 3350	Culture and Food Patterns	3	Free Elective
HNSC 3400	Nutrition Assessment and Counselling	3	Free Elective

HNSC 4140	Quantity Food Production and Management	3	HNSC Elective
HNSC 4300	Community Nutrition Intervention	3	HNSC elective
HNSC 4310 or HNSC 4340	Nutrition and the Elderly or Maternal and Child Nutrition	3	HNSC Elective
HNSC 4500	Clinical Nutrition 1	3	HNSC 4300 or HNSC 4500
HNSC 4550	Clinical Nutrition 2	3	HNSC elective

Suggested Progression of Program: Dietetics Preparation

Year 1

Course Number	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~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic 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~~ **SOC 1000**	Introduction to Psychology or Introduction to Sociology	**3-**6
Free Elective(s)		0-~~3~~ **6**
Total credit hours		30

Year 2

Course Number	Course Name	Credit Hours
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
ABIZ 1000 or GMGT 1010	Introduction to Agribusiness Management or Business and Society	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~~
CHEM 2730/MBIO 2730	**Elements of Biochemistry I**	**3**

CHEM 2740	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM 2750/MBIO 2750	**Elements of Biochemistry II**	**3**
~~HEAL 2600~~	~~Integration of Health Determinants of Individuals~~	~~3~~
Total credit hours		30

Year 3

Course Number	Course Name	Credit Hours
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 3350	Culture and Food Patterns	3
HNSC 3400	Nutrition Assessment and Counselling	3
FOOD 4150	Food Microbiology	3
HEAL 2600	**Integration of Health Determinants of Individuals**	**3**
HEAL 3000	Introduction to Social Epidemiology	3
Free Elective		~~6~~ **3**
Total credit hours		30

Year 4

Course Number	Course Name	Credit Hours
HNSC 4100	Current Issues in Food and Human Nutrition	3
HNSC 4140	Food Production and Management	3
HNSC 4300	Community Nutrition Intervention	3
HNSC 4310 or HNSC 4340	Nutrition and the Elderly or Maternal and Child Nutrition	3
HNSC 4500	Clinical Nutrition 1	3
HNSC 4550	Clinical Nutrition 2	3
~~HNSC~~ **Restricted** electives		6
Free Electives		6
Total credit hours		30

4.8.3 Bachelor of Science (Human Nutritional Sciences) - Second Degree Program

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 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 4)~~	~~3~~
~~CHEM 2780~~ / ~~MBIO 2780~~	~~Elements of Biochemistry 2 (See Note 5)~~	~~3~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 3)**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**3**
CHEM 2730/MBIO 2730 (See Note 4)	**Elements of Biochemistry I**	**3**
CHEM 2740 (See Note 5)	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM 2750/MBIO 2750 (See Note 6)	**Elements of Biochemistry II**	**3**
HNSC 2140	Basic Principles of Human Nutrition	3
HNSC 2160	Principles of Food Preparation and Preservation	3
Total Credit Hours (See Note 2)		~~27-30~~ **30-33**
Complete one of the following concentrations: (A, B, or C):		
A. Dietetics (See Note ~~9~~ **10**)		
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 4500	Clinical Nutrition 1	3
HNSC 4550	Clinical Nutrition 2	3
Free Electives (see Notes 2 and ~~6~~ **7**)		~~3-6~~ **0-3**
Total Credit Hours		~~30-33~~ **27-30**
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 4500 or HNSC 4300	Clinical Nutrition 1 or Community Nutrition Intervention	3
~~HNSC~~ **Restricted** electives (see Note~~7~~ **8**)		12
Free Electives (see Notes 2 and ~~6~~ **7**)		~~6-9~~ **3-6**
Total Credit Hours		~~30-33~~ **27-30**
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~~ **9**)		3
Free Electives (See Notes 2 and ~~6~~ **7**)		~~6 9~~ **3-6**
Total Credit Hours		~~30 33~~ **27-30**

NOTES:

1. STAT 2000 (Basic Statistical Analysis 2) can be substituted for AGRI 2400 (Experimental Methods in Agricultural and Food Sciences).

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). Students can substitute both BIOL 1410 and BIOL 1412 with both BIOL 2410 (Human Physiology 1) and BIOL 2420 (Human Physiology 2).

   ~~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.~~

3. Students can hold **CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry)** ~~CHEM 2210 (Introductory Organic Chemistry 1: Structure and Function)~~ in place of ~~CHEM 1320~~ **CHEM 1130 (Introduction to Organic Chemistry).**

4. Under required courses, students can **use** ~~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).~~ **CHEM/MBIO 2700 (Biochemistry I: Biomolecules and an Introduction to Metabolic Energy) in place of CHEM/MBIO 2730 (Elements of Biochemistry I).**

5. **Under required courses, student can use CHEM 2720 (Principles and Practices of the Modern Biochemistry Laboratory) in place of CHEM 2740 (Introduction to the Biochemistry Laboratory).**

6. Under required courses, students can **use** ~~take either~~ ~~CHEM 2780/MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370/MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).~~ **CHEM/MBIO 2710 (Biochemistry II: Catabolism, Synthesis, and Information Pathway) in place of CHEM/MBIO 2750 (Elements of Biochemistry II).**

7. 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.

8. ~~HNSC~~ **Restricted** electives required in Option B: Human Nutrition can be either AGRI 2300 or any HNSC course at the 3000 or 4000 level not already required as part of the degree.

9. 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.

10. In order to meet PDEP Accreditation Standards, Second Degree students intending to apply for Dietetic Practicums would also need to complete the following Dietetics Supporting Courses:

    - ABIZ 1000 or GMGT 1010
    - HNSC 2000

- HNSC 2130 or HNSC 2150
- HNSC 3350
- HNSC 4100
- HNSC 4310 or HNSC 4340
- FOOD 4150 or MBIO 1220 or MBIO 1010
- Psychology or Sociology (**3-**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 2)	3 – 6
BIOL 1412	Physiology of the Human Body (See Note 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 4)~~	~~3~~
~~CHEM 2780 / MBIO 2780~~	~~Elements of Biochemistry 2 (See Note 5)~~	~~3~~
CHEM 1100	**Introductory Chemistry 1: Introductory Chemistry 1: Atomic and Molecular Structure and Energetics**	**3**
CHEM 1110 **or** **CHEM 1130 (See Note 3)**	**Introductory Chemistry 2: Interaction, Reactivity, and Chemical Properties** **or** **Introduction to Organic Chemistry**	**3**
CHEM 2730/MBIO 2730 (See Note 4)	**Elements of Biochemistry I**	**3**
CHEM 2740 (See Note 5)	**Introduction to the Biochemistry Laboratory (Lab course)**	**3**
CHEM 2750/MBIO 2750 (See Note 6)	**Elements of Biochemistry II**	**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 4100	Current Issues in Food and Nutrition	3
HNSC 4290	Food, Nutrition and Health Policies	3
~~Free Electives (See Notes 2 and 6 7)~~		~~0 – 3~~
Total Credit Hours		54-**57**
Complete one of the following concentrations: (A or B):		

A. Human Nutrition		
HNSC 4300 or HNSC 4500	Community Nutrition Intervention or Clinical nutrition 1	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
Total Credit Hours		6

NOTES:

1. STAT 2000 (Basic Statistical Analysis 2) can be substituted for AGRI 2400 (Experimental Methods in Agricultural and Food Sciences).

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 1410 and BIOL 1412 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.~~

3. **Students can hold CHEM 2100 (Organic Chemistry I: Foundations of Organic Chemistry) in place of CHEM 1130 (Introduction to Organic Chemistry).**

4. Under required courses, students can **use** ~~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).~~ **CHEM/MBIO 2700 (Biochemistry I: Biomolecules and an Introduction to Metabolic Energy) in place of CHEM/MBIO 2730 (Elements of Biochemistry I).**

5. **Under required courses, student can use CHEM 2720 (Principles and Practices of the Modern Biochemistry Laboratory) place of CHEM 2740 (Introduction to the Biochemistry Laboratory).**

6. Under required courses, students can **use** ~~take either~~ ~~CHEM 2780/MBIO 2780 (Elements of Biochemistry 2) or CHEM 2370/MBIO 2370 (Biochemistry 2: Catabolism, Synthesis, and Information Pathways).~~ **CHEM/MBIO 2710 (Biochemistry II: Catabolism, Synthesis, and Information Pathway) in place of CHEM/MBIO 2750 (Elements of Biochemistry II).**

7. Students can apply for the Cooperative Education Program. Two work terms are required to graduate with Co-op designation. Co-op courses **are** 3 credit hours each. ~~are used towards free electives.~~

Plant Science

Modifications:

PLNT 2530 Plant Biotechnology - 3 cr 0.0
(Lab required) An introduction to current biotechnological techniques, including recombinant DNA, plant tissue culture, plant transformation and regeneration. A background to the techniques as well as a discussion of their applications in current biology and crop production will be examined. A laboratory will provide first hand experience with many of the techniques. Prerequisites: [(CHEM/MBIO 2730 and CHEM 2740) or the former CHEM/MBIO 2770; or (CHEM/MBIO 2700 (CHEM/MBIO 2701) and CHEM 2720 (CHEM 2721)) or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361)] and [PLNT 2520 or BIOL 2500].

PLNT 3400 Plant Physiology - 3 cr 0.0
(Lab required) An integrative view of major physiological processes in plants, spanning the biochemical, cellular, tissue, organ and whole plant levels of organization. The focus will be on photosynthesis, respiration, plant water relations, plant mineral nutrition, and the role of hormonal and extrinsic factors in the regulation of plant growth. Also offered as BIOL 3400. May not be held with BIOL 3400, the former BIOL 3450 or the former PLNT 3500. Prerequisites: BIOL 2242 and [(CHEM/MBIO 2730 and CHEM/MBIO 2740) or the former CHEM/MBIO 2770; or (CHEM/MBIO 2700 (CHEM/MBIO 2701) and CHEM/MBIO 2720 (CHEM 2721)) or the former CHEM/MBIO 2360 (the former CHEM/MBIO 2361)]; or consent of the instructor.

NET CHANGE IN CREDIT HOURS: 0.0

School of Agriculture

Program modification:

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

4.9 Diploma in Agriculture (Program Electives List)

Program Electives

Students can select program electives to fulfill the program's 93 credit hour requirement. The following Faculty of Agricultural and Food Sciences' courses are approved as program electives for the Agriculture Diploma program. In addition, students may be allowed to register for a maximum of three credit hours of electives from degree or diploma programs offered outside the Faculty of Agricultural and Food Sciences for credit towards the Agriculture Diploma. Credit for these courses will be granted on the condition that there is not significant overlap of course content. Students planning to register for degree courses should contact the Student Services Office to discuss implications for scheduling and graduation, as these courses start earlier in September and end later in April.

Course No.		Credit Hours
ABIZ 0710	Agricultural Policy	3
ABIZ 0730	Financial Risk Management	3
ABIZ 0740	Special Topics in Business Management	3
ABIZ 0750	Advanced Agricultural Financial Management and Lending	3
ABIZ 1000	Introduction to Agribusiness Management	3
ABIZ 1010	Economics of World Food Issues and Policies	3
ABIZ 2610	Agricultural Law	3
ABIZ 2620	Agricultural Human Resource Management	3
ABIZ 3530	Farm Management	3
AGRI 2002	Agricultural and Food Sciences Co-operative Education Work Term 1	3
AGRI 2500	Managing Farm Safety	3
AGRI 2510	Managing Farm Business Transition	3
AGRI 3030	**Modern Topics in Agriculture 1***	**3**
ANSC 0600	Animal Health and Welfare	3
ANSC 0670	Beef Cattle Production and Management	4
ANSC 0680	Dairy Cattle Production and Management	4
ANSC 0690	Swine Production and Management	4
ANSC 0700	Poultry Production and Management	4
ANSC 0720	Special Topics in Livestock Management	3
ANSC 0730	Horse and Stable Management	3
BIOE 0600	Farm Machinery	4
BIOE 0700	Agricultural Buildings and Environments	4
BIOE 0710	Materials Handling and Electrical Controls	3
DAGR 0510	Farm Management Practicum	3
DAGR 0540	Exploring New Opportunities in Adding On-Farm Value	4
DAGR 0610	Advanced Communication and Leadership	3
DAGR 0630	Special Project	3
DAGR 0660	Special Topics in General Agriculture	3
ENTM 0610	Beekeeping	2
ENTM 0620	Insect Pest Management	4
ENTM 1000	World of Bugs	3
FOOD 1000	Food Safety Today and Tomorrow	3
HNSC 1200	Food: Facts and Fallacies	3
HNSC 1210	Nutrition for Health and Changing Lifestyles	3
PLNT 0750	Forage and Pasture Management	4
PLNT 0770	Weed Management	4
PLNT 0780	Plant Disease Management	4
PLNT 0810	Special Topics in Crop Management	3
PLNT 0820	Organic Crop Production on the Prairies	3
PLNT 1000	Urban Agriculture	3

SOIL 0630	Soil Fertility	4

***Note: AGRI 3030 Modern Topics in Agriculture 1 is a topics course that will vary term to term with a variety of subject areas. The course may be completed more than once for credit, if taken under different course titles.**

School of Art

Introductions:

STDO 3710 Special Topics in Indigenous Contemporary Art Practices - 3 cr +3.0
This course will provide opportunities for skill building, conceptual development and depth, and historical and theoretical considerations of topics concerning Indigenous Contemporary Art Practices. This course can be completed as a topics course multiple times under different titles. Prerequisite: Successful completion of 21 credit hours at 1000-level STDO courses.

STDO 3720 Special Topics in BIPOC Contemporary Art Practices - 3 cr +3.0
This course will provide opportunities for skill building, conceptual development and depth, and historical and theoretical considerations of topics concerning Black, Indigenous, and People of Colour (BIPOC) Contemporary Art Practices. This course can be completed as a topics course multiple times under different titles. Prerequisite: Successful completion of 21 credit hours at 1000-level STDO courses.

NET CHANGE IN CREDIT HOURS: +6.0

Program modifications:

Modifications to the following programs are outlined on the next 4 pages:

- **Bachelor of Fine Arts (General) in Art History**
- **Bachelor of Fine Arts (Honours) in Art History**
- **Bachelor of Fine Arts (General)**
- **Bachelor of Fine Arts (Honours)**

4.3 Bachelor of Fine Arts - Art History Programs

The Art History program at the School of Art offers students an opportunity to consider, in a cultural context, both Western and non-Western artistic traditions with an emphasis on the former from the Renaissance to the present. While all courses acknowledge methodological issues, the program also offers courses in art theory and criticism at the second- and third-year levels. Students enrolled in this program broaden their knowledge of art production with studio electives.

Program Requirements:

BFA Art History General Degree (90 credit hours)			
YEAR 1 (30 credit hours) University 1	YEAR 2 (30 credit hours)	YEAR 3 (30 credit hours)	
FAAH 1030 **or EVDS 1660**, FAAH 1040 **or EVDS 1670** 3 credit hours - English Literature Requirement[1,2,3] 3 credit hours - Mathematics Requirement[1,3,2] 6 credit hours – Academic electives 6 credit hours – Social Science or Science Elective Choose 6 credit hours from the ~~following~~ **approved list of** courses[8]	FA 1990 9 credit hours of 1000 level studio courses[4] 6 credit hours in Academic or Studio Electives[4,5] 15 credit hours of 2000 level Art History Electives6	FAAH 3212 Studio Electives (9 credit hours at the 1000 level or 6 credit hours at the 2000 level)[4,7] Art History Electives 15 or 18 credit hours (dependent on the whether 1000 or 2000 level studio electives have been chosen.) One of the following courses: FAAH 3260 or FAAH 3270	

BFA Art History Honours Degree (120 credit hours)			
YEAR 1 (30 credit hours) University 1	YEAR 2 (30 credit hours)	YEAR 3 (30 credit hours)	YEAR 4 (30 credit hours)
FAAH 1030 **or EVDS 1660**, FAAH 1040 **or EVDS 1670** 3 credit hours - English Literature Requirement[1,2,3] 3 credit hours - Mathematics Requirement[1,3,2] 6 credit hours – Academic electives 6 credit hours – Social Science or Science Elective	FA 1990 9 credit hours of 1000 level studio courses[4] 6 credit hours in Academic or Studio Electives[4,5] 15 credit hours of 2000 level Art History Electives	FAAH 3212 Studio Electives (9 credit hours at the 1000 level or 6 credit hours at the 2000 level)[4,7] Art History Electives 15 or 18 credit hours (dependent on the whether 1000 or 2000 level studio electives have been chosen.) One of the following courses: FAAH 3260 or FAAH 3270	15 credit hours of Art History Electives 3 credits of 4000 level Art History elective 12 Other Academic or Studio Electives (Honours Students wishing to take more than the 18 credit hours of Art History courses listed above may use their Academic Electives to do so.)[4]

Choose 6 credit hours from the ~~following~~ **approved list of** courses[8]			

NOTES:

1. Students are recommended to complete these requirements in the first 60 credit hours of their program.
2. The School of Art offers FA 1020 - Mathematics in Art, to fulfil this requirement. See the General Academic Regulations section of the Undergraduate Calendar for a full list of courses that meet this requirement.
3. The English Literature Requirement can be fulfilled by any course taught by the English Department under the course code ENGL.
4. Studio Electives can be fulfilled by any course taught by the School of Art under the course code STDO except STDO 1510 – Art Now which is not considered a Studio Elective course for the purposes of this program.
5. Academic Electives can be fulfilled by courses from departments outside of the School of Art.
6. Art History electives can be fulfilled by any 2000 level FAAH course and those courses listed in Section 4.4 below.
7. Most 2000 level studio courses will require completion of a minimum 21 credit hours of 1000 level studio courses therefore students should be advised that this component is normally fulfilled by 9 credit hours of 1000 level courses.
8. **This requirement can be fulfilled by choosing 6 credit hours from the following list of courses:**

ASIA 1420: Asian Civilizations to 1500 (3)
ASIA 1430: Asian Civilizations from 1500 (3)
CDN 1130: Introduction to Canadian Studies (6)
CATH 1190: Introduction to Catholic Studies (6)
CLAS 1270: Introduction to Ancient Greek Culture (3)
CLAS 1280: Introduction to Ancient Roman Culture (3)
FILM 1290: The Art of Film 1 (3)
FILM 1310: Film History (3)
GRMN 2120: Introduction to German Culture from 1918 to Present (3)
GRMN 2130: Introduction to German Culture from the Beginnings to 1918 (3)
HIST 1200: An Introduction to the History of Western Civilization (6)
HIST 1350: An Introduction to the History of Western Civilization to 1500 (3)
HIST 1360: An Introduction to the History of Western Civilization from 1500 (3)
HIST 1370: An Introduction to Modern World History: 1500-1800 (3)
HIST 1380: An Introduction to Modern World History: 1800-Present (3)
HIST 1440: History of Canada (6)
HIST 2390: Early Modern Europe 1450-1789 (6)
HIST 2420: The Medieval World (6)
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)
PHIL 1200: Introduction to Philosophy (6)
PHIL 1290: Critical Thinking (3)
RLGN 1322: Introduction to Eastern Religions (3)
RLGN 1324: Introduction to Western Religions (3)
RUSN 2290: Russian Culture from 1900 to the Present (3)
UKRN 2780: Ukrainian Culture from 1900 to the Present (3)
WOMN 1500: Introduction to Women's and Gender Studies in the Humanities (3)
MUSC 1930: Rudiments of Music (3)

4.4 Elective Subjects and Academic Requirements

In addition to the Art History courses in the School of Art, the following courses from other faculties fulfil the Art History elective requirement. Not all courses are offered every year.

CLAS 2670	Greek Art and Archaeology	3
CLAS 2680	Roman Art and Archaeology	3
RLGN 2570	Indian Religious Art and Architecture	3
TXSC 2420	~~History of Textiles~~	~~3~~

4.1 Bachelor of Fine Arts Studio Programs

The School of Art offers degrees that cover the history, theory, and techniques of art. Students may also take elective courses outside the School of Art. These programs provide a general cultural background as well as the technical education necessary to become an educator, or a professional creative artist in fine art or applied fields. The programs reflect the assumption that in a time of fluctuating cultural values, technical training alone is not sufficient for significant work in any branch of the arts.

The first two years offer basic instruction in the fundamental principles of drawing, design and representation. In the fine arts studio electives in second year, the student selects courses that provide specialization in one or more of the following: ceramics, drawing, graphic design, painting, photography, print media, sculpture and video.

The School of Art offers a General and an Honours Degree Program in Studio. In order to be transferred from the General Degree to the Honours Degree Programs, a student must have completed 63 credit hours and have a minimum grade point average of 2.5 (C). The Student Advisor will be able to transfer the student from General to Honours.

In order to be eligible to do the final fourth year Honours year (the Senior Studio and Honours Seminar courses), students in the Honours Degree must have completed 15 credit hours of Studio courses at the 3000 level and have successfully passed a minimum of 94 credit hours.

The school reserves the right to retain temporarily or permanently any work done by students in fulfilment of course requirements.

BFA General Degree (93 credit hours)			
YEAR 1 (33 credit hours)	YEAR 2 (30 credit hours)	YEAR 3 (30 credit hours)	
STDO 1210, STDO 1240, STDO 1410, STDO 1510, FA 1990, FAAH 1030 **or EVDS 1660**, STDO 1250,STDO 1480, STDO 1470, FAAH 1040 **or EVDS 1670** 3 credit hours - Written English Requirement[1,2] 3 credit hours - Mathematics Requirement[1,3]	FAAH 2080 **and FAAH 2090** 15 credit hours in Fine Arts Studio Electives ~~6~~ **3** credit hours in Art History Electives 6 credit hours in Academic Electives[5]	FAAH 3202, FAAH 3212 **STDO 3710 or STDO 3720** ~~15~~ **12** credit hours in Fine Arts Studio Electives[4] 3 credit hours in Art History Electives 6 credit hours in Academic Electives[5]	

BFA Honours Degree (123 credit hours)			
YEAR 1 (33 credit hours)	YEAR 2 (30 credit hours)	YEAR 3 (30 credit hours)	YEAR 4 (30 credit hours)
STDO 1210, STDO 1240, STDO 1410, STDO 1510, FA 1990, FAAH 1030 **or EVDS 1660**, STDO 1250,STDO 1480, STDO 1470, FAAH 1040 **or EVDS 1670**	FAAH 2080 **and FAAH 2090** 15 credit hours in Fine Arts Studio Electives ~~6~~ **3** credit hours in Art History Electives 6 credit hours in Academic Electives[5]	FAAH 3202, FAAH 3212 **STDO 3710 or STDO 3720** ~~15~~ **12** credit hours in Fine Arts Studio Electives[4] 3 credit hours in Art History Electives	One of STDO 4710 or STDO 4810; and one of STDO 4720 or STDO 4820; with one of STDO 4730 or STDO 4910, and STDO 4920 6 credit hours of Fine Arts Studio Electives 6 credit hours of Academic Electives

3 credit hours - Written English Requirement[1,2] 3 credit hours - Mathematics Requirement[1,3]		6 credit hours in Academic Electives[5]	

Notes:
1. Students are recommended to complete these requirements in the first 60 credit hours of their program.
2. The School of Art offers FAAH 2930 - Writing About Art, to fulfil this requirement. See the General Academic Regulations section of the Undergraduate Calendar for a full list of courses that meet this requirement.
3. The School of Art offers FA 1020 - Mathematics in Art, to fulfil this requirement. See the General Academic Regulations section of the Undergraduate Calendar for a full list of courses that meet this requirement.
4. Students wishing to pursue the BFA Honours program should be advised that a minimum of 15 credit hours of 3000 level studio courses must be taken to be eligible to register for STDO 4810 and STDO 4910
5. Students are permitted to take any courses to fulfill the Academic Elective requirement. This includes courses taught by the School of Art such as Studio or Art History courses or courses taught by other faculties.

Faculty of Arts

Canadian Studies

Introduction:

CDN 1000 Introduction to Canada - 3 cr +3.0
A multidisciplinary introduction to the main political, economic, social, cultural and geographic features that have shaped Canada's past and current realities. May not be held with CDN 1130.

NET CHANGE IN CREDIT HOURS: +3.0

Economics

Modifications:

ECON 3040 Introduction to Econometrics - 3 cr 0.0
This course builds on ECON 2040 by introducing: multivariate ordinary least squares regression using matrices; heteroscedasticity; and autocorrelation. Additional topics may include: instrumental variables; binary choice models; and panel data models. Students may not hold credit for ECON 3040 and either ABIZ 3080 or the former ECON 3180. Prerequisite: [a grade of "C+" or better in ECON 2040 or the former ECON 3170] or [a grade of "C" or better in six credit hours of 1000 level Economics and STAT 2000 or STAT 2001].

ECON 4050 History of Economic Thought 1 - 3 cr 0.0
A seminar course on the history of economic thought up to 1870. Attention is given to the evolution and significance of major theoretical concepts and approaches, the people who developed them and the attendant social, intellectual and economic context. Students may not hold credit for both ECON 4050 and the former ECON 4410. Prerequisite: written consent of instructor.

ECON 4140 Evaluation of Economic Policy and Programs - 3 cr 0.0
This is a course in applied micro-economic policy analysis using the techniques of cost-benefit analysis as its foundation. Students will learn the welfare foundations of cost-benefit analysis, techniques for decision-making under conditions of risk and uncertainty, and how these techniques may be applied to public policy. The course will include examples from all areas of public policy, including health, education, social services, criminal justice, etc. Prerequisite: written consent of instructor.

ECON 4430 Theories of Economic Development - 6 cr 0.0;
A study of theories, problems, and policies of economic growth and development both for advanced and underdeveloped countries. Prerequisite: written consent of instructor. ECON 2020 (or the former ECON 2800) and ECON 3020 (or the former ECON 3800) are recommended but not required.

NET CHANGE IN CREDIT HOURS: 0.0

French, Spanish and Italian

Modifications:

FREN 2700 Poésie et théâtre canadiens-français (B) - 3 cr 0.0
Introduction à la poésie et au théâtre canadiens-français à partir d'un choix d'oeuvres. Prerequisite: [a grade of "C" or better in FREN 1190] or [a grade of "C+" or better in FREN 1200] or [a grade of "C" or better in FREN 2620] or written consent of department head.

FREN 2740 Théâtre et poésie du dix-neuvième siècle (B) - 3 cr 0.0
Initiation aux poètes et aux dramaturges représentatifs des mouvements romantique, symboliste et réaliste à partir d'un choix d'oeuvres. Prerequisite: [a grade of "C" or better in FREN 1190] or [a grade of "C+" or better in FREN 1200] or [a grade of "C" or better in FREN 2620] or written consent of department head.

FREN 3140 Roman canadien-français (B) - 3 cr 0.0
Ce cours est destiné à initier l'étudiant(e) au roman canadien-français à partir d'un choix d'oeuvres. Un accent particulier sera mis sur l'interprétation historique. Prerequisite: any 2000-level French course or written consent of department head. FREN 2610 may not be used as a prerequisite.

FREN 3160 Roman et nouvelle français du dix-neuvième siècle (B) - 3 cr 0.0
Étude des principaux romanciers romantiques, réalistes et naturalistes à partir d'un choix d'oeuvres. Prerequisite: Any 2000-level French course or written consent of department head. FREN 2610 may not be used as a prerequisite.

NET CHANGE IN CREDIT HOURS: 0.0

German and Slavic Studies

Introduction:

RUSN 3630 Russian Politics, Government, and Society - 3 cr +3.0
Language of instruction: English. Survey of contemporary Russia that explores the social, cultural and economic factors shaping its domestic politics and foreign policy. Analyses Russia’s transformation after the collapse of the Soviet Union, citizenship and social agency, Russian identity formation in a multi-ethnic and multi-confessional state, and Russia’s complex relationships with its neighbours and former Cold War foes. Also offered as POLS 3630. Students may not hold credit for both RUSN 3630 and POLS 3630.

NET CHANGE IN CREDIT HOURS: +3.0

History

Introduction:

HIST 3576 History of Women, Gender and Sexuality in Canada (C) - 3 cr +3.0
This course examines the history of women, gender, and sexuality in Canada's past. Specific topics may include women, gender and sexuality in Indigenous peoples, English and French

colonization, nation-building, immigration and urbanization, politics, race, migration and racialization, violence, war, and protest. May not be held with HIST 3572. Prerequisite: six credit hours of history or written consent of department head.

Modification:

HIST 4320 Studies in Modern World History (M) - 6 cr 0.0
Advanced historical study of topics in world and global history. Specific thematic, methodological, and theoretical approaches may vary by instructor. Prerequisite: written consent of department head.

NET CHANGE IN CREDIT HOURS: +3.0

Labour Studies

Modification:

LABR 3050 Issues in Occupational Health and Safety and Workers' Compensation - 3 cr 0.0
This course will explore historical, legal and political issues surrounding health and safety in Canadian workplaces with an emphasis on Manitoba. It will critically examine both the Workers' Compensation and the Workplace Health and Safety systems as they currently exist and review the role of workers, employers, unions and government in these processes. It will investigate various challenges and emerging issues in health and safety including but not limited to industrial disease, gender concerns, precarious employment and globalization. Prerequisite: [a grade of "C" or better in LABR 3060] or written consent of the Labour Studies coordinator.

NET CHANGE IN CREDIT HOURS: 0.0

Native Studies

Introductions:

NATV 2540 Indigenous in the City - 3 cr +3.0
This course introduces students to the field of Urban Indigenous Studies through an exploration of Indigenous-settler relations in the urban context. This course considers how cities are dynamic places shaped by Indigenous and settler societies, and how cities have, in turn, shaped Indigenous Peoples and citizens of first world settler-colonial nation-states. Prerequisites: NATV 1200 or [NATV 1220 and NATV 1240].

NATV 2630 Indigenous Feminisms - 3 cr +3.0
With reference to scholarship, activism, and literary, narrative, and/or creative works, this course critically engages differences and shared priorities across Indigenous feminisms past and present. Also offered as WOMN 2630. Students may not hold credit for both NATV 2630 and WOMN 2630. Prerequisite: one of NATV 1200, NATV 1220, NATV 1240, WOMN 1500, WOMN 1600, or written consent from either Native Studies department head or the Women's and Gender Studies coordinator.

Modification:

NATV 2430 Indigenous Women's Stories - 3 cr 0.0
This course will investigate through the media of film and literature, including life writing, fiction, creative non-fiction and poetry, the experiences of Indigenous women in North America, particularly Canada, as articulated in their own voices. Also offered as WOMN 2430. Students may not hold for credit for both NATV 2430 and WOMN 2430. Prerequisite: one of NATV 1200, NATV 1220, NATV 1240, WOMN 1500, WOMN 1600, or written consent from either Native Studies department head or the Women's and Gender Studies coordinator.

NET CHANGE IN CREDIT HOURS: +6.0

Political Studies

Deletion:

POLS 3580 U.N. Security Council - 3 cr -3.0

Introductions:

POLS 3630 Russian Politics, Government, and Society - 3 cr +3.0
Survey of contemporary Russia that explores the social, cultural and economic factors shaping its domestic politics and foreign policy. Analyzes Russia’s transformation after the collapse of the Soviet Union, citizenship and social agency, Russian identity formation in a multi-ethnic and multi-confessional state, and Russia’s complex relationships with its neighbors and former Cold War foes. Also offered as RUSN 3630. Students may not hold credit for both POLS 3630 and RUSN 3630.

POLS 4010 U.N. Security Council - 3 cr +3.0
This course explores one of the most powerful but maligned organs of the UN - the Security Council. Drawing on legal texts, resolutions and case studies, this course explores the history and evolution of this organ. Particular attention is paid to its decision-making processes and contributions to international peace and security and international law. Students may not hold credit for both POLS 4010 and the former POLS 3580. Restricted to students enrolled in the Honours program in Political Studies or with written consent of the instructor or department head.

POLS 4090 Political Representation - 3 cr +3.0
An exploration of the theories of, debates about, and empirical research into political representation and the institutional and behavioural elements that affect it. Restricted to students enrolled in the Honours program in Political Studies or with written consent of the instructor or department head.

NET CHANGE IN CREDIT HOURS: +6.0

Sociology and Criminology

Program modification:

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

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

Sociology and Criminology

- Proposal to modify General Major and Single Honours in Criminology to include SOC 3762
- Program modification proposal approved at CPAC in July 2020, however inadvertently missed in submission to SCCCC

Added Material

~~Deleted Material~~

8.27.4 Criminology

YEAR 1	YEAR 2	YEAR 3	YEAR 4
GENERAL MAJOR TOTAL: 30 CREDIT HOURS			
SOC 1000 or both of SOC 1211 and SOC 1221	• SOC 2292 • SOC 2294 • SOC 2510 • SOC 2610	• 15 credit hours[1] from: SOC 3100, SOC 3310, SOC 3400, SOC 3410, SOC 3660, SOC 3700, SOC 3710, SOC 3720, SOC 3740, SOC 3750, SOC 3762, SOC 3790, SOC 3830, SOC 3850, SOC 3860, SOC 3880	

SINGLE HONOURS			
SOC 1000 or both of SOC 1211 and SOC 1221	• SOC 2010, SOC 2220, SOC 2292, SOC 2294, SOC 2510, SOC 2610 • 12 credit hours in ancillary options[2]	• 3 credit hours of criminology-related theory courses from SOC 3310 or SOC 3700 • 3 credit hours[3] of criminology or sociology-related theory courses from SOC 3310, SOC 3330, SOC 3350, SOC 3360, SOC 3380, SOC 3390, SOC 3700 • 15 credit hours[1,] from SOC 3100, SOC 3310, SOC 3400, SOC 3410, SOC 3660, SOC 3700, SOC 3710, SOC 3720, SOC 3740, SOC 3750, SOC 3762,	• SOC 4450, SOC 4490, SOC 4570 • 3 credit hours of research methods courses from SOC 3820 or SOC 4580 • 3 credit hours of advanced theory courses from SOC 4460 or SOC 4560 • 15 credit hours in ancillary options[2]

		SOC 3790, SOC 3830, SOC 3850, SOC 3860, SOC 3880 • 9 credit hours in ancillary options[2]	

NOTES:

[1]Students who use SOC 1200 (6) or both of SOC 1211 and 1221 to satisfy the year one requirements will be required to complete three (3) fewer credit hours in Sociology courses numbered at the 2000 or 3000 level.

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

[3] These courses can include SOC 3310 or SOC 3700 if not already completed as a criminology or sociology-related theory requirement.

[4] Equivalent courses offered through the Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart.

Women’s and Gender Studies

Introduction:

WOMN 2430 Indigenous Women's Stories - 3 cr +3.0
This course will investigate through the media of film and literature, including life writing, fiction, creative non-fiction and poetry, the experiences of Indigenous women in North America, particularly Canada, as articulated in their own voices. Also offered as NATV 2430. Students may not hold for credit for both WOMN 2430 and NATV 2430. Prerequisite: one of WOMN 1500, WOMN 1600, NATV 1200, NATV 1220, NATV 1240, or written consent from either the Women's and Gender Studies coordinator or Native Studies department head.

Modification:

WOMN 2630 Indigenous Feminisms - 3 cr 0.0
With reference to scholarship, activism, and literary, narrative, and/or creative works, this course critically engages differences and shared priorities across Indigenous feminisms past and present. Also offered as NATV 2630. Students may not hold credit for both WOMN 2630 and NATV 2630. Prerequisite: one of WOMN 1500, WOMN 1600, NATV 1200, NATV 1220, NATV 1240, or written consent from either the Women's and Gender Studies coordinator or Native Studies department head.

NET CHANGE IN CREDIT HOURS: +3.0

Faculty of Education

Curriculum, Teaching and Learning

Introduction:

EDUB 5342 Becoming Writers: Power, Place and Pedagogy in Teaching Writing - 6 cr +6.0
This course invites participants to engage in becoming stronger writers and more effective teachers of writing. The course is designed with the premise that to become better teachers of writing, teachers must become writers themselves. This is an intensive and experiential course that affords opportunities to write, participate in writing groups, delve into professional literature in writing craft and pedagogy, interact with guest speakers, explore place and place-writing as inquiries into power and (in)justice, and design and lead a teaching demonstration. The course is open to all, regardless of prior writing experience. May not be held with EDUA 5220 when titled “Writing Workshop: Writing for/as Human Rights” or EDUB 5230 when titled “Curriculum Development: Writing for/as Human Rights".

NET CHANGE IN CREDIT HOURS: +6.0

Faculty of Engineering

Faculty of Engineering

Modifications:

ENG 1430 Design in Engineering - 3 cr 0.0
The creative process; the design process; working in a team. The engineering profession from the perspective of students and professionals. Academic, legal and ethical considerations. Prerequisites: [A minimum grade of 60% in Pre-Calculus Mathematics 40S (or a minimum grade of "C" in one of MATH 0401, MATH 1018, MATH 1230, MATH 1500, MATH 1501, MATH 1510, MATH 1520, MATH 1690, MSKL 0100, or the former MATH 1680)] and [a minimum grade of 60% in Physics 40S (or a passing grade in PHYS 0900 or PSKL 0100; or a minimum grade of "C" in PHYS 1018, PHYS 1050, or PHYS 1051)] and [a minimum grade of 60% in Chemistry 40S (or a passing grade in CHEM 0900 or CSKL 0100; or a minimum grade of "C" in CHEM 1018, CHEM 1100, CHEM 1301, or the former CHEM 1300)] or their equivalents.

ENG 1440 Introduction to Statics - 3 cr 0.0
(Lab required) Statics of particles; rigid bodies, equilibrium of rigid bodies; analysis of structures; distributed forces. Not to be held with ENG 1441. Prerequisites: [A minimum grade of 60% in Pre-Calculus Mathematics 40S (or a minimum grade of "C" in one of MATH 0401, MATH 1018, MATH 1230, MATH 1500, MATH 1501, MATH 1510, MATH 1520, MATH 1690, MSKL 0100, or the former MATH 1680)] and [a minimum grade of 60% in Physics 40S (or a passing grade in PHYS 0900 or PSKL 0100; or a minimum grade of "C" in PHYS 1018, PHYS 1050, or PHYS 1051)] and [a minimum grade of 60% in Chemistry 40S (or a passing grade in CHEM 0900 or CSKL 0100; or a minimum grade of "C" in CHEM 1018, CHEM 1100, CHEM 1301, or the former CHEM 1300)] or their equivalents.

ENG 1450 Introduction to Electrical and Computer Engineering - 3 cr 0.0
(Lab required) Part I: Current, voltage, energy, potential, power Ohm's law; independent sources; capacitor, inductor, ideal diode, op-amp; Kirchoff's law; simple circuits (Resistive, RC, RL, OP-Amp; Diode); introduction to ac theory (Sinusoidal waveform, phase relations of voltage and current waveforms for R,L,C. RL and RC circuits). Part II: Applications (Digital Logic, motors). Prerequisites: [A minimum grade of 60% in Pre-Calculus Mathematics 40S (or a minimum grade of "C" in one of MATH 0401 , MATH 1018, MATH 1230, MATH 1500, MATH 1501, MATH 1510, MATH 1520, MATH 1690, MSKL 0100, or the former MATH 1680)] and [a minimum grade of 60% in Physics 40S (or a passing grade in PHYS 0900 or PSKL 0100; or a minimum grade of "C" in PHYS 1018, PHYS 1050, or PHYS 1051)] and [a minimum grade of 60% in Chemistry 40S (or a passing grade in CHEM 0900 or CSKL 0100; or a minimum grade of "C" in CHEM 1018, CHEM 1100, CHEM 1301, or the former CHEM 1300)] or their equivalents.

ENG 1460 Introduction to Thermal Sciences - 3 cr 0.0
(Lab required) Properties of pure substances; first law for closed systems; first law for open systems; second law; examples of power cycles and refrigeration cycles. Prerequisites: [A minimum grade of 60% in Pre-Calculus Mathematics 40S (or a minimum grade of "C" in one of MATH 0401, MATH 1018, MATH 1230, MATH 1500, MATH 1501, MATH 1510, MATH 1520, MATH 1690, MSKL 0100, or the former MATH 1680)] and [a minimum grade of 60% in Physics 40S (or a passing grade in PHYS 0900 or PSKL 0100; or a minimum grade of "C" in PHYS 1018, PHYS 1050, or PHYS 1051)] and [a minimum grade of 60% in Chemistry 40S (or a

passing grade in CHEM 0900 or CSKL 0100; or a minimum grade of "C" in CHEM 1018, CHEM 1100, CHEM 1301, or the former CHEM 1300)] or their equivalents.

NET CHANGE IN CREDIT HOURS: 0.0

Program modification:

Modifications to the description of the **Minor in Management** are outlined below:

Management Minor

The Minor in Management offered by the Faculty of Management is available to Engineering students. The minor consists of any 18 credit hours of Management courses; students must meet all prerequisite requirements. Depending on the approval of the Engineering department, courses used for the minor may also be used to fulfill program requirements in Engineering. Admission requirements for the minor are based on all courses transferred to Engineering or completed while in Engineering; the requirements are a minimum of 30 credit hours applied to their degrees with a minimum Degree Grade Point Average (DGPA) of 3.00. Up to 10 spaces are available each year for engineering students on a competitive basis. Applications can be made in the Engineering Dean's office by May 30th. **Students not granted a reserve space in the minor, but who have successfully completed 18 credit hours of Management courses at the time of graduation, will qualify for the Management Minor.**

Note 1. Civil Engineering students only may use CIVL 2780 for credit towards the Management Minor in Engineering.
Note 2. Mechanical Engineering students only may use MECH 3170 for credit towards the Management Minor in Engineering.

Biosystems Engineering

Modification:

BIOE 2590 Biology for Engineers - 3 cr 0.0
(Lab required) Provide theories and principles of Biology to engineering students and present applications of biological principles to engineering problems. Fundamental theories involved in cell structure and function, metabolism, genetics and heredity, bacteria and virus structure and function, plant and animal structure and function are covered. An introduction to animal and plant physiology is also provided. Laboratory sessions and term assignments focus on the engineering applications of these basic theories and principles to provide a good understanding of the role of Biology in Engineering. May not be held with BIOL 1020 or BIOL 1030. Prerequisite: CHEM 1100 or the former CHEM 1300.

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

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

- **Bachelor of Science in Engineering (Biosystems)**
- **Bachelor of Science in Engineering (Biosystems), Co-operative Option**
- **Biomedical Specialization**
- **Bioresource Specialization**
- **Environmental Specialization**

4.4.1 Biosystems Engineering Degree Program

Preliminary Engineering Program

Common to all engineering programs (see Section 4.2 for details).

Program Core Courses

Note: Students are encouraged to consult the department for eight- and ten-term program models. Students are strongly encouraged to follow the model programs when possible, as timetabling and course offerings are based on these program models.

Course No.		Credit Hours
BIOE 2110	Transport Phenomenon	3
BIOE 2480	Impact of Engineering on the Environment	3
BIOE 2590	Biology for Engineers	3
BIOE 2790	Fluid Mechanics	4
BIOE 2800	Solid Mechanics	4
BIOE 2900	Biosystems Engineering Design 1	4
BIOE 3270	Instrumentation and Measurement for Biosystems	4
BIOE 3320	Engineering Properties of Biological Materials	4
BIOE 3400	Design of Structural Components in Machines	4
BIOE 3590	Mechanics of Materials in Biosystems	4
BIOE 3900	Biosystems Engineering Design 2	4
BIOE 4240	Graduation Project	3
BIOE 4900	Biosystems Engineering Design 3	4
BIOE 4950	Biosystems Engineering Design 4	4
~~CHEM 1310~~	~~University Chemistry 1~~	~~3~~
CHEM 1110	**Introduction to Chemistry 2: Interaction, Reactivity, and Chemical Properties**	**3**
CHEM 1126	**Introduction to Chemical Techniques for Engineering 2**	**1.5**
ENG 2022	Engineering CAD Technologies for Biosystems	3
ENG 3000	Engineering Economics	3
MATH 2130	Engineering Mathematical Analysis 1	3
MATH 2132	Engineering Mathematical Analysis 2	3
MBIO 1220 or MBIO 1010	Essentials of Microbiology Microbiology 1	3 3
MECH 2150	Mechanical Engineering Modelling and Numerical Methods	4
MECH 3482	Kinematics and Dynamics	4
STAT 2220	Contemporary Statistics for Engineers	3
Two Science Electives (see list below)		6
One course in Technology and Society (ENG 3020 or ANTH 2430)		3
One course from the List of Indigenous Knowledge Courses		**3**
~~Two~~ **One** Complementary Studies Electives		~~6~~ **3**
Three Biosystems Engineering Design Electives (see list below)		12
Two Free Electives		6-8
Total credit hours for graduation		~~150~~ **153** to ~~152~~ **155**

Please note the combination of BIOL 1020 (Biology 1: Principles and Themes) and BIOL 1030 (Biology 2: Biological Diversity, Function and Interactions) can be used in place of BIOE 2590 (Biology for Engineers).

The former CHEM 1310 may be used in place of the combination of CHEM 1110 and CHEM 1126.

4.4.2 Science Electives

Course No.		Credit Hours
AGEC 2370	Principles of Ecology (or the equivalent BIOL 2300)	3
ANSC 3530	The Animal and its Environment	3
BIOL 1410	The Anatomy of the Human Body	3
BIOL 1412	Physiology of the Human Body	3
PLNT 2510	Fundamentals of Horticulture	3
SOIL 4060	Physical Properties of Soil	3

4.4.3 Biosystems Engineering Design Electives

Course No.		Credit Hours
BIOE 4390	Unit Operations 1	4
BIOE 4412	Design of Light-Frame Building Systems	4
BIOE 4414	Imaging and Spectroscopy for Biosystems	4
BIOE 4420	Crop Preservation	4
BIOE 4440	Bioprocessing for Biorefining	4
BIOE 4460	Air Pollution Assessment and Management	4
BIOE 4560	Structural Design in Wood	4
BIOE 4590	Management of By-Products from Animal Production	4
BIOE 4600	Design of Water Management Systems	4
BIOE 4610	Design of Assistive Technology Devices	4
BIOE 4620	Remediation Engineering	4
BIOE 4640	Bioengineering Applications in Medicine	4
BIOE 4650	**Textiles in Healthcare and Medical Applications**	**4**

Design elective courses offered vary from year to year. Courses offered in the current year are listed on the online timetables on the department website.

4.4.4 Indigenous Knowledge Courses

Course No.		**Credit Hours**
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 2012 / HIST 2010	**Indigenous History in Canada**	**3**
NATV 2020 / HIST 2020	**The Métis in Canada**	**3**
POLS 2802	**Introduction to Indigenous Politics**	**3**
POLS 3870	**Politics of Indigenous-Settler Relations**	**3**

Students admitted to Biosystems Engineering in Fall 2021 who have completed three complementary studies elective courses prior to admission to the program, may use one of those courses in place of the Indigenous knowledge course.

~~*4.4.4*~~ ***4.4.5*** *Complementary Studies Electives*

Complementary studies electives are required to give the engineering student exposure to topics outside the fields of science and engineering. Many university courses fulfill the complementary studies requirement:

- Any course at the 1000-level or above from the faculties of Arts or Management;
- Any course at the 1000-level or above from the Department of Agribusiness and Agricultural Economics;
- Any course listed in Group C of our 3 specializations

ARTS 1100 Introduction to University may not be used for credit in the Price Faculty of Engineering. Other university courses, which do not cover topics of science or engineering, may also be acceptable. Please consult with the department head (or his/her designate) for approval of such courses. If you are planning to complete a specialization, please take note that there are specific courses to be used as complementary studies electives.

Free Electives

Any university course at the 1000-level or above can be used as a free elective. However, *ARTS 1100 Introduction to University* may not be used for credit in the Price Faculty of Engineering. Students are permitted to take additional design electives or engineering courses from other departments to fulfill free elective requirements. If you are planning to complete a specialization, please take note that there are specific courses to be used as free electives.

~~*4.4.5*~~ *4.4.6 Specializations in Biosystems Engineering*

Students wishing to pursue more focused studies in a Biosystems Engineering subject area have the choice of completing one of three specializations: 1) Biomedical, 2) Bioresource, or 3) Environmental. To complete a specialization, you will be required to complete two science electives (identified as Group A), three Biosystems Engineering design electives (identified as Group B), ~~two~~ **one** complementary studies electives (identified as Group C), **one Indigenous knowledge course (section 4.4.4),** and two free electives (selected from Groups B, C or D). The similarly-themed courses that have been identified for each specialization take the place of two science electives, three Biosystems Engineering design electives, two complementary studies electives, and two free electives in the general Biosystems Engineering program (i.e., completing a specialization does not require any additional coursework).

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~~ **1** 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.)

BIOL 2410 Human Physiology 1
BIOL 2420 Human Physiology 2
BIOL 4470 Sensory-Motor Physiology
~~CHEM 2210 Introductory Organic Chemistry 1~~
CHEM 2100 Organic Chemistry 1: Foundations of Organic Chemistry
~~CHEM 2360 Biochemistry 1~~
CHEM 2700 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy
~~CHEM 2370 Biochemistry 2~~
CHEM 2710 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
ECE 4610 Biomedical Instrumentation and Signal Processing
KPER 2330 Biomechanics
KIN 4330 Advanced Biomechanics
MECH 4322 Design of Biomechanical Devices
MECH 4832 Biomaterials in Biomedical Engineering
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 ~~two~~ **both** courses)

ANSC 3530 The Animal and Its Environment *or* PLNT 2510 Fundamentals of Horticulture
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 4560 Structural Design in Wood
BIOE 4590 Management of By-Products from Animal Production
BIOE 4600 Design of Water Management Systems

Group C: Complementary Studies Electives (choose ~~2~~ **1** 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 1600 Introduction to Agrifood Systems
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.~~

Environmental Specialization

There are numerous environmental issues faced by society. The environmental specialization provides engineers with the knowledge to predict environmental impacts due to human developments and to solve problems associated with the environment (soil contamination, pollution of rivers and lakes, air pollution, wastewater treatment).

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

Group A: Science Electives (choose both courses)

AGEC 2370 Principles of Ecology *or* BIOL 2300 Principles of Ecology
SOIL 4060 Physical Properties of Soil

Group B: Biosystems Engineering Design Electives (choose 3 from the list)

BIOE 4412 Design of Light-Frame Building Systems
BIOE 4460 Air Pollution Assessment and Management
BIOE 4590 Management of By-Products from Animal Production
BIOE 4600 Design of Water Management Systems
BIOE 4620 Remediation Engineering

Group C: Complementary Studies Electives (choose ~~2~~ **1** from the list)

ABIZ 2390 Introduction to Environmental Economics (or equivalent)
ENVR 1000 Environmental Science 1 – Concepts
ENVR 2000 Environmental Science 2 - Issues
ENVR 2810 Environmental Critical Thinking and Scientific Research
ENVR 3160 Environmental Responsibilities and the Law
ENVR 3400 Introduction to Environment and Health
ENVR 3750 Green Building and Planning
ENVR 3850 Sustainable Manitoba
ENVR 4050 Ecosystem Management
ENVR 4400 Advanced Issues in Environment and Health
GEOG 2520 Geography of Natural Resources
PHIL 2750 Environmental Ethics

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.)
AGEC 2370 Principles of Ecology (or equivalent)
CIVL 3690 Environmental Engineering Analysis
CIVL 3700 Environmental Engineering Design
CIVL 4350 Hazardous Waste Treatment
ENVR 2550 Environmental Chemistry
ENVR 3110 Environmental Conservation and Restoration
GEOG 3730 Geographic Information Systems

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

Agribusiness Minor

A minor in agribusiness is available to Biosystems Engineering students. The minimum requirement is 18 credit hours consisting of ECON 1010 Introduction to Microeconomic Principles (3 credit hours), ECON 1020 Introduction to Macroeconomic Principles (3 credit hours), ABIZ 1000 Introduction to Agribusiness (3 credit hours), ABIZ 2510 Introduction to Agricultural and Food Marketing (3 credit hours), ABIZ 2520 Introduction to Management Sciences (3 credit hours) and at least three additional credit hours from the Department of Agribusiness and Agricultural Economics (students must meet all prerequisite requirements). A maximum of 3 courses (9 credit hours) of courses used for the minor may also be used to fulfill course requirements in Biosystems Engineering.

Admission to Medicine

The Bachelor of Science degree in Biosystems Engineering provides the background to meet eligibility requirements for admission into the Max Rady College of Medicine at the University of Manitoba. Students planning to apply for entrance to Medicine after completing the B.Sc. in Biosystems Engineering are advised to consult with the Max Rady College of Medicine for admission requirements.

Co-operative Education Program in Biosystems Engineering

Please refer to *SECTION 5: Co-operative Education and Industrial Internship Programs*

Civil Engineering

Introductions:

CIVL 4000 Uncertainty Analysis in Civil Engineering Systems - 4 cr +4.0
(Lab required) Fundamentals of uncertainty, risk, reliability and decision making in Civil Engineering applications. Mathematical basis for analyzing the effects of uncertainty on Civil Engineering design. Data driven modelling and analysis of multi-variable Civil Engineering systems. Computer-based numerical and simulation methods to evaluate uncertainty in Civil Engineering applications. Risk analysis using Bayesian Decision Theory. Prerequisites: CIVL 3590, MATH 2130, and STAT 2220.

CIVL 4032 Bridge Engineering - 4 cr +4.0
(Lab required) Fundamentals of highway bridge engineering, base knowledge of bridge construction technology and tools for structural analysis and evaluation for most common bridge types built in North America according to current standards. Prerequisite: CIVL 3760.

Modifications:

CIVL 3770 Design of Steel Structures - 4 cr 0.0
(Lab required) Introduction to design of steel structures; loading calculations based on building codes; structural configurations; design of beams, columns, beam-columns and connections based on limit state design. Prerequisites: CIVL 2770, CIVL 3760.

CIVL 4390 Reinforced Concrete Structures - 4 cr 0.0
(Lab required) Limit state design of reinforced concrete; analysis and design of beams and one-way slabs subjected to bending and shear; bond, cracking and deflection considerations; column design; isolated footings. Prerequisites: CIVL 2770, CIVL 3760.

NET CHANGE IN CREDIT HOURS: +8.0

Program modifications:

Modifications to the following programs are outlined on the next 4 pages:

- **Bachelor of Science in Engineering (Civil)**
- **Bachelor of Science in Engineering (Civil), Co-operative Option**
- **Bachelor of Science in Engineering (Civil) with Environmental Option**

Preliminary Engineering Program

Common to all Engineering Programs (see Section 4.2 for details.)

Civil Engineering Program and Environmental Engineering Option

Common Core Program

Course No.		Credit
CHEM 1110	Introduction to Chemistry 2: Interaction, Reactivity and Chemical Properties*	3
CHEM 1126	Introduction to Chemical Techniques for Engineering 2*	1.5
CIVL 2770	Civil Engineering Materials	5
CIVL 2780	Civil Engineering Systems	4
CIVL 2790	Fluid Mechanics	4
CIVL 2800	Solid Mechanics 1	4
CIVL 2830	Graphics for Civil Engineers	2
CIVL 2840	Civil Engineering Geomatics	3
CIVL 3590	Numerical Methods for Engineers	4
CIVL 3690	Environmental Engineering Analysis	4
CIVL 3700	Environmental Engineering Design	4
CIVL 3730	Geotechnical Materials and Analysis	4
CIVL 3740	Hydraulics	4
CIVL 3750	Hydrology	4
CIVL 3760	Structural Analysis	4
CIVL 3770	~~Structural Design 1~~ Design of Steel Structures	4
CIVL 3790	Transportation Engineering	4
CIVL 4220	Geotechnical Design	4
CIVL 4380	Infrastructure Engineering and Construction Management	4
CIVL 4390	~~Structural Design 2~~ Reinforced Concrete Structures	4
CIVL 4400	Transportation Engineering 2	4
CIVL 4590	Design Project	6
ENG 2030 or ENG 2040	Engineering Communication: Strategies for the Profession Engineering Communication: Strategies, Practice and Design	3 3
ENG 3000	Engineering Economics	3
ENG 3020	Technology, Society and the Future	3
GEOL 1340	The Dynamic Earth	3
MATH 2130	Engineering Mathematical Analysis	3
MATH 2132	Engineering Mathematical Analysis 2	3
STAT 2220	Introduction to Probability and Statistics	3
Civil Engineering:		
~~Complementary Studies elective (See Note 1)~~		~~3~~
Indigenous Knowledge Course (See Note 1)		3
Environmental Option:		
PHIL 2750	Environmental Ethics 3 ~~(See Note 1)~~	3

* The former CHEM 1310 may be used in lieu of the combination of CHEM 1110 and CHEM

Civil Engineering Technical Electives: (5 courses) (see Notes 2 and 3)

A minimum of 3 courses must be taken from Group A and up to 2 from Group B, with no more than one course from outside the Department of Civil Engineering.

Group A (Select 3 to 5 courses)

Course No.	Course Name	Credit Hours
CIVL 3710	Finite Element Analysis	4
CIVL 4020	Masonry Design and Construction	4
CIVL 4022	Properties and Design of Concrete Mixtures	4
CIVL 4024	Sustainable Building Design (see Note 4)	4
CIVL 4030	Advanced Structural Design	4
CIVL 4032	**Bridge Engineering**	**4**
CIVL 4040	Structural Dynamics	4
CIVL 4100	Engineering Management and the Environment	4
CIVL 4120	Water Treatment Plant Design	4
CIVL 4130	Solid Waste Management	4
CIVL 4180	Environmental Systems	4
CIVL 4200	Groundwater Contamination	4
CIVL 4230	Geotechnical Engineering	4
CIVL 4232	Geotechnical Earthquake Engineering	4
CIVL 4250	Groundwater Hydrology	4
CIVL 4300	Design of Urban Water Systems	4
CIVL 4350	Hazardous Waste Treatment	4
CIVL 4360	Water Resources Planning and Management	4
CIVL 4410	Transportation Systems	4
CIVL 4420	Highway Pavement Design	4
CIVL 4470	Watershed Processes	4

Group B (Up to 2 courses, only 1 from outside of Civil Engineering)

Course No.	Course Name	Credit Hours
BIOE 4560	Structural Design in Wook	4
CIVL 4000	**Uncertainty Analysis in Civil Engineering Systems**	**4**
CIVL 4332	Civil Engineering Thesis Project	4
CIVL 4500	Contemporary Topics in Civil Engineering	4

Environmental Option Technical Electives: (5 courses) (see Notes 2 and 3)

Group A (Select 3 to 5 courses)

Course No.	Course Name	Credit Hours
CIVL 3710	Finite Element Analysis	4
CIVL 4100	Engineering Management and the Environment	4
CIVL 4120	Water Treatment Plant Design	4
CIVL 4130	Solid Waste Management	4
CIVL 4180	Environmental Systems	4
CIVL 4200	Groundwater Contamination	4
CIVL 4250	Groundwater Hydrology	4
CIVL 4300	Design of Urban Water Systems	4
CIVL 4350	Hazardous Waste Treatment	4
CIVL 4360	Water Resources Planning and Management	4
CIVL 4470	Watershed Processes	4

Group B (Up to 2 courses, only 1 from outside of Civil Engineering)

Course No.	Course Name	Credit Hours
BIOE 4460	Air Pollution Assessment and Management	4
CIVL 4000	**Uncertainty Analysis in Civil Engineering Systems**	**4**
CIVL 4332	Civil Engineering Thesis Project	4
CIVL 4500	Contemporary Topics in Civil Engineering	4
SOIL 4500	Remediation of Contaminated Land	3

Indigenous Knowledge Courses

Course No.	**Course Name**	**Credit Hours**
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 2012 / HIST 2010	**Indigenous History in Canada**	**3**
NATV 2020 / HIST 2020	**The Métis in Canada**	**3**
POLS 2802	**Introduction to Indigenous Politics**	**3**
POLS 3870	**Politics of Indigenous-Settler Relations**	**3**
ENG 4100	**Contemporary Topics In Engineering Practice (See Note 1)**	**3**

Notes:

1. ~~Students are required to take any course from the Faculty of Arts or Faculty of Management, at the 1000 level or above, as a complementary studies elective. However, ARTS 1110 Introduction to University may not be used for credit in the Price Faculty of Engineering. Students pursuing the Environmental Option must take PHIL 2750 as their complementary studies elective.~~
   Students are required to take at least one of the courses from the list of Indigenous Knowledges courses. ENG 4100 may be used to meet this requirement when the course content satisfies the requirements for an Indigenous course. Students admitted to Civil Engineering in Fall 2021 who have completed two complementary studies elective courses (or 6 credit hours) prior to admission to the program, may use one of those courses in place of the Indigenous knowledge course. A complementary studies course is any course from the Faculty of Arts or the Faculty of Management at the 1000 level or above, with the exception of *ARTS 1110 Introduction to the University* which may not be used for credit in the Price Faculty of Engineering.
2. Technical elective courses offered vary from year to year and may have limited enrollment. Courses offered in the current year are listed on the online timetables on the Department website.
3. Students are encouraged to discuss their program of courses with members of the instructional staff to obtain advice concerning the best choice of electives for their needs.
4. CIVL 4024 can not be held with BIOE 4412 or BIOE 4700.
5. Students may take one technical elective course with a significant engineering science and/ or design component from another department subject to the approval by the department head (or designate) of Civil Engineering.

Mechanical Engineering

Modifications:

MECH 3520 Aerodynamics - 4 cr 0.0
(Lab required) Aeronautical definitions, compressible flow, plane normal shock waves, Mach. no. and shock waves in two-dimensional flow, potential flow theory in two-dimensional and axisymmetric flows. Two-dimensional wing theory, finite wing theory panel methods, elements of boundary layer theory. Compressibility and wings, wing design, flow control. Prerequisites: MECH 2150 and MECH 3492 (or the former MECH 3490).

MECH 4860 Engineering Design - 5 cr 0.0
(Lab required) Design projects; teams of students prepare written and oral design reports on solutions to specific problems from Manitoba industries; series of seminars by invited speakers. Prerequisite: eligibility for graduation in the current academic year or registered in third year Industrial Cooperative Education Program. Prerequisites: (ENG 2030 or ENG 2040 or the former ENG 2010) and MECH 3170 and (MECH 3652 or the former MECH 4650).

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following programs are set out on the next 2 pages:

- **Bachelor of Science in Engineering (Mechanical)**
- **Bachelor of Science in Engineering (Mechanical), Co-operative Education Option**

4.10.1 MECHANICAL ENGINEERING PROGRAM

Preliminary Engineering Program - Common to all Engineering Programs. (See Section 4.2 for details.)

Program Core Courses:

Course No.		Credit Hours
~~CHEM 1310~~	~~An Introduction to Physical Chemistry~~	~~3~~
CHEM 1110	Introduction to Chemistry 2: Interaction, Reactivity and Chemical Properties	3
CHEM 1126	Introduction to Chemical Techniques for Engineering 2	1.5
ECE 3010	Elements of Electric Machines and Digital Systems	4
ENG 3000	Engineering Economics	3
ENG 3020	Technology, Society and the Future	3
ENG 2030 or ENG 2040	Engineering Communication: Strategies for the Profession Engineering Communication: Strategies, Practice and Design	3 3
MATH 2130	Engineering Mathematical Analysis	3
MATH 2132	Engineering Mathematical Analysis 2	3
MATH 3132	Engineering Mathematical Analysis 3	3
MECH 2112	Fundamentals of Mechanical and Computer Aided Desgin	5
MECH 2150	Mechanical Engineering Modelling and Numerical Methods	4
MECH 2202	Thermodynamics	4
MECH 2222	Mechanics of Materials	4
MECH 2262	Fundamentals of Fluid Mechanics	4
MECH 2272	Engineering Materials 1	4
MECH 3170	Project Management	4
MECH 3420	Vibrations and Acoustics	4
MECH 3430	Measurement and Control	4
MECH 3460	Heat Transfer	4
MECH 3482	Kinematics and Dynamics	4
MECH 3492	Fluid Mechanics and Applications	4
MECH 3502	Stress Analysis and Design	4
MECH 3542	Engineering Materials 2	4
MECH 3652	Machine Design	4
MECH 3982	Mechanical Laboratories in Solid Mechanics	2
MECH 3992	Mechanical Laboratories in Thermofluids	2
MECH 4860	Engineering Design	5
PHYS 1070	Physics 2: Waves and Modern Physics	3
STAT 2220	Introduction to Probability and Statistics	3
5 Technical Electives (TE)		4
~~1 Complementary Studies Elective (CE)~~		~~3~~
1 Course from the list of Indigenous Knowledge Courses		3

Indigenous Knowledge Courses

Students must select one course from the following list:

Course No.		Credit Hours
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 2012 / HIST 2010	**Indigenous History in Canada**	**3**
NATV 2020 / HIST 2020	**The Métis in Canada**	**3**
POLS 2802	**Introduction to Indigenous Politics**	**3**
POLS 3870	**Politics of Indigenous-Settler Relations**	**3**

NOTES:

1. ~~A student's selection and timetabling of electives are subject to the following conditions:~~
   a. ~~Only one complementary elective (CE) is required upon completion of Critical Thinking (PHIL 1290), which is recommended but not required; students may choose an alternate course from the Faculties of Arts or Management at the 1000 level or above, and one course from the approved list of Written English Courses for Engineering Students in the Preliminary Engineering Program (see Section 4.2).~~
   b. ~~The complementary elective (CE) can be any course at the 1000-level or above from the faculties of Arts or Management. However, ARTS 1110 Introduction to University may not be used for credit in the Price Faculty of Engineering.~~
1. **Students admitted to Mechanical Engineering in Fall 2021 who have completed two complementary studies elective courses prior to admission to the program, may use one of those courses in place of the Indigenous knowledge course. A complementary studies course is any course from the Faculty of Arts or the Faculty of Management at the 1000 level or above, with the exception of *ARTS 1110 Introduction to the University* which may not be used for credit in the Price Faculty of Engineering.**
2. For courses continuing through both terms, credit is given on completion of course.
3. A minimum of 20 credit hours of technical electives is required with 18 hours required if completing MECH 4162 the Mechanical Engineering Thesis Course (5 courses at 4 credit hours each or 3 courses at 4 credit hours each plus MECH 4162 at 6 credit hours).
4. **The former CHEM 1310 may be used in lieu of the combination of CHEM 1110 and CHEM 1126.**

Faculty of Environment, Earth, and Resources

Faculty of Environment, Earth, and Resources

Program modification:

The faculty is proposing a modification to the Science and Faculty of Arts Course Requirements, as outlined on the next page.

3.4 Science and Faculty of Arts Course Requirements

Students are required to take 6 credit hours from the Faculty of Arts and 6 credit hours of science coursework.

For course subjects taught by the **Faculty of Arts** refer to the Chapter Faculty of Arts for a complete listing.

Students may complete any combination of the courses listed below adding up to six credit hours to satisfy the 6 credit hours science requirement.

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

ENVR 1000, ENVR 2000

GEOG 1290, GEOG 1291, GEOG 2200, GEOG 2272, GEOG 2520, GEOG 2540, GEOG 2541, GEOG 2550, GEOG 2551, GEOG 2700, GEOG 2930, GEOG 3390, GEOG 3730

GEOL 1340, GEOL 1400, GEOL 1410, GEOL 1420, GEOL 2350, GEOL 2390, GEOL 2440, GEOL 2500, GEOL 2570~~, GEOL 3310~~

Faculty of Science

All courses offered by the Faculty of Science.

Faculty of Agricultural and Food Sciences

AGRI 1600

ENTM 1000, ENTM 2050

PLNT 1000, PLNT 2500

SOIL 3060, SOIL 3520, SOIL 3600

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

Environment and Geography

Introduction:

ENVR 3140 Aquatic Ecosystem Services - 3 cr +3.0
This course introduces the field of Ecosystem Services, an analytical framework for evaluating the economic, cultural, and biogeochemical contributions that ecosystems make to human health and well-being. Examples will be drawn from aquatic ecosystems and cover topics such as pollution and contamination cleanup, commercial and subsistence food provisioning, climate regulation, and cultural uses in folklore, art, religion, science, and recreation. A special emphasis will be made on microbes as key drivers of aquatic ecosystems, including topics in microbial diversity, metabolism, and evolution. Prerequisites: [BIOL 1010 or BIOL 1011] or [(BIOL 1020 or BIOL 1021) and (BIOL 1030 or BIOL 1031)]; and [(one of CHEM 1100, CHEM 1101, the former CHEM 1300, or the former CHEM 1301) and (CHEM 1120 or CHEM 1121)] or ENVR 2000.

Modifications:

ENVR 3180 Methods in Ecotoxicology - 3 cr 0.0
(Lab required) This is a laboratory-based course exploring and critiquing the development, conduction, and interpretation of toxicity tests in ecotoxicology. Students will learn how to perform standard bioassays for a variety of species (plants, invertebrates, and vertebrates) as well as systems (aquatic and terrestrial) at different levels of biological organization, from the individual to the ecosystem. Prerequisite: ENVR 2180 or BIOL 2380 or AGRI 2180, or permission of instructor or department head.

ENVR 3250 Environmental Assessment - 3 cr 0.0
This course engages with the theory, principles and practices of environmental assessment as a planning and decision-making process to identify and mitigate adverse effects of development projects. Environmental assessment is defined in the context of federal and provincial legislation, and applicable standards and guidelines. Assignments involve practical experiences, case study review and basic report preparation. Prerequisites: [ABIZ 3550 or ENVR 3160 or the former ENVR 3150] and [BIOL 2300 or BIOL 2301 or AGEC 2370] or [BIOL 2390] or permission of department head or instructor.

ENVR 4180 Ecotoxicological Risk Characterization - 3 cr. 0.0
An advanced course that will give students working knowledge of current techniques for defining and mitigating the environmental risks associated with chemical and other contaminants. The course will cover the topics of problem definition, effects characterization, exposure characterization, risk assessment, causality, weight of evidence, and risk communication and management. Prerequisite: One of ENVR 2180, BIOL 2380, BIOL 2381, or AGRI 2180, or permission of instructor or department head.

GEOG 2300 Atmospheric Thermodynamics, Clouds and Precipitation (PS) - 3 cr 0.0
Critical thermodynamic processes are discussed that are associated with the Earth's atmosphere including dry and moist processes, phases of water, stability, cloud development and precipitation processes. Prerequisites: (one of GEOG 1290, GEOG 1291, GEOG 1200, GEOG 1201) and (one of MATH 1230, MATH 1500, MATH 1501, MATH 1510, MATH 1520, MATH 1530) or permission of department head or instructor.

GEOG 2310 Introduction to Process Hydrology (PS) - 3 cr 0.0
This course introduces students to the near-surface components of the hydrological cycle, including the processes of precipitation, evaporation, water-biosphere interactions, infiltration, overland and stream flow. Prerequisites: (one of GEOG 1290, GEOG 1291, GEOG 1200, GEOG 1201) and (one of PHYS 1020, PHYS 1021, PHYS 1050, PHYS 1051, MATH 1230, MATH 1500, MATH 1501, MATH 1510, MATH 1520, MATH 1530) or permission of department head or instructor.

GEOG 3200 Introduction to Remote Sensing (TS) - 3 cr 0.0
(Lab required) The course is an introduction to the principles of optical, active and passive microwave remote sensing. A review of satellite and sensors and their geographic applications will be presented, along with digital image analysis techniques. Laboratory assignments will provide hands-on experience in dealing with remote sensing data. Prerequisites: (one of GEOG 1200, GEOG 1201, GEOG 1290, GEOG 1291) and (one of PHYS 1020, PHYS 1021, PHYS 1050, PHYS 1051, MATH 1230, MATH 1300, MATH 1301, MATH 1310, MATH 1500, MATH 1501, MATH 1510, MATH 1520) or permission of department head or instructor.

GEOG 3810 Quantitative Research Methods in Geography (TS) - 3 cr 0.0
This course focuses on the quantitative analytical methods available for the interpretation on physical and human geography applications. May not be held with the former GEOG 3680. Prerequisite: ENVR 2810 or the former GEOG 2530 or STAT 1000 or STAT 1001 or STAT 1150, or permission of department head or instructor.

GEOG 4560 Techniques in Climatology - 3 cr 0.0
This course will examine field and analysis techniques that form the basis of climatological research, with particular emphasis on contemporary research in the areas of microclimatology and micrometeorology. Techniques for the examination of biophysical and biogeochemical processes driving the surface exchanges of heat, water and greenhouse gases form an important component of this course. The aim of the course is to prepare the student for independent research in applied climatology and meteorology, including the affiliated fields of ecology, hydrology, oceanography, as well as other fields of atmospheric science. Prerequisite: GEOG 3320 or permission of department head or instructor.

NET CHANGE IN CREDIT HOURS: +3.0

Program modifications:

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

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

7.5 Bachelor of Environmental Science Program Chart

7.5 Bachelor of Environmental Science[1,2]			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1100[3], ~~CHEM 1300,~~ CHEM ~~,~~ 1110[3], ~~CHEM 1310,~~ CHEM 1120[3], MATH 1500[34], STAT 1000[5], ECON 1010 ~~Plus 3 credit hours from the Faculty of Arts[4]~~	ENVR 2810[98], ENVR 3160[109], BIOL 2300 (or AGEC 2370), ECON 2390 (ABIZ 2390), PHYS 1020[65], STAT 2000 One of PHYS 1030[65], MATH 1200, MATH 1300[76], MATH 1700[76] One of GEOG 1290 or GEOL 1340 (or GEOL 1440) 3 credit hours from the Faculty of Arts	ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area[87] ~~Enough elective credit to total 120 credit hours for the program.~~21 credit hours of elective courses.	
The W course must be completed within the first 60 credit hours of coursework.			
HONOURS COOPERATIVE OPTION 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030, CHEM 1100[3], CHEM 1110[3], CHEM 1120[3], ~~, CHEM 1300, CHEM 1310,~~ MATH 1500[34], STAT 1000[5], ECON 1010 ~~Plus 3 credit hours from the Faculty of Arts[4]~~	ENVR 2810[98], ENVR 3160[109], BIOL 2300 (or AGEC 2370), ECON 2390 (ABIZ 2390), PHYS 1020[65], STAT 2000, ENVR 2900 One of PHYS 1030[65], MATH 1200, MATH 1300[76], MATH 1700[76] One of GEOG 1290 or GEOL 1340 (or GEOL 1440) 3 credit hours from the Faculty of Arts	ENVR 4110, ENVR 4500 Plus 33 credit hours in an approved Focus Area[87] ENVR 3900, ENVR 3980, ENVR 3990, ENVR 3910, ENVR 3920 (ENVR 4980[11] and ENVR 4910[11] are optional) ~~Enough elective credit to total 120 credit hours for the program.~~15 credit hours of elective courses.	
The W course must be completed within the first 60 credit hours of coursework.			
MAJOR 120 CREDIT HOURS			
ENVR 1000, ENVR 2000, BIOL 1020, BIOL 1030 CHEM 1100[3], CHEM 1110[3], CHEM 1120[3], ~~, CHEM 1300, CHEM 1310,~~ MATH 1500[34], STAT 1000[5], ECON 1010 ~~Plus 3 credit hours from the Faculty of Arts[4]~~	ENVR 2810[98], ENVR 3160[109], BIOL 2300 (or AGEC 2370), ECON 2390 (ABIZ 2390), PHYS 1020[65], STAT 2000 One of PHYS 1030[65], MATH 1200, MATH 1300[76], MATH 1700[76] One of GEOG 1290 or GEOL 1340 (or GEOL 1440) 3 credit hours from the Faculty of Arts	ENVR 4110 Plus 33 credit hours in an approved Focus Area[78] 27 credit hours of elective courses.~~Enough elective credit to total 120 credit hours for the program.~~	
The W course must be completed within the first 60 credit hours of coursework.			

MAJOR COOPERATIVE OPTION 120 CREDIT HOURS		
ENVR 1000, ENVR 2000, BIOL 1030, CHEM 1100[3], CHEM 1110[3], CHEM 1120[3], ~~CHEM 1300, CHEM 1310,~~ MATH 1500[34], STAT 1000[5], ECON 1010 ~~Plus 3 credit hours from the Faculty of Arts~~[4]	ENVR 2810[98], ENVR 3160[109], BIOL 2300 (or AGEC 2370), ECON 2390 (ABIZ 2390), PHYS 1020[65], STAT 2000, ENVR 2900 One of PHYS 1030[65], MATH 1200, MATH 1300[76], MATH 1700[76] One of GEOG 1290 or GEOL 1340 (or GEOL 1440) 3 credit hours from the Faculty of Arts	ENVR 4110 Plus 33 credit hours in an approved Focus Area[78] ENVR 3900, ENVR 3980, ENVR 3990, ENVR 3910, ENVR 3920 (ENVR 4980[11] and ENVR 4910[11] are optional) 21 credit hours of elective courses.~~Enough elective credit to total 120 credit hours for the program.~~
The W course must be completed within the first 60 credit hours of coursework.		
GENERAL 90 CREDIT HOURS		
ENVR 1000, ENVR 2000, BIOL 1030, CHEM 1100[3], CHEM 1110[3], CHEM 1120[3], ~~CHEM 1300, CHEM 1310,~~ MATH 1500[34], STAT 1000[5], ECON 1010 ~~Plus 3 credit hours from the Faculty of Arts~~[4]	ENVR 2810[98], ENVR 3160[109], BIOL 2300 (or AGEC 2370), ECON 2390 (ABIZ 2390), PHYS 1020[65], STAT 2000 One of PHYS 1030[65], MATH 1200, MATH 1300[76], MATH 1700[76] One of GEOG 1290 or GEOL 1340 (or GEOL 1440) 3 credit hours from the Faculty of Arts	ENVR 4110 Plus 9 credit hours in an approved Focus Area 21 credit hours of elective courses.~~Enough elective credit to total 90 credit hours for the program.~~
MINOR 18 CREDIT HOURS		
ENVR 1000, ENVR 2000	12 credit hours of ENVR courses numbered at the 2000-level or above.	

NOTES:

[1]Advanced Entry into the degree programs is summarized in section 7.2.1 of this *Chapter*.

[2]The courses required in this program will satisfy the University Mathematics Requirements.

[3]The former CHEM 1300 and CHEM 1310 may be used in lieu of CHEM 1100, CHEM 1110 and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.

[43]MATH 1230 or MATH 1510 or MATH 1520 may be taken in place of MATH 1500 (or equivalent).

[54]~~It is recommended that students consider a selection from List A below when selecting courses from the Faculty of Arts.~~STAT 1150 and STAT 2150 may be used in lieu of STAT 1000 and STAT 2000.

[65]PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030.

[76]MATH 1310 and MATH 1710 may be taken in place of MATH 1300 and MATH 1700 (or equivalent).

[8]7Focus Area courses must include a minimum of 21 credit hours at the 3000- and/or 4000-level. Focus Area performance requirements are defined in section 7.3 of this *Chapter*. Information on Focus Areas is available in the Focus Area Brochure.

[9]8The former ENVR 2170 or the former ENVR 2270 may be used in lieu of ENVR 2810.

[10]9The former ENVR 2650 may be used in lieu of ENVR 3160.

[11] Students in the cooperative education option who complete ENVR 4980 and ENVR 4910 will graduate with an additional 1.5 degree credits for a total of 121.5 credits hours.

IMPORTANT: The Honours and Major programs need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

NOTE:

- To fulfil prerequisite requirements, a grade of 'C' must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.
- Students should review the current course topics available through *ENVR 2010* (1.5), *ENVR 2020* (3), *ENVR 3000* (3), *ENVR 3010* (1.5), *ENVR 3020* (3), *ENVR 4000* (3), *ENVR 4010* (1.5), and *ENVR 4020* (3) as well as those offered through *GEOG 3740 (6), GEOG 3750 (3), GEOG 3760 (6), GEOG 3770 (3) and GEOG 4670 (3)*. Also, all courses are not offered every year or every term. The course schedule for the current academic term is available from the **Class Schedule in Aurora** .
- Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.
- Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the program requirements chart.

~~**List A:** Recommended List of Faculty of Arts Electives. Students may wish to consider courses from the following list when identifying appropriate selections from the Faculty of Arts.~~

~~* In the list below indicates courses no longer offered.~~

~~ANTH 1210 Human Origins and Antiquity (3)~~
~~ANTH 1220 Cultural Anthropology (3)~~
~~ANTH 1520 Critical Cultural Anthropology (3)~~
~~ECON 1020 Introduction to Macroeconomic Principles (3)~~
~~NATV 1200 Indigenous Peoples in Canada (6)~~
~~NATV 1240 Indigenous Peoples in Canada, Part 2 (3)~~
~~PHIL 1200 Introduction to Philosophy (6)~~
~~PHIL 1290 Critical Thinking (3)~~
~~PHIL 1320* Introductory Logic (6)~~
~~PHIL 1510* Historical Introduction to Philosophy (6)~~
~~RLGN 1420 Ethics in World Religions (3)~~
~~RLGN 2180 Theory of Nature (3)~~

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

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

6.5. B.Sc. Physical Geography Program Chart

Bachelor of Science in Physical Geography[1,2]			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
HONOURS[3] 120 CREDIT HOURS			
GEOG 1290, PHYS 1020[4], MATH 1500[5] PHYS 1030[4], MATH 1300[5]; or 6 credit hours from GEOL 1340, COMP 1012, ~~CHEM 1300~~ **CHEM 1100**[6], ~~CHEM 1310~~ **CHEM 1110**[6], **CHEM 1120**[6], STAT 1000[7~~6~~], STAT 2000, BIOL 1020[8~~7~~], BIOL 1030[8~~7~~], MATH 1700[5] Plus 6 credit hours from the Faculty of Arts	GEOG 2200, GEOG 2300, GEOG 2310, GEOG 2540, GEOG 2550, ENVR 2810[9~~8~~] Whichever of, PHYS 1030[4], MATH 1300[5], or 6 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7~~6~~], STAT 2000, BIOL 1020[8~~7~~], BIOL 1030[8~~7~~], MATH 1700[5] not yet taken	GEOG 2272[10~~9~~], GEOG 3730, GEOG 3810[11~~10~~] 9 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[11]~~CHEM 1300, CHEM 1310~~, STAT 1000[7~~6~~], STAT 2000, BIOL 1020[8~~7~~], BIOL 1030[8~~7~~], MATH 1700[5] not yet taken	GEOG 4660 ~~Enough elective credit to total 120 credit hours for the program.~~18 credit hours of elective courses.
The W course must be completed within the first 60 credit hours of courses.			
Plus a **Stream** approved by a Riddell Faculty student advisor. Honours Stream requirements are as follows: 33 credit hours of 2000- (or higher) level courses, of which 24 credit hours must be at the 3000- or 4000-level.			
HONOURS COOPERATIVE OPTION[3] 120 CREDIT HOURS			
GEOG 1290, PHYS 1020[4], MATH 1500[5] PHYS 1030[4], MATH 1300[5]; or 6 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7~~6~~], STAT 2000, BIOL 1020[8~~7~~], BIOL 1030[8~~7~~], MATH 1700[5] Plus 6 credit hours from the Faculty of Arts	GEOG 2200, GEOG 2300, GEOG 2310, GEOG 2540, GEOG 2550, ENVR 2810[9~~8~~], ENVR 2900 Whichever of, PHYS 1030[4], MATH 1300[5], or 6 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7~~6~~], STAT 2000, BIOL 1020[8~~7~~], BIOL 1030[8~~7~~], MATH 1700[5] not yet taken	GEOG 2272[10~~9~~], GEOG 3730, GEOG 3810[11~~10~~], ENVR 3900, ENVR 3980, ENVR 3910 9 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7~~6~~], STAT 2000, BIOL 1020[8~~7~~], BIOL 1030[8~~7~~], MATH 1700[5] not yet taken	GEOG 4660 ENVR 3990, ENVR 3920 (ENVR 4980[12] and ENVR 4910[12] are optional) ~~Enough elective credit to total 120 credit hours for the program.~~12 credit hours of elective courses.
The W course must be completed within the first 60 credit hours of courses.			
Plus a **Stream** approved by a Riddell Faculty student advisor. Honours Stream requirements are as follows: 33 credit hours of 2000- (or higher) level courses, of which 24 credit hours must be at the 3000- or 4000-level.			
MAJOR[3] 120 CREDIT HOURS			
GEOG 1290, PHYS 1020[4], MATH 1500[5] PHYS 1030[4], MATH 1300[5]; or 6 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6],	GEOG 2200, GEOG 2300, GEOG 2310, GEOG 2540, GEOG 2550, ENVR 2810[9~~8~~] Whichever of, PHYS 1030[4], MATH 1300[5], or 6 credit hours from GEOL	GEOG 2272[10~~9~~], GEOG 3730, GEOG 3810[11~~10~~] 9 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6],	~~Enough elective credit to total 120 credit hours for the program.~~27 credit hours of elective courses.

CHEM 1120[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7,6], STAT 2000, BIOL 1020[8,7], BIOL 1030[8,7], MATH 1700[5] Plus 6 credit hours from the Faculty of Arts	1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7,6], STAT 2000, BIOL 1020[8,7], BIOL 1030[8,7], MATH 1700[5] not yet taken	**CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7,6], STAT 2000, BIOL 1020[8,7], BIOL 1030[8,7], MATH 1700[5] not yet taken	
The W course must be completed within the first 60 credit hours of courses.			
Plus a **Stream** approved by a Riddell Faculty student advisor. Major Stream requirements are as follows: 30 credit hours of 2000- (or higher) level courses, of which 18 credit hours must be at the 3000- or 4000-level.			
MAJOR COOPERATIVE OPTION[3] 120 CREDIT HOURS			
GEOG 1290, PHYS 1020[4], MATH 1500[5] PHYS 1030[5], MATH 1300[5]; or 6 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7,6], STAT 2000, BIOL 1020[8,7], BIOL 1030[8,7], MATH 1700[5] Plus 6 credit hours from the Faculty of Arts	GEOG 2200, GEOG 2300, GEOG 2310, GEOG 2540, GEOG 2550, ENVR 2810[9,8], ENVR 2900 Whichever of, PHYS 1030[4], MATH 1300[5], or 6 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7,6], STAT 2000, BIOL 1020[8,7], BIOL 1030[8,7], MATH 1700[5] not yet taken	GEOG 2272[10,9], GEOG 3730, GEOG 3810[11,10], ENVR 3900, ENVR 3980, ENVR 3910 9 credit hours from GEOL 1340, COMP 1012, **CHEM 1100**[6], **CHEM 1110**[6], **CHEM 1120**[6]~~CHEM 1300, CHEM 1310~~, STAT 1000[7,6], STAT 2000, BIOL 1020[8,7], BIOL 1030[8,7], MATH 1700[5] not yet taken	ENVR 3990, ENVR 3920 (ENVR 4980[12] and ENVR 4910[12] are optional) ~~Enough elective credit to total 120 credit hours for the program.~~21 credit hours of elective courses.
The W course must be completed within the first 60 credit hours of courses.			
Plus a **Stream** approved by a Riddell Faculty student advisor. Major Stream requirements are as follows: 30 credit hours of 2000- (or higher) level courses, of which 18 credit hours must be at the 3000- or 4000-level.			
MINOR 18 CREDIT HOURS			
GEOG 1290 15 credit hours selected from 2000-, 3000-, or 4000-level courses designated as Physical Geography (PS) or Techniques (TS) courses in the Geography course descriptions defined in sections 5.6 in this *Chapter.*			
NOTES: [1] The courses required in this program will satisfy the University Mathematics requirement. [2] Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart. [3] Entrance into the degree programs is summarized in 6.2.1 in this *Chapter*. [4] PHYS 1050 and PHYS 1070 may be used in lieu of PHYS 1020 and PHYS 1030, respectively. [5] MATH 1230, MATH 1510 or MATH 1520 may be used in lieu of MATH 1500; or MATH 1690 may be used in place of MATH 1500 (or equivalent) and MATH 1700; or MATH 1310 may be used in lieu of MATH 1300; or MATH 1232 or MATH 1710 may be used in lieu of MATH 1700.			

[6] **The former CHEM 1300 and 1310 may be used in lieu of CHEM 1100, CHEM 1110 and CHEM 1120.** ***CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.***

~~6~~ [7] STAT 1150 may be used in lieu of STAT 1000.

~~7~~ [8] BIOL 1000 and BIOL 1010 may be used in lieu of BIOL 1020 and BIOL 1030.

~~8~~ [9] The former GEOG 2530 may be used in lieu of ENVR 2810.

~~9~~ [10] The former GEOG 2440 may be used in lieu of GEOG 2272.

~~10~~ [11] The former GEOG 3680 may be used in lieu of GEOG 3810.

[12] Students in the cooperative education option who complete ENVR 4980 and ENVR 4910 will graduate with an additional 1.5 degree credits for a total of 121.5 credits hours.

Note:
To fulfil prerequisite requirements a grade of 'C' must be achieved, unless otherwise stated, in any course stipulated as a prerequisite to a further course.

- Students should review the course topics available for GEOG 3740 (6), GEOG 3750 (3), GEOG 3760 (6), GEOG 3770 (3) *and GEOG 4670* (3). Also, all courses are not offered every year. The course schedule for the current academic term is available from the Class Schedule in Aurora.
- Students registering in certain courses may be required to participate in field trips or field components and pay a portion of the associated expenses. For details, contact the Department of Environment and Geography general office.

IMPORTANT: The Honours and Major programs need not be completed in the course order described in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

Geological Sciences

Modifications:

GEOL 2500 Introduction to Mineralogy - 3 cr 0.0
(Lab required) An introduction to the chemistry, physics and classification of minerals. Brief, systematic description of about 200 of the most important minerals. Laboratory: hand specimen identification. Not to be held with the former GEOL 2540. Prerequisites: GEOL 1340 (C+) and [one of Chemistry 40S (50%), CSKL 0100 (P), or the former CHEM 0900 (P)]. (CHEM 1100 or CHEM 1101) and (one of CHEM 1120, CHEM 1121, or CHEM 1126) are highly recommended.

GEOL 2570 Energy and Mineral Resources - 3 cr 0.0
An introduction to the geological factors and processes responsible for the origin, concentration and distribution of fuels, geothermal resources, metallic and nonmetallic minerals. Prerequisite: Any university-level Geology course.

GEOL 2770 Principles of Inorganic Geochemistry - 3 cr 0.0
(Lab required) The cosmic abundance of the elements, nucleosynthesis, geological differentiation of the elements; chemical petrology of igneous, metamorphic and sedimentary rocks. An introduction to aqueous and low-temperature geochemistry. Prerequisites: [GEOL 2500 or the former GEOL 2540] and [one of MATH 1300, MATH 1301, MATH 1210, MATH 1211, MATH 1230, MATH 1500, MATH 1501, MATH 1510, or MATH 1520]. Pre- or corequisite: [(CHEM 1100 or CHEM 1101) and (one of CHEM 1120, CHEM 1121, or CHEM 1126)] or the former CHEM 1300 or the former CHEM 1301.

GEOL 3310 Paleontology - 3 cr 0.0
(Lab required) The study of fossils: invertebrate paleontology, with an introduction to paleontologic principles, vertebrate paleontology, and paleobotany. Prerequisites: [GEOL 1340 (C+) and GEOL 1400] or [BIOL 1030 or BIOL 1031].

GEOL 3450 Hydrogeology - 3 cr 0.0
(Lab required) The hydrologic cycle and basic hydrologic processes; properties of aquifers and principles of groundwater flow; well hydraulics and groundwater resource evaluation; regional groundwater flow and subsurface geology; and basic chemical hydrogeology. May not be held with CIVL 4250. Prerequisites: [MATH 1230 or MATH 1500 or MATH 1501 or MATH 1510 or MATH 1520] and [PHYS 1020 or PHYS 1021 or PHYS 1050 or PHYS 1051] and [(CHEM 1100 or CHEM 1101) and (one of CHEM 1120, CHEM 1121, or CHEM 1126)] or the former CHEM 1300 or the former CHEM 1301] and [GEOL 2060 or GEOG 2310 or (one of STAT 1000, or STAT 1001, or STAT 1150)] and [GEOL 2530].

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the following program are outlined on the next 4 pages.

- **Bachelor of Science (Honours) in Geological Sciences (Geology)**
- **Bachelor of Science (Major) in Geological Sciences (Geology)**
- **Bachelor of Science (Honours) in Geological Sciences (Geophysics)**
- **Bachelor of Science (Major) in Geological Sciences (Geophysics)**

SECTION 8: Department of Geological Sciences

Added Material
~~**Deleted Material**~~

8.4 B.Sc. Geological Sciences (Geology) Program Chart

8.4 B.Sc. Geological Sciences (Geology)[1]			
YEAR 1	**YEAR 2**	**YEAR 3**	**YEAR 4**
HONOURS GEOLOGY 120 CREDIT HOURS			
GEOL 1340 (B) and GEOL 1400 MATH 1500[2a] (C) CHEM ~~1300~~-1100 (C) CHEM 1120[3] PHYS 1020[4a] 6 credit hours from the Faculty of Arts	GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2800, GEOL 2770, GEOL 3910[5]	GEOL 2060, GEOL 3110, GEOL 3130, GEOL 3310, GEOL 3440, GEOL 3450, GEOL 3490, GEOL 3900, GEOL 4910[5] 3 credit hours of Geological Sciences Geology Electives – Group A	GEOL 4300, GEOL 4520, GEOL 4670, GEOL 4870 6 credit hours of Geological Sciences Geology Electives – Group A Enough elective credit to total 120 credit hours for the program.
MAJOR GEOLOGY 120 CREDIT HOURS			
GEOL 1340 (C+) and GEOL 1400 MATH 1500[2a] (C) CHEM ~~1300~~-1100 (C) CHEM 1120[3] PHYS 1020[4a] 6 credit hours from the Faculty of Arts	GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2800, GEOL 2770, GEOL 3910[5]	GEOL 2060, GEOL 3110, GEOL 3130, GEOL 3310, GEOL 3440, GEOL 3490, GEOL 3900, GEOL 4910[5] 3 credit hours of Geological Sciences Geology Electives[6a]	GEOL 4670, 15 credit hours of Geological Sciences Geology Electives[6a] Enough elective credit to total 120 credit hours for the program.

Notes:

[1]The courses required in this program will satisfy the University Mathematics requirement and the University Written English requirement.
[2a]MATH 1230 or MATH 1510 or MATH 1520 may be used in lieu of MATH 1500.
[3]The former CHEM 1300 may be used in lieu of CHEM 1100 and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.
[4a]PHYS 1050 may be used in lieu of PHYS 1020.
[5]Students will register for GEOL 3910 and GEOL 4910 in Summer term.
[6a]Among the Geological Sciences Electives, Major students must complete 18 credit hours consisting of 3 credit hours from Group B with the remaining 15 credit hours from Group A or B.

NOTE:
Students should be aware that they are expected to contribute to transportation and accommodation costs. See the department office at the beginning of each year for information.

IMPORTANT:
The Honours and Major programs need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. (Letters in brackets indicate the minimum prerequisite standing in a specific course required for entry to the program).

GEOL 1400 is highly recommended to be taken in Year 1, but will not be considered when assessing entrance requirements to the program. If this requirement is not fulfilled in Year 1, it must be completed by the end of Year 2.

NOTE:
To fulfil prerequisite requirements, a grade of 'C' must be achieved in any course stipulated as prerequisite to a further course in Geological Sciences, unless a higher prerequisite is stipulated in a course description.

All courses are not offered every year. The course schedule for the current academic term is available from the Class Schedule in Aurora.

Students registering in certain courses may be required to pay a portion of the costs associated with field trips. For details, contact the Department general office.

Equivalent courses offered through Université de Saint Boniface may be used in lieu of the specified courses identified in the degree program chart.

Geological Sciences Geology Electives

Other Note1: Geological Sciences – Geology Electives: Honours students are required to complete a minimum of 9 credit hours from Group A; Major students must complete 18 credit hours consisting of 3 credit hours from Group B with the remaining 15 credit hours from Group A or B.	
Geological Sciences - Geology Electives - Group A	
GEOL 2390	Environmental Geology (3)
GEOL 2570	Energy and Mineral Resources (3)
GEOL 3140	Gemology (3)L
GEOL 3420	Engineering Geology (3)
GEOL 3740	Exploration Seismology (3)L
GEOL 3750	Geology and Geophysics of the Planets (3)L
GEOL 3810	Applied Geophysics (3)L
GEOL 4260	Applied Geophysics Field Course (3)
GEOL 4270	Advanced Studies in Earth Sciences (3)
GEOL 4280	Instrumental Techniques in Geology (3)L
GEOL 4310	Paleontologic Principles (3)L
GEOL 4360	Mineral Exploration Techniques (3) L
GEOL 4370	Global Change (3)
GEOL 4380	Mineral Resource Development (3)
GEOL 4740	Geophysics Field School (6)
GEOL 4890	Basin Analysis (3)L
GEOL 4920	Technical Report (3) - For Major students only
ENVR 2180	Introductory Toxicology (3)
ENVR 2550	Environmental Chemistry (3)L
GEOG 2310	Introduction to Process Hydrology (3)
GEOG 2930	Introduction to Oceanography (3)
GEOG 3200	Introduction to Remote Sensing (3)L
GEOG 3730	Geographic Information Systems (3)L
Geological Sciences - Geology Electives - Group B	
GEOG 3450	Hydrogeology (3)L
GEOG 4300	Hydrogeology (3)L
GEOG 4520	Petroleum Geology (3)L
NOTE: With departmental approval, up to 6 credit hours of 2000-level or higher courses from Science departments may be substituted to satisfy professional registration (EGM) requirements.	

SECTION 8: Department of Geological Sciences

Added Material
~~**Deleted Material**~~

8.5 B.Sc. Geological Sciences (Geophysics) Program Chart

B.Sc. Geological Sciences (Geophysics)[1]			
YEAR 1	**YEAR 2**	**YEAR 3**	**YEAR 4**
HONOURS GEOPHYSICS 120 CREDIT HOURS			
GEOL 1340 (B) and one of: GEOL 1400, GEOL 1410, or GEOL 1420[2] PHYS 1050(B) [or PHYS 1020(B+)], PHYS 1070(B) [or PHYS 1030 (B+)], MATH 1210[3], ~~COMP 1012,~~ CHEM ~~1300~~1100, CHEM 1120[4], MATH 1510[3](B), and MATH 1710[3](B) [or MATH 1500(B) and MATH 1700(B)[1]] ~~Plus 3 credit hours from the Faculty of Arts.~~	GEOL 2060, GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2800 MATH 2130[5], MATH 2132[5] 3 credit hours from the Faculty of Arts[6].	GEOL 3130, GEOL 3740, GEOL 3810, GEOL 4250, GEOL 4320, GEOL 4330, GEOL 4670, GEOL 4740[7], GEOL 4810, GEOL 4870, COMP 1012~~COMP 2190~~[4], PHYS 2600, MATH 3132[5], ~~6~~ 3 credit hours of Geological Sciences Geophysics Electives from List P and 6 credit hours of Geological Sciences Geophysics Electives from List B. 3 credit hours from the Faculty of Arts. Enough elective credit to total 120 credit hours for the program.	
MAJOR GEOPHYSICS 120 CREDIT HOURS			
GEOL 1340 (C+) and one of: GEOL 1400, GEOL 1410, or GEOL 1420[2] PHYS 1050(C) [or PHYS 1020(C+)], PHYS 1070(C) [or PHYS 1030 (C+)], MATH 1210[3], ~~COMP 1012,~~ CHEM 1100, CHEM 1120[4]~~1300~~, MATH 1510[3](C+), and MATH 1710[3] (C) [or MATH 1500(C+) and MATH 1700(C)[1]] ~~3 credit hours from the Faculty of Arts.~~	GEOL 2060, GEOL 2440, GEOL 2500, GEOL 2520, GEOL 2530, GEOL 2800 MATH 2130[5], MATH 2132[5] 3 credit hours from the Faculty of Arts[6].	GEOL 3130, GEOL 3740, GEOL 3810, GEOL 4670, GEOL 4740[7], GEOL 4810, COMP 1012~~COMP 2190~~[4], PHYS 2600, MATH 3132[5] 9 credit hours of Geological Sciences Geophysics Electives from List A, 3 credit hours of Geological Sciences Geophysics Electives from List P and 6 credit hours of Geological Sciences Geophysics Electives from List B. 3 credit hours from the Faculty of Arts. Enough elective credit to total 120 credit hours for the program.	

NOTES:

[1]The courses required in this program will satisfy the University Mathematics Requirement. ~~and the University Written English Requirement~~.

[2]GEOL 1400 is highly recommended to be taken in Year 1, but GEOL 1410 or GEOL 1420 may be substituted.

[3]MATH 1690 may be taken in place of MATH 1230 or MATH 1500 (or MATH 1510) and MATH 1700 (or MATH 1710); MATH 1300 may be taken in place of MATH 1210. Selection of MATH 1300 or MATH 1210 will determine the prerequisite background for Mathematics courses required in years 2, 3 and 4.

[4] The former CHEM 1300 may be used in lieu of CHEM 1100 and CHEM 1120. CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120.

[~~4~~5]MATH 2720 may be taken in place of MATH 2130. PHYS 2496 may be taken in place of MATH 2132. ~~MATH 2160 may be taken in place of COMP 2190.~~ PHYS 3496 may be taken in place of MATH 3132. Normally, students select (MATH 2130, MATH 2132, ~~COMP 2190,~~ and MATH 3132) or (MATH 2720, PHYS 2496, ~~MATH 2160,~~ and PHYS 3496).

[6] The course selected must meet the University's Written English requirement.

[7~~5~~]GEOL 4740 will normally be taken immediately following the Winter term examinations and will continue for approximately three weeks. Registration will show as Summer Term. NOTE: Students are expected to contribute to the costs of transportation, lodging, and food. Contact the Department for further information.

IMPORTANT: The Honours and Major programs need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program. (Letters in brackets indicate the minimum prerequisite standing required for further study)

NOTE:

- To fulfil prerequisite requirements, a grade of 'C' must be achieved in any course stipulated as prerequisite to a further course in Geological Sciences, unless a higher prerequisite grade is stipulated in a course description.

- All courses are not offered every year. The course schedule for the current academic term is available from the Class Schedule in Aurora
- Students registering in certain courses may be required to pay a portion of the costs associated with field trips. For details, contact the Department general office.

Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart.

Other Note 1: Geological Sciences Geophysics Electives Lists A, B and P

List A Electives: Major students must complete a minimum of 9 credit hours from the following courses

GEOL 4250	Theory and Application of Geophysical Inversion Methods (3)L
GEOL 4320	Physics of the Earth: Seismology and Heat Flow (3)
GEOL 4330	Physics of the Earth: Geomagnetism and Gravity (3)
GEOL 4920	Technical Report (3)
List B Electives: Honours students are required to complete a minimum of 6 credit hours; Major students must complete a minimum of 6 credit hours from the following courses:	
GEOL 2390	Environmental Geology (3)
GEOL 2570	Energy and Mineral Resources (3)
GEOL 2770	Principles of Inorganic Geochemistry (3)L
GEOL 3110	Petrogenesis of Igneous Rocks (3)L
GEOL 3420	Engineering Geology (3)
GEOL 3440	Structure and Metamorphism (3)L
GEOL 3450	Hydrogeology (3)L
GEOL 3490	Glacial Geology and Geomorphology (3)L
GEOL 3750	Geology and Geophysics of the Planets (3)L
GEOL 3900	Sedimentology (3)L
GEOL 3910	Introduction to Field Mapping (3)
GEOL 4270	Advanced Studies in Earth Sciences (3)
GEOL 4300	Mineral Deposits (3)L
GEOL 4360	Mineral Exploration Techniques (3)L
GEOL 4370	Global Change (3)
GEOL 4380	Mineral Resource Development (3)
GEOL 4520	Petroleum Geology (3)L
GEOL 4890	Basin Analysis (3)L
GEOL 4910	Advanced Field Mapping (3)
ENVR 2550	Environmental Chemistry (3)L
GEOG 2300	Atmospheric Thermodynamics , Clouds and Precipitation (3)
GEOG 2310	Introduction to Process Hydrology (3)
GEOG 2930	Introduction to Oceanography (3)
GEOG 3200	Introduction to Remote Sensing (3)L
GEOG 3310	Atmospheric Dynamics, Storms and Radar (3)
GEOG 3320	Introduction to Microclimates and Micrometeorology (3)
GEOG 3730	Geographic Information Systems (3)L
Any List A or P not already taken, or any advanced level Geological Sciences, Physics or Mathematics course(s) approved by department.	
List P Electives: ~~Honours students are required to complete a minimum of 6 credit hours; Major students must complete a minimum of 3 credit hours from the following courses:~~	
CHEM 2290	Chemical Energetics and Dynamics: Macroscopic Descriptions (3)L
PHYS 2152	Modern Physics for Engineers (3)L
PHYS 2260	Optics (3)L
PHYS 2610	Circuit Theory and Introductory Electronics (3)L
PHYS 2650	Classical Mechanics 1 (3)
PHYS 3180	Stars (3)
PHYS 3630	Electro - and Magnetostatic Theory (3)
PHYS 3670	Classical Thermodynamics (3)
MECH 2262	Fundamentals of Fluid Mechanics (3)L
Or alternate physical science course(s) approved by department.	

Faculty of Health Sciences

Interdisciplinary Health Program

Introductions:

HEAL 1500 Foundations of Human Biology 1 - 3 cr +3.0
This course starts by describing simple molecules and cells and progressively introduces the student to more sophisticated aspects of human biology. The course will detail the general organization of the human body and describe many of the main systems responsible for its function. Students registered in a Major or Honours program in Biological Sciences can use this course only as an elective. Prerequisite: Biology 40S (or equivalent) or Chemistry 40S or CHEM 0900 or CSKL 0100.

HEAL 1502 Foundations of Human Biology 2 - 3 cr +3.0
This course will introduce various elements of human biology encompassing the nervous, endocrine, and reproductive systems. It will also provide basic knowledge in genetics and microbiology. Students registered in a Major or Honours program in Biological Sciences can use this course only as an elective. Prerequisite: HEAL 1500 (C+).

Modifications:

HEAL 2600 Integration of Health Determinants of Individuals - 3 cr 0.0
Students study, integrate and apply the determinants that affect the health of individuals throughout the lifespan to selected case or learning scenarios. The case or learning scenarios present a variety of issues in the delivery of health-related services that are intended to benefit individual health. Prerequisites: one of CHEM 1100 (the former CHEM 1300) or BIOL 1020 or HEAL 1502 or STAT 1000 and one of PSYC 1200 or SOC 1000 (the former SOC 1200) or consent of instructor.

HEAL 3610 Mechanisms of Disease 1 - 3 cr 0.0
This course will provide an overview of cellular processes and immunology, followed by an introduction to common processes underlying the development of human diseases. These include: cell injury and death (including metabolism and aging); neoplasia, inflammation; toxins and trauma; genetic diseases and susceptibility; and immune dysregulation. The focus will be on both local and systemic disease processes, and the progression of cells and tissues from a healthy to a pathological state. For IHP students only. Prerequisites: BGEN 2000 and CHEM 2740 and (one of CHEM 2700, MBIO 2700, CHEM 2730, MBIO 2730, the former CHEM 2360, the former MBIO 2360, the former CHEM 2770, the former MBIO 2770).

NET CHANGE IN CREDIT HOURS: +6.0

Program modifications:

Modifications to the **Bachelor of Health Sciences** are outlined on the next 7 pages.

- **Biomedical Sciences Concentration – closure** (See Observation 13 in the Report.)

Bachelor of Health Sciences Degree Program Chart

The Bachelor of Health Sciences (BHSc) Degree consists of 120 credit hours. There is one concentration available as an option, the Biomedical Sciences concentration. A Concentration is 18 credit hours. Students should consult the Academic Calendar to ensure that they have the appropriate pre-or co-requisites before they attempt to register in a course. A number of courses are cross-listed between departments/faculties. Students are strongly encouraged to seek the advice of **an** ~~the~~ Academic Advisor in the Interdisciplinary Health Program in order to plan their programs.

Year 1 [1]	**Year 2** [1]	**Year 3** [1]	**Year4** [1]
30 credit hours • ~~BIOL 1020~~ • ~~BIOL 1030~~ • BIOL 1410 • ~~BIOL 1412~~ • ~~CHEM 1300~~ • ~~CHEM 1310~~ • **CHEM 1100**[2] • **CHEM 1110**[2] • **CHEM 1120**[2] • **HEAL 1500**[3] • **HEAL 1502**[3] • **NATV 1220 OR NATV 1240** • PSYC 1200 **OR SOC 1000** • STAT 1000 ~~3 credit hours of Free Electives~~ **3 credit hours of Free Electives if SOC 1000 is taken**	30 credit hours • **BGEN 2000** • **CHEM 2730** • **CHEM 2740** • ~~ECON 1210 OR ECON 1220~~ • ~~GMGT 2070 OR LEAD 2010~~ • HEAL 2600 • HNSC 1210 • HNSC 2000 OR PSYC 2250 • **IMMU 2000** • ~~NATV 1220 OR NATV 1240 OR NATV 3240~~ • **PHGY 1030 (6)** • ~~PHIL 2740~~ ~~6 credit hours of Program Electives~~ [2,3] 3 credit hours of Free Electives	30 credit hours • **BGEN 3010**[4] • FMLY 3750 • FMLY 3780 OR FMLY 3790 • HEAL 3000 • HEAL 3600 • **HEAL 3610** • **PHAC 3000** • **PHIL 2740** ~~15 credit hours of Program Electives~~ [2,3] 3 credit hours of Free Electives[3] **3 credit hours of Program Electives**[3] [5]	30 credit hours • HEAL 4600 • HEAL 4620 • **HEAL 4630** • **PHAC 4030** • **PHAC 4040** ~~15 credit hours of Program Electives~~ [2, 3] 9 credit hours of Free Electives[3] **6 credit hours of Program Electives**[3] [5]

[1] Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart.

[2] CHEM 1300 and CHEM 1310 may be used as course equivalents if completed prior to September 2021.

[3] BIOL 1020 and BIOL 1030 may be used as course equivalents if completed prior to September 2021.

~~[2] Of 36 credit hours of program electives, 21 must be science electives~~

~~[3] Of the 36 credit hours of program electives, 24 must be at the 3000-4000 level.~~

[4] Students interested in applying to the MSc in Genetic Counselling must take BGEN 3022 and BGEN 3024 instead of BGEN 3010.

[5] Of the 9 credit hours of program electives, 6 credit hours must be selected from the science elective list.

Bachelor of Health Sciences Elective List

Please note, a course completed as a core requirement may not also be used as an elective.

~~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).~~

~~**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~~

Science Electives
Faculty of Agricultural and Food Sciences
AGRI 2180 Introductory Toxicology

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 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~~

Clayton H Riddell Faculty of Environment Earth and Resources
ENVR 2180 Introductory Toxicology

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

CHEM 2100 Organic Chemistry 1: Foundations of Organic Chemistry
CHEM 2110 Organic Chemistry 2: Foundations of Organic Synthesis
CHEM 2122 Experimental Organic Chemistry
CHEM 2750 Elements of Biochemistry II
~~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 Introduction to Metabolic Energy~~
~~MBIO 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways~~
MBIO 2420 Introductory Virology
MBIO 2750 Elements of Biochemistry II
~~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 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~~

Social Sciences Electives
Faculty of Arts
ECON 1010 Introduction to Microeconomic Principles
ECON 1210 Introduction to Canadian Economic Issues and Policies
~~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 1000 Introduction to Sociology
~~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

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
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

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

Program modification:

Modifications to the following programs are outlined on the next 12 pages:

- **Bachelor of Health Studies**
- **Family Health Concentration**

Bachelor of Health Studies Degree Program Chart

The Bachelor of Health Studies (B.H.St.) Degree consists of 120 credit hours. There are three concentrations available, (1) Health Policy, Planning, and Evaluation, (2) Health Promotion and Education, and (3) Family Health. A Concentration is 18 credit hours. Students should consult the Academic Calendar to ensure that they have the appropriate pre-or co-requisites before they attempt to register in a course. A number of courses are cross-listed between departments/faculties. Students are strongly encouraged to seek the advice of the Academic Advisor in the Interdisciplinary Health Program in order to plan their programs.

Year 1 [1]	**Year 2** [1]	**Year 3** [1]	**Year 4** [1]
30 credit hours • ANTH 1210 or ANTH 1220 • FMLY 1012 • **HEAL 1500**[2] • **HEAL 1502**[2] • PSYC 1200 • **SOC 1000** • ~~SOC 1200~~ • STAT 1000 ~~6 credit hours of Science Electives~~ [2] 3 credit hours of Concentration Electives **3 credit hours of Free Electives**	30 credit hours • ECON 1210 OR ECON 1220 • GMGT 1010 OR GMGT 2070 • HEAL 2600 • HNSC 1210 • HNSC 2000 OR PSYC 2250 • NATV 1220 OR NATV 1240 OR NATV 3240 6 credit hours of Concentration Electives 3 credit hours of Program Electives [3] 3 credit hours of Free Electives	30 credit hours • FMLY 3750 • FMLY 3780 • FMLY 3790 • HEAL 3000 • HEAL 3600 • PHIL 2740 • SOC 2490 3 credit hours of Concentration Electives 6 credit hours of Program Electives [3]	30 credit hours • HEAL 4600 • HEAL 4610 6 credit hours of Concentration Electives 12 credit hours of Program Electives [3] 6 credit hours of Free Electives

Notes:
[1] Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the degree program chart.
[2] BIOL 1020 and BIOL 1030 may be used as course equivalents if courses were completed prior to September 2021.
~~[2]See Bachelor of Health Studies electives list for courses that would meet the science requirement.~~
[3] Of the 21 credit hours of program electives, 9 must be at the 3000-4000 level.

Bachelor of Health Studies Elective List

Please note, a course completed as a core requirement may not also be used as an elective.

~~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

FOOD 4150 Food Microbiology 1

HNSC 1200 Food, Facts and Fallacies
HNSC 2130 Nutrition through the Life Cycle
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 3100 Gender and Politics in Canada~~
~~POLS 3860 Canadian Federalism~~
~~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 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 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
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 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 3890 Geography of Wellness
~~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

Max Rady College of Medicine
BGEN 2000 Human Cell Biology
BGEN 3010 Genetics for Biomedicine

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 3510 Physical Activity and Aging

KPER 1200 Physical Activity, Health and Wellness
KPER 2200 Planning Principles
KPER 2700 Motor Control and Learning
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 1100 Atomic and Molecular Structure and Energetics
CHEM 1110 Interaction, Reactivity, and Chemical Properties
CHEM 1120 Introduction to Chemical Techniques
CHEM 1130 Introduction to Organic Chemistry
~~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 2100 Organic Chemistry 1: Foundations of Organic Chemistry
CHEM 2110 Organic Chemistry 2: Foundations of Organic Synthesis
CHEM 2122 Experimental 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 2700 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy
CHEM 2710 Biochemistry 2: Catabolism, Synthesis, and Information Pathways
CHEM 2720 Principles and Practices of the Modern Biochemistry Laboratory
CHEM 2730 Elements of Biochemistry 1

CHEM 2740 Introduction to the Biochemistry Laboratory
CHEM 2750 Elements of Biochemistry 2
~~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 Introduction to Metabolic Energy~~
~~MBIO 2370 Biochemistry 2: Catabolism, Synthesis, and Information Pathways~~
MBIO 2420 Introductory Virology
MBIO 2700 Biochemistry 1: Biomolecules and Introduction to Metabolic Energy
MBIO 2710 Biochemistry 2: Catabolism, Synthesis, and Information Pathways

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 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

Health Promotion and Education:
Students selecting the Health Promotion and Education concentration should choose 18 credit hours from the following courses:

ANTH 2560 - Anthropology of Illness
EDUA 1560 - Adult learning and Development
EDUA 1570 - Foundations of Adult Education
EDUA 1580 - Program Planning in Adult Education
EDUA 1590 - Facilitating Adult Education
ENVR 3400 - Introduction to Environment and Health
ENVR 4400 - Advanced Issues in Environment and Health
FMLY 1010 - Human Development in the Family
FMLY 1420 - Family Management Principles
FMLY 2650 - The Social Aspects of Aging
FMLY 3012 - Theories of Social Development
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
HEAL 4500 - Injury Prevention Across the Life Course
HNSC 1200 - Food Facts and Fallacies*
HNSC 2130 - Nutrition through the Life Cycle*
HNSC 2150 - Composition, Functional and Nutritional Properties of Food
HNSC 2160 - Principles of Food Preparation and Preservation
HSNC 3260 - Food Quality Evaluation
HNSC 3350 - Culture and Food Patterns
HNSC 4270 - Sensory Evaluation of Food
HNSC 4290 - Food, Nutrition, and Health Policies
HNSC 4310 - Nutrition and the Elderly
KIN 2610 - Health and Physical Aspects of Aging (also NUR 2610)
KPER 1200 - Physical Activity, Health, and Wellness
LABR 1260 - Working for a Living
NATV 2100 - Indigenous Spirituality
NATV 3100 - Indigenous Healing Ways
PHIL 2150 - Mind and Body
PSYC 2260 - Introduction to Research Methods in Psychology
PSYC 2360 - Brain and Behaviour
PSYC 2440 - Behaviour Modification Principles
PSYC 2470 - Learning Foundations of Psychology
PSYC 2480 - Cognitive Processes
PSYC 3130 - Introduction to Health Psychology
RLGN 1430 - Food: Religious Concepts and Practices
SOC 2620 - The Sociology of Aging
SOC 2630 - Social Change
SOC 3540 - The Sociology of Health Care Systems
SOC 3730 - Society and Education
STAT 2000 - Basic Statistical Analysis 2*
SWRK 2050 - Community and Organizational Theory

SWRK 2080 - Interpersonal Communication Skills

Note: *Students considering a career as a Home Economics teacher through the Faculty of Education after degree program should consult with an academic advisor in the Faculty of Education. Some courses (marked with an asterisk) may be required for completion of higher level courses in the 'teachable subject areas' in foods and nutrition and family social sciences, and will require careful program planning.

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

Faculty of Kinesiology and Recreation Management

Modifications:

KIN 4460 Fitness Appraisal and Lifestyle Counselling - 3 cr 0.0
(Lab required) Theoretical knowledge and practical training related to physical activity, fitness and lifestyle appraisal and counselling. Note: This course prepares students for certification as a Certified Personal Trainer (CPT) by the Canadian Society for Exercise Physiology. B.Kin. students who wish to prepare for certification as a Certified Exercise Physiologist (CEP) by the Canadian Society for Exercise Physiology, should consult the Undergraduate Program Administrator for information. May not be held for credit with PHED 4460. Prerequisites: KPER 3470 (or the former KIN 3470 or the former PHED 3470 or the former PHED 3430). Pre- or corequisites: [KPER 1200 (or the former PERS 1200 or the former PHED 1200)] and [KIN 3512 (or the former KIN 3090 or the former PHED 3090)]. Requires an active Recreation Services Membership.

KPER 2120 Academic Skills in Kinesiology and Recreation Management - 3 cr 0.0

- The course has been modified to meet the criteria for a Written English course. See Observation 2 in the Report.

KPER 2170 History of Physical Activity and Leisure - 3 cr 0.0

- The course has been modified such that it no longer meets the criteria for a Written English course. See Observation 3 in the Report.

REC 2130 Introduction to Indigenous Land-based Education and Outdoor Recreation - 3 cr 0.0
This course examines human relationships to the outdoors. Through the exploration of historical and contemporary philosophies and theories about the outdoors, the course will introduce Indigenous ways of knowing and being in relation to the multiple conceptualizations of outdoor recreation, environmental education and outdoor experiential education. Special attention will be given to issues of social and environmental justice within outdoor practices within Canadian and global contexts. Prerequisite: One of KPER 1400 (or the former PERS 1400 or the former REC 1400), NATV 1000, NATV 1200, NATV 1220, NATV 1240, or permission of instructor.

REC 3770 Indigenous Land-based Education (Urban and Rural) - 3 cr 0.0
This course explores the history and potential of Indigenous land-based education within the Winnipeg metropolitan region and surrounding areas. Three facets of Indigenous land-based education will be emphasized: nature, culture, and history. Course content and experiential learning activities will examine First Nations and Métis perspectives on the unique history, culture, and natural environment of the area, including the University of Manitoba wetlands, forested, and agricultural lands. Prerequisite: One of REC 2130, NATV 1000, NATV 1200, NATV 1220, NATV 1240, or permission of instructor.

REC 4400 Special Event Management - 3 cr 0.0
This course examines the theory and practice of special event management. Students will engage in a multi-disciplinary exploration of concepts and issues unique to special event contexts. Students will be given the opportunity to apply knowledge gained. May not be held for credit with the former REC 4310. Prerequisite: REC 2400.

REC 4770 Mino-Bimadisiwin: Indigenous Recreation and Well-being - 3 cr 0.0
This course examines historical and contemporary Indigenous perspectives of well-being. Indigenous responses to the political landscape of health and well-being will be examined

through community and grassroots movements, physical cultural practices, and physical, emotional, mental and spiritual ways of knowing. Prerequisite: REC 2130 or permission of instructor.

NET CHANGE IN CREDIT HOURS: 0.0

Program modification:

Modifications to the **Bachelor of Recreation Management and Community Development** are outlined on the next 2 pages.

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: 30 Credit Hours		
Course No.		**Cr.Hrs.**
KPER 1200	Physical Activity, Health and Wellness	3
KPER 1400	Concepts of Recreation and Leisure	3
PSYC 1200	Introduction to Psychology	6
SOC 1000	Introduction to Sociology	3
STAT 1000 / STAT 1150	Basic Statistical Analysis 1 or Introduction to Statistics and Computing	3
	Electives	12
YEAR 2: 30 Credit Hours		
Course No.		**Cr.Hrs.**
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
	Choose 3 of the following 5:	9
REC 2100	Introduction to Leisure Travel (3)	
REC 2130	Introduction to Outdoor and Land-Based Recreation (3)	
REC 2150	Introduction to Sport Management (3)	
REC 2170	Introduction to Therapeutic Recreation (3)	
REC 2650	Social Aspects of Aging (3)	
	Electives	6
YEAR 3: 30 Credit Hours		
Course No.		**Cr.Hrs.**
KPER 3100	Inclusive Physical Activity and Leisure	3
KPER 3460	Sociology of Physical Activity of Leisure	3
REC 3072	Principles of Community Development	3
REC 3180	Social Psychology of Leisure	3
REC 3220	Program Planning and Evaluation	3
KPER 3630	Service and Experiential Learning	3
REC 3850	Planning of Recreation Areas and Facilities	3
~~REC 3/4XXX~~	Advanced ~~Recreation~~ **Faculty** Elective~~*~~ **(REC or KPER at the 3000- or 4000-level)**	3
	Electives	6

YEAR 4: 30 Credit Hours		
Course No.		**Cr.Hrs.**
KPER 4020	Philosophy of Physical Activity and Leisure	3
KPER 4100	Current Issues	3
Supervised Fieldwork Experience	KPER 4630 (12) ***or*** KPER 4632 (6) & KPER 4634 (6)	12
~~REC 3/4XXX~~	Advanced ~~Recreation~~ **Faculty** Elective~~*~~ **(REC or KPER at the 3000- or 4000-level)**	3
	Electives	6
Degree Exit Requirement: Current CPR Level C and Emergency or Standard First Aid Certification		

~~***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 and 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 (3)~~
~~KPER 4320 Sport and the Body (3)~~
~~KPER 4340 Sport, Film and Society (3)~~
~~PHED 4710 Outdoor Education (3)~~

Faculty of Management

Program modification:

A modification to the **Bachelor of Commerce (Honours)** is outlined on the next 2 pages.

Faculty of Management/I.H. Asper School of Business
Calendar Modification
Effective for September 2022

2.1 Admission Requirements from High School and Previous Post-Secondary Institutions
(section 2.1 sent to the Faculty of Science and SCADM for review on January 19, 2021)
…skip to (see highlighted sections)

Track 1 Transfer Students
The following is a summary of the admission requirements for the Bachelor of Commerce (Honours) for Track 1 transfer students. Equivalent courses completed at other universities will be considered for admission and transfer credit only if the courses have been taken within the last 10 years. All admission requirements, as well as application deadline dates and forms, are included in the Applicant Information Bulletin that is available from the Admissions Office, 424 University Centre. This information is also posted on the University of Manitoba's website.

Requirements (for Track 1 Transfer students) [1]
• [ECON 1010 (3) and ECON 1020 (3)] (6)
• 6 credit hours from: Anthropology, History, Mathematics, Philosophy, Political Studies, Psychology, or Sociology (6)*[2]
• Mathematics MATH 1520 (3) or MATH 1500 (3) or MATH 1230 (3)[3]
• Statistics STAT 1000 (3) or STAT 1150 (3)
• A 3 credit hour Written English ("W") course from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline) (3)
• 3 credit hours of electives (3)**[4]

Minimum 24 credit hours completed by April 30. Although 24 credit hours is the minimum requirement for admission, a full year course load would require 30 credit hours; therefore, students only taking 24 credit hours for admission will need to pick up an extra 6 credit hours of course work once in the Asper School of Business.

An Elective is any three or six credit hour course freely chosen by the student from courses taught in the degree programs of other faculties and schools, excluding the Asper School of Business.

If students want to complete 30 credit hours in Year 1, students are recommended to take 6 credit hours from this suggested list of recommended courses: GMGT 1010 plus one of GMGT 2060, GMGT 2070 or MKT 2210.

*[1] Students must achieve a minimum grade of "C" on each course listed above.
[2] Courses chosen for this requirement must be independent from courses taken to fulfill other degree requirements.
[3] MATH 1510 will be accepted as an alternate for MATH 1500 or MATH 1520.
[4]Critical Thinking (Philosophy) PHIL 1290 is a preferred elective choice

Students must achieve a minimum grade of "C" on each course listed above. Admission in this category is competitive.

See Applicant Bulletin for complete details.

4.1 Program Requirements for the Bachelor of Commerce (Honours) Program – Direct Entry, Track 1 and Track 2 (including students admitted from International Articulation Agreements)

Course Requirements for Direct Entry, Track 1 and Track 2 Students

The tables below list the Core courses that all Business students must complete. The courses are listed by year in a *suggested* sequence. Students normally complete the Core courses in the sequence shown.

To determine which additional courses to take each year (i.e., non-Core courses) students should consult the listing of course requirements for each year of their chosen Major.

<table>
<tr><th colspan="4">Course Requirements for Direct Entry, Track 1 and Track 2 Students</th></tr>
<tr><th>YEAR 1</th><th>YEAR 2</th><th>YEAR 3</th><th>YEAR 4</th></tr>
<tr><td>ECON 1010 and ECON 1020[1]

MATH 1520 or MATH 1500 or MATH 1230[1]

STAT 1000 or STAT 1150[1]

6 credit hours of ANTH, HIST, MATH, PHIL, POLS, PSYC, SOC[1,2]</td><td>ACC 1100

GMGT 2010

ENTR 2030</td><td>GMGT 3300

3 credit hours from International Business Requirement[8]

3 credit hours from Ethics[9]</td><td>GMGT 4010</td></tr>
<tr><td>3 credit hours of Written English “W”[1,3]</td><td></td><td></td><td></td></tr>
<tr><td>GMGT 1010[4]</td><td colspan="2">18 credit hours from ACC 1110, FIN 2200, HRIR 2440, MIS 2000, MSCI 2150, SCM 2160[7]</td><td>3 credit hours from Alternative Management Studies[10]</td></tr>
<tr><td colspan="2" rowspan="2">9 credit hours from GMGT 2060, GMGT 2070, MKT 2210[4,5]</td><td colspan="2">12 credit hours of Major courses</td></tr>
<tr><td colspan="2">15 credit hours of Business Options[11]</td></tr>
<tr><td>3 credit hours of Electives[1,6]</td><td>3 credit hours of Electives[12]</td><td colspan="2">12 credit hours of Electives[12]</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

NOTES:

1) Foundation Courses: All students regardless of admit type must complete these Foundation courses and achieve a minimum grade of “C” in each. These 24 credit hours are the minimum admission requirements for Track 1 transfer students. (See applicant information bulletin for details). **MATH 1510 will be accepted as an alternate for MATH 1500 or MATH 1520 (for students admitted under Track 1 who presented this alternate Mathematics course for admission).**

College of Medicine

Biochemistry and Medical Genetics

Introductions:

BGEN 2000 Medical Cell Biology - 3 cr +3.0
This course will outline the molecular mechanisms underpinning human cellular biological processes, their role in specialized human cells, normal development and homeostasis, and how changes in cellular function can lead to the pathobiology of human diseases. Prerequisite: A minimum grade of C+ in HEAL 1502 or BIOL 1030 or BIOL 1031.

BGEN 2010 Applied Nutrition for Pharmacy Practice – 2 cr +2.0
This course will provide an evidence-based guide for pharmacists on how nutrition and supplements can be applied in the management of disease or enhancement of health in pharmacy practice. Topics will focus on the underlying biochemical basis for nutrition management of selected chronic metabolic and genetic diseases. Chronic disorders for which pharmacists are most frequently consulted will be selected for discussion. Other topics could include frequently encountered diets or supplements.

BGEN 3010 Genetics in Biomedicine - 3 cr +3.0
This course provides students with an overview of the field of human genetics from the research laboratory to the clinic. This course will cover the topics of epigenetics, patterns of inheritance, population genetics, complex traits, prenatal diagnosis and ethics. May not be held with BGEN 3022 or BGEN 3024 or the former BGEN 3020. Prerequisite: A minimum grade of C+ in BGEN 2000 or BIOL 2520 or BIOL 2521.

Modifications:

BGEN 3022 Introduction to Human Genetics A - 3 cr 0.0
Introduction to basic principles of human genetics with emphasis on pedigrees analysis, population genetics and cytogenetics. May not be held with BGEN 3010 or the former BGEN 3020. Prerequisite: BIOL 2500 or BIOL 2501 or BGEN 2000 or instructor permission.

BGEN 3024 Introduction to Human Genetics B - 3 cr 0.0
Principles of human genetics with emphasis on clinical applications, including human development, disease treatments, prenatal diagnosis and ethics. May not be held with BGEN 3010 or the former BGEN 3020. Prerequisite: BGEN 3022.

NET CHANGE IN CREDIT HOURS: +8.0

Community Health Sciences

Modification:

FMLY 2400 Family Financial Health - 3 cr 0.0
A survey of topics that have an impact on the financial health of Canadian families, including personal money management, mortgage financing, credit and debt, educational and retirement planning, taxation, insurance, savings and investments. The course prepares students to help

families maximize resources and increase their financial literacy. May not be held with the former FMLY 2070.

NET CHANGE IN CREDIT HOURS: 0.0

Immunology

Introduction:

IMMU 2000 Fundamentals in Immunology - 3 cr +3.0
This course will provide an overview of the basic processes of immune cells and general immunology. Throughout the course the emphasis is upon the human immune system and how its successes, failures, and compromises affect the lives of each and every one of us. Prerequisites: HEAL 1502 or BIOL 1030.

NET CHANGE IN CREDIT HOURS: +3.0

Faculty of Music

Introductions:

MUSC 1010 Music Matters: Excursions in Western Musical Culture - 3 cr +3.0
This course introduces and explores selected western musical phenomena from aesthetic, social, and historical perspectives. Topics will include art and vernacular musics; style and genre; social function and context; the nature and varieties of musical experience. May not be held with MUSC 1050. This course may not be used for credit towards the Bachelor of Music or the Bachelor of Jazz Studies degree.

MUSC 1020 Introduction to Popular Music - 3 cr +3.0
This course begins with a brief examination of the origins of the popular music industry in the late 19th and early 20th centuries through the development of rock'n'roll in the 1950s and then surveys the subsequent proliferation of different types of popular music into the 21st century. The course will address representative genres, artists, and record labels in their cultural, political, historical, and technological contexts.

MUSC 1030 History of Musical Theatre - 3 cr +3.0
A broad survey of the development and history of musical theatre from the early days of Vaudeville and burlesque through its evolution to the grand scale Broadway productions of today. This course is designed to reveal the origins and development of modern musical theatre through the study of influential artists, movements and major figures. This course will include a field trip component.

NET CHANGE IN CREDIT HOURS: +9.0

Program modification:

Modifications to the **Bachelor of Music** are outlined on the next 2 pages.

ATTACHMENT FOR SECTION D – Academic Calendar Content

CURRENT: FROM 2020-2021 Undergraduate Calendar

SECTION 4.4 Core Music History Electives and Music Theory Electives

Music Theory Electives addtition

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 Music History electives (12 credit hours) from the chart below- two from column A and two from column B. Bachelor of Music (Music Education) students must choose two Music History elective (6 credit hours) from any of the courses listed in columns A or 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 3056 Plainchant and Liturgy in Medieval Europe
MUSC 3074 Classical Music History	MUSC 3090 Introduction to Ethnomusicology
MUSC 3084 Romantic Music History	MUSC 3104 History of Opera 1: From Monteverdi to Mozart
MUSC 3964 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 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 above listed courses will be offered every year.

Music Theory Electives

- 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

REQUESTED CHANGES

SECTION 4.4 Core Music History Electives and Music Theory Electives

~~**Music Theory Electives addtition**~~

Core Music History Electives

In addition to the required first-year **Music** History courses (MUSC 1004 and MUSC 1014) Bachelor of Music students must choose four additional Music History electives (12 credit hours) from the ~~chart~~ **list** below ~~two from column A and two from column B~~. Bachelor of Music (Music Education) students must choose two Music History elective (6 credit hours) from **the list below**. ~~any of the courses listed in columns A or B.~~	
~~A~~	~~B~~

- **MUSC 1020 Introduction to Popular Music**
- **MUSC 1030 History of Musical Theatre**
- **MUSC 2072 Jazz History 1**
- **MUSC 2082 Jazz History 2**
- **MUSC 3034 Medieval Music History**
- **MUSC 3044 Renaissance Music History**
- **MUSC 3056 Plainchant and Liturgy in Medieval Europe**
- **MUSC 3064 Baroque Music History**
- **MUSC 3074 Classical Music History**
- **MUSC 3084 Romantic Music History**
- **MUSC 3090 Introduction to Ethnomusicology**
- **MUSC 3104 History of Opera 1: From Monteverdi to Mozart**
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- **MUSC 3380 From Rock to Rap and Beyond: A History of Popular Music in the 20th Century**
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- **MUSC 3964 History of Western Art Music after 1900**
- **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 above listed courses will be offered every year.

Music Theory Electives

- 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

College of Nursing

Modification:

NURS 2100 Introduction to Family Caregiving Across the Lifespan - 3 cr 0.0
This course provides an interdisciplinary approach to introduce the concept of family caregiving. In this course, students will be provided with information regarding caregivers and the vital role(s) they play in providing support and assistance to those who have physical, psychological, or developmental needs. Health-related quality of life and wellness, legal, economic, and policy issues related to caregiving are explored. Prerequisite: SOC 1000 (or SOC 1221 or the former SOC 1200) or PSYC 1200 (or PSYC 1221).

NET CHANGE IN CREDIT HOURS: 0.0

Program modifications:

Modifications to the **Bachelor of Nursing**, are outlined on the next page.

Section D of the Program Modification Form

From the Academic Calendar:

SECTION 4: Program and Graduation Requirements

4.1a Bachelor of Nursing Program

Non-nursing courses must be completed within 10 years; and nursing courses must be completed within 5 years of admission to the program in order to be eligible for admission and advanced standing (transfer credit).

This program can be done by full-time and part-time study.

All courses from any given year are to be completed before proceeding to the next year.

University I (30 credit hours)
(pre-nursing)

BIOL 1410	Anatomy of the Human Body	3	
BIOL 1412	Physiology of the Human Body		3
MBIO 1220	Essentials of Microbiology		3
Science Electives			9
Electives	Any combination of the following courses/subjects for a total of 12 credit hours	12	
	Social Sciences or Humanities (6-12 cr)		
~~NURS 1280~~	~~Introduction to Nursing (3crd)~~		
NURS 2610 or KIN 2610	Health and Physical Aspects of Aging (3 cr)		
FMLY 2650 or REC 2650 or SWRK 2650 (or **the former** HMEC 2650)	Social Aspects ~~in~~ **of** Aging (3 cr)		
NURS 1500	Preparing for Professional Nursing Education (3 cr)		

Program modifications:

Modifications to the **Bachelor of Midwifery** are outlined on the next 2 pages.

Bachelor of Midwifery Year 1 Requirements

BIOL 1410	Anatomy of the Human Body[1]	3
BIOL 1412 **or** **BIOL 2410 and BIOL 2420**	Physiology of the Human Body[1] **OR** **Human Physiology 1 AND Human Physiology 2** [2]	3
MBIO 1220 **or** **MBIO 3010**	Essentials of Microbiology[1] **OR** **Mechanisms of Microbial Disease**	3
STAT 1000 **OR STAT 1150**	Basic Statistical Analysis 1[3] **OR** **Introduction to Statistics and Computing**	3
~~CHEM 1300~~ **CHEM 1100**	~~University 1 Chemistry: Structure and Modelling in Chemistry[2]~~ **Introductory Chemistry 1: Atomic and Molecular Structure and Energetics[4]**	3
~~CHEM 1310~~ **CHEM 1110**	~~University 1 Chemistry: An Introduction to Physical Chemistry~~ **Introductory Chemistry 2: Interaction, Reactivity and Chemical Properties[1]**	3
NATV 1220[1] and **NATV 1240[1]** **OR NATV 1200[1]**	**Indigenous Peoples in Canada, Part 1 and** **Indigenous Peoples in Canada, Part 2** **OR The Native Peoples of Canada**	**3** **3** **6**
Students must meet the University of Manitoba Written English and Mathematics Requirements with a University level course completed within the last 10 years, must be at the 1000 level (or higher) and with a minimum grade of C in each. It is strongly recommended that these courses be completed within the elective credits indicated above.		
~~Native Electives [1&2]~~		~~3~~
Social Sciences or Humanities Electives [1]		~~6~~**3**
Science Electives [1&3]		3
Total Credit Hours		30

[1]All courses can be completed in University 1, or an equivalent program, if students do not wish to extend their program of study.

[2]If students complete BIOL 2410 and BIOL 2420, the additional 3 credit hours may be used toward the requirement for 3 credit hours of Science Electives.

~~[2]NATV 3240: Indigenous Medicine and Health is the preferred elective and should be taken if it is offered during the time the student is fulfilling University 1 or pre-midwifery year course requirements. Other Native Studies courses or equivalents are acceptable if NATV 3240 is not offered.~~

[3]Science Prerequisites. Students must meet the current Science prerequisites before registration for Science courses. See the ~~Faculty of Science section in~~ the Academic Calendar for the current **course** prerequisites. It is recommended the above prerequisites have been completed within the last five years. ~~Math 40S is a prerequisite for MBIO 1220. Any grade 12 or 40S Mathematics, or equivalent is a prerequisite for STAT 1000.~~

[4]**Prerequisites for CHEM 1100: [one of Chemistry 40S (50%), CSKL 0100 (P), or the former CHEM 0900 (P)] and [one of Applied Mathematics 40S (50%), Pre-calculus Mathematics 40S (50%), the former Mathematics 40S (300) (50%), or a grade of "C" or better in MSKL 0100].**

~~Students should have a minimum of two years of previous high-school chemistry study (Chemistry 40S or its equivalent, such as CHEM 0900) which is the prerequisite for CHEM 1300.~~

College of Pharmacy

Program modification:

Modifications to the **Doctor of Pharmacy** are outlined on the next page.

PharmD Program Requirements

Year 1

Course #	Course Name	Credit Hours
ANAT 1030	Human Anatomy	3
PHAC 2100	Pharmacology	6
PHMD 1000	Introduction to Professional Practice	1
PHMD 1002	Applied Pharmacy Practice Lab 1	4
PHMD 1004	Introduction to Pharmacotherapy Literature	1
PHMD 1006	Pharmacy Informatics	1
PHMD 1008	Medicinal Chemistry	4
PHMD 1010	Applied Pathophysiology	4
PHMD 1012	Extemporaneous Pharmaceutical Compounding	3
PHMD 1014	Clinical Therapeutics 1	3
PHMD 1016	Pharmaceutics	3
PHMD 1040	Service Learning / IPE 1	1
	Total Credit Hours	**34**

Year 2

Course #	Course Name	Credit Hours
~~HNSC 2170~~	~~Nutrition for Health Professionals~~	~~2~~
BGEN 2010	**Applied Nutrition for Pharmacy Practice**	**2**
PHMD 2000	Drug Delivery	3
PHMD 2004	Critical Appraisal of Pharmacotherapy Literature 1	4
PHMD 2006	Applied Biopharmaceutics and Pharmacokinetics	3
PHMD 2008	Pharmacy Law	1
PHMD 2010	Principles of Biotechnology	2
PHMD 2012	Pharmacogenetics	2
PHMD 2016	Clinical Pharmacokinetics - Pharmacodynamics	3
PHMD 2020	Introductory Pharmacy Practice - Community	4
PHMD 2022	Applied Pharmacy Practice Lab 2 - 1	2
PHMD 2024	Applied Pharmacy Practice Lab 2 - 2	2
PHMD 2026	Clinical Therapeutics 2 - 1	4
PHMD 2028	Clinical Therapeutics 2 - 2	4
PHMD 2030	Introductory Pharmacy Practice - Hospital	4
PHMD 2040	Service Learning / IPE 2	1
	Total Credit Hours	**41**

Year 3

Course #	Course Name	Credit Hours
PHMD 3002	Applied Pharmacy Practice Lab 3	4
PHMD 3004	Critical Appraisal of Pharmacotherapy Literature 2	2
PHMD 3006	Advanced Clinical Therapeutics	6
PHMD 3008	Concepts of Integrative Medicine	2
PHMD 3010	Pharmacy Management	4
PHMD 3012	Applied Professional Practice	3
PHMD 3014	Clinical Therapeutics 3	8
PHMD 3016	Toxicology of Medications and Drugs of Abuse	2
	Total Credit Hours	**31**

Year 4

Course #	Course Name	Credit Hours
PHMD 4000	Pharmacy Research Project	6
PHMD 4020	Advanced Pharmacy Practice Experience - Community	8
PHMD 4030	Advanced Pharmacy Practice Experience - Hospital	8
PHMD 4040	Advanced Pharmacy Practice Experience - Primary Care	8
PHMD 4060	Advanced Pharmacy Practice Experience - Elective	8
	Total Credit Hours	**38**

Faculty of Science

Faculty of Science

Introductions:

SCI 1002 Topics in Science 1 with Laboratories - 3 cr +3.0
(Lab required) Topics of current interest in the Faculty of Science. Offerings will be based on the interests and requirements of students and faculty, and will include interdisciplinary topics not available in regular course offerings. This course may be used to satisfy a Science elective. This course is a Topics course and may be completed multiple times under different titles. Prerequisite: consent of the instructor.

SCI 2002 Topics in Science 2 with Laboratories - 3 cr +3.0
(Lab required) Topics of current interest in the Faculty of Science. Offerings will be based on the interests and requirements of students and faculty, and will include interdisciplinary topics not available in regular course offerings. This course may be used to satisfy a Science elective. This course is a Topics course and may be completed multiple times under different titles. Prerequisite: consent of the instructor.

SCI 3002 Topics in Science 3 with Laboratories - 3 cr +3.0
(Lab required) Topics of current interest in the Faculty of Science. Offerings will be based on the interests and requirements of students and faculty, and will include interdisciplinary topics not available in regular course offerings. This course may be used to satisfy a Science elective. This course is a Topics course and may be completed multiple times under different titles. Prerequisite: consent of the instructor.

Modifications:

SCI 1000 Topics in Science 1 - 3 cr 0.0
Topics of current interest in the Faculty of Science. Offerings will be based on the interests and requirements of students and faculty and will include interdisciplinary topics not available in regular course offerings. This course may be used to satisfy a Science elective. This course is a Topics course and may be completed multiple times under different titles. Prerequisite: consent of the instructor.

SCI 2000 Topics in Science 2 - 3 cr 0.0
Topics of current interest in the Faculty of Science. Offerings will be based on the interests and requirements of students and faculty and will include interdisciplinary topics not available in regular course offerings. This course may be used to satisfy a Science elective. This course is a Topics course and may be completed multiple times under different titles. Prerequisite: consent of the instructor.

SCI 3000 Topics in Science 3 - 3 cr 0.0
Topics of current interest in the Faculty of Science. Offerings will be based on the interests and requirements of students and faculty and will include interdisciplinary topics not available in regular course offerings. This course may be used to satisfy a Science elective. This course is a Topics course and may be completed multiple times under different titles. Prerequisite: consent of the instructor.

SCI 4000 Topics in Science 3 - 3 cr 0.0
Topics of current interest in the Faculty of Science. Offerings will be based on the interests and requirements of students and faculty and will include interdisciplinary topics not available in regular course offerings. This course may be used to satisfy a Science elective. This course is a Topics course and may be completed multiple times under different titles. Prerequisite: consent of the instructor.

NET CHANGE IN CREDIT HOURS: +9.0

Program modifications:

Modifications to the **Bachelor of Science (General)** are outlined on the next 10 pages.

Executive Summary

An external review of the B.Sc. General program was completed in Spring 2019 and suggested a series of recommendations for the Faculty of Science to consider. Based on this review, the Faculty of Science embarked on a review of the B.Sc. General curriculum and has resulted in the enclosed proposal. Throughout this process, we have consulted with departments within the Faculty of Science, held student townhalls, and executed an extensive survey of alumni and current students of the B.Sc. General program.

In the current proposal that we are submitting, one of the main goals of the changes is to allow students to receive a broad(er) general science education, where students gain exposure to all the major areas of Science. In order to do this, we are moving away from the existing Group A and Group B lists for the introductory level courses in the current program and moving to lists from 3 areas: mathematical/computational sciences, life sciences, and physical sciences. We are also proposing to remove the requirement that students must choose 2 areas of advanced-level Faculty of Science courses, or the requirement to complete either a biological sciences or chemistry focus. Departments have submitted program modifications to remove program charts that appear in their portion of the undergraduate academic calendar.

The changes to the B.Sc. General are:

- For introductory courses requirements, students will need to take:
    1. 9 credit hours from COMP, MATH, and STAT;
    2. 6 credit hours from BIOL, and MBIO;
    3. and 6 credit hours from ASTR, CHEM, and PHYS.

    These requirements will replace the existing requirements defined using the Group A and Group B lists. The specific lists of courses that can be used are in the program chart given below. As part of this change, students will now be required to have at least one of HS Chemistry 40S or Physics 40S. This is needed in order to take 6 credit hours of introductory courses from ASTR, CHEM, or PHYS. If a student enters the Faculty of Science without Chemistry or Physics 40S, they will need to take one of the Essentials courses that is currently under development by the Chemistry and Physics departments, another equivalent, or Chemistry or Physics 40S.

- Students will need to take 3 credit hours of Faculty of Science courses (at the 1000 level or higher), beyond the 21 credit hours required in the previous bullet.
- Students need to take 36 credit hours of Faculty of Science courses at the 2000, 3000, or 4000 levels with at least 9 credit hours at the 3000 or 4000 levels.

    - Students are no longer required to complete 18 credit hours in two areas, or complete the Biological Science or Chemistry focus areas. Students will have

more options to take courses across the departments in the Faculty of Science. It will also allow for the use of DATA, and SCI courses to fulfill this requirement. The minimum number of credit hours at the 3000 level and higher is increased to 9 credit hours from the current program's requirement of 6 credit hours.

Transition Plan

Students who are currently enrolled in the B.Sc. General degree at the time the proposed changes come into effect will have the option to complete their degree requirements under the current academic regulations or the proposed academic regulation for the B.Sc. General degree.

Calendar Entry – 3.2 B.Sc. (General) Degree Academic Regulations (Current)

As approved by 4Cs and Senate in Fall 2020

B.Sc. General Academic Regulations[1]

A student must complete 90 credit hours with passing grades ("D" or better) in each course. Please note higher grades are usually required for prerequisite purposes. See course descriptions for details. A student must obtain a minimum grade point average of 2.00 on the 90 credit hours which constitute the degree to qualify for the degree of Bachelor of Science (General).

~~Students may not exceed 36 credit hours of failures.~~

Introductory Level Science courses (24 credit hours): Students must select 6 credit hours from each of 3 areas listed below (18 credit hours) in Group A. Additionally, students must select 6 credit hours from any courses listed in Group A and/or Group B.

NOTE: No more than 6 credit hours may be selected from any single subject area for use toward the 24 credit hours of introductory course requirements.

Group A:

Astronomy: ASTR 1810 and ASTR 1830

Biology: BIOL 1020 and BIOL 1030

Chemistry: 6 credit hours from CHEM 1100, CHEM 1110 or CHEM 1120 (or CHEM 1122 and CHEM 1126)[1]

Computer Science: COMP 1010 (or COMP 1012[2]) and COMP 1020

Mathematics: six credit hours chosen from:

- MATH 1200[3]
- 3 credit hours from MATH 1220[3] or MATH 1300[3] (or equivalent) (or MATH 1210[3]),
- 3 credit hours from MATH 1230 or MATH 1500 (or equivalent),
- 3 credit hours from MATH 1232 or MATH 1700 (or equivalent),
- MATH 1240

Microbiology: MBIO 1010 and MBIO 2020

Physics: PHYS 1020 or PHYS 1050; and PHYS 1030 or PHYS 1070

Statistics: STAT 1000[5] (or STAT 2220[4]) and STAT 2000[5] or STAT 1150[5] and STAT 2150[5]

Group B:

BIOL 1410, FORS 2000.

Notes:

1. CHEM 1122 and CHEM 1126 are intended for Engineering students and may not be held for credit with CHEM 1120.

2. COMP 1012 is intended for Engineering students and may not be held for credit with COMP 1010.

3. MATH 1210 is intended for Engineering students and may not be held for credit with MATH 1200, MATH 1220 or MATH 1300.

4. STAT 2220 is intended for Engineering students and may not to be held for credit with STAT 1000 or STAT 1150.

5. It is recommended that students intending to complete their advanced level Science subjects in Statistics or Mathematics choose STAT 1150 and STAT 2150, rather than STAT 1000 and STAT 2000. STAT 1000 and STAT 2000 may not be held for credit with STAT 1150.

Advanced Level Science Courses (36 credit hours): Effective for students entering Science September 2008 or later[2], to satisfy the advanced level requirements of the 3-year General Degree program, eighteen (18) credit hours at the 2000, 3000, and (or) 4000 level must be chosen from each of **two** of the following Science departments: Biological Sciences, Chemistry, Computer Science, Mathematics, Microbiology, Physics and Astronomy, and (or) Statistics.

Of the 36 credit hours (total) from the advanced areas of study, at least 6 credit hours must be chosen from 3000 or 4000 level courses. Students should note prerequisite requirements for upper level courses when planning their program. Appropriate courses and combinations of courses are detailed in each departmental section. Substitute courses from a department may be taken by obtaining written authorization from the chosen department.

Other Faculty Courses (12 credit hours): a minimum of 12 credit hours must be taken from outside the Faculty of Science, of which at least six credit hours must be from the Faculty of Arts. A maximum of 30 credit hours may be taken from outside the Faculty of Science for use in the General Degree program.

Elective Courses (18 credit hours): 18 credit hours of the B.Sc. General Degree are open electives.

Biological Sciences Option: Students may elect to choose all 36 credit hours of advanced level course requirements from the Department of Biological Sciences provided they follow the specified course selections prescribed in the Biological Sciences Focus Chart - B.Sc. General.

Chemistry Option: Students may elect to choose a specific set of introductory courses, plus all 36 credit hours of the advanced level course requirements from the Department of Chemistry provided they follow the specified course selections (introductory and advanced levels) prescribed in Chemistry Focus Chart - B.Sc. General.

NOTES:

1. Students having difficulty with the interpretation of these regulations or the way in which they are applied, are urged to contact a Science Academic Advisor in the general office. Students are responsible for their own degree progress and completion.

2. Students admitted to the Faculty of Science prior to September 2008 should consult with a Science Academic Advisor about degree requirements.

~~B.Sc. General Degree Minimum Performance Requirements~~

~~Effective September 2013, each student in the Faculty of Science will be placed on academic suspension for one year, regardless if there has been evidence of improved performance, if they have more than 36 credit hours of "F" grades.~~

~~Following a one year suspension, the student may return upon application to the Faculty of Science by selecting one of the following irreversible options:~~

~~(a) to continue with no possibility of further "F" grades. Any further "F" grades will result in academic suspension for two years. (Following the two year suspension, the student may apply to the Faculty of Science to return to start afresh.)~~

~~Or~~

~~(b) start afresh, with their previous work not counting towards satisfying degree requirements. Students may appeal to transfer in up to 30 credit hours of coursework previously completed with a grade of "C" or better.~~

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

B.Sc. General Degree Residence Requirements

There are two ways in which students may fulfill the minimum requirement of credit hours that must be taken at the University of Manitoba: by taking at least 48 credit hours at the University of Manitoba; or by taking at least the final 30 credit hours at the University of Manitoba. The courses used to satisfy the residence requirement must be acceptable for credit in the Faculty of Science. Residency requirements apply to both first and second degree students.

Calendar Entry - B.Sc. (General) Degree Academic Regulations (Proposed)

3.2 B.Sc. (General) – Three Year Degree

The three-year General program is intended to provide diversified training in Science. The program provides students with broad exposure to major areas of Science at the introductory level with a requirement for more advanced studies in one or more areas of Science.

This program is not intended for students who desire to practice in some field of specialization in the Sciences. Students with that intent are recommended to pursue the Honours or the four-year Major program.

Students are required to have the equivalent of high school Mathematics 40S (either pre-calculus or applied mathematics) and at least one of high school Chemistry 40S or Physics 40S.

B.Sc. General Academic Regulations

A student must complete 90 credit hours with passing grades ("D" or better) in each course. Please note higher grades are usually required for prerequisite purposes. See course descriptions for details. A student must obtain a minimum grade point average of 2.00 on the 90 credit hours, which constitute the degree to qualify for the degree of Bachelor of Science (General).

Introductory Level Faculty of Science courses (21 credit hours):

Students must complete[1]:

- 9 credit hours from the Computational and Mathematical Sciences:
  - COMP 1010 (or COMP 1012[2]), COMP 1020,
  - [(MATH 1220 or MATH 1300 (or equivalent)) or(MATH 1210[3])], [MATH 1230 or MATH 1500 (or equivalent)], [MATH 1232 or MATH 1700 (or equivalent)], MATH 1240,
  - [STAT 1000[4,5] (or STAT 2220[4]) or STAT 1150[5]], STAT 2000[5], STAT 2150
- 6 credit hours from the Physical Sciences[6]:
  - ASTR 1810, ASTR 1830,
  - CHEM 1100, CHEM 1110, [CHEM 1120 or (CHEM 1122 and CHEM 1126)[7]],

    - (PHYS 1020 or PHYS 1050), [PHYS 1030 or (PHYS 1070 or PHYS 2152)][8]
- 6 credit hours from the Life Sciences:
    - BIOL 1020, BIOL 1030, BIOL 1410, BIOL 1412
    - MBIO 1010, MBIO 1220[9]

Notes:

1. When selecting courses to fulfill the Introductory Faculty of Science requirement, a student should consider the subject areas in which they wish to select Advanced Level Faculty of Science courses, and select courses that will fulfill the prerequisite requirements of the Advanced Level courses. A student is encouraged to consult course descriptions and an academic advisor for guidance. Students must satisfy the W requirement, within the first 60 credit hours.

2. COMP 1012 is primarily intended for Engineering students and may not be held for credit with COMP 1010.

3. MATH 1210 is intended for Engineering students and may not be held for credit with MATH 1220 or MATH 1300 (or equivalent).

4. STAT 2220 is intended for Engineering students and may not to be held for credit with STAT 1000 or STAT 1150.

5. STAT 1150 may not be held for credit with STAT 1000 or STAT 2000.

6. Students must have at least one of High School Chemistry 40S or Physics 40S. Students who do not have either of these high school courses will not be able to satisfy this requirement without taking CHEM 1018, PHYS 1018, or another equivalent. CHEM 1018 or PHYS 1018 may be used to fulfill the Faculty of Science requirement, or an elective requirement.

7. CHEM 1122 and CHEM 1126 are intended for Engineering students and may not be held for credit with CHEM 1120.

8. PHYS 2152 is intended for Engineering students and may not be held for credit with PHYS 1070.

9. MBIO 1220 is primarily intended for students planning to enter the College of Nursing or other health care or related programs. It will not act as a prerequisite to higher level Microbiology courses.

Advanced Level Faculty of Science Courses (36 credit hours):

To satisfy the advanced level requirements of the 3-year General Degree program, thirty-six (36) credit hours at the 2000, 3000, and (or) 4000 level must be chosen from courses offered by

the Faculty of Science. Courses offered by the Faculty of Science include courses from the departments of Biological Sciences, Chemistry, Computer Science, Mathematics, Microbiology, Physics & Astronomy, and Statistics. Courses with the prefix DATA, FORS, and SCI, are also courses taught by the Faculty of Science and maybe used to fulfill this requirement.

Of these 36 credit hours, at least 9 credit hours must be chosen from 3000 or 4000 level courses.

Students should note prerequisite requirements for upper level courses when planning their program.

PHYS 2152, SCI 3980, SCI 3990, SCI 4980, SCI 4990, STAT 2000, and STAT 2220 may not be used to fulfill this requirement.

Other Course Requirements (33 credit hours)

- **Faculty of Science Elective course (3 credit hours):**

  In addition to the 57 credit hours of Faculty of Science courses stated above, students must take an additional 3 credit hours from the Faculty of Science. This course must be at the 1000-level or higher.

- **Other Faculty Courses (12 credit hours):**

  Students must take a minimum of 12 credit hours of courses from outside the Faculty of Science**, of which at least six credit hours must be from the Faculty of Arts**. Students may take up to 30 credit hours of courses from outside of the Faculty of Science using the 18 credits of electives below.

- **Elective Courses (18 credit hours):**

  Students must take 18 credit hours of electives in this program. Elective courses may include courses from within the Faculty of Science, or courses from other faculties.

B.Sc. General Degree Minimum Performance Requirements

Students in the B.Sc. General Degree program are subject to academic assessment regulations as specified in Section 3.1 (Regulations Applicable to all Programs) of the Faculty of Science section of the general calendar.

B.Sc. General Degree Residence Requirements

There are two ways in which students may fulfill the minimum requirement of credit hours that must be taken at the University of Manitoba: by taking at least 48 credit hours at the University

of Manitoba; or by taking at least the final 30 credit hours at the University of Manitoba. The courses used to satisfy the residence requirement must be acceptable for credit in the Faculty of Science. Residency requirements apply to both first and second degree students.

B.Sc. General (Revised) Program Chart

<table>
<tr><th>YEAR 1[1]</th><th>YEAR 2</th><th>YEAR 3</th></tr>
<tr><td>9 Credit Hours from COMP, MATH or STAT[2]
6 Credit Hours from ASTR, CHEM or PHYS[3,4]
6 Credit Hours from BIOL or MBIO[5]</td><td colspan="2">27 Credit Hours at the 2000 level or higher from the Faculty of Science.[6]
9 Credit Hours at the 3000 level or higher from the Faculty of Science.</td></tr>
<tr><td colspan="3">3 Credit Hours of Faculty of Science courses.

12 Credit Hours from outside the Faculty of Science, of which at least six credit hours must be from the Faculty of Arts.

18 Credit Hours of electives.</td></tr>
<tr><td>30 Hours</td><td>30 Hours</td><td>30 Hours</td></tr>
</table>

Comments/Notes:

1. Student must satisfy the W requirement within their first 60 credit hours.
2. Chosen from (COMP 1010 or COMP 1012), COMP 1020, [MATH 1220 or MATH 1300 (or equivalent), or MATH 1210], [MATH 1230 or MATH 1500 (or equivalent)], [MATH 1232 or MATH 1700 (or equivalent)], MATH 1240, (STAT 1000 or STAT 2220 or STAT 1150), STAT 2000, STAT 2150.
3. Chosen from ASTR 1810, ASTR 1830, CHEM 1100, CHEM 1110, [CHEM 1120 or (CHEM 1122 and CHEM 1126)], (PHYS 1020 or PHYS 1050), [PHYS 1030 or (PHYS 1070 or PHYS 2152)].
4. Student must have at least one of high school Chemistry 40S or Physics 40S, or equivalent.
5. Chosen from BIOL 1020, BIOL 1030, BIOL 1410, BIOL 1412, MBIO 1010, MBIO 1220.
6. PHYS 2152, SCI 3980, SCI 3990, SCI 4980, SCI 4990, STAT 2000, STAT 2220 cannot be used to satisfy this requirement.

Additional Notes:

1. Students having difficulty with the interpretation of these regulations or the way in which they are applied, are urged to contact a Science Academic Advisor in the general office. Students are responsible for their own degree progress and completion.

2. Students admitted into the B.Sc. General degree program prior to September 2021 should consult with a Science Academic Advisor about degree requirements.

3. Students anticipating a transfer to either a four-year Major or Honours program at the end of the second or third year should consult with a Science Academic Advisor before registering.

Biochemistry

Program modifications:

Modifications to the following programs are outlined on the next 4 pages.

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

4.2 Biochemistry
4.2.1 Program Information

Biochemistry Honours Degree Requirements

To enter the joint Honours program in Biochemistry, a student must have completed at least 24 credit hours with a minimum DGPA of 3.00 and also obtained a minimum grade of "B" in CHEM 1110 and a minimum grade of "C+" in CHEM 1120 and BIOL 1020. CHEM 1100, BIOL 1030, PHYS 1050 (or PHYS 1020), MATH 1500, STAT 1150 (or STAT 1000), and 6 credit hours from the Faculty of Arts, including a course that satisfies the "W" requirement are required courses in the program and students are strongly encouraged to complete them in first year.

To continue in the Biochemistry Joint Honours program, students must maintain a minimum DGPA of 3.00, and complete a minimum of 9 credit hours during each Fall and Winter Term.

To graduate with the Biochemistry Joint Honours degree, a student must achieve a minimum DGPA of 3.00 and obtain a minimum grade of "C" on the courses that make up the 120 credit hours of the degree.

Chemistry and Microbiology Optional Courses for Biochemistry Honours Students:

Chemistry: CHEM 2300, CHEM 2600, CHEM 3100, CHEM 3120 (2), CHEM 3300, CHEM 3320 (2), CHEM 3500, CHEM 3520 (2), CHEM 3600, CHEM 3620 (2), CHEM 3820 (2), CHEM 3840, CHEM 4100, CHEM 4110, CHEM 4130, CHEM 4150, CHEM 4170, CHEM 4360, CHEM 4620, CHEM 4670, CHEM 4680, CHEM 4800, CHEM 4802, CHEM 4804.

Microbiology: MBIO 3000, MBIO 3010, MBIO ~~3030~~ **3032**, MBIO ~~3280~~ **3282**, MBIO 3430, MBIO 3450, MBIO 3460, MBIO ~~3470~~ **3472**, MBIO 3600, **MBIO 3700,** MBIO 4020, MBIO 4030, MBIO 4032, MBIO 4410, MBIO 4440, MBIO 4480, MBIO 4520, MBIO 4540, MBIO 4602, MBIO 4612, ~~MBIO 4670 (or~~ **MBIO 4672**~~)~~.

Optional courses no longer offered that may be used if taken prior to their deletion: CHEM 2260, CHEM 2290, CHEM 2400, CHEM 2470, CHEM 3260, CHEM 3360, CHEM 3370, CHEM 3380, CHEM 3390, CHEM 3400, CHEM 3490, CHEM 3580, CHEM 3590, CHEM 4600, CHEM 4640, CHEM 4650, CHEM 4690, MBIO 2280, **MBIO 3030, MBIO 3280,** MBIO 3440, **MBIO 3470,** MBIO 3480, MBIO 4010, MBIO 4320, MBIO 4470, MBIO 4510, MBIO 4570, MBIO 4580, MBIO 4600, MBIO 4610, **and MBIO 4670**. NOTE: Several of these courses may not be held with current course offerings found on the above optional course lists. Please refer to the course descriptions for more information about specific course restrictions.

Biochemistry Four-Year Major Degree Requirements

To enter the joint four-year Major program, a student must have completed a minimum of 24 credit hours with a minimum DGPA of 2.00, and also obtained a minimum grade of "C+" in CHEM 1110, and a minimum grade of "C" in CHEM 1120 and BIOL 1020. CHEM 1100, BIOL 1030, PHYS 1050 (or PHYS 1020), MATH 1500, and STAT 1150 (or STAT 1000), and 6 credit hours from the Faculty of Arts, including a course that satisfies the "W" requirement are required courses in the program and students are strongly encouraged to complete these courses in first year.

To continue in the Bachelor of Science Major degree program, students must maintain a minimum DGPA of 2.00.

To graduate with the Bachelor of Science Major in Biochemistry, a student must complete 120 credit hours or more, with minimum grades of "C" on all Major Program Specific courses (see below), passing grades ("D" or better) on the remaining courses, and a minimum DGPA of 2.00.

Major Program-Specific Courses:

Chemistry: CHEM 2100, CHEM 2110, CHEM 2122, CHEM 2510, CHEM 2520 (2), CHEM 2700 (MBIO 2700), CHEM 2710 (MBIO 2710), CHEM 2720 (MBIO 2720), CHEM 3700, CHEM 3760 (4), CHEM 4630 and whichever one of CHEM 4360, and CHEM 4620 is selected.

Microbiology: MBIO 1010, MBIO 2020, MBIO 3410, and whichever one of BIOL 2520, MBIO 3450, MBIO 3460, MBIO 4540 or MBIO 4612 is selected.

Students in this program should note the following:

Students must satisfy any course prerequisites and co-requisites for courses selected. Care should be taken to select courses in their proper sequence, e.g. CHEM 2710 (MBIO 2710) and MBIO 2020 should be taken in Year 2 as they are prerequisite to a number of subsequent required or optional courses.

Normally 4000 level courses are available only to students in their fourth year. MBIO 4530 and MBIO 4670 are not available to Major students.

Students are encouraged to elect other courses pertinent to the study of biochemistry although this is not required for completion of the degree. The departments of Microbiology and Chemistry will be glad to suggest such supplementary courses upon request.

Students who may wish to transfer to the Honours program in Biochemistry following Year 2 should be sure to complete all courses recommended in Year 2 (see the chart below).

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 the first and second year requirements of the program and MBIO 3410 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 encouraged, but not required, to take 15 credit hours in each academic term in the third and subsequent years. Students are required to complete the first- and second-year requirements of the program and MBIO 3410 before beginning their first co-op work term.

4.2.2 Biochemistry Programs (offered Jointly by the Departments of Chemistry and Microbiology)

YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS			
CHEM 1100, CHEM 1110 (B), CHEM 1120[1] (C+), BIOL 1020 (C+), BIOL 1030 PHYS 1050 (or PHYS 1020) MATH 1500[2] STAT 1150 (or STAT 1000)	CHEM 2100, CHEM 2110, CHEM 2122, CHEM 2510, CHEM 2520 (2) CHEM 2700, CHEM 2710, CHEM 2720 MBIO 1010[4], MBIO 2020	BIOL 2520, CHEM 3700, CHEM 3760 (4) MBIO 3410	CHEM 4630, (CHEM 4710 (6) or MBIO 4530 (6))
		9 credit hours from: MBIO 3450, MBIO 3460, CHEM 4360, CHEM 4620, MBIO 4540, MBIO 4612	
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[3]		18 credit hours selected from the list of Microbiology and Chemistry optional courses (listed above). Of these 18 credit hours, at least 6 hours must be 4000 level courses. 12 credit hours selected from the Faculty of Science[5].	
30 Hours	29 Hours	31Hours	30 Hours
JOINT HONOURS CO-OPERATIVE OPTION[6] 120 CREDIT HOURS			
CHEM 1100, CHEM 1110 (B), CHEM 1120[1] (C+), BIOL 1020 (C+), BIOL 1030 PHYS 1050 (or PHYS 1020) MATH 1500[2] STAT 1150 (or STAT 1000)	CHEM 2100, CHEM 2110, CHEM 2122, CHEM 2510, CHEM 2520 (2), CHEM 2700, CHEM 2710, CHEM 2720 MBIO 1010[4], MBIO 2020	BIOL 2520, CHEM 3700, CHEM 3760 (4) MBIO 3410	CHEM 4630
		9 credit hours from: MBIO 3450, MBIO 3460, CHEM 4360, CHEM 4620, MBIO 4540, MBIO 4612	
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[3]		24 credit hours selected from the list of Chemistry and Microbiology Optional courses listed above. Of these 24 credit hours, at least 12 hours must be 4000 level courses. 12 credit hours selected from the Faculty of Science[5].	
		Co-op Requirements: SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if a 4th work term is selected).	
30 Hours	29 Hours	31Hours	30 Hours
JOINT FOUR YEAR MAJOR (including Co-operative Option)[6,7] 120 CREDIT HOURS			
CHEM 1100, CHEM 1110(C+), CHEM 1120[1] (C), BIOL 1020(C), BIOL 1030 PHYS 1050 (or PHYS 1020) MATH 1500[2] STAT 1150 (or STAT 1000)	CHEM 2100, CHEM 2110, CHEM 2122, CHEM 2510, CHEM 2520 (2), CHEM 2700, CHEM 2710, CHEM 2720 MBIO 1010[4], MBIO 2020	CHEM 3700, CHEM 3760 (4) MBIO 3410	CHEM 4630
		One of: BIOL 2520, MBIO 3450, MBIO 3460, MBIO 4540, MBIO 4612 One of: CHEM 4360, CHEM 4620	
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[3].		21 credit hours of Chemistry and Microbiology (minimum 6 credit hours from each dept.). Of these 21 credit hours, at least 12 hours must be 4000 level courses. 21 credit hours of electives[5].	
		Co-op Requirements (if selected):	

	SCI 3980, SCI 3990, SCI 4980, and SCI 4990 (if a 4th work term is selected).

NOTES:

[1] CHEM 1126 may be used in lieu of CHEM 1120.

[2] MATH 1230 or MATH 1510 or MATH 1520 or MATH 1690 may be taken in place of MATH 1500.

[3] As there are no electives in Year 2 of the program, students should complete the university written English requirement in Year 1. If not completed in Year 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.

[4] MBIO 1010 can be taken in Year 1 after BIOL 1020.

[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] 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.

[7] The four-year Major program need not be completed in the manner prescribed in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

(The numbers 2, 4, and 6 in brackets indicate two, four and six credit-hour courses, respectively. All other courses are 3 credit hours.)

Biological Sciences

Modifications:

BIOL 2300 Principles of Ecology - 3 cr 0.0
(Lab required) Principles of ecology at the individual, population, community, and ecosystems levels. This course 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, STAT 1000, STAT 1001, or STAT 2220.

BIOL 4216 Biology of Birds - 3 cr 0.0
(Lab required) Biology of birds including: morphology, systematics, evolution, life histories and breeding biology, ecology, migration, and distribution of birds. Prerequisite: BIOL 2210 or BIOL 2231.

NET CHANGE IN CREDIT HOURS: 0.0

Program modification:

Modifications to the department's Academic Calendar content, which follow from proposed changes to the Bachelor of Science (General) degree, are outlined on the next page.

Current content based on changes approved by 4Cs and Senate in Fall 2020

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. Students 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; two one of BIOL 2200$_L$ or BIOL 2210$_L$; one of BIOL 2240, BIOL 2242, BIOL 2260$_L$ or BIOL 2262, or BIOL 2420; 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.

4.3.7.6 Biological Sciences – Minor Requirements 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; two one of BIOL 2200, or BIOL 2210$_L$; one of BIOL 2240, BIOL 2242, BIOL 2260$_L$ or BIOL 2262, or BIOL 2420; 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.

Biotechnology

Program modifications:

Modifications to the following programs are set out on the next 6 pages.

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

4.4.1 Program Information

4.4.1 Program Information

NOTE: As of Fall 2018, admission to the Biotechnology programs has been temporarily suspended. For further information, see the Faculty of Science office.

Biotechnology Honours Degree Requirements

To enter the Biotechnology Joint Honours program a student must have completed at least 24 credit hours with a minimum DGPA of 3.00, and also obtained a minimum grade of "B" in CHEM **1110** ~~1310~~ and a minimum grade of "C+" in **CHEM 1120 and** BIOL 1020. CHEM **1100** ~~1300~~, BIOL 1030, MATH 1500[1], PHYS 1020 (or PHYS 1050), and STAT 1000 are required courses in the program and students are strongly encouraged to complete these courses in first year. Six credit hours of Arts electives, including the written English course should also be taken in Year 1.

Students will select one stream (Analytical or Molecular Biotechnology). ~~Students are also encouraged to select a Minor in a complementary area. There are enough free electives to cover the 18 credit hours required for a Minor.~~ All students must complete a ~~C~~**c**common ~~C~~**c**ore of required courses plus required ~~S~~**s**tream ~~S~~**s**pecific courses. The remaining courses can be selected from the list of ~~R~~**r**ecommended ~~E~~**e**lectives. This list is meant to give students some idea of appropriate electives; however, students have the option to choose courses not on the list in consultation with the Program Advisors.

To continue in the Biotechnology Joint Honours program, students must maintain a minimum DGPA of 3.00 and complete a minimum of 9 credit hours during each Fall and Winter Term. No more than 15 credit hours of F grades may be accumulated, regardless of whether any course has been repeated and a higher grade achieved. Research Project in Biotechnology (BTEC 4000) must be taken in the final year of the program.

To graduate from the Biotechnology Joint Honours program students must achieve a minimum DGPA of 3.00 and obtain a minimum grade of "C" on the courses that contribute to the 120 credit hours that make up the degree.

Students who do not meet these minimum requirements will be required to withdraw from the program and may be eligible to enter the 4-Year Major degree program in Biotechnology. Depending on course selection students may also be eligible to enter other Major Programs (e.g. Biochemistry, Biological Sciences, Chemistry, or Microbiology) and/or the 3-year B.Sc. General Degree program.

~~**Biotechnology Honours Cooperative Option**~~

~~Students interested in alternating academic terms and terms of paid employment as part of their Honours Biotechnology program may enter the Cooperative Option in April of their second year in Honours Biotechnology. This program provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and university units.~~

~~The course and grade requirements **for entry** to this option are the same as those required for entry to the regular Honours program, as indicated in the chart. Students are required to complete the first and second year requirements of the program; and MBIO 3410 before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Honours) Cooperative Options in Section 3.6.~~

~~**To continue** in the Honours Cooperative program a student must maintain a minimum DGPA of 3.00, successfully complete each work term, and complete a minimum of 9 credit hours during each academic term. Students should note that the grade requirements for the Cooperative Option are the same as that for the regular Honours program (see above).~~

~~Students must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. Acceptance into the program is dependent upon the student receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. Students are advised that~~

~~satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.~~

~~Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.~~

Biotechnology 4-Year Major Degree Requirements

To enter the Biotechnology Joint Major program a student must have completed at least 24 credit hours with a minimum DGPA of 2.00 and also obtained a minimum grade of "C+ in CHEM **1110** ~~1310~~ and a minimum grade of "C" in **CHEM 1120 and** BIOL 1020. BIOL 1030, CHEM **1100** ~~1300~~, MATH 1500[1], PHYS 1020 or 1050, and STAT 1000 are required courses in the program and students are strongly urged to complete these courses in first year. Six credit hours of Arts electives, including the written English course should also be taken in Year 1.

Students will select one stream (Analytical or Molecular Biotechnology). ~~Students are also encouraged to select a Minor in a complementary area. There are enough free electives to cover the 18 credit hours required for a Minor.~~ All students must complete a ~~C~~**c**ommon ~~C~~**c**ore of required courses plus required ~~S~~**s**tream ~~S~~**s**pecific courses. The remaining courses can be selected from the list of ~~R~~**r**ecommended ~~E~~**e**lectives. This list is meant to give students some idea of appropriate electives; however, students have the option to choose courses not on the list in consultation with the Program Advisors.

To continue in the Major program a student must maintain a minimum DGPA of 2.00. No more than 18 credit hours of F grades can be accumulated regardless of whether any course has been repeated and a higher grade achieved.

To graduate from the Biotechnology Joint Major degree, students must maintain a minimum DGPA of 2.00. Students must also obtain a minimum grade of "C" on all ~~C~~**c**ommon ~~C~~**c**ore and stream specific courses outlined below. There is no term registration load requirement in the Major degree.

Students who do not meet these minimum requirements will be required to withdraw from the program and will normally be eligible to enter the 3-Year B.Sc. General degree program.

~~**Biotechnology 4 Year Major Cooperative Option**~~

~~Students interested in alternating academic terms and terms of paid employment as part of their Major program in Biotechnology may enter the Cooperative Option in April of their second year in Biotechnology. This program provides students with a minimum of 12 months of paid employment by the time they graduate. It enables them to obtain work experience in research and industry with participating firms, government agencies and university units.~~

~~The course and grade requirements **for entry** to this option are the same as those required for entry to the regular Major program. MBIO 3410 is required in Year 3. Students are required to complete the first and second year requirements of the program and MBIO 3410 before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Major) Cooperative Options in Section 3.4.~~

~~Students must check with the Co-op office for the April application deadline information. They will normally be notified of their provisional acceptance in the program by September. Acceptance into the program is dependent upon the student receiving an employment placement. Employment term positions available to the students will be approved by the department, and the employers will select the students they wish to employ. Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Option if the demand for places exceeds the number of places available. The department reserves the right to determine and select the best qualified applicants.~~

~~Students are required to register in and pay fees for each employment term prior to the commencement of each employment term. Students will be required to submit an employment report upon the completion of each employment term.~~

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 the first and second year requirements of the program and MBIO 3410 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 MBIO 3410 before beginning their first co-op work term.

Common Core Courses:

~~BIOL 2500,~~ BIOL 2520, ~~CHEM 2210, CHEM 2220,~~ **CHEM 2100, CHEM 2110, CHEM 2122** ~~CHEM/MBIO 2360, CHEM /MBIO 2370,~~**CHEM/MBIO 2700, CHEM/MBIO 2710, CHEM 2720,** ~~CHEM 2470~~, **CHEM 2510, CHEM 2520 (2),** ~~CHEM 3590~~,**CHEM 3500, CHEM 3760 (4),** CHEM 4630, MBIO 1010, MBIO 2020, MBIO 3000, ~~MBIO 3030~~, **MBIO 3032,** MBIO 3410, **MBIO 3700,** MBIO 4520

Optional Courses:

Appropriate prerequisites must be taken for all Optional courses.

~~CHEM 3570~~, **CHEM 3520, CHEM 3700,** CHEM 4360, CHEM 4670, MBIO 3430, ~~MBIO 4010~~, **MBIO 4020,** MBIO 4410, MBIO 4440, BIOL 3300, BIOL 4554/4556 ~~6~~, BIOL 4540, BIOL 4560, PLNT 2530, PLNT 4610, COMP 3820

Program Stream Courses:

Analytical Biotechnology: MATH 1700[1], CHEM 4370, CHEM 4590, CHEM 4670, CHEM 4700

Molecular Biotechnology: BIOL 4544 or BIOL 4556~~, MBIO 4600,~~ **MBIO 3600, MBIO 4602,** ~~MBIO 4610~~, **MBIO 4612,** MBIO 4672

Note: In some instances pre-requisites will be waived upon approval by the appropriate department.

~~**Complementary Existing Minors that could satisfy the Recommended Electives (Minors require 18 cr hrs of prescribed courses):**~~

~~Management, Animal Systems, Food Science, Plant Biotechnology, or Human Nutrition and Metabolism~~

Recommended General Electives if not required in Program stream:

~~All courses in above described Minors.~~

Appropriate pre-requisites must also be taken for all Electives.

BIOE 3200, BIOE 3530, BIOE 4510, BIOL 1300 (BOTN 1010), BIOL 2242 (BOTN 2010), BIOL 2380 (BOTN/ZOOL 2180), BIOL 2260 (BOTN 2210), BIOL 2300 (BOTN/ZOOL 2370), BIOL 3550 (BOTN 3190), BIOL 3290 (BOTN 3280), BIOL 3500 (BOTN 3460), BIOL 4500 (BOTN 4180), BIOL 3542 (BIOL 2540), BIOL 4540 (ZOOL 4150), BIOL 4544 (BIOL 3540); CHEM 4360, CHEM 4370, CHEM 4590, CHEM 4620, CHEM 4670, CHEM 4700; COMP 1010, COMP 1020, COMP 1260, COMP 1270; ENG 1420; ENTR 2020; MATH 1700[1]; MBIO ~~3280 (MBIO 2280)~~ **3282**, MBIO 3010, MBIO 3430, MBIO 4440 (MBIO 3440), MBIO 3450, MBIO 3460, MBIO ~~3470~~ **3472**, MBIO 4480 (MBIO 3480), MBIO 4010, MBIO 4410, MBIO 4470, MBIO ~~4600~~ **4602**, MBIO ~~4610~~ **4612**, MBIO 4672; PHAC 4030, PHAC 4040; PHIL 2740, PHIL 2830; PLNT 3140, PLNT 3500, PLNT 3520, PLNT 3570, PLNT 4310, PLNT 4330, PLNT 4550, PLNT 4560, PLNT 4570, PLNT 4580, PLNT 4590, PLNT 4600; STAT 2000

Other suitable courses may be selected through consultation with the department heads.

4.4.2 Biotechnology Programs (incl. Co-operative Option if selected)

4.4.2 Biotechnology Programs (incl. Co-operative Option if selected)

NOTE: As of Fall 2018, admission to the Biotechnology programs has been temporarily suspended. For further information, see the Faculty of Science office.

4.4.2 Biotechnology Programs (incl. Co-operative Option if selected) - Offered Jointly by the Departments of Chemistry and Microbiology			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS (incl. Co-operative Option if selected) 120 CREDIT HOURS			
BIOL 1020, BIOL 1030 ~~CHEM 1300, CHEM 1310~~ **CHEM 1100, CHEM 1110, CHEM 1120** PHYS 1020 (or PHYS 1050) MATH 1500[1] STAT 1000	~~CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), CHEM 2470~~ **CHEM 2100, CHEM 2110, CHEM 2122** **CHEM 2700 (MBIO 2700), CHEM 2710 (MBIO 2710), CHEM 2720** **CHEM 2510** MBIO 1010, MBIO 2020 ~~BIOL 2500,~~ BIOL 2520	**CHEM 2520 (2)** **CHEM 3500** ~~CHEM 3590~~ MBIO 3000, ~~MBIO 3030~~, **MBIO 3032,** MBIO 3410, **MBIO 3700**	CHEM 4630 MBIO 4520 BTEC 4000 (6)~~4 2~~
The requirements listed below can be completed in Year 1 or Year 2: 6 credit hours from the Faculty of Arts including the required "W" course ~~6 credit hours of **Required Program Stream**[2] courses or electives~~[3]		The requirements listed below can be completed in 3rd or 4th year: **CHEM 3760 (4)** 9 credit hours of Optional Courses ~~2~~ ~~3~~ ~~27~~ **15** credit hours of **Required Program Stream** courses[2]~~3~~ ~~and electives~~[3] **3 credit hours of electives**[4]	
		Work Terms (if Co-op Selected):	**Work Terms (if Co-op Selected):**

		~~BTEC 3980, BTEC 3990~~ **SCI 3980, SCI 3990**	~~BTEC 4980 and/or BTEC 4990~~ **SCI 4980, and SCI 4990 (if a 4th work term is selected)**
30 Hours	30 Hours	30 Hours	30 Hours
JOINT FOUR YEAR MAJOR (incl. Co-operative Option if selected) 120 CREDIT HOURS			
BIOL 1020, BIOL 1030 ~~CHEM 1300, CHEM 1310~~ **CHEM 1100, CHEM 1110, CHEM 1120** PHYS 1020 (or PHYS 1050) MATH 1500[1] STAT 1000	~~CHEM 2210, CHEM 2220, CHEM 2360 (MBIO 2360), CHEM 2370 (MBIO 2370), CHEM 2470~~ **CHEM 2100, CHEM 2110, CHEM 2122** **CHEM 2700 (MBIO 2700), CHEM 2710 (MBIO 2710), CHEM 2720** **CHEM 2510** MBIO 1010, MBIO 2020 ~~BIOL 2500,~~ BIOL 2520	**CHEM 2520 (2)** **CHEM 3500** ~~CHEM 3590~~ MBIO 3000, ~~MBIO 3030~~, **MBIO 3032,** MBIO 3410, **MBIO 3700**	CHEM 4630 MBIO 4520
The requirements listed below can be completed in Year 1 or Year 2: 6 credit hours from the Faculty of Arts including the required "W" course ~~6 credit hours of **Required Program Stream** courses[2] and/or approved electives[3]~~		The requirements listed below can be completed during 3rd and 4th year: **CHEM 3760 (4)** 9 credit hours of Optional Courses ~~2~~ **3** ~~33~~ **15** credit hours of **Required Program Stream** courses[2]**3** ~~and electives[3]~~ **9 credit hours of electives[4]**	
		Work Terms (if Co-op Selected): ~~BTEC 3980, BTEC 3990~~ **SCI 3980, SCI 3990**	**Work Terms (if Co-op Selected):** ~~BTEC 4980 and/or BTEC 4990~~ **SCI 4980, and SCI 4990 (if a 4th work term is selected)**
NOTES:			

[1] MATH 1230, MATH 1510 or MATH 1520 may be used in place of MATH 1500; MATH 1232 or MATH 1710 may be used in place of MATH 1700.

[2] BTEC 4000 is required for students in the Honours program only. Students in the Honours Co-operative program will require 6 credit hours of approved electives.

~~[2]~~ **[3]** Optional courses and program stream courses requirements can be found above the Biotechnology program charts in section 4.4.1.

~~[3]~~ **[4]** Refer to list of recommended elective courses and ~~complementary Minor programs~~ (listed above charts) prior to registration in your electives.

~~[4] BTEC 4000 is required for students in the Honours program only. Students in the Honours Co-operative program will require 6 credit hours of approved electives.~~

~~[5] Choice of BIOL 4554 or BIOL 4556 not already chosen for stream.~~

~~(The number 6 in brackets indicates a 6 credit hour course.)~~

(The numbers 2, 4, and 6 in brackets indicate two, four and six credit-hour courses, respectively. All other courses are 3 credit hours.)

Chemistry

Introduction:

CHEM 1018 Chemistry - The Central Science - 3 cr +3.0
An atomic understanding of our world and ourselves impinges on every aspect of human life and culture. In this course students will learn the principles of chemistry that provide the deepest understanding of topics such as human health, the environment, energy, consumer products, fine arts, agriculture, technology, foods, industry, the history of science and more. The course will cover the classification of matter, chemical change as well as fundamental chemistry calculations. CHEM 1018 may not be used for credit in a Chemistry honours, joint honours, or major program. Not available to students who have previously obtained credit in (grade of C or better) CHEM 1100 or CHEM 1101 or the former CHEM 1300 or the former CHEM 1301.

Modifications:

CHEM 2730 Elements of Biochemistry 1 - 3 cr 0.0
Basic concepts of biochemistry including the properties of biomolecules (amino acids and proteins, enzymes, carbohydrates, lipids, and nucleic acids) and aspects of energy production in cells. Primarily for students in Agricultural and Food Sciences and four-year Biological Sciences programs in Science. May not be used as part of an Honours, Major, or Minor program in Chemistry. May not be used as part of an Honours or Major program in Microbiology. This course is also given in Microbiology as MBIO 2730. May not be held with the former CHEM 2360, the former CHEM 2361, CHEM 2700, CHEM 2701, the former CHEM 2770, the former CHEM 2860, the former MBIO 2360, the former MBIO 2361, MBIO 2700, MBIO 2701, MBIO 2730, or the former MBIO 2770. Prerequisites: [one of CHEM 1110, CHEM 1111, CHEM 1130, the former CHEM 1310, the former CHEM 1311, or the former CHEM 1320] and [six credit hours of university level BIOL courses or (HEAL 1500 and HEAL 1502)].

CHEM 2740 Introduction to the Biochemistry Laboratory - 3 cr 0.0
This course is intended primarily for students in Agricultural and Food Sciences and four-year Biological Sciences programs who would benefit from hands-on experience of the most commonly used techniques in the modern biochemistry laboratory. The course will provide practical training in the use of micropipettors and spectrophotometers for the quantitation and analysis of proteins and enzymes, carbohydrates and DNA. Students will learn the application of various chromatographic and centrifugation-based techniques for biomolecule purification and analysis with an emphasis on topics of specific relevance to agriculture and food sciences. May not be used as part of an Honours, Major, or Minor program in Chemistry or in Microbiology. May not be held with the former CHEM 2370, the former CHEM 2371, CHEM 2720, CHEM 2721, the former CHEM 2780, the former MBIO 2370, the former MBIO 2371, or the former MBIO 2780. Prerequisites: one of CHEM 1110, CHEM 1111, CHEM 1130, the former CHEM 1310, the former CHEM 1311, or the former CHEM 1320.

CHEM 2750 Elements of Biochemistry 2 - 3 cr 0.0
The continuation of CHEM/MBIO 2730, dealing with nitrogen and lipid metabolism, representative biosynthetic pathways, and synthesis and importance of DNA, RNA and proteins. Primarily for students in Agricultural and Food Sciences and four-year Biological Sciences programs in Science. May not be used as part of an Honours, Major, or Minor program in Chemistry. May not be used as part of an Honours or Major program in Microbiology. This course is also given in Microbiology as MBIO 2750. May not be held with the former CHEM 2370, the former CHEM 2371, CHEM 2710, CHEM 2711, the former CHEM 2780, the former

MBIO 2370, the former MBIO 2371, MBIO 2710, MBIO 2711, MBIO 2750, or the former MBIO 2780. Prerequisites: one of CHEM 2730, CHEM 2700, CHEM 2701, the former CHEM 2770, the former CHEM 2360, the former CHEM 2361, the former CHEM 2860, MBIO 2730, MBIO 2700, MBIO 2701, the former MBIO 2770, the former MBIO 2360, or the former MBIO 2361.

NET CHANGE IN CREDIT HOURS: +3.0

Program modification:

Modifications to the department's Academic Calendar content, which follow from proposed changes to the Bachelor of Science (General) degree, are outlined on the next 2 pages.

As approved by 4Cs and Senate in Spring 2020

4.5.1 Department of Chemistry Program Information

Option A – Three Year General: As prescribed with all other faculty regulations in Section 3.2, students in this program must select 18 credit hours of 2000, 3000, and (or) 4000 level courses from each of two Science areas. 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).

To satisfy the requirement in the area of Chemistry, students must select a minimum of 18 credit hours of 2000 level or higher CHEM courses, with at least 6 credit hours chosen from CHEM 2122, CHEM 2520, CHEM 2720, CHEM 3120, CHEM 3320, and CHEM 3620.

Courses not allowed for use as advanced level courses in the 3-Year General Degree Option A are: CHEM 2240, the former CHEM 2550 (ENVR 2550), CHEM 2560, CHEM 2730 (MBIO 2730), CHEM 2740, CHEM 2750 (MBIO 2750), the former CHEM 2770 (the former MBIO 2770), the former CHEM 2780 (the former MBIO 2780), CHEM 3980, CHEM 3990, CHEM 4610, CHEM 4710, CHEM 4980 and CHEM 4990.

Option B – Three Year B.Sc. – Chemistry Focus: Students that choose this path for their three-year degree program will follow the program chart below. The 24 credit hours of introductory courses and 36 credit hours of advanced level requirements have been prescribed in such a way so that students that follow the chart can seamlessly transfer to a 4-year Chemistry Honours or Major degree program should they choose to do so after the completion of the 90 credit hours listed in the chart.

Students anticipating a transfer to either the four year Major or Honours program at the end of their second or third year should consult with the Departmental Program Advisor before registering.

Courses not allowed for use as advanced level courses in the 3-Year General Degree Option B are: CHEM 2240, the former CHEM 2550 (ENVR 2550), CHEM 2560, CHEM 2730 (MBIO 2730), CHEM 2740, CHEM 2750 (MBIO 2750), the former CHEM 2770 (the former MBIO 2770), the former CHEM 2780 (the former MBIO 2780), CHEM 3980, CHEM 3990, CHEM 4610, CHEM 4710, CHEM 4980 and CHEM 4990.

4.5.4 Chemistry General Degree and Minor Requirements

YEAR 1	YEAR 2	YEAR 3	YEAR 4
THREE YEAR B.Sc. General – Chemistry Focus 90 CREDIT HOURS			
CHEM 1100, CHEM 1110, CHEM 1120[1] BIOL 1020, BIOL 1030 MATH 1500[2], MATH 1700[2]	15 hours of required 2000 level Chemistry courses: CHEM 2100, CHEM 2300, CHEM 2510, CHEM 2600, CHEM 2700. 21 credit hours of 2000 level or higher CHEM with a minimum of 6 credit hours chosen from the 3000 / 4000 level[4] 6 credit hours of electives to be chosen from outside the Faculty of Science 15 credit hours of electives 3 credit hours from the Faculty of Arts[3]		

~~PHYS 1050 (or PHYS 1020), PHYS 1070 (or PHYS 1030)~~ ~~3 credit hours from the Faculty of Arts[3]~~	
~~**THREE YEAR GENERAL** 90 CREDIT HOURS~~	
~~CHEM 1100, CHEM 1110 (C), CHEM 1120[1]~~	~~a minimum of 18 credit hours of 2000 level or higher CHEM courses[4], which include at least 6 credit hours from: CHEM 2122, CHEM 2520, CHEM 2720, CHEM 3120, CHEM 3320, and CHEM 3620. 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	
CHEM 1100, CHEM 1110 (C), CHEM 1120[1]	Plus an additional 9 credit hours of Chemistry at the 2000 level or higher.

NOTES:

[1] CHEM 1122 and CHEM 1126 may be used in lieu of CHEM 1120. Note: CHEM 1122 is only available to Faculty of Engineering students.

~~[2] 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.~~

~~[3] Should include the required "W" course within these 6 credit hours.~~

~~[4]Courses not allowed for use as advanced level courses in the B.Sc. General – Chemistry Focus or the 3-Year General Degree are: CHEM 2240, the former CHEM 2550 (ENVR 2550), CHEM 2560, CHEM 2730 (MBIO 2730), CHEM 2740, CHEM 2750 (MBIO 2750), the former CHEM 2770 (the former MBIO 2770), the former CHEM 2780 (the former MBIO 2780), CHEM 3980, CHEM 3990, CHEM 4610~~, CHEM 4710, CHEM 4980 and CHEM 4990.

(Letters in brackets indicate minimum prerequisite standing for further study.) ~~The number x in brackets indicates a x credit hour course all other courses are 3 credit hours.)~~

Computer Science

Program modification:

Modifications to the department's Academic Calendar content, which follow from proposed changes to the Bachelor of Science (General) degree, are outlined on the next page.

Computer Science

4.6.1 Program Information

~~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.).~~

4.6.2 Computer Science Program Charts

~~**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)~~

Mathematics

Introduction:

MATH 1018 Pre-Calculus in Practice - 3 cr +3.0
(Lab required) Essential topics in pre-calculus, with an emphasis on applications and elementary mathematical modelling in the sciences. This course is intended primarily for students who do not have credit for Pre-calculus Mathematics 40S (60%) and wish to continue in a subsequent course in Mathematics. May not be used for credit in a Mathematics Honours, Joint Honours, or Major program. Not available to students who have previously obtained credit (grade of C or better) in MATH 1200, MATH 1201, MATH 1210, MATH 1211, MATH 1220, MATH 1230, MATH 1240, MATH 1241, MATH 1300, MATH 1301, MATH 1310, MATH 1500, MATH 1501, MATH 1510, MATH 1520, or MATH 1690.

NET CHANGE IN CREDIT HOURS: +3.0

Program modification:

Modifications to the department's Academic Calendar content, which follow from proposed changes to the Bachelor of Science (General) degree, are outlined on the next page.

4.9.1 Program Information

~~**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).~~

4.9.2.7 Mathematics ~~General Degree and~~ Minor Requirements
As approved by 4Cs and Senate in Fall 2020

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] and (or) 2000 and (or) 3000 level Mathematics courses.			

NOTES:

[1] MATH 1500 or MATH 1510 may be taken in place of MATH 1230; MATH 1210 (B) or 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.

Microbiology

Deletion:

MBIO 4670 Applied Molecular Biology H - 3 cr -3.0

Modifications:

MBIO 2730 Elements of Biochemistry 1 - 3 cr 0.0
Basic concepts of biochemistry including the properties of biomolecules (amino acids and proteins, enzymes, carbohydrates, lipids, and nucleic acids) and aspects of energy production in cells. Primarily for students in Agricultural and Food Sciences and four-year Biological Sciences programs in Science. May not be used as part of an Honours, Major, or Minor program in Chemistry. May not be used as part of an Honours or Major program in Microbiology. This course is also given in Chemistry as CHEM 2730. May not be held with the former CHEM 2360, the former CHEM 2361, CHEM 2700, CHEM 2701, CHEM 2730, the former CHEM 2770, the former CHEM 2860, the former MBIO 2360, the former MBIO 2361, MBIO 2700, MBIO 2701, or the former MBIO 2770. Prerequisites: [one of CHEM 1110, CHEM 1111, CHEM 1130, the former CHEM 1310, the former CHEM 1311, or the former CHEM 1320] and [six credit hours of university level BIOL courses or (HEAL 1500 and HEAL 1502)].

MBIO 2750 Elements of Biochemistry 2 - 3 cr 0.0
The continuation of CHEM/MBIO 2730, dealing with nitrogen and lipid metabolism, representative biosynthetic pathways, and synthesis and importance of DNA, RNA and proteins. Primarily for students in Agricultural and Food Sciences and four-year Biological Sciences programs in Science. May not be used as part of an Honours, Major, or Minor program in Chemistry. May not be used as part of an Honours or Major program in Microbiology. This course is also given in Chemistry as CHEM 2750. May not be held with the former CHEM 2370, the former CHEM 2371, CHEM 2710, CHEM 2711, CHEM 2750, the former CHEM 2780, the former MBIO 2370, the former MBIO 2371, MBIO 2710, MBIO 2711, or the former MBIO 2780. Prerequisites: one of CHEM 2730, CHEM 2700, CHEM 2701, the former CHEM 2770, the former CHEM 2360, the former CHEM 2361, the former CHEM 2860, MBIO 2730, MBIO 2700, MBIO 2701, the former MBIO 2770, the former MBIO 2360, or the former MBIO 2361.

MBIO 4672 Applied Molecular Biology - 3 cr 0.0
The overall objective of this course is to introduce and describe the current molecular techniques and their application to biological problems. These include, but are not limited to, basic gene cloning, mutagenesis and over-expression. May not be held with the former MBIO 4570, the former MBIO 4670, the former MBIO 4580, MBIO 4581. Prerequisites: [MBIO 3410 or MBIO 3411] and [one of MBIO 2710, MBIO 2711, the former MBIO 2370, the former MBIO 2371, CHEM 2710, the former CHEM 2370 or the former CHEM 2371].

NET CHANGE IN CREDIT HOURS: -3.0

Program modifications:

Modifications to the department’s Academic Calendar content, which follow from proposed changes to the Bachelor of Science (General) degree, are outlined on the next page.

4.10 Department of Microbiology

4.10.1 Program Information

Three Year General

~~As prescribed with all other faculty regulations in~~ See Section 3.2.

~~, students in this program must select 18 credit hours of 2000, 3000 and (or) 4000 level courses from each of two Science areas. To satisfy the requirement in the area of Microbiology, students must take a minimum of 18 credit hours of Microbiology courses as prescribed in the chart below (subject to the Faculty requirement that of the 36 credit hours in the two advanced level Science areas, at least 6 credit hours must be at the 3000/4000 level.).~~

~~Students wishing to elect courses in Microbiology in fulfilment of the requirements for the B.Sc. (General) degree should note the following:~~

- ~~Students must obtain a grade of "C" or better in the following: MBIO 1010, BIOL 1020, BIOL 1030, CHEM 1100, CHEM 1110 and CHEM 1120.~~
- ~~Students are encouraged to elect additional Microbiology courses above the required minimum.~~
- ~~Microbiology- MBIO 2730 and MBIO 2750 CHEM 2730 and CHEM 2750) are not available in this program.~~

4.10.2 Microbiology Program Charts

~~THREE YEAR GENERAL~~ ~~90 CREDIT HOURS~~	
~~MBIO 1010~~ ~~BIOL 1020, BIOL 1030~~ ~~CHEM 1100, CHEM 1110,~~ ~~CHEM 1120[3]~~	~~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)~~

Physics and Astronomy

Introduction:

PHYS 1018 The Mechanics of Nature - 3 cr +3.0
This course provides an overview of how aspects of the natural world can be modeled using the laws of mechanics within the contexts of everyday life, including astronomy and biology. Students will learn conceptual and calculational tools used to discover the essential physics observed in everyday experiences. Suitable for students seeking an introductory-level general-interest science course, and students seeking to prepare for taking other first year Physics and Astronomy courses. May not be used for credit in a Physics and Astronomy Honours, Joint Honours, or Major program. Not available to students who have previously obtained credit (grade of C or better) in PHYS 1020, PHYS 1021, PHYS 1050, or PHYS 1051. Pre- or corequisite: one of MATH 0401, MATH 1018, Applied Mathematics 40S, Pre-calculus Mathematics 40S, MSKL 0100, or equivalent.

NET CHANGE IN CREDIT HOURS: +3.0

Program modifications:

Modifications to the department's Academic Calendar content, which follow from proposed changes to the Bachelor of Science (General) degree, are outlined on the next page.

4.11.1 Program Information

~~**Three Year General**~~

~~As prescribed with all other faculty regulations in Section 3.2, students in this program must select 36 credit hours of 2000 and (or) 3000 level courses from **two** Science departments. To satisfy the requirement in the Department of Physics and Astronomy, students must select a minimum of 18 credit hours from the list in the chart below.~~

4.11.2 Physics and Astronomy Program Charts

~~**THREE YEAR GENERAL** 90 CREDIT HOURS~~	
~~PHYS 1050 (C) (or PHYS 1020 (C+)) and PHYS 1070 (C) (or PHYS 1030 (C+))~~	~~A minimum of 18 credit hours of 2000, 3000, and (or) 4000 level Physics or Astronomy courses (Subject to the Faculty requirement that of the 36 hours of advanced level courses, at least 6 credit hours must be chosen from the 3000 and (or) 4000 level.)~~

Statistics

Program modifications:

Modifications to the department's Academic Calendar content, which follow from proposed changes to the Bachelor of Science (General) degree, are outlined on the next page.

4.13.1 Program Information

~~**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.~~

4.13.2 Statistics Program Charts
As approved by 4Cs and Senate in Fall 2020

4.13.2 Statistics			
YEAR 1	YEAR 2	YEAR 3	YEAR 4
~~**THREE YEAR GENERAL** 90 CREDIT HOURS~~			
~~STAT 1150[2], STAT 2150~~	~~STAT 2400~~ ~~15 additional credit hours of 2000, 3000, and (or) 4000 level Statistics courses[4]~~		

Université de Saint-Boniface

Faculté des arts

département de sciences humaines et sociales

Deletions:

ANTH 2813 Méthodes en ethnologie – 3 cr -3.0
SOC 2291 Introduction aux méthodes de recherche - 6 cr -6.0

Introductions:

ANTH 2013 Initiation à la recherche en sciences sociales - 3 cr +3.0
Cours permettant de comprendre et d'apprécier la recherche menée dans les différentes disciplines de sciences humaines. Enjeux épistémologiques et éthiques. Problématique et questions de recherche. Logique des différents types de devis de recherche. Techniques d'analyse et de cueillette de données, incluant l'ethnographie, l'observation directe, l'entrevue, le groupe de discussion, l'analyse documentaire, le travail d'archive et le sondage. Ce cours est aussi donné comme SOC 2013. On ne peut se faire créditer ANTH 2013 et SOC 2013, SOC 2292, SOC 2294, ou les anciens ANTH 2831, SOC 2291, SOC 2290.

SOC 2013 Initiation à la recherche en sciences sociales - 3 cr +3.0
Cours permettant de comprendre et d'apprécier la recherche menée dans les différentes disciplines de sciences humaines. Enjeux épistémologiques et éthiques. Problématique et questions de recherche. Logique des différents types de devis de recherche. Techniques d'analyse et de cueillette de données, incluant l'ethnographie, l'observation directe, l'entrevue, le groupe de discussion, l'analyse documentaire, le travail d'archive et le sondage. Ce cours est aussi donné comme ANTH 2013. On ne peut se faire créditer SOC 2013 et ANTH 2013, SOC 2292, SOC 2294, ou les anciens ANTH 2831, SOC 2291, SOC 2290.

SPAN 2461 Amérique latine : chocs et métissages culturels - 3 cr +3.0
Analyse des œuvres littéraires, cinématographiques et artistiques, ainsi que des récits et des témoignages portant sur les rencontres qui ont eu lieu dans le « Nouveau monde » entre les civilisations et les peuples précolombiens et les Conquistadors, puis Colons espagnols, et les conséquences de ces rencontres au fil du temps. Étude portant principalement sur les traces culturelles laissées sur les périodes qui ont marqué de façon permanente et profonde les cultures des pays latino-américains : la Conquête, le système esclavagiste et la formation des états-nations. Cette analyse recouvre différents types de productions culturelles : récits, témoignages, histoire, littérature, cinéma, peinture, sculpture, discours politiques, etc. On ne peut se faire créditer SPAN 2461 et SPAN 2671 Espagnol sujet spécial 1 : Amérique latine : choc et métissages culturels. Préalables : SPAN 1263 ou SPAN 1262, SPAN 1280 ou SPAN 1290; ou l'ancien SPAN 1261 ou l'ancien SPAN 1260; ou l'autorisation professorale.

SPAN 2553 Perfectionnement et pratique de l'espagnol, langue et grammaire 1 - 3 cr +3.0
Cours de perfectionnement et de consolidation linguistique et grammaticale. L’objectif général est d’atteindre un niveau intermédiaire avancé dans la connaissance et la maitrise de la langue espagnole. Certains aspects grammaticaux, lexicaux et phonétiques complexes seront étudiés, ainsi que certains aspects culturels à travers des activités écrites et orales. Le cours est orienté vers la correction formelle et la réflexion ainsi que vers la fluidité et l'utilisation appropriée de la grammaire et du vocabulaire. On ne peut se faire créditer SPAN 2553 et SPAN 2671 Espagnol sujet spécial 1 : Perfectionnement et pratique de l’espagnol, langue et grammaire 1. Préalable :

SPAN 1263 ou SPAN 1262, SPAN 1280 ou SPAN 1290; ou l’ancien SPAN 1261 (TRAD 1261) ou l'ancien SPAN 1260; ou l'autorisation professorale.

SPAN 3463 Le réalisme magique dans la littérature latino-américaine – 3 cr +3.0
Étude des œuvres significatives de la littérature latino-américaine appartenant à l’esthétique du réalisme magique. À travers l’interprétation et l’analyse des œuvres littéraires importantes, ce cours étudiera les problématiques spécifiques à la culture latino-américaine dans le contexte des tensions et des relations entre différents sujets, institutions, groupes sociaux et genres. On ne peut se faire créditer SPAN 3463 et SPAN 3271 Espagnol sujet spécial 2 : Le réalisme magique dans la littérature latino-américaine. Préalable : n’importe quel cours d’espagnol de niveau 2000 ou l'autorisation professorale.

SPAN 3465 Perfectionnement et pratique de l'espagnol, langue et grammaire 2 – 3 cr +3.0
Cours de perfectionnement et de consolidation linguistique et grammaticale. L’objectif général est d’atteindre un niveau avancé élevé dans la connaissance et la maitrise de la langue espagnole. Certains aspects grammaticaux, lexicaux et phonétiques complexes seront étudiés, ainsi que certains aspects culturels à travers des activités écrites et orales. Le cours est orienté vers la correction formelle et la réflexion ainsi que vers la fluidité et l'utilisation appropriée de la grammaire et du vocabulaire. On ne peut se faire créditer SPAN 3465 et SPAN 3271 Espagnol sujet spécial 2 : Perfectionnement et pratique de l'espagnol, langue et grammaire 2. Préalable : n’importe quel cours d’espagnol de niveau 2000 ou l'autorisation professorale.

SPAN 3467 Représentations du handicap en Espagne et Amérique latine - 3 cr +3.0
Réflexion sur la représentation du handicap dans le dialogue social (télévision, cinéma, littérature, presse, etc.). Analyse et déconstruction des stéréotypes et des idées préconçues sur les personnes en situation de handicap présents dans les représentations qui circulent dans les sociétés hispanophones. Étude des mécanismes de la construction de l’identité/altérité qui résultent dans l’exclusion et le rejet des personnes handicapées. On ne peut se faire créditer SPAN 3467 et SPAN 3271 Espagnol sujet spécial 2 : Représentations du handicap en Espagne et Amérique latine. Préalable : n’importe quel cours d’espagnol de niveau 2000 ou l'autorisation professorale.

Modifications:

SOC 1211 Introduction à la microsociologie – 3 cr 0.0
Introduction systématique à la perspective sociologique : points de vue théoriques, méthodes et domaines de recherche. Initiation à l'étude de la socialisation, des groupes, de la famille, de l'école, des minorités, des rôles sexuels. On ne peut se faire créditer SOC 1211 et SOC 1000 ou les anciens SOC 1200 ou SOC 1201.

SOC 1221 Introduction à la macrosociologie - 3 cr 0.0
Introduction systématique à la perspective sociologique : points de vue théoriques, méthodes et domaines de recherche. Initiation à la culture, à la stratification sociale, aux mouvements sociaux, à la population, aux institutions politiques, aux différents systèmes de la société. On ne peut se faire créditer SOC 1221 et SOC 1000 ou les anciens SOC 1200 ou SOC 1201. Préalable : SOC 1211.

SOC 2221 Théories sociologiques classiques – 3 cr 0.0
Aperçu de la théorie sociologique classique. Les principaux penseurs et les principales écoles de pensée en sociologie. On ne peut se faire créditer SOC 2221 et SOC 2220. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2261 Sociologie de la ville et du milieu urbain - 3 cr 0.0
Étude des dimensions sociale et culturelle du phénomène urbain. Analyse de l'expérience urbaine, des formes de socialité et des inégalités sociales. On ne peut se faire créditer SOC 2261, SOC 2260, SOC 2271 ou SOC 2270. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2311 Choix de problèmes sociaux - 3 cr 0.0
Analyse d'un ou de plusieurs problèmes sociaux contemporains (autres que le crime et la délinquance). On pourra examiner, par exemple, des problèmes tels que la pauvreté, la guerre, l'environnement, la consommation de drogues, la mortalité. Pour plus de détails sur le contenu du cours, consulter le guide d'inscription ou s'adresser au professeur. On ne peut se faire créditer SOC 2311 et SOC 2310. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2321 La société canadienne et sa culture - 3 cr 0.0
Analyse sociologique des institutions canadiennes en adoptant, comme point de référence, des perspectives historiques, culturelles, économiques et politiques. On ne peut se faire créditer SOC 2321 et SOC 2320. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2331 Psychosociologie - 3 cr 0.0
Examen de la relation entre individu, groupe et société, en soulignant l’interaction comme étant le processus qui donne à la vie quotidienne sa forme, sa direction et sa signification. Les sujets discutés peuvent inclure : le soi, le processus de formation de l'identité, la motivation, le contrôle des émotions. On ne peut se faire créditer SOC 2331 et SOC 2330. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2371 Rapports ethniques – 3 cr 0.0
Introduction aux dimensions sociologiques et sociopsychologiques des rapports ethniques au Canada. On ne peut se faire créditer SOC 2371 et SOC 2370. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2391 L'organisation sociale – 3 cr 0.0
Étude des forces qui influencent la formation de l’ordre dans la société, son maintien et son changement, le contrôle social, le conflit de pouvoir, l'intégration. On ne peut se faire créditer SOC 2391 et SOC 2390. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2461 La famille - 3 cr 0.0
Analyse sociologique des diverses formes et pratiques familiales dans les sociétés contemporaines, ainsi que de leur évolution à partir de formes plus anciennes. Sont également étudiés les rapports entre les formes familiales et le contexte social global. On ne peut se faire créditer SOC 2461 et le SOC 2460. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2511 Criminologie – 3 cr 0.0
Introduction générale aux théories de comportement déviant et de criminologie. L'explication du crime en se référant aux facteurs physiques, psychologiques et sociaux. On ne peut se faire créditer SOC 2511 et le SOC 2510. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 2531 Sociologie du Manitoba - 3 cr 0.0
Étude sociologique de la population du Manitoba avec un accent sur ses regroupements culturels et sa stratification sociale. On ne peut se faire créditer SOC 2531 et l'ancien SOC 2530. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 3331 Origines de la pensée sociologique - 3 cr 0.0
Une introduction systématique à la pensée sociologique, de ses origines philosophiques jusqu'au milieu du 19e siècle. Examen de la pensée sociale qui deviendra la base de la théorie sociologique. On ne peut se faire créditer SOC 3331 et SOC 3330. Préalable : SOC 2221 ou SOC 2220.

SOC 3371 Sociologie du travail - 3 cr 0.0
Analyse du travail comme dimension centrale de la vie contemporaine. La transformation qu'a connue le travail dans le temps et par rapport aux changements politiques, technologiques et sociaux. L'organisation du travail du point de vue des travailleurs et des employeurs. L'impact du travail sur les individus, les institutions sociales et la société en général. On ne peut se faire créditer SOC 3371 et SOC 3370 ou LABR 3370. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 3471 Sociologie politique - 3 cr 0.0
Évaluation critique de la théorie et des recherches sociologiques relatives aux rapports de force dans la société. Les divers aspects du pouvoir (économique, politique, idéologique), des conflits de classe, de la socialisation, de l'origine, des fonctions et de l'évolution de l'État. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 3581 Culture, médias et société - 3 cr 0.0
Étude de l'influence des médias dans les sociétés contemporaines; analyse de la production, de la circulation et de la consommation de diverses formes médiatiques et de leur impact sur la vie sociale. On ne peut se faire créditer SOC 3581 et SOC 3580 ou les anciens SOC 3591 ou SOC 3590. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201. SOC 2331 ou SOC 2330 est recommandé.

SOC 3731 Société et éducation - 3 cr 0.0
Examen critique des enjeux de l'éducation et de leur impact sur l'évolution de la société. Questions telles que : le curriculum; l'interaction au sein de la classe compte tenu des caractéristiques socio-économiques des élèves (sexe, ethnie, niveau de revenu et profession des parents, etc.). Cours s'adressant particulièrement aux personnes qui se préparent à faire carrière en éducation. On ne peut se faire créditer SOC 3731 et SOC 3730. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 3811 Sociologie de la sexualité et des rôles sexuels – 3 cr 0.0
Étude exploratoire des rapports entre les hommes et les femmes dans la société contemporaine. Examen du processus de construction sociale de la sexualité et des rôles sexuels, à travers une perspective historique de comparaison entre les cultures. On ne peut se

faire créditer SOC 3811 et SOC 3810. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

SOC 3871 Inégalités sociales – 3 cr 0.0
Présentation des inégalités sociales dans la société capitaliste actuelle. Examen critique des explications proposées au sujet des diverses dimensions de l'inégalité sociale telles que : la classe sociale d'appartenance, les rôles sexuels et l'appartenance ethnique. Discussions au sujet de la pauvreté, de la répartition sociale, de la richesse, du chômage, de l'évolution des postes et des contextes de travail à l'ère de la mondialisation. On ne peut se faire créditer SOC 3871 et SOC 3890 ou l'ancien SOC 3870. Préalables : SOC 1000 ou (SOC 1211 et SOC 1221) ou les anciens SOC 1200 ou SOC 1201.

NET CHANGE IN CREDIT HOURS: +12.0

Program modifications:

Modifications to the **Baccalauréat ès arts avec majeure générale en anthropologie** are outlined on the next page.

Anthropologie (ANTH)

Majeure générale (30 crédits)	**Mineure (18 crédits)**
ANTH 1211 (3) et ANTH 1221 (3) + ANTH 2001 (3), ANTH 2101 (3), et ~~ANTH 2831 (3)~~ **ANTH/SOC 2013 (3)** + un cours de 3 crédits parmi ANTH 2020 (3), ANTH 2530 (3), **ANTH 2041 (3)** ~~ou ANTH 2861 (3)~~ + 12 crédits au choix de niveau 2000 ou plus (dont un minimum de 6 crédits de niveau 3000 ou 4000)	ANTH 1211 (3) et ANTH 1221 (3) + 12 crédits au choix (ANTH 2001 (3) est recommandé)

Majeure générale en anthropologie :
Préalables pour déclarer une majeure générale en anthropologie : une note minimale de « C » dans a) ANTH 1211 et ANTH 1221 ou b) l'ancien ANTH 1201. Les étudiantes et étudiants qui ont suivi des cours supplémentaires pour la majeure générale doivent avoir obtenu une moyenne pondérée de 2.00 (« C ») dans tous les cours requis pour la majeure générale.

Une moyenne cumulative minimale de 2.00 (« C ») est nécessaire dans tous les cours qui constituent la majeure générale pour satisfaire aux exigences du baccalauréat ès arts général.

Mineure en anthropologie :
Préalables pour déclarer une mineure en anthropologie : une note minimale de « C » dans a) ANTH 1211 et ANTH 1221 ou b) l'ancien ANTH 1201.

Modifications to the **Baccalauréat ès arts avec majeure générale en sociologie** are outlined on the next page.

Sociologie (SOC)

Majeure générale (30 crédits)	**Mineure (18 crédits)**
[SOC 1211 (3) et SOC 1221 (3)] ou [l'ancien SOC 1201 (6)]	[SOC 1211 (3) et SOC 1221 (3)] ou [l'ancien SOC 1201 (6)]
+ SOC 2221 (3) et ~~SOC 2291 (6)~~	+ 12 crédits de niveau 2000 ou 3000
SOC/ANTH 2013 (3)	
+ SOC 3331 (3) ou SOC 3391 (3)	
+ ~~12~~ **15** crédits de niveau 2000 ou 3000	

Majeure générale en sociologie :
Préalables pour déclarer une majeure générale en sociologie : une note minimale de « C » dans a) SOC 1211 et SOC 1221 ou b) l'ancien SOC 1201. Les étudiantes et étudiants qui ont suivi des cours supplémentaires pour la majeure générale doivent avoir obtenu une moyenne pondérée de 2.00 (« C ») dans tous les cours requis pour la majeure générale.

Une moyenne cumulative minimale de 2.00 (« C ») est nécessaire dans tous les cours qui constituent la majeure générale pour satisfaire aux exigences du baccalauréat ès arts général.

Mineure en sociologie :
Préalables pour déclarer une mineure en sociologie : une note minimale de « C » dans a) SOC 1211 et SOC 1221 ou b) l'ancien SOC 1201.

Faculté des sciences

département des sciences expérimentales

Deletions:

CHEM 1301 Université I Chimie : La structure et la modélisation chimique – 3 cr -3.0
CHEM 1311 Université I Chimie : Une introduction à la chimie physique – 3 cr -3.0
CHEM 2211 Introduction à la chimie organique I : Structure et fonction – 3 cr -3.0
CHEM 2221 Introduction à la chimie organique II : Réactivité et synthèse – 3 cr -3.0
CHEM 2261 Introduction à la spectroscopie – 3 cr -3.0
CHEM 2361 Biochimie I : les molécules biochimiques et une introduction à l'énergie métabolique – 3 cr -3.0
CHEM 2371 Biochimie II : catabolisme, synthèse et les voies d'information – 3 cr -3.0
CHEM 2401 Chimie inorganique : Structure et applications – 3 cr -3.0
CHEM 2471 Introduction à la chimie analytique – 3 cr -3.0
CHEM 3571 Chimie biophysique – 3 cr -3.0
MBIO 2361 Biochimie I : les molécules biochimiques et une introduction à l'énergie métabolique – 3 cr -3.0
MBIO 2371 Biochimie II : catabolisme, synthèse et les voies d'information – 3 cr -3.0
MBIO 4601 Génétique moléculaire des procaryotes – 3 cr -3.0

Introductions:

ASTR 1821 La cosmologie : entre science et fiction – 3 cr +3.0
Introduction à l'étude de la cosmologie, la science qui s'intéresse à tous les aspects de l'univers lui-même : son origine, son évolution, sa structure et sa composition. Étude des étoiles, des planètes et des galaxies. Modèles et théories modernes qui permettent de mieux comprendre l'origine, l'évolution et l'avenir de l'univers. Le cours explore la mince frontière qui sépare la science de la fiction avec quelques-unes des idées les plus étranges de la science actuelle : cordes cosmiques, dimensions recourbées sur elles-mêmes, univers parallèles et trous de vers. Place de l'être humain dans l'univers et possibilité de découvrir de la vie ailleurs dans l'univers. Ce cours est conçu pour les étudiantes et étudiants de toutes les facultés. Les mathématiques pourront être utilisées pour soutenir et clarifier certaines discussions mais on ne fera appel qu'à des connaissances de base. Ce cours ne peut pas être reconnu aux fins d'un programme de mineure, de majeure ou spécialisé en physique. On ne peut se faire créditer ASTR 1821 et ASTR 1810.

CHEM 1101 Introduction à la chimie 1 : Structures atomiques et moléculaires, et énergie chimique -3 cr +3.0
Consolidation des concepts chimiques fondamentaux appris au secondaire. Description plus approfondie du tableau périodique des éléments, de la nature de l'énergie en chimie, des structures atomiques et moléculaires, et des concepts de réactivité chimique. On ne peut se faire créditer CHEM 1101 et CHEM 1100 (ou les anciens CHEM 1301, CHEM 1300). Préalables : [un de Chimie 40S (50%), CSKL 0100 (P) ou l'ancien CHEM 0900 (P)] et [un de Mathématiques appliquées 40S (5O%), Mathématiques pré-calcul 40S (50%), MATH 0401, l'ancien Mathématiques 40S (300) (50%) ou MSKL 0100 (C)].

CHEM 1111 Introduction à la chimie 2 : Interaction, réactivité et propriétés chimiques – 3 cr +3.0

Consolidation des concepts chimiques fondamentaux appris au secondaire. Descriptions plus approfondies de la réactivité chimique et des propriétés physiques de la matière. On ne peut se faire créditer CHEM 1111 et CHEM 1110 (ou les anciens CHEM 1311, CHEM 1310). Préalables : un de CHEM 1101 ou CHEM 1100 ou un des anciens (CHEM 1301 ou CHEM 1300).

CHEM 1121 Introduction aux techniques chimiques - 3 cr +3.0

(Laboratoire autonome) Perfectionnement des compétences en matière d'observations, de manipulation sécuritaire de produits chimiques, de manipulation d'équipement de laboratoire, d'analyses quantitatives, de traitements de données et de communication scientifique. Démonstration de l'importance de la chimie pour la société via une introduction aux concepts de développement durable, à la sécurité chimique et aux différentes applications de la chimie. On ne peut se faire créditer CHEM 1121 et CHEM 1120 ou CHEM 1122 ou CHEM 1126 ou les anciens CHEM 1311 et CHEM 1310. Préalables : [Chimie 40S (70%) et (un de Mathématiques pré-calcul 40S (70%), Mathématiques appliquées 40S (70%) ou MSKL 0100 (B))] ou [un de CHEM 1101, CHEM 1100, CSKL 0100 (P) ou un des anciens [CHEM 1301, CHEM 1300, ou CHEM 0900 (P))].

CHEM 2101 Chimie organique 1 : Principes de la chimie organique - 3 cr +3.0

Introduction aux concepts de liaisons et de réactivité chez les molécules organiques. Propriétés et préparation des composés organiques renfermant un groupe fonctionnel. On ne peut se faire créyditer CHEM 2101 et CHEM 2100, CHEM 1130 ou (les anciens CHEM 2211, CHEM 2210, CHEM 1320). Préalables : [(CHEM 1111 ou CHEM 1110) et un de (CHEM 1121, CHEM 1120, CHEM 1126)] ou un des anciens [CHEM 1311, CHEM 1310].

CHEM 2111 Chimie organique 2 : Principes de la synthèse organique - 3 cr +3.0

Introduction à la réactivité des composés organiques et aux stratégies de synthèse. L'application de l'interchangeabilité des groupes fonctionnels dans la synthèse des composés sera examinée. On ne peut se faire créditer CHEM 2111 et CHEM 2110 (ou les anciens CHEM 2221, CHEM 2220). Préalables : CHEM 2101 ou CHEM 2100 ou un des anciens (CHEM 2211 ou CHEM 2210).

CHEM 2123 Chimie organique expérimentale – 3 cr +3.0

(Laboratoire autonome) Introduction aux méthodes de synthèses organiques, aux techniques de purification et aux analyses de produits. Les théories et les applications de la spectroscopie IR et RMN du 1H et du 13C en chimie organique seront présentées. Développement des compétences en communication scientifique par l'entremise de diverses plateformes médiatiques ainsi que d’aptitudes pour la littérature chimique. On ne peut se faire créditer CHEM 2123 et CHEM 2122 (ou les anciens CHEM 2221, CHEM 2220). Préalables : [(CHEM 1111 ou CHEM 1110) et (un de CHEM 1121, CHEM 1120 ou CHEM 1126)] ou un des anciens (CHEM 1311, CHEM 1310).

CHEM 2301 Chimie inorganique 1 : Structure et applications – 3 cr +3.0

Revue de la liaison chimique, de la structure et de la réactivité à travers le tableau périodique des éléments à partir d'exemples liant la chimie inorganique à la science des matériaux et à la biochimie. Aperçu des tendances périodiques et de leurs relations avec certaines propriétés des éléments, de la liaison chimique et de la réactivité de certains composés et matériaux inorganiques, accompagné d'applications variées de la chimie inorganique. On ne peut se faire créditer CHEM 2301 et CHEM 2300 (ou les anciens CHEM 2381, CHEM 2380, CHEM 2401,

CHEM 2400). Préalables : [(CHEM 1111 ou CHEM 1110) et (un de CHEM 1121, CHEM 1120 ou CHEM 1126)] ou [(un des anciens CHEM 1311 ou CHEM 1310)].

CHEM 2511 Introduction à la chimie analytique - 3 cr +3.0
Un cours de chimie analytique quantitative fournit une formation utile à presque tous les scientifiques. Ce cours outille les étudiants et étudiantes avec les principes théoriques à la base des méthodes analytiques, avec l'habilité de planifier et d'exécuter des expériences et ensuite d'interpréter les résultats. On ne peut se faire créditer CHEM 2511 et CHEM 2510 (ou les anciens CHEM 2471 et CHEM 2470). Préalables : [(CHEM 1111 ou CHEM 1110) et un de (CHEM 1121, CHEM 1120 ou CHEM 1126)] ou [un des anciens (CHEM 1311 ou CHEM 1310)].

CHEM 2521 Introduction aux techniques de la chimie analytique - 2 cr +2.0
Introduction aux techniques traditionnelles et classiques d'analyses chimiques. Les expériences mettront l'emphase sur les déterminations quantitatives à l'aide de méthodes gravimétrique, titrimétrique et spectrophotométrique. On ne peut se faire créditer CHEM 2521 et CHEM 2520 (ou les anciens CHEM 2471 et CHEM 2470). Préalables : [(CHEM 1111 ou CHEM 1110) et (un de CHEM 1121, CHEM 1120 ou CHEM 1126) ou (un des anciens CHEM 1311 ou CHEM 1310)].

CHEM 2523 Complément de techniques de la chimie analytique - 1 cr +1.0
(Laboratoire autonome) Activités de laboratoire en complément de CHEM 2521. Introduction pratique à des instruments choisis de la chimie analytique moderne. Applications de la chimie analytique à l’analyse environnementale, à la chimie alimentaire et aux domaines industriels et pharmaceutiques. Emphase sur la préparation des échantillons, les méthodes de calibration, le fonctionnement des instruments et l'interprétation des données. On ne peut se faire créditer CHEM 2523 et CHEM 3520 ou ENVR 3550 ou l'ancien CHEM 3590. Préalables : [(CHEM 1111 ou CHEM 1110) et (un de CHEM 1121, CHEM 1120 ou CHEM 1126) ou (un des anciens CHEM 1311 ou CHEM 1310)]. Préalable ou concomitant : CHEM 2521 ou CHEM 2520.

CHEM 2601 Chimie physique 1 - 3 cr +3.0
Introduction aux principes théoriques de la spectroscopie atomique et moléculaire et leurs applications à l'étude des propriétés chimiques et physiques à l'échelle microscopique. Exploration des spectroscopies ultraviolet et visible, de vibration, de rotation et de résonance magnétique nucléaire. On ne peut se faire créditer CHEM 2601 et CHEM 2600 (ou les anciens CHEM 2261, CHEM 2260, CHEM 2281 et CHEM 2280). Préalables : [((CHEM 1111 ou CHEM 1110) et (un de CHEM 1121, CHEM 1120 ou CHEM 1126)) ou (un des anciens CHEM 1311 ou CHEM 1310)] et [(un de MATH 1230, MATH 1501, MATH 1500, MATH 1510, MATH 1520) ou (un des anciens MATH 1530 ou MATH 1690)].

CHEM 2701 Biochimie 1 : molécules biochimiques et introduction à l'énergie métabolique - 3 cr +3.0
Le cours vise à faire découvrir le fonctionnement de la cellule en examinant les composés biochimiques les plus importants - les protéines, les glucides, les acides nucléiques ainsi que les lipides. Une introduction à la bioénergétique sera faite en utilisant les concepts d'énergie libre, de catabolisme ainsi que d'ATP. Ce cours est aussi donné comme MBIO 2701. On ne peut se faire créditer CHEM 2701 et CHEM 2700, MBIO 2701, MBIO 2700, MBIO 2730, CHEM 2730, ou les anciens (MBIO 2361, MBIO 2360, CHEM 2361, CHEM 2360, MBIO 2770, CHEM 2770, CHEM 2860). Préalables : [un de [(CHEM 1111 ou CHEM 1110) et un de (CHEM 1121 ou CHEM 1120 ou CHEM 1126)] ou un des anciens (CHEM 1311 ou CHEM 1310)] et un de (BIOL 1031 ou BIOL 1030).

CHEM 2711 Biochimie II : catabolisme, synthèse et voies d'information - 3 cr +3.0
Introduction aux processus métaboliques cellulaires de base incluant la production et l'utilisation de l'énergie moléculaire, la dégradation et la synthèse des molécules biochimiques, la synthèse de l'ADN, de l'ARN et des protéines et la régulation de ces processus. Ce cours est aussi donné comme MBIO 2711. On ne peut se faire créditer CHEM 2711 et CHEM 2710, MBIO 2711, MBIO 2710, CHEM 2750, MBIO 2750, ou les anciens (CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370, MBIO 2780, CHEM 2780). Préalables : [un de (CHEM 2701, CHEM 2700, MBIO 2701, MBIO 2700) ou un des anciens (MBIO 2361, MBIO 2360, CHEM 2361, CHEM 2360, CHEM 2860)] et [un de (CHEM 2101, CHEM 2100) ou un des anciens (CHEM 2211 ou CHEM 2210)].

CHEM 2721 Principes et techniques de laboratoire en biochimie moderne - 3 cr +3.0
Le cours va fournir une introduction aux idées théoriques et pratiques des techniques utilisées dans le laboratoire de biochimie moderne. On ne peut pas se faire créditer CHEM 2721 et CHEM 2720, CHEM 2740, ou les anciens (CHEM 2371, CHEM 2370, CHEM 2780, MBIO 2371, MBIO 2370, MBIO 2780). Préalables : un de (CHEM 1111 ou CHEM 1110) et un de (CHEM 1121, CHEM 1120 ou CHEM 1126) ou (les anciens CHEM 1311 ou CHEM 1310). Ce cours peut être utilisé pour "Advanced Level Science requirements" en Chimie ou Microbiologie.

CHEM 3701 Chimie biophysique – 3 cr +3.0
Application de la chimie physique aux problèmes biologiques avec l'accent sur l'interprétation quantitative. Les sujets comprennent la cinétique enzymatique, la bioénergétique, les processus de transport ainsi que la spectroscopie. On ne peut se faire créditer CHEM 3701 et CHEM 3700 (ou les anciens CHEM 3571, CHEM 3570). Préalables : [un de (CHEM 2701, CHEM 2700, MBIO 2701, ou MBIO 2700) ou un des anciens (CHEM 2361, CHEM 2360, CHEM 2860, MBIO 2361 ou MBIO 2360)] et [un de MATH 1230, MATH 1501, MATH 1500, MATH 1510, MATH 1520].

CHEM 3761 Laboratoire avancé de biochimie - 4 cr +4.0
(Laboratoire autonome) Cours axé sur le laboratoire qui présente des méthodes avancées de purification et d'analyse structurelle et fonctionnelle de biomolécules importantes. On ne peut se faire créditer CHEM 3761 et CHEM 3760 (ou l'ancien CHEM 4700). Préalables : [un de (CHEM 2711, CHEM 2710, MBIO 2711, MBIO 2710) et un de (CHEM 2721, CHEM 2720)] ou [un des anciens CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370].

CHEM 3331 Applications de la spectroscopie en chimie inorganique - 3 cr +3.0
Introduction à la synthèse et à la purification de composés inorganiques, et étude de leurs propriétés à l'aide de techniques spectroscopiques. Les expériences fourniront une formation solide de base dans les aspects théorique et pratique des spectroscopies UV-Vis, IR et RMN 1H et 13C tel qu'appliquées à la chimie inorganique. On ne peut se faire créditer CHEM 3331 et CHEM 3320 ou CHEM 3620 ou (les anciens CHEM 3380 et CHEM 3400). Préalables : [(CHEM 2123, CHEM 2122, CHEM 2601 ou CHEM 2600) ou (un des anciens CHEM 2221, CHEM 2220, CHEM 2261, CHEM 2260, CHEM 2281 ou CHEM 2280)]. Préalable ou concomitant : [(CHEM 2301 ou CHEM 2300) ou (un des anciens CHEM 2381, CHEM 2380, CHEM 2401 ou CHEM 2400)].

MBIO 2701 Biochimie 1 : molécules biochimiques et introduction à l'énergie métabolique- 3 cr +3.0
Le cours vise à faire découvrir le fonctionnement de la cellule en examinant les composés biochimiques les plus importants – les protéines, les glucides, les acides nucléiques ainsi que les lipides. Une introduction à la bioénergétique sera faite en utilisant les concepts d'énergie

libre, de catabolisme ainsi que d'ATP. Ce cours est aussi donné comme CHEM 2701. On ne peut se faire créditer MBIO 2701 et MBIO 2700, CHEM 2701, CHEM 2700, MBIO 2730, CHEM 2730, ou les anciens (MBIO 2361, MBIO 2360, CHEM 2361, CHEM 2360, MBIO 2770, CHEM 2770, CHEM 2860). Préalables : un de [(CHEM 1111 ou CHEM 1110) et un de (CHEM 1121 ou CHEM 1120 ou CHEM 1126) ou un des anciens (CHEM 1310 ou CHEM 1311)] et un de (BIOL 1031 ou BIOL 1030).

MBIO 2711 Biochimie II : catabolisme, synthèse et voies d'information - 3 cr +3.0
Introduction aux processus métaboliques cellulaires de base incluant la production et l'utilisation de l'énergie moléculaire, la dégradation et la synthèse des molécules biochimiques, la synthèse de l'ADN, de l'ARN et des protéines et la régulation de ces processus. Ce cours est aussi donné comme CHEM 2711. On ne peut se faire créditer MBIO 2711 et MBIO 2710, CHEM 2711, CHEM 2710, CHEM 2750, MBIO 2750, ou les anciens (CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370, MBIO 2780, CHEM 2780). Préalables : [un de (CHEM 2701, CHEM 2700, MBIO 2701, MBIO 2700) ou un des anciens (MBIO 2361, MBIO 2360, CHEM 2361, CHEM 2360, CHEM 2860)] et [un de (CHEM 2101, CHEM 2100) ou un des anciens (CHEM 2211 ou CHEM 2210)].

MBIO 4603 Génétique moléculaire des procaryotes - 3 cr +3.0
Étude détaillée des principes qui sous-tendent les mécanismes moléculaires de la génétique bactérienne en se concentrant sur la conjugaison, la transduction, la transformation, la recombinaison et les éléments génétiques mobiles. Les rôles de ces mécanismes dans les approches moléculaires et dans la pathogénie de certains pathogènes bactériens seront également abordés. On ne peut se faire créditer MBIO 4603 et MBIO 4602 ou les anciens (MBIO 4601 et MBIO 4600). Préalables : [MBIO 3411 ou MBIO 3410] et [MBIO 2021, MBIO 2020] et [un de (MBIO 2701, MBIO 2700, CHEM 2701, CHEM 2700, MBIO 2730, CHEM 2730) ou un des anciens (MBIO 2361, MBIO 2360, CHEM 2361, CHEM 2360, MBIO 2770, CHEM 2770)].

PHYS 1303 Énergie et durabilité - 3 cr +3.0
Ce cours présente les différentes sources d'énergie découvertes par l'homme, leurs méthodes d'exploitation et impact sur l'environnement. Étude des concepts physiques sous-jacents et des diverses solutions retenues : combustion du bois, énergies fossiles et nucléaires, récentes technologies de production d'énergie renouvelable. Analyse des conséquences de l'exploitation des ressources sur la préservation de l'environnement et de la ressource elle-même. Réflexion sur le lien étroit entre l'évolution de l'humanité et l'énergie qu'elle produit. Ce cours est conçu pour les étudiantes et étudiants de toutes les facultés. Les mathématiques pourront être utilisées pour soutenir et clarifier certaines discussions mais on ne fera appel qu'à des connaissances de base. Ce cours ne peut pas être reconnu aux fins d'un programme de mineure, de majeure ou spécialisé en physique. On ne peut se faire créditer PHYS 1303 et [PHYS 1301, l'ancien PHYS 1300, PHYS 2350].

Modifications:

BIOL 2301 Principes d'écologie - 3 cr 0.0
(Laboratoire requis) Principes d'écologie au niveau de l'individu, de la population, de la communauté et de l'écosystème. C'est normalement le cours préalable aux autres cours d'écologie. On ne peut se faire créditer BIOL 2301 et BIOL 2300, BIOL 2390 ou AGEC 2370. Préalable : BIOL 1031 ou BIOL 1030. Préalable ou concomitant : un de STAT 1001, STAT 1000 ou STAT 1150.

BIOL 2381 Introduction à la toxicologie - 3 cr 0.0
Survol des principes généraux à la base des effets des substances toxiques sur les systèmes biologiques, tout en prenant en considération l'histoire, l'étendue et les applications de la toxicologie, les mécanismes d'action des toxines et certains types majeurs de toxines. On ne peut se faire créditer BIOL 2381 et BIOL 2380, ENVR 2180, ENVR 2190, AGRI 2180, AGRI 2190 (ou l'ancien BIOL 2382). Préalables : [BIOL 1031 ou BIOL 1030] et [(CHEM 1101 ou CHEM 1100 et un de CHEM 1111, CHEM 1110, CHEM 1121, CHEM 1120, CHEM 1126 ou CHEM 1130) ou (un des anciens CHEM 1311, CHEM 1310 ou CHEM 1320)].

BIOL 3501 Génétique 2 – 3 cr 0.0
(Laboratoire requis) Complément du cours d'introduction à la génétique BIOL 2501 (BIOL 2500). Présentation des divers aspects de la liaison génique et la recombinaison génique, de la fonction des gènes, l'allélisme, des mutations et de la réparation, de l'utilisation des bactéries et des virus comme outils génétiques, des bases de la génétique du développement et de l'hérédité extranucléaire. On ne peut se faire créditer BIOL 3501 et BIOL 3500. Préalables : un de [BIOL 2501 ou BIOL 2500 ou PLNT 2520]; et un de [(CHEM 2711, CHEM 2710, MBIO 2711 ou MBIO 2710) et (CHEM 2721 ou CHEM 2720)] ou (CHEM 2740 et (CHEM 2750 ou MBIO 2750)] ou [un des anciens (CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370, CHEM 2780 ou MBIO 2780)] ou autorisation professorale.

CHEM 4361 Signalisation et régulation de l'expression génétique - 3 cr 0.0
Biochimie de la réponse cellulaire aux stimuli externes, en mettant l'accent sur les animaux. Les récepteurs à la surface des cellules, les ligands, la signalisation au noyau, la phosphorylation, la protéolyse, la transcription et les gradients dans le typage cellulaire. On ne peut se faire créditer CHEM 4361 et CHEM 4360. Préalable : un de (CHEM 2711, CHEM 2710, MBIO 2711 ou MBIO 2710) ou un des anciens (CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370).

CHEM 4371 Glycobiologie et activation des protéines - 3 cr 0.0
Le rôle des biomolécules contenant des glucides en biochimie et leur importance dans la connaissance des maladies génétiques. L'importance de la protéolyse limitée dans l'activation des biomolécules. On ne peut se faire créditer CHEM 4371 et CHEM 4370. Préalable : un de (CHEM 2711, CHEM 2710, MBIO 2711 ou MBIO 2710) ou un des anciens (CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370).

CHEM 4621 Biochimie des acides nucléiques - 3 cr 0.0
La structure des acides nucléiques; synthèse et détermination des séquences; interactions avec les protéines et les médicaments. On ne peut se faire créditer CHEM 4621 et CHEM 4620. Préalable : un de (CHEM 2711, CHEM 2710, MBIO 2711 ou MBIO 2710) ou un des anciens (CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370).

CHEM 4631 Biochimie des protéines - 3 cr 0.0
Les structures et fonctions des protéines, leurs propriétés physiques et chimiques et les méthodes utilisées pour les étudier. On ne peut se faire créditer CHEM 4631 et CHEM 4630. Préalable : un de (CHEM 2711, CHEM 2710, MBIO 2711, MBIO 2710) ou (un des anciens CHEM 2371, CHEM 2370, MBIO 2371, MBIO 2370).

ENG 1441 Introduction à la statique - 3 cr 0.0
(Laboratoire requis) Statique des particules, corps rigides, équilibre des corps rigides, analyse de structures, forces réparties. On ne peut se faire créditer ENG 1441 et ENG 1440. Préalables : [(une note minimale de 60% dans Mathématiques 40S (pré-calcul)) ou (une note minimale de C dans MATH 0401 ou MATH 1501 ou MATH 1230 ou MATH 1500 ou MATH 1510 ou MATH

1520 ou MATH 1690 ou MSKL 0100 ou l'ancien MATH 1680)] et [(une note minimale de 60% dans Physique 40S) ou (avoir réussi PHYS 0900 ou PSKL 0100) ou (une note minimale de C dans PHYS 1051 ou PHYS 1050)] et [(une note minimale de 60% dans Chimie 40S) ou (avoir réussi CHEM 0900 ou CSKL 0100) ou (une note minimale de C dans CHEM 1301 ou CHEM 1300)] ou l'équivalent.

MATH 1241 Éléments de mathématiques discrètes - 3 cr 0.0
(Laboratoire requis) Ce cours est destiné aux étudiantes et aux étudiants des disciplines riches en mathématiques. Introduction aux idées mathématiques, aux méthodes et techniques de démonstration et à l'écriture mathématiques, explorées à partir de sujets des mathématiques discrètes. On ne peut se faire créditer MATH 1241 et MATH 1240 ou MATH 3120. Préalable : [une note minimale de 60% en MATH 40S pré-calcul (ou l'ancien MATH 40S (300))] ou [MATH 0401 ou MSKL 0100].

MATH 2071 Théorie des graphes 1- 3 cr 0.0
(Laboratoire requis) Introduction aux graphes, digraphes et multigraphes. Les sujets comprennent les arbres, les cycles, les circuits, les graphes planaires, les algorithmes élémentaires et les applications des graphes aux sciences sociales et physiques. On ne peut pas se faire créditer MATH 2071 et MATH 2070 (ou l'ancien MATH 2400) ou COMP 4340. Préalables : [MATH 1241 ou MATH 1240] et [(MATH 1220) ou (MATH 1301 (C+) ou MATH 1300 (C+)) ou (MATH 1211 (B) ou MATH 1210 (B))].

MATH 2081 Introduction à l'analyse - 3 cr 0.0
(Laboratoire requis) Propriétés fondamentales du système de nombres réels en tant que corps ordonné complet, propriété archimédienne, existence de racines carrées, densité des nombres rationnels, non dénombrabilité des nombres réels, suites, sous suites, théorèmes sur les limites, monotonicité, théorème de Bolzano-Weierstrass, suites de Cauchy, traitement rigoureux des limites, continuité des fonctions à une ou plusieurs variables, continuité uniforme et applications. On ne peut se faire créditer MATH 2081 et MATH 2080 (ou l'ancien MATH 2202). Préalables : [MATH 1232 ou MATH 1690 ou MATH 1701 (B) ou MATH 1700 (B) ou MATH 1710 (B)] et [MATH 1220 ou MATH 1301 (C+) ou MATH 1300 (C+) ou MATH 1211 (B) ou MATH 1210 (B)] et [MATH 1241 ou MATH 1240].

MATH 2091 Algèbre linéaire 2 - 3 cr 0.0
(Laboratoire requis) Espaces vectoriels abstraits, transformations linéaires, bases et systèmes de coordonnées, représentations matricielles, orthogonalisation, diagonalisation, théorème des axes principaux. On ne peut se faire créditer MATH 2091 et MATH 2090 (ou les anciens MATH 2300, MATH 2301, MATH 2350, MATH 2352). Préalables : MATH 1220 ou MATH 1301 (C+) ou MATH 1300 (C+) ou MATH 1211 (B) ou MATH 1210 (B).

MATH 2161 Analyse numérique - 3 cr 0.0
(Laboratoire requis) Techniques élémentaires de résolutions numériques des équations linéaires et non-linéaires : techniques des différences finies, techniques d'interpolation, techniques de dérivation et d'intégration numériques. On ne peut se faire créditer MATH 2161 et MATH 2160 ou MATH 2120 (ou les anciens MATH 2600, MATH 2601). Préalables : [MATH 1232 ou MATH 1690 ou MATH 1701 (B) ou MATH 1700 (B) ou MATH 1710 (B)] et [MATH 1220 ou MATH 1301 (C+) ou MATH 1300 (C+) ou MATH 1211 (B) ou MATH 1210 (B)].

MATH 2721 Calcul à plusieurs variables - 3 cr 0.0
(Laboratoire requis) Calcul différentiel et intégral à plusieurs variables. On ne peut se faire créditer MATH 2721 et MATH 2720, MATH 2151, MATH 2150 ou MATH 2130 (ou les anciens

MATH 2751, MATH 2750, MATH 2110). Préalables : [MATH 1301 ou MATH 1300 ou MATH 1220 ou MATH 1211 (B) ou MATH 1210 (B) ou MATH 1310] et [MATH 1701, MATH 1700, MATH 1232, MATH 1690, MATH 1710 ou l'ancien MATH 1730].

MBIO 1011 Microbiologie I - 3 cr 0.0
(Laboratoire requis) Définition et historique de la microbiologie, des concepts pratiques de la microbiologie, de la structure des cellules procaryotes, de l'expression des gènes spécifiques aux procaryotes, du transfert de l'information génétique, du rôle des microbes dans l'environnement incluant le corps humain, ainsi que des applications de la microbiologie dans la production des aliments et dans la biotechnologie. On ne peut se faire créditer MBIO 1011 et MBIO 1010 (ou les anciens MBIO 2101, MBIO 2100, MBIO 2111 ou MBIO 2110). Préalables : (BIOL 1021 ou BIOL 1020) et [(CHEM 1101 ou CHEM 1100) ou un des anciens (CHEM 1301, CHEM 1300)].

MBIO 2021 Microbiologie II - 3 cr 0.0
(Laboratoire requis) Étude de la croissance bactérienne, de la réplication de l'ADN, des processus de la transcription et de la traduction ainsi que leurs rôles dans la régulation de l'expression génétique. Présentation des familles des bactéries et de virus animaux, de leurs modes de reproduction, de leurs pouvoirs pathogènes. Introduction aux mutations et au transfert de gènes bactériens. On ne peut se faire créditer MBIO 2021 et MBIO 2020 (ou les anciens MBIO 2111 et MBIO 2110). Préalables : [MBIO 1011 ou MBIO 1010] et [((CHEM 1111 ou CHEM 1110) et (CHEM 1121, CHEM 1120 ou CHEM 1126)) ou un des anciens (CHEM 1311 ou CHEM 1310 ou CHEM 1320)].

MBIO 3411 Biologie moléculaire – 3 cr 0.0
Traitement rigoureux des bases de la biologie moléculaire moderne reliées à la maladie moléculaire, aux manipulations génétiques et cellulaires, ainsi qu'aux contrôles cellulaires. On ne peut se faire créditer MBIO 3411 et MBIO 3410. Préalables : [(un de MBIO 2701, MBIO 2700, CHEM 2701, CHEM 2700, MBIO 2730 ou CHEM 2730) ou (un des anciens MBIO 2361, MBIO 2360, CHEM 2361, CHEM 2360, MBIO 2770, CHEM 2770] et [un de MBIO 2021, MBIO 2020, BIOL 2521, BIOL 2520, BIOL 2501, BIOL 2500, PLNT 2520].

MBIO 3451 Régulation des processus biochimiques - 3 cr 0.0
Mécanismes de régulation de l'activité enzymatique, incluant l'allostérie, le contrôle de certaines routes biosynthétiques ou dégradatives sélectionnées, ainsi que la régulation de l'expression génétique. On ne peut se faire créditer MBIO 3451 et MBIO 3450. Préalables : [MBIO 2021 ou MBIO 2020] et [(un de MBIO 2711, MBIO 2710, CHEM 2711 ou CHEM 2710) ou (un des anciens MBIO 2371, MBIO 2370, CHEM 2371 ou CHEM 2370)], ou l'autorisation écrite de la professeure ou du professeur.

MBIO 3461 Biochimie membranaire et cellulaire – 3 cr 0.0
(Laboratoire requis) Isolement, fractionnement, structure et fonction des membranes cellulaires et des composés subcellulaires. Mise en évidence du rôle central joué par ces éléments dans la biochimie des processus cellulaires. On ne peut se faire créditer MBIO 3461 et MBIO 3460. Préalable : [un de (MBIO 2711, CHEM 2711, MBIO 2710, CHEM 2710) et un de (CHEM 2721, CHEM 2720)] ou [un des anciens (MBIO 2371, CHEM 2371, MBIO 2370, CHEM 2370)).

MBIO 4021 Immunologie – 3 cr 0.0
Étude des antigènes, des anticorps, des réactions antigènes-anticorps, de l'immunogénétique, de la régulation de la réponse du système immunitaire, du complément, des réactions d'hypersensibilité, de l'auto-immunité, des déficiences immunitaires, de l'immunologie des

greffes et des tumeurs. On ne peut se faire créditer MBIO 4021 et MBIO 4020 (ou les anciens MBIO 4011, MBIO 4010). Préalable : MBIO 3011, MBIO 3010, MBIO 3411 (B) ou MBIO 3410 (B).

MBIO 4411 Virologie – 3 cr 0.0
Analyse détaillée des propriétés fondamentales des virus, de la taxonomie virale ainsi que des façons dont les virus se reproduisent. Examen des méthodes expérimentales utilisées en virologie et des façons dont les virus provoquent des maladies. On ne peut se faire créditer MBIO 4411 et MBIO 4410. Préalables : [MBIO 3011 ou MBIO 3010] et [MBIO 3411 ou MBIO 3410] et [MBIO 2711, MBIO 2710, CHEM 2711 ou CHEM 2710 ou (un des anciens MBIO 2371, MBIO 2370, CHEM 2371 ou CHEM 2370)].

MBIO 4541 Transduction de l'énergie biologique - 3 cr 0.0
Biochimie des processus biologiques comportant l'interconversion des différentes formes d'énergie comme la phosphorylation oxydative, le transport dans les membranes et les processus de contractions. On ne peut se faire créditer MBIO 4541 et MBIO 4540. Préalables : MBIO 2711, MBIO 2710, CHEM 2711 ou CHEM 2710 ou (un des anciens MBIO 2371, MBIO 2370, CHEM 2371 ou CHEM 2370). MBIO 3031 ou MBIO 3032 est recommandé.

NET CHANGE IN CREDIT HOURS: +25.0

Program modifications:

Modifications to the **Baccalauréat ès sciences général** are outlined on the next 7 pages.

Baccalauréat ès sciences général

1.0 À propos du Baccalauréat ès sciences

Le programme d'études au B.Sc. général initie l'étudiante ou l'étudiant à diverses disciplines scientifiques au niveau des cours d'introduction et lui permet ensuite d'approfondir ses connaissances en sciences biologiques ou dans deux disciplines scientifiques différentes (sciences biologiques, chimie, mathématiques ou microbiologie). Ce programme d'études assure une formation scientifique de base, tout en permettant d'approfondir certaines connaissances selon les intérêts de chacun.

Ce programme vise à former des généralistes et sert souvent de tremplin à une formation professionnelle spécifique. Il est fortement recommandé aux personnes qui voudraient se spécialiser en biochimie ou en microbiologie de s'inscrire au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.

2.0 Admission

Admission au Baccalauréat ès sciences général

Si on satisfait aux conditions d'admission directe on s'inscrit au Baccalauréat ès sciences général ou au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.

Si on satisfait aux conditions d'admission après Université 1 on transfère au Baccalauréat ès sciences général et on peut, par la suite, faire une demande d'admission au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie si toutes les conditions d'admission au programme sont satisfaites.

3.0 Exigences

3.1 Exigences du B.Sc. général

L'Université du Manitoba accordera le grade de Baccalauréat ès sciences (études générales) à toute étudiante ou à tout étudiant de l'USB qui aura obtenu 90 crédits (l'équivalent de 15 pleins cours) avec une note minimale de D dans chaque cours qui satisfait aux exigences du baccalauréat et une moyenne cumulative de 2,00 (moyenne de C).

Une étudiante ou un étudiant ne peut excéder 36 crédits de notes « F ».

Une étudiante ou un étudiant doit suivre un total de 90 crédits répartis de la façon suivante :

a. 24 crédits de cours d'introduction en sciences. On doit choisir 18 crédits à partir de la liste de cours d'introduction du groupe A, soit 6 crédits dans trois disciplines différentes. De plus, on doit choisir 6 crédits additionnels qui peuvent être compris dans le groupe A ou le groupe B.
N. B. : Un maximum de 6 crédits peut être choisi dans une discipline pour obtenir les 24 crédits de cours d'introduction.

Groupe A	
Astronomie	**ASTR 1821**, ASTR 1810 et ASTR 1830
Biologie	BIOL 1021* et BIOL 1031*
Chimie	~~CHEM 1301* et CHEM 1311*~~ 6 crédits parmi : **CHEM 1101*, CHEM 1111*, CHEM 1121*¥ (ou CHEM 1122 et CHEM 1126)[1]**
Informatique	COMP 1011* (ou COMP 1013*~~[1]~~[2]) et COMP 1021*
Mathématiques	6 crédits parmi les suivants : MATH 1200[2] 3 crédits parmi : ~~MATH 1211*[2]~~, MATH 1301*[2]~~[3]~~, MATH 1220[2]~~[3]~~ (ou l'équivalent) **(ou MATH 1211[3])** 3 crédits parmi : MATH 1501*, MATH 1230 (ou l'équivalent) 3 crédits parmi: MATH 1701*, MATH 1232 (ou l'équivalent) MATH 1241*
Microbiologie	MBIO 1011* et MBIO 2021*
Physique	PHYS 1021* ou PHYS 1051*; et PHYS 1031* ou PHYS 1071*
Statistiques	STAT 1001*[4]~~[5]~~ (ou STAT 2220[3]~~[4]~~) et STAT 2001*[4]~~[5]~~; ou STAT 1150[4]~~[5]~~ et STAT 2150[4]~~[5]~~ * Offerts à l'USB

¥ CHEM 1101, CHEM 1111 et CHEM 1121 sont obligatoires pour ceux qui veulent prendre les cours de chimie de 2e année ou plus.

Groupe B

BIOL 1411*

FORS 2000

Important :

1. **CHEM 1122 et CHEM 1126 sont des cours destinés aux étudiantes et aux étudiants voulant s'orienter en ingénierie. On ne peut se faire créditer CHEM 1121 et (CHEM 1122 et CHEM 1126)**

~~1.~~ **2.** COMP 1013 est un cours destiné aux étudiantes et aux étudiants voulant s'orienter en ingénierie. On ne peut se faire créditer COMP 1013 et COMP 1011.

~~2.~~ **3.** MATH 1211 est un cours destiné aux étudiantes et aux étudiants voulant s'orienter en ingénierie. On ne peut se faire créditer MATH 1211 et MATH 1200, MATH 1220 ou MATH 1301.

~~3.~~ **4.** STAT 2220 est un cours destiné aux étudiantes et aux étudiants voulant s'orienter en ingénierie. On ne peut se faire créditer STAT 2220 et STAT 1001 ou STAT 1150.

~~4.~~ **5.** Il est recommandé aux étudiantes et aux étudiants qui désirent suivre des cours avancés en sciences en statistiques ou en mathématiques de suivre STAT 1150 et STAT 2150 au lieu de STAT 1001 et STAT 2001.On ne peut se faire créditer [STAT 1001 et STAT 2001] et STAT 1150.

b. 36 crédits de cours avancés (niveaux 2000, 3000 ou 4000) en sciences. On doit choisir 18 crédits dans deux disciplines différentes avec au moins 6 crédits de niveau 3000 ou 4000. À l'USB, on doit choisir deux des quatre disciplines suivantes : chimie, mathématiques, microbiologie ou sciences biologiques. ~~Depuis l'automne 2009, une~~ **Une** étudiante ou un étudiant peut décider de suivre la totalité de ses 36 crédits de cours avancés en sciences biologiques tant que les cours spécifiques exigés sont complétés avec succès. Voir la section 3.2 pour la description des deux options.

c. Un minimum de 12 crédits doit être obtenu hors de la Faculté des sciences (6 crédits de français + 6 autres crédits). Un maximum de 30 crédits peut être suivi hors de la Faculté des sciences et compter envers le B.Sc. général.

d. 18 crédits facultatifs (choisis dans la Faculté des sciences ou dans d'autres facultés).

Note : Pour de plus amples renseignements, communiquer avec la vice-doyenne ou le vice-doyen de la Faculté des sciences (info_cours_sciences@ustboniface.ca).

3.2 Exigences du B.Sc. général - Détails et cheminements

~~Pour les étudiantes et les étudiants admis à Université 1 à partir de 2007-2008, le~~ **Le** cheminement présenté ci-après permet l'obtention du Baccalauréat ès sciences général en 3 ANS. Un cheminement différent prolongera la durée du programme d'études.

~~Les étudiantes et les étudiants admis à Université 1 avant 2007-2008 devraient communiquer avec le Registrariat ou un orienteur en ce qui concerne les exigences du Baccalauréat ès sciences général.~~

Il n'y a pas de concentrations mineures dans le programme de Baccalauréat ès sciences. Les mineures sont offertes uniquement à l'intérieur des programmes du Baccalauréat ès arts.

3.2.1 Cheminement général

Année 1 (ou Université 1)
30 crédits

- 24 crédits de cours d'introduction en sciences
- 6 crédits de français[1]

~~Nous recommandons l~~ Les cours suivants **sont obligatoires pour être admis dans le programme Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie** :

- BIOL 1021 (3) L **(C)** et BIOL 1031 (3) L
- ~~CHEM 1301 (3) L et CHEM 1311 (3) L~~ **CHEM 1101 (3), CHEM 1111 (3) (C+), CHEM 1121 (3) (C)**
- MATH 1501 (3) L[2] ~~et MATH 1701 (3) L[2]~~
- PHYS 1021 (3) L ou PHYS 1051 (3) L et
- ~~PHYS 1031 (3) L ou PHYS 1071 (3) L~~
- **STAT 1001 (or STAT 1150),**

(~~Les cours de physique~~ **PHYS 1021 (3) L ou PHYS 1051 (3) L** ~~sont~~ **est aussi** obligatoire~~s pour passer au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie et~~ pour certains programmes de médecine.)

Année 2 - 30 crédits/
Année 3 - 30 crédits

- 36 crédits de cours avancés en sciences (niveaux 2000, 3000 ou 4000)[3,5]
- 18 crédits facultatifs[4]
- 6 crédits obtenus hors des sciences[1]

Notes:

1. Un minimum de 12 crédits doit être obtenu hors de la Faculté des sciences (6 crédits de français + 6 autres crédits).
2. MATH 1230 ou MATH 1510 peut être suivi au lieu de MATH 1501; MATH 1232 ou MATH 1710 peut être suivi au lieu de MATH 1701.
3. Parmi les 36 crédits de cours avancés en sciences, il faut suivre un minimum de 6 crédits de niveaux 3000 ou 4000.
4. Les 18 crédits facultatifs peuvent être suivis à la Faculté des sciences ou dans d'autres facultés.
5. Un maximum de 42 crédits obtenus dans une seule discipline et un maximum de 60 crédits dans deux disciplines différentes.

En 2e et 3e années, il faut suivre 36 crédits de cours avancés en sciences (niveaux 2000, 3000 ou 4000) avec un minimum de 6 crédits de niveaux 3000 ou 4000. À l'Université de Saint-Boniface, on peut obtenir ses 36 crédits de cours avancés en sciences de deux façons :

1. en choisissant de suivre 18 crédits dans deux des quatre disciplines suivantes : chimie, mathématiques, microbiologie ou sciences biologiques,
2. en choisissant de suivre les 36 crédits de cours avancés en sciences biologiques tant que les cours spécifiques exigés sont complétés avec succès.

3.2.2 Cheminement par disciplines

À moins d'indication contraire explicite dans l'Annuaire, une note minimale de C est requise dans tout cours qui sert de préalable.

Chaque discipline a des exigences particulières qui peuvent se résumer ainsi :

3.2.2.1 Sciences biologiques

Année 1 (ou Université 1)

- BIOL 1021 (3) L
- BIOL 1031 (3) L

+ 18 crédits de cours d'introduction en sciences

Années 2 et 3

18 crédits en sciences biologiques de niveau 2000, 3000 ou 4000 (sujet à l'exigence de la Faculté qu'au moins 6 crédits parmi les 36 crédits de cours avancés en sciences soient de niveau 3000 ou 4000)

ou

~~Depuis 2009, on~~**On** peut choisir de suivre ses 36 crédits en sciences biologiques, en respectant les exigences suivantes :

1. Cours obligatoires : BIOL 2301[1,2], BIOL 2501 et BIOL 2521
~~2. Un des cours suivants : BIOL 2201[1] ou BIOL 2231[1]~~
~~3. Un des cours suivants : BIOL 2261[1], BIOL 2242, BIOL 2240 ou BIOL 2262~~
2. **Deux des cours suivants : BIOL 2201[1], BIOL 2231[1,] BIOL 2261[1], BIOL 2240, BIOL 2242, BIOL 2262 ou BIOL 2421**
3. ~~4.~~ 21 crédits optionnels en sciences biologiques avec au moins 6 crédits de niveau 3000 ou 4000[3]

Notes:

1. Cours requis offerts en rotation; il faut les suivre l'année où ils sont offerts.
2. STAT 1001 est préalable ou concomitant à BIOL 2301.
3. Certains cours optionnels sont offerts en rotation tous les 2 ans; il faut les suivre l'année où ils sont offerts.

3.2.2.2 Chimie

Année 1 (ou Université 1)

- ~~CHEM 1301 (3) L~~
- ~~CHEM 1311 (3) L[1,2]~~
- **CHEM 1101 (3),**
- **CHEM 1111 (3) (C) [1],**
- **CHEM 1121 (3) [1, 2]**
- BIOL 1021 (3) L **[1]**
- BIOL 1031 (3) L

+ 12 crédits de cours d'introduction en sciences

Années 2 et 3

18 crédits en chimie de niveau 2000, 3000 ou 4000[3,4] (sujet à l'exigence de la Faculté qu'au moins 6 crédits parmi les 36 crédits de cours avancés en sciences soient de niveau 3000 ou 4000). **Sur les 18 crédits de chimie, il faut choisir un minimum de 6 crédits de laboratoire parmi les suivants : CHEM 2123 (3), CHEM 2521 (2), CHEM 2523 (1), CHEM 2721 (3), CHEM 3331 (3), CHEM 3120 (2), CHEM 3320 (2) et CHEM 3620 (2).**

~~Cours à suivre en 2e année~~

- ~~CHEM 2211 (3) L~~
- ~~CHEM 2221 (3) L~~
- ~~CHEM / MBIO 2361 (3) L[1]~~
- ~~CHEM / MBIO 2371 (3) L~~

~~Cours à suivre en 3e année~~

- ~~6 crédits en chimie[3]~~

~~Liste de cours acceptés pour répondre au minimum de 18 crédits du département de chimie : CHEM 2211, CHEM 2221, CHEM 2261 (CHEM 2281), CHEM 2290, CHEM 2361, CHEM 2371, CHEM 2401, CHEM 2471, CHEM 3360, CHEM 3370, CHEM 3390, CHEM 3400 (CHEM 3380), CHEM 3571, CHEM 3580, CHEM 3590, CHEM 4100, CHEM 4361, CHEM 4371, CHEM 4570, CHEM 4580, CHEM 4590, CHEM 4621, CHEM 4631, CHEM 4640, CHEM 4660, CHEM 4670, CHEM 4680 et CHEM 4690.~~
~~Les cours suivants ne sont pas acceptés pour satisfaire les 18 crédits du département de chimie : CHEM 2240, CHEM 2550, CHEM 2560, CHEM 2770, CHEM 2780, CHEM 2860, CHEM 4550, (l'ancien CHEM 4600), CHEM 4610 (6), CHEM 4650, CHEM 4700 ET CHEM 4711.~~

Notes:

1. ~~Il faut obtenir un C+ dans CHEM 1311 pour suivre CHEM / MBIO 2361.~~
1. ~~2.~~ Il faut obtenir un C+ dans ~~CHEM 1311~~ **CHEM 1111, un C dans CHEM 1121 et BIOL 1021** pour s'inscrire au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.
3. ~~Certains cours de chimie exigent d'autres préalables; il faut vérifier la description des cours.~~

2. **CHEM 1122 (1.5) et CHEM 1126 (1.5) peuvent être suivis au lieu de CHEM 1121. À noter que CHEM 1122 et CHEM 1126 sont disponibles seulement pour les étudiants en ingénierie.**
3. **Certains cours de chimie exigent d'autres préalables; il faut vérifier la description des cours.**
4. Les cours suivants ne sont pas acceptés pour satisfaire les 18 crédits du département de chimie : CHEM 2240, **l'ancien** CHEM 2550 **(ENVR 2550),** CHEM 2560, **CHEM 2730 (MBIO 2730), CHEM 2740, CHEM 2750 (MBIO 2750), l'ancien** CHEM 2770 (**l'ancien MBIO 2770), l'ancien** CHEM 2780 (**l'ancien MBIO 2780)**, ~~CHEM 2860, CHEM 4550, (l'ancien CHEM 4600),~~ **CHEM 3980, CHEM 3990,** CHEM 4610 (6), ~~CHEM 4650, CHEM 4710,~~ ~~ET~~ CHEM 4711, **CHEM 4980 et CHEM 4990.**

(Les lettres entre parenthèses indiquent la note requise pour continuer. Les chiffres entre parenthèses indiquent le nombre d'heure crédits du cours/laboratoires.)

3.2.2.3 Microbiologie

Année 1 (ou Université 1)

- BIOL 1021 (3) L **(C) [1],**
- BIOL 1031 (3) L **(C),**
- ~~CHEM 1301 (3) L~~
- ~~CHEM 1311 (3) L[1,2]~~
- **CHEM 1101 (3) (C),**
- **CHEM 1111 (3) (C) [1],**

- **CHEM 1121 (3) (C) [1, 2],**

+ 12 crédits de cours d'introduction en sciences

Années 2 et 3

18 crédits en microbiologie de niveau 2000, 3000 ou 4000 (sujet à l'exigence de la Faculté qu'au moins 6 crédits parmi les 36 crédits de cours avancés en sciences soient de niveau 3000 ou 4000)

Cours ~~à suivre~~ recommandés en 2e année

- ~~CHEM 2211 (3) L~~
- ~~CHEM 2221 (3) L~~
- **CHEM 2101 (3)**
- **CHEM 2111 (3)**
- **CHEM 2123 (3)**
- ~~CHEM / MBIO 2361 (3) L[1,3]~~
- ~~CHEM / MBIO 2371 (3) L[3]~~
- **CHEM / MBIO 2701 (3)** [4]
- **CHEM / MBIO 2711 (3)** [4]
- **CHEM / MBIO 2721 (3)** [4]
- MBIO 1011 (3) L (C) [3]
- MBIO 2021 (3) L[3]

Cours à suivre en 3e année

- 18 crédits en microbiologie[4, 5, 6]

Notes:

1. ~~Il faut obtenir un C+ dans CHEM 1311 pour suivre CHEM / MBIO 2361.~~
1. ~~2. Il faut obtenir un C+ dans CHEM 1311 pour s'inscrire au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.~~
2.
3. ~~Selon le parcours de l'étudiante ou de l'étudiant, il est possible de compter CHEM / MBIO 2361~~ **~~CHEM/MBIO 2701~~** ~~et CHEM / MBIO 2371~~ CHEM/MBIO 2711 parmi les 18 crédits de cours avancés en microbiologie.
4. ~~MBIO 1011 et MBIO 2021 comptent comme cours d'introduction.~~
5. ~~Certains cours de microbiologie exigent d'autres préalables; il faut vérifier la description des cours.~~
6. ~~2.~~

1. ~~2.~~ Il faut obtenir un C+ dans ~~CHEM 1311~~ **CHEM 1111, un C dans CHEM 1121 et BIOL 1021** pour s'inscrire au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.

2. **CHEM 1122 (1.5) et CHEM 1126 (1.5) peuvent être suivis au lieu de CHEM 1121. À noter que CHEM 1122 et CHEM 1126 sont disponibles seulement pour les étudiants en ingénierie.**
3. **MBIO 1011 et MBIO 2021 comptent comme cours d'introduction.**
4. **Selon le parcours de l'étudiante ou de l'étudiant, il est possible de compter CHEM / MBIO 2701, CHEM/MBIO 2711 et CHEM / MBIO 2721 parmi les 18 crédits de cours avancés en microbiologie.**
5. **Certains cours de microbiologie exigent d'autres préalables; il faut vérifier la description des cours.**
6. **Les cours suivants ne sont pas acceptés pour satisfaire les 18 crédits du département de microbiologie : MBIO 2730, CHEM 2730, MBIO 2750 et CHEM 2750 (ou les anciens MBIO 2770, CHEM 2770, MBIO 2780, CHEM 2780).**

(Les lettres entre parenthèses indiquent la note requise pour continuer. Les chiffres entre parenthèses indiquent le nombre d'heure crédits du cours/laboratoire.)

3.2.2.4 Mathématiques

Année 1 (ou Université 1)

- MATH 1241 (3) L[1] (C)
- MATH 1301 (3) L[2] (B)
- MATH 1501 (3) L[3] (B)
- MATH 1701 (3) L[4] (B)

+ 18 crédits de cours d'introduction en sciences[5]

Années 2 et 3

18 crédits en mathématiques de niveau 2000, 3000 ou 4000 (sujet à l'exigence de la Faculté qu'au moins 6 crédits parmi les 36 crédits de cours avancés en sciences soient de niveau 3000 ou 4000)

Notes:

1. MATH 1200 (B) peut être suivi au lieu de MATH 1241 (C), mais ces cours ne sont pas équivalents, c'est-à-dire qu'il faut prendre en considération que MATH 1241 est un préalable pour certains cours de mathématiques de 2e année pour lesquels MATH 1200 n'est pas reconnu comme préalable.
2. MATH 1220 (C) peut être suivi au lieu de MATH 1301 (B).
3. MATH 1230 (C) ou MATH 1510 (B) peut être suivi au lieu de MATH 1501 (B).
4. MATH 1232 (C) ou MATH 1710 (B) peut être suivi au lieu de MATH 1701 (B).
5. Selon le parcours de l'étudiante ou de l'étudiant, une partie des 18 crédits de cours d'introduction en sciences peuvent être suivis après la première année.

Pour de plus amples renseignements, communiquer avec la vice-doyenne ou le vice-doyen de la Faculté des sciences (info_cours_sciences@ustboniface.ca)

3.3 Assiduité

Les absences non motivées à six cours d'une heure (quatre cours d'une heure et demie ou deux cours de trois heures) durant une session peuvent entrainer des sanctions. Ces sanctions sont à la discrétion de la professeure ou du professeur et doivent recevoir l'assentiment de la doyenne ou du doyen.

3.4 Seuil de rendement (conditions de poursuite des études)

Le rendement est évalué après les examens d'avril. On doit maintenir une moyenne cumulative minimale de 2,0 pour continuer dans un programme en sciences.

L'étudiante ou l'étudiant qui obtient 36 crédits de notes « F » ou plus est suspendu pendant une période d'un (1) an. Après cette période, il a deux choix :

1. poursuivre ses études à la Faculté des sciences. Toute autre note « F » se traduira par une suspension académique de deux (2) ans (après quoi, il est possible de faire une nouvelle demande d'admission à la Faculté des sciences et de reprendre sa formation du début, c'est-à-dire qu'aucun cours n'est crédité);
2. reprendre sa formation du début. Aucun crédit des cours réussis avant la suspension ne peut être compté envers l'obtention du diplôme.

Palmarès du doyen

Les étudiantes et les étudiants à la Faculté des sciences inscrits à un minimum de 12 crédits par session et qui obtiennent une moyenne pondérée de 3,75 ou plus seront inscrits au Palmarès du doyen.

3.5 Conditions d'obtention de diplôme

L'Université du Manitoba accordera le grade de Baccalauréat ès sciences (études générales) à toute étudiante ou à tout étudiant de l'USB qui aura obtenu :

1. 90 crédits (l'équivalent de 15 pleins cours) avec une note minimale de D dans chaque cours qui satisfait aux exigences du baccalauréat **(à moins d'une indication contraire)**, dont :
    - 24 crédits de cours d'introduction en sciences
    - 36 crédits de cours avancés en sciences (niveaux 2000, 3000 ou 4000). Parmi les 36 crédits de cours avancés en sciences, il faut suivre un minimum de 6 crédits de niveaux 3000 ou 4000.
    - un minimum de 12 crédits doit être obtenu hors de la Faculté des sciences (6 crédits de français + 6 autres crédits) et
    - 18 crédits facultatifs (choisis dans la Faculté des sciences ou dans d'autres facultés)
2. une moyenne cumulative de 2,00 (moyenne de C).

Une étudiante ou un étudiant ne peut excéder 36 crédits de notes « F ».

Tout renseignement supplémentaire concernant les règlements ou les niveaux requis peut être obtenu en consultant l'annuaire de l'Université du Manitoba ou la doyenne ou le doyen de la Faculté.

3.6 Obtention d'un deuxième diplôme de premier cycle

Pour obtenir un B.Sc. après l'obtention d'un premier diplôme universitaire (B.A., B. Ed.), on doit :

- avoir dans son premier diplôme 30 crédits reconnus en sciences (avec une note minimale de C);

- obtenir 60 crédits supplémentaires en sciences.

Tout renseignement supplémentaire concernant les règlements ou les niveaux requis peut être obtenu en consultant l'annuaire de l'Université du Manitoba ou la doyenne ou le doyen de la Faculté.

Étudiante ou étudiant spécial – Une personne qui a déjà obtenu un premier diplôme avec une moyenne cumulative minimale de C dans un programme d'études d'une université reconnue pourra être admise en tant qu'étudiante ou étudiant spécial. Celle-ci pourra s'inscrire à un maximum de 12 crédits de cours en sciences durant la période d'inscription précédant l'année universitaire régulière. Toutefois, elle pourra ajouter 6 crédits durant la période officielle de révision des cours. L'étudiante ou l'étudiant spécial peut s'inscrire à des cours en sciences de deux façons :

i. à un maximum de 6 crédits par année durant son programme d'études (à condition de ne pas dépasser le nombre d'essais permis);
ii. en utilisant, durant la dernière année du programme, le nombre d'essais permis et non utilisés dans le programme d'études.

Dans les deux cas, les cours suivis en tant qu'étudiante ou étudiant spécial ne font pas partie du programme aux fins d'obtention du diplôme et ne sont pas comptabilisés dans la moyenne cumulative. Ils le seront, toutefois, dans la moyenne de l'année universitaire. Les cours identifiés « SS » (étudiante ou étudiant spécial) font partie des 30 crédits d'essais permis au-delà des 90 crédits requis pour compléter un programme général en sciences. Ces cours identifiés « SS » peuvent être suivis dans d'autres facultés ou écoles, lesquelles devront donner leur permission par écrit avant que la Faculté des sciences ne puisse autoriser l'inscription.

3.7 Exigences de séjour

On peut satisfaire à l'exigence minimale du nombre de cours qui doivent être suivis à l'USB ou à l'Université du Manitoba de deux façons : soit en suivant 48 crédits, soit en suivant les 30 derniers crédits. Les cours servant à satisfaire à l'exigence de séjour doivent être reconnus comme crédits en sciences. Il est à noter qu'on devra suivre un minimum d'un tiers des cours du programme à l'USB.

À moins d'indication contraire explicite dans l'Annuaire, une note minimale de C est requise dans tout cours qui sert de préalable.

[*En dessous du sous-titre «* Cours et disciplines *» et de l'entête «* Descriptions de cours *», juste avant le tableau des cours, ajouter cette note :*]

NOTE

La mention « (Laboratoire requis) » au début d'une description de cours indique que ce cours combine l'apprentissage théorique en classe et l'apprentissage pratique en laboratoire. Il faut réussir les deux composantes pour obtenir les crédits du cours.

La mention « (Laboratoire autonome) » au début d'une description de cours indique que ce cours consiste en une série d'activités d'apprentissage pratique en laboratoire. Il faut réussir cette composante unique pour obtenir les crédits du cours.

Modifications to the following programs are outlined on the next 10 pages.

- **Baccalauréat ès sciences majeure conjointe en biochimie-microbiologie**
- **Mineure en chimie**
- **Mineure en microbiologie**

Baccalauréat ès sciences majeure conjointe en biochimie-microbiologie

1.0 À propos du Baccalauréat ès sciences majeure conjointe en biochimie-microbiologie

Le Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie prévoit des études plus approfondies en biochimie et en microbiologie. L'approfondissement des connaissances dans ces disciplines permet à la diplômée ou au diplômé de se qualifier pour une carrière liée à son champ d'études. De plus, ce programme permet d'accéder directement à des études de deuxième cycle.

2.0 Admission

Admission au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, volet régulier.

Si on satisfait aux critères d'admission de la Faculté des sciences (directe ou après Université 1) on peut s'inscrire au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie. Selon le type d'admission, les exigences sont les suivantes:

A. EXIGENCES SUITE À L'ADMISSION DIRECTE

Pour les étudiantes et les étudiants qui ont satisfait aux critères d'admission directe et choisit le Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, les conditions à satisfaire en 1re année pour demeurer dans le programme sont les suivantes :

1. obtenir une note minimale de C+ (2,5) dans le cours spécifié par le secteur, soit ~~CHEM 1311 (Université I Chimie : Une introduction à la chimie physique)~~ **CHEM 1111 (Interaction, réactivité et propriétés chimiques)**;
2. **Obtenir une note minimale de C (2,0) dans CHEM 1121 (Introduction aux techniques chimiques) et BIOL 1021 (Biologie I: Thèmes et principes)**
3. compléter les cours d'introduction requis au programme de majeure conjointe ~~avec une note minimale de C (2,0)~~, y compris:
    - ~~BIOL 1021 (Biologie I: Thèmes et principes,~~
    - BIOL 1031 (Biologie II : Diversité biologique, fonction et interactions),
    - ~~CHEM 1301 (Université I Chimie : La structure et la modélisation chimique),~~
    - **CHEM 1101 (Structures atomiques et moléculaires, et énergie chimique),**
    - MATH 1501 (Introduction au calcul),
    - ~~MATH 1701 (Calcul II),~~
    - **STAT 1001 (Analyse statistique de base I),**
    - PHYS 1021 (Physique générale I) ou PHYS 1051 (Physique I : La mécanique)**; et**
    - ~~PHYS 1031 (Physique générale II) ou PHYS 1071 (Physique II : La physique des ondes et la physique moderne);~~ et
4. obtenir une moyenne pondérée cumulative du programme (MPCP) d'au moins 2,00 (C) indépendamment du point d'entrée, et satisfaire aux conditions de poursuite des études (seuil de rendement).

B. EXIGENCES SUITE À L'ADMISSION APRÈS UNIVERSITÉ 1

Les étudiantes et les étudiants qui ont terminé Université 1 doivent transférer au Baccalauréat ès sciences général. Ils pourront par la suite faire une nouvelle demande d'admission au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.

Les conditions à satisfaire pour être admis au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet régulier sont les suivantes :

1. avoir complété 30 crédits à Université 1. Toutefois, sur recommandation du département, il est possible de faire une demande après avoir obtenu 24 crédits;
2. avoir obtenu une note minimale de C+ (2,5) dans le cours spécifié par le secteur, soit ~~CHEM 1311 (Université I Chimie : Une introduction à la chimie physique)~~ **CHEM 1111 (Interaction, réactivité et propriétés chimiques)**;
3. **Obtenir une note minimale de C (2,0) dans CHEM 1121 (Introduction aux techniques chimiques) et BIOL 1021 (Biologie I: Thèmes et principes)**
4. avoir préférablement complété les cours d'introduction requis au programme de majeure conjointe ~~avec une note minimale de C (2,0)~~, y compris :
    - ~~BIOL 1021 (Biologie I: Thèmes et principes),~~
    - BIOL 1031 (Biologie II : Diversité biologique, fonction et interactions),
    - ~~CHEM 1301 (Université I Chimie : La structure et la modélisation chimique),~~
    - **CHEM 1101 (Structures atomiques et moléculaires, et énergie chimique),**
    - MATH 1501 (Introduction au calcul),
    - ~~MATH 1701 (Calcul II),~~
    - **STAT 1001 (Analyse statistique de base I),**
    - PHYS 1021 (Physique générale I) ou PHYS 1051 (Physique I : La mécanique);

- ~~PHYS 1031 (Physique générale II) ou PHYS 1071 (Physique II : La physique des ondes et la physique moderne);~~ et

5. avoir une moyenne pondérée cumulative du programme (MPCP) d'au moins 2,00 (C) indépendamment du point d'entrée, et satisfaire aux conditions de poursuite des études (seuil de rendement).

Une étudiante ou un étudiant qui aurait obtenu plus de 30 crédits est admissible au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet régulier et les crédits excédentaires qui satisfont aux exigences seront appliqués au programme de majeure conjointe.

Une étudiante ou un étudiant qui aurait obtenu plus de 48 crédits est admissible au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet coopératif et les crédits excédentaires qui satisfont aux exigences seront appliqués au programme de majeure conjointe. Voir les exigences d'admission au volet coopératif.

La demande d'admission s'effectue en ligne à partir du site du Registrariat.

3.0 Exigences

3.1 Exigences du B.Sc. avec majeure conjointe en biochimie-microbiologie, volet régulier

3.1.1 Organisation et structure

Le volet régulier du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie comprend seulement des sessions académiques, par contre, un projet de recherche peut être réalisé dans sa dernière année du programme.

Plusieurs cours obligatoires du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie sont offerts en rotation. Il est donc important de communiquer avec la vice-doyenne ou le vice-doyen de la Faculté des sciences (info_cours_sciences@ustboniface.ca) pour établir la liste et la séquence des cours à suivre.

Les cours requis dans le volet régulier sont les même que ceux du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet coopératif.

3.1.2 Détails et cheminement

Pour faire le Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet régulier en 4 ANS, on doit suivre le cheminement présenté ci-dessous. Un cheminement différent implique l'ajout, au minimum, d'une année d'études au programme.

L'étudiante ou l'étudiant inscrit au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie peut déclarer une ou plusieurs mineures.

Année 1 (Université 1) – 30 crédits

- ~~BIOL 1021 (3) L~~ **(C)**
- ~~BIOL 1031 (3) L~~
- ~~CHEM 1301 (3) L~~
- ~~CHEM 1311 (3) L (C+)~~
- **CHEM 1101 (3)**
- **CHEM 1111 (3) (C+)**
- **CHEM 1121 (3) (C)**
- ~~MATH 1501 (3) L~~[1]
- ~~MATH 1701 (3) L~~[1]
- **STAT 1001 (3) L**
- ~~PHYS 1021 (3) L ou PHYS 1051 (3) L~~
- ~~PHYS 1031 (3) L ou PHYS 1071 (3) L~~

+ 6 crédits de français

Année 2 – 30 crédits

- ~~CHEM 2211 (3) L~~
- ~~CHEM 2221 (3) L~~
- **CHEM 2101 (3)**
- **CHEM 2111 (3)**
- **CHEM 2123 (3)**
- ~~CHEM / MBIO 2361 (3) L~~
- ~~CHEM / MBIO 2371 (3) L~~
- **CHEM/MBIO 2701 (3)**
- **CHEM/MBIO 2711 (3)**

- **CHEM 2721 (3)**
- MBIO 1011 (3) L
- MBIO 2021 (3) L

~~+ 4 cours facultatifs (12 crédits)~~[4,6]
+ 2 cours facultatifs (6 crédits)[3,5]

Années 3 et 4[2] **– 60 crédits**

- ~~CHEM 2261 (3) L~~[2]
- ~~CHEM 2401 (3) L~~
- ~~CHEM 2471 (3) L~~
- ~~CHEM 3571 (3)~~[2]
- **CHEM 2511 (3)**
- **CHEM 2521 (2)**
- **CHEM 3701 (3)** [2]
- **CHEM 3761 (4)**
- CHEM 4361 (3)[2]
- ~~CHEM 4371 (3)~~[2,3]
- CHEM 4621 (3)[2]
- CHEM 4631 (3)[2]
- MBIO 3411 (3)

~~+ 1 cours (3 crédits) de COMP, MATH ou STAT~~[4]

~~+ 7 cours optionnels (21 crédits) en chimie et en microbiologie~~[2,5]~~, dont un parmi MBIO 3451 (3), MBIO 3461 (3) L ou MBIO 4541 (3)~~[2]

+1 cours parmi BIOL 2521 (3), MBIO 3451 (3), MBIO 3461 (3) L ~~ou~~ MBIO 4541 (3)[2] **ou MBIO 4612 (3)**[6]

+ 6 cours optionnels (18 crédits) en chimie et en microbiologie[2,4]**, dont 6 crédits de niveau 4000**

~~+ 3 cours facultatifs (9 crédits)~~[4,6]
+ 5 cours facultatifs (15 crédits)[3,5]

Notes:

1. MATH 1230 ou MATH 1510 peut être suivi au lieu de MATH 1501; ~~MATH 1232 ou MATH 1710 peut être suivi au lieu de MATH 1701~~
2. Plusieurs cours de la 3e et de la 4e année sont en rotation; il faut les suivre l'année où ils sont offerts.
3. ~~Il est possible de remplacer deux de ces trois cours par CHEM 4711.~~
3. ~~4.~~ À l'exception de : COMP 1261, l'ancien COMP 1270, COMP 1500, COMP 1600, MATH 1010, MATH 1020 et MATH 1191.
4. ~~5.~~ 18 crédits optionnels en chimie et en microbiologie, dont 6 crédits de niveau 4000 en microbiologie (il y certaines restrictions).
5. ~~6.~~ Les crédits facultatifs peuvent être choisis parmi la liste de cours acceptables en sciences ou à l'extérieur de la Faculté des sciences (il y a certaines restrictions).
6. **Ce cours n'est pas offert à l'USB.**

- **(Les lettres entre parenthèses indiquent la note requise pour continuer. Les chiffres entre parenthèses indiquent le nombre d'heure crédits du cours/laboratoires.)**
- **La lettre « L » après un code de cours, indique un cours avec un laboratoire.**

Pour la feuille de route du programme majeure conjointe, consulter la page du programme sur le site Web de l'USB.

Cours optionnels (21 crédits)

Liste des cours optionnels en chimie et en microbiologie offerts à l'USB (on doit suivre un cours parmi les suivants : MBIO 3451, MBIO 3461 ou MBIO 4541*).

~~***N. B. :** Des cours de chimie ont déjà été inclus dans le cheminement, cependant il est possible de faire une modification.*~~

- **CHEM 2301 (3)**
- **CHEM 2601 (3) ***
- **CHEM 3331 (3)**
- **CHEM 4371 (3) ***

- CHEM 4711 (6)
- MBIO 3011 (3)
- MBIO 3451 (3)
- MBIO 3461 (3) L
- MBIO 4021 (3)
- MBIO 4411 (3)
- MBIO 4531 (6)
- MBIO 4541 (3) *
- MBIO 4581 (3) *
- ~~MBIO 4601 (3) L*~~ **MBIO 4603 (3) ***

* Cours en rotation; on doit les suivre l'année où ils sont offerts.

Cours facultatifs (21 crédits)

Les cours facultatifs peuvent être des cours de la Facultés des sciences, tels que ceux mentionnés ci-dessous, ou des cours dans d'autres facultés.

- BIOL 2201 (3) L*
- BIOL 2231 (6) L*
- BIOL 2261 (3) L*
- BIOL 2301 (3) L*
- BIOL 2381 (3) *
- BIOL 2411 (3)
- BIOL 2421 (3)
- BIOL 2501 (3) L
- BIOL 2521 (3)
- BIOL 3291 (3) *
- BIOL 3301 (3) L*
- BIOL 3501 (3) L*
- BIOL 3561 (3) L*
- STAT 2001 (3) L
- **PHYS 1031 (3) L ou PHYS 1071 (3) L**
- **MATH 1701(3) L**

* Cours en rotation; on doit les suivre l'année où ils sont offerts.

Note: À moins d'indication contraire explicite dans l'Annuaire, une note minimale de C est requise dans tout cours qui sert de préalable.

3.2 Assiduité

Les absences non motivées à six cours d'une heure (quatre cours d'une heure et demie ou deux cours de trois heures) durant une session peuvent entrainer des sanctions. Ces sanctions sont à la discrétion de la professeure ou du professeur et doivent recevoir l'assentiment de la doyenne ou du doyen.

3.3 Seuil de rendement (conditions de poursuite des études)

Une fois admis, l'étudiante ou l'étudiant doit répondre aux conditions suivantes pour demeurer inscrit dans le Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet régulier, sinon, elle ou il devra se retirer :

1. maintenir une moyenne pondérée cumulative du programme (MPCP) de 2,00 (C) à chaque évaluation de rendement.
2. l'évaluation de rendement se fera après avoir obtenu 54 crédits et, par la suite, après la série d'examens de fin de session d'hiver (avril). Si on n'obtient pas la moyenne pondérée cumulative du programme (MPCP) de 2,00 (C), il faut se retirer du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.
3. cours échoués : si on échoue plus de 18 crédits après avoir été admis au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, il faut se retirer du programme. Les cours échoués, s'ils sont requis au programme, doivent être repris. Un cours échoué et facultatif au programme pourra être remplacé par un autre cours facultatif avec l'autorisation du Département.

L'étudiante ou l'étudiant inscrit au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie peut déclarer une ou plusieurs mineures.

PALMARÈS DU DOYEN

Les étudiantes et les étudiants à la Faculté des sciences inscrits à un minimum de 12 crédits par session et qui obtiennent une moyenne pondérée de 3,75 ou plus seront inscrits au Palmarès du doyen.

3.4 Conditions d'obtention de diplôme

L'Université du Manitoba accordera le grade de Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie à toute étudiante ou à tout étudiant de l'USB qui aura obtenu :

1. 120 crédits avec une note minimale de C+ dans le cours ~~CHEM 1311~~ **CHEM 1111**, une note minimale de C dans les cours propres à la majeure conjointe et une note minimale de D dans les autres cours du baccalauréat **(à moins d'une indication contraire);**
2. un minimum de 6 crédits (avec un maximum de 36 crédits) sont exigés hors des sciences;
3. une moyenne pondérée cumulative du programme (MPCP) de 2,00 (C); et
4. un maximum de 18 crédits de cours échoués après avoir été admis au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie. Les cours échoués, s'ils sont requis au programme, doivent être repris. Un cours facultatif au programme qui est échoué pourra être remplacé par un autre cours facultatif avec l'autorisation du Département.

Tout renseignement supplémentaire concernant les règlements ou les niveaux requis peut être obtenu en consultant l'annuaire de l'Université du Manitoba ou la doyenne ou le doyen de la Faculté.

3.5 Obtention d'un deuxième diplôme au premier cycle

Pour obtenir un B.Sc. après l'obtention d'un premier diplôme universitaire (B.A., B.Éd.), on doit :

- avoir dans son premier diplôme 30 crédits reconnus en sciences (avec une note minimale de C);
- obtenir 60 crédits supplémentaires en sciences.

Tout renseignement supplémentaire concernant les règlements ou les niveaux requis peut être obtenu en consultant l'annuaire de l'Université du Manitoba ou la doyenne ou le doyen de la Faculté.

3.6 Exigences de séjour

On doit suivre un minimum de 60 crédits en sciences (à l'USB ou à l'Université du Manitoba). Les cours utilisés pour satisfaire à cette exigence de séjour doivent être reconnus comme crédits en sciences.

3.7 Équivalence de crédits

Les personnes intéressées à effectuer une équivalence de crédits devront consulter la liste des cours et les règlements particuliers qui s'y appliquent. Le calendrier universitaire contient les dates limites d'inscription pour ces équivalences de crédits.

Cours et disciplines

À moins d'indication contraire explicite dans l'Annuaire, une note minimale de C est requise dans tout cours qui sert de préalable.

[*En dessous du sous-titre* « Cours et disciplines » *et de l'entête* « Descriptions de cours », *juste avant le tableau des cours, ajouter cette note :*]

NOTE

La mention « (Laboratoire requis) » au début d'une description de cours indique que ce cours combine l'apprentissage théorique en classe et l'apprentissage pratique en laboratoire. Il faut réussir les deux composantes pour obtenir les crédits du cours.

La mention « (Laboratoire autonome) » au début d'une description de cours indique que ce cours consiste en une série d'activités d'apprentissage pratique en laboratoire. Il faut réussir cette composante unique pour obtenir les crédits du cours.

Admission à la Faculté des sciences

Conditions d'admission à la Faculté des sciences

Il y a deux types d'admission à la Faculté des sciences : l'admission directe et l'admission après Université 1.

A. CONDITIONS D'ADMISSION DIRECTE

1. Satisfaire aux conditions générales d'admission.
2. Avoir une moyenne minimale de 85 % dans trois cours de 12e année désignés S ou U (ou l'équivalent) dont :
    a. un cours 40S ou 40U de Français;
    b. un cours 40S ou 40U de Précalcul (recommandé) ou de Mathématiques appliquées;
    c. un cours 40S ou 40U parmi les cours suivants : Biologie, Chimie, Informatique ou Physique.
3. Avoir une note minimale de 60 % dans chacun des trois cours considérés pour l'admission directe.

⚠ Dans le cas où une candidate ou un candidat soumettrait une demande d'admission directe et n'y est pas admissible selon ses notes finales de 12e année, il sera automatiquement admis à Université 1 si elle ou il répond aux conditions générales d'admission qui y sont rattachées.

⚠ La candidate ou le candidat admissible à l'admission directe s'inscrit au Baccalauréat ès sciences général ou au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.

- Durant la deuxième année, du Baccalauréat ès sciences général ou du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, on peut faire une demande d'admission au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie – volet coopératif si toutes les conditions d'admission au programme sont satisfaites. Les stages professionnels en milieu de travail sont gérés par l'Université du Manitoba.

B. CONDITIONS D'ADMISSION APRÈS UNIVERSITÉ 1

1. Avoir obtenu au moins 24 crédits dans le programme Université 1.
2. L'étudiante ou l'étudiant qui a obtenu 30 crédits ou plus dans le programme Université 1 doit choisir la Faculté des sciences si elle ou il n'a pas choisi une autre faculté ou école, et ce, avant la période des inscriptions de la prochaine session.
3. L'étudiante ou l'étudiant qui a accumulé 36 crédits ou plus de notes « F » n'est pas admissible à la Faculté des sciences tant que la période de suspension académique n'est pas écoulée.

L'étudiante ou l'étudiant doit avoir également réussi le cours de Mathématiques 40S et les cours de Sciences 40S préalables à la discipline choisie.

⚠ Veuillez noter que les étudiantes et les étudiants qui ont terminé Université 1 peuvent se présenter au Registrariat pour transférer au Baccalauréat ès sciences général ou au Baccalauréat ès arts général. **Dans ce cas, une nouvelle demande d'admission n'est pas requise.**

Voici la liste des cours offerts à l'USB avec les cours 40S préalables exigés :

Biologie

BIOL 1001	Mathématiques 40S (50 %)
BIOL 1011	Mathématiques 40S (50 %)
BIOL 1021	Biologie 40S (50 %), Mathématiques 40S (50 %) et un des deux cours suivants : Chimie 40S (50 %) ou Physique 40S (50 %)

Chimie

~~CHEM 1301~~	~~Chimie 40S et un de Mathématiques appliquées 40S ou Mathématiques (précalcul) 40S~~
CHEM 1101	**Chimie 40S (50 %) et un de Mathématiques appliquées 40S (50 %) ou Mathématiques (précalcul) 40S (50 %)**
CHEM 1121	**Chimie 40S (70 %) et un de Mathématiques appliquées 40S (70 %) ou Mathématiques (précalcul) 40S (70 %)**

Informatique

COMP 1011	Un cours de mathématiques de 12^{e} année ou de niveau 40S
COMP 1021	Informatique 40S (75 %) et un cours de mathématiques de 12^{e} année ou de niveau 40S

Mathématiques

MATH 1241	Mathématiques (précalcul) 40S (60 %)
MATH 1301	Mathématiques (précalcul) 40S (60 %)
MATH 1501	Mathématiques (précalcul) 40S (60 %)

Physique

PHYS 1021	Physique 40S et un de Mathématiques (précalcul) 40S ou Mathématiques appliquées 40S (70 %)
PHYS 1051	Physique 40S (60 %)

Statistiques

STAT 1001	Un cours de mathématiques de 12^{e} année ou de niveau 40S

Majeure et mineures pour le Baccalauréat ès arts

1. 0 À propos de la majeure ou de la mineure en sciences

Les étudiantes et étudiants du baccalauréat ès arts peuvent décider de compléter une majeure en mathématiques ou une mineure en sciences. Les exigences ci-dessous doivent être satisfaites.

2.0 Admission

Pour les conditions d'admission, veuillez consulter le baccalauréat ès arts.

3.0 Exigences

3.1 Majeure en mathématiques[1] (Arts) - 30 CRÉDITS

Année 1

- MATH 1241 (C)
- MATH 1301 (B)[2]
- MATH 1501 (B)[3]
- MATH 1701 (B)[4]

Années 2 et 3 18 crédits parmi les cours de mathématiques de niveau 2000, 3000 ou 4000 (dont un minimum de 3 crédits qui doit être de niveau 3000 ou 4000)

Notes:

1. Pour être admis à la majeure en mathématiques, il faut une note minimale de C+ dans 2 cours de mathématiques déjà complétés.
2. MATH 1301 peut être remplacé par MATH 1220 avec une note minimale de C.
3. MATH 1501 peut être remplacé par MATH 1230 avec une note minimale de C.
4. MATH 1701 peut être remplacé par MATH 1232 avec une note minimale de C.

3.2 Mineures

Il est possible de compléter une mineure dans les 4 disciplines suivantes : chimie, mathématiques, microbiologie et sciences biologiques, en autant que les exigences ci-dessous soient satisfaites.

CHIMIE – Mineure (Arts) - 18 CRÉDITS

Année 1

- ~~CHEM 1301~~
- ~~CHEM 1311[1]~~
- **CHEM 1101**
- **CHEM 1111 (C)**
- **CHEM 1121[1]**

Années 2 et 3 ~~Normalement CHEM 2211 et CHEM 2221, plus 6 crédits additionnels en chimie de niveau 2000 ou 3000.~~
Plus 9 crédits additionnels en chimie de niveau 2000 ou 3000

Notes :

~~1. Il faut obtenir un C+ dans CHEM 1311 pour suivre CHEM / MBIO 2361.~~

1. **CHEM 1122 et CHEM 1126 peuvent être suivi au lieu de CHEM 1121. À noter que CHEM 1122 et CHEM 1126 sont disponibles seulement pour les étudiants en ingénierie.**

MATHÉMATIQUES[1] – Mineure (Arts) - 18 CRÉDITS

Année 1

- MATH 1301 (B)[2]
- MATH 1501 (B)[3]
- MATH 1701 (B)[4]

Années 2 et 3 9 crédits parmi MATH 1241 (C) et les cours de mathématiques de niveau 2000 ou 3000

Notes:

1. Pour être admis à la mineure en mathématiques, il faut une note minimale de C dans 2 cours de mathématiques déjà complétés.
2. MATH 1301 peut être remplacé par MATH 1220 avec une note minimale de C.
3. MATH 1501 peut être remplacé par MATH 1230 avec une note minimale de C.
4. MATH 1701 peut être remplacé par MATH 1232 avec une note minimale de C.

MICROBIOLOGIE – Mineure (Arts) - 18 CRÉDITS

Année 1
- BIOL 1021 **(C)**
- BIOL 1031 **(C)**
- ~~CHEM 1301~~
- ~~CHEM 1311~~[1]
- **CHEM 1101 (C)**
- **CHEM 1111 (C)**
- **CHEM 1121 (C)** [1]

Années 2 et 3 MBIO 1011 **(C)**
+ 12 crédits en microbiologie de niveau 2000 ou 3000.

Notes :

~~1. Il faut obtenir un C+ dans CHEM 1311 pour suivre CHEM / MBIO 2361.~~

1. **CHEM 1122 et CHEM 1126 peuvent être suivi au lieu de CHEM 1121. À noter que CHEM 1122 et CHEM 1126 sont disponibles seulement pour les étudiants en ingénierie.**

SCIENCES BIOLOGIQUES – Mineure (Arts) - 18 CRÉDITS

Année 1 BIOL 1021
BIOL 1031

Années 2 et 3 12 crédits en sciences biologiques de niveau 2000, 3000 ou 4000

[*En dessous du sous-titre «* Cours et disciplines *» et de l'entête «* Descriptions de cours *», juste avant le tableau des cours, ajouter cette note :*]

NOTE

La mention « (Laboratoire requis) » au début d'une description de cours indique que ce cours combine l'apprentissage théorique en classe et l'apprentissage pratique en laboratoire. Il faut réussir les deux composantes pour obtenir les crédits du cours.

La mention « (Laboratoire autonome) » au début d'une description de cours indique que ce cours consiste en une série d'activités d'apprentissage pratique en laboratoire. Il faut réussir cette composante unique pour obtenir les crédits du cours.

Université de
Saint-Boniface

Changements dans les programmes de science de l'USB

PLAN DE TRANSITION

Les changements proposés touchent le B.A. général (Majeure en MATH, Mineures en MATH, CHEM, MBIO, BIOL), le B.Sc. général, et le B.Sc. avec majeure conjointe biochimie-microbiologie (volets régulier et coopératif). Ils emboîtent le pas avec la dernière réforme de programme à la Faculté des sciences de l'UM.

1. Échéancier pour la modification de programme

Le département visé, le Comité de direction de la FAFS, le Conseil pédagogique de la FAFS, le CECP et le Sénat de l'USB ont déjà donné leur aval à cette proposition. Si elle reçoit l'appui du SCCCC et du Sénat de l'UM, elle devrait être adoptée le 19 mai 2021.

Le Registrariat, le Service d'orientation et le Service de recrutement sont déjà prévenus de cette proposition de programme. Ils seront invités à une réunion de mise en œuvre après l'approbation par le Sénat de l'UM (mai 2021).

Nous visons une publication du programme dans l'Annuaire de l'USB avant le 1 juillet 2021, afin d'être prêt pour la période d'inscription (mi-juillet) et de commencer les cours en septembre 2021.

2. Passerelles curriculaires

Les changements proposés assurent la concordance des programmes de science des deux universités et permet de maintenir la transférabilité intercampus pour les étudiants. Autrement, les changements proposés ne créent pas de nouvelles passerelles et maintient celles qui existent déjà.

3. Parcours de diplomation pour les étudiants dans le programme actuel

Les changements seront mis en œuvre de manière à ne pas pénaliser les étudiants qui ont déjà entrepris ces programmes. Ceux qui ont réussi des cours maintenant supprimés (CHEM 1301, CHEM 1311, CHEM 2211, CHEM 2221, CHEM 2261, CHEM/MBIO 2361, CHEM/MBIO 2371, CHEM 2401, CHEM 2471, CHEM 3571, MBIO 4601) pourront continuer à les utiliser comme préalables ou pour rencontrer les exigence de diplomation des programmes de sciences de l'USB. Les étudiants seront prévenus du changement par les orienteurs lors de la prochaine période d'inscription.

Modifications to the **Baccalauréat ès sciences majeure conjointe en biochimie-microbiologie, volet coopératif** are outlined on the next 7 pages.

Baccalauréat ès sciences majeure conjointe en biochimie-microbiologie, volet coopératif

1.0 À propos du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, volet coopératif

Le Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie – volet coopératif prévoit des études plus approfondies en biochimie et en microbiologie, avec une alternance de huit sessions académiques et de trois (ou quatre) stages de quatre mois rémunérés au sein de l'industrie, de laboratoires ou d'organismes gouvernementaux. L'approfondissement des connaissances dans ces disciplines permet à la diplômée ou au diplômé de se qualifier pour une carrière liée à son champ d'études. De plus, ce programme permet d'accéder directement à des études de deuxième cycle.

⚠ Les stages professionnels en milieu de travail sont gérés par l'Université du Manitoba.

Communiquer avec la personne responsable des stages du Département des sciences expérimentales pour toute demande d'information.

2.0 Admission

Admission au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, volet coopératif.

Si on satisfait aux critères d'admission de la Faculté des sciences (directe ou après Université 1), on peut, durant sa deuxième année, faire une nouvelle demande d'admission au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie – volet coopératif si l'on satisfait les exigences suivantes:

1. avoir complété ou être sur le point de terminer un minimum de 48 crédits (y compris les 6 crédits de français recommandés par le Service de perfectionnement linguistiques), mais moins de 90 crédits au Baccalauréat ès sciences;
2. avoir complété les cours et les préalables de première et de deuxième années requis au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie ~~avec une note minimale de C (2,0)~~, y compris :
   - ~~BIOL 1021 (Biologie I: Thèmes et principes),~~
   - BIOL 1031 (Biologie II : Diversité biologique, fonction et interactions),
   - ~~CHEM 1301 (Université I Chimie : La structure et la modélisation chimique),~~
   - **CHEM 1101 (Structures atomiques et moléculaires, et énergie chimique),**
   - MATH 1501 (Introduction au calcul),
   - ~~MATH 1701 (Calcul II),~~
   - **STAT 1001 (Analyse statistique de base I),**
   - PHYS 1021 (Physique générale I) ou PHYS 1051 (Physique I : La mécanique),
   - ~~PHYS 1031 (Physique générale II) ou PHYS 1071 (Physique II : La physique des ondes et la physique moderne);~~
   - ~~CHEM 2211 (Introduction à la chimie organique I : Structure et fonction),~~
   - ~~CHEM 2221 (Introduction à la chimie organique II : Réactivité et synthèse),~~
   - **CHEM 2101 (Chimie organique I : Principes de la chimie organique)**
   - **CHEM 2111 (Chimie organique II : Principes de la synthèse organique)**
   - **CHEM 2123 (Chimie organique expérimentale)**
   - MBIO 1011 (Microbiologie I),
   - MBIO 2021 (Microbiologie II),
   - ~~CHEM / MBIO 2361 (Biochimie I : Les molécules biochimiques et une introduction à l'énergie métabolique),~~
   - ~~CHEM / MBIO 2371 (Biochimie II : Catabolisme, synthèse et les voies d'information);~~
   - **CHEM/MBIO 2701 (Biochimie I: molécules biochimiques et introduction à l'énergie métabolique)**
   - **CHEM/MBIO 2711 (Biochimie II: catabolisme, synthèse et voies d'information)**
   - **CHEM 2721 (Principes et techniques de laboratoire en biochimie moderne);**
3. avoir obtenu une note minimale de C+ (2,5) dans le cours ~~CHEM 1311 (Université I Chimie : Une introduction à la chimie physique)~~ **CHEM 1111 (Interaction, réactivité et propriétés chimiques)**;
4. **avoir obtenu une note minimale de C (2,0) dans CHEM 1121 (Introduction aux techniques chimiques) et BIOL 1021 (Biologie I: Thèmes et principes)**
5. avoir une moyenne pondérée cumulative du programme (MPCP) d'au moins 2,5 (C+); et
6. être aux études à temps plein.

Note: Une étudiante ou un étudiant qui aurait complété plus de 48 crédits (mais moins de 90 crédits) peut soumettre une demande d'admission au volet coopératif et les crédits excédentaires qui satisfont aux exigences seront appliqués au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie – volet coopératif.

La demande d'admission s'effectue en ligne à partir du site du Registrariat. Le formulaire dûment rempli ainsi que toutes les pièces appuyant la demande doivent être acheminés au Registrariat avant la date limite. Le Département des sciences expérimentales procède à l'évaluation des demandes d'admission et au processus de sélection.

Le volet coopératif du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie est un programme compétitif et sélectif. Le fait de satisfaire aux exigences d'admission du volet coopératif ne garantit pas une place dans le volet coopératif. De plus, si le nombre de demandes excède le nombre de places disponibles, le Département se réserve le droit de sélectionner les candidats les mieux qualifiés.

Advenant que le comité de sélection ne puisse pas retenir la candidature d'une étudiante ou d'un étudiant pour le volet coopératif, l'étudiante ou l'étudiant sera redirigé au volet régulier si elle ou il satisfait aux exigences.

Chaque étudiante et étudiant coopératif s'engage à faire évaluer ses compétences linguistiques scientifiques en anglais et, au besoin, à les renforcer en suivant les formations qui lui seront recommandées. La maîtrise de l'anglais est essentielle afin que l'étudiante ou l'étudiant puisse intégrer le milieu dans lequel il sera appelé à travailler dans le cadre de ses stages professionnels.

L'étudiante ou l'étudiant a la responsabilité de répondre aux exigences du programme d'études et de Citoyenneté et Immigration Canada, le cas échéant, afin de pouvoir effectuer les stages professionnels.

Les stages professionnels en milieu de travail sont gérés par l'Université du Manitoba.

3.0 Exigences

3.1 Exigences du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, volet coopératif

3.1.1 Organisation et structure

Le volet coopératif comprend une alternance de sessions académiques et de stages professionnels en milieu de travail.

Chaque session académique et chaque stage professionnel commencent en septembre, en janvier ou en mai.

Plusieurs cours obligatoires du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie sont offerts en rotation. Il est donc important de communiquer avec la personne responsable des stages pour établir la liste et la séquence des cours à suivre.

L'étudiante ou l'étudiant est également tenu de suivre la séquence des sessions académiques et des stages professionnels en milieu de travail établie par la personne responsable des stages.

A. Sessions académiques

Les cours requis dans le volet coopératif sont les mêmes que ceux du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet régulier.

L'étudiante ou l'étudiant doit poursuivre ses études à temps plein (équivalent au minimum de 9 heures crédits par session académique).

B. Stages professionnels

⚠ Les stages professionnels en milieu de travail sont gérés par l'Université du Manitoba.

Il est recommandé de suivre MBIO 3411 avant de partir en stage.

Chaque stage (SCI 3981, SCI 3991, SCI 4981, SCI 4991), d'une durée de quatre mois, est rémunéré. Chaque stage professionnel est équivalent à la durée d'une session académique régulière. Il faut compléter un minimum de trois stages professionnels.

L'étudiante ou l'étudiant est tenu de s'inscrire au stage professionnel approprié et de s'acquitter des droits de scolarité associés aux stages professionnels selon les dates établies par le Registrariat.

Après chaque stage professionnel, l'étudiante ou l'étudiant doit soumettre un rapport de stage pour évaluation (de type réussite/échec). La date de remise des rapports de stage est déterminée par la personne responsable des stages du Département des sciences expérimentales et communiquée à l'étudiante ou à l'étudiant par la coordonnatrice ou par le coordonnateur des stages à l'Université du Manitoba.

L'étudiante ou l'étudiant est tenu d'obtenir le guide de rédaction du rapport de stage, afin que celui-ci soit conforme quant à la forme et au contenu, auprès de la personne responsable des stages du Département des sciences expérimentales.

La note globale « réussite » doit être obtenue dans chacun des stages professionnels. Si l'évaluation d'un rapport de stage s'avère insatisfaisante (échec), les procédures mises en place seront suivies.

Durant les stages professionnels en milieu de travail, l'étudiante ou l'étudiant ne peut pas suivre plus de 3 heures crédits de cours. Tout cours suivi durant les stages professionnels nécessite l'approbation de la coordonnatrice ou du coordonnateur des stages à l'Université du Manitoba et de l'employeur.

3.1.2 Détails et cheminement

Pour faire le Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie – volet coopératif en 5 ANS, on doit suivre le cheminement présenté ci-dessous. Un cheminement différent implique l'ajout, au minimum, d'une année d'études au programme.

L'étudiante ou l'étudiant inscrit au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie – volet coopératif peut déclarer une ou plusieurs mineures.

Sessions académiques 1 et 2 (1re année) - 30 crédits

- BIOL 1021 (3) L **(C)**
- BIOL 1031 (3) L
- ~~CHEM 1301 (3) L~~
- ~~CHEM 1311 (3) L (C+)~~
- **CHEM 1101 (3)**
- **CHEM 1111 (3) (C+)**
- **CHEM 1121 (3) (C)**
- MATH 1501 (3) L[1]
- ~~MATH 1701 (3) L[±]~~
- **STAT 1001 (3) L**
- PHYS 1021 (3) L ou PHYS 1051 (3) L
- ~~PHYS 1031 (3) L ou PHYS 1071 (3) L~~

+ 6 crédits de français

Sessions académiques 3 et 4 (2e année) - 30 crédits

- ~~CHEM 2211 (3) L~~
- ~~CHEM 2221 (3) L~~
- **CHEM 2101 (3)**
- **CHEM 2111 (3)**
- **CHEM 2123 (3)**
- ~~CHEM / MBIO 2361 (3) L~~
- ~~CHEM / MBIO 2371 (3) L~~
- **CHEM/MBIO 2701 (3)**
- **CHEM/MBIO 2711 (3)**
- **CHEM 2721 (3)**
- MBIO 1011 (3) L
- MBIO 2021 (3) L

~~+ 4 cours facultatifs (12 crédits)~~[4,6]
+ 2 cours facultatifs (6 crédits)[3, 5]

Sessions académiques 5, 6, 7 et 8 (3e, 4e et 5e années)[2] - 60 crédits
Ces sessions académiques alternent avec

- ~~CHEM 2261 (3) L[±]~~
- ~~CHEM 2401 (3) L~~
- ~~CHEM 2471 (3) L~~

des sessions de stages.

- ~~CHEM 3571 (3)[3]~~
- **CHEM 2511 (3)**
- **CHEM 2521 (2)**
- **CHEM 3701[2] (3)**
- **CHEM 3761 (4)**
- CHEM 4361 (3)[2]
- ~~CHEM 4371 (3)[2,3]~~
- CHEM 4621 (3)[2]
- CHEM 4631 (3)[2]
- MBIO 3411 (3)

~~+ 1 cours (3 crédits) de COMP, MATH ou STAT[4]~~

~~+ 7 cours optionnels (21 crédits) en chimie et en microbiologie[2,5], dont un parmi MBIO 3451 (3), MBIO 3461 (3) L ou MBIO 4541 (3)[2]~~
+1 cours parmi BIOL 2521 (3), MBIO 3451 (3), MBIO 3461 (3) L ~~ou~~ MBIO 4541 (3)[2] ou MBIO 4612 (3)[6]
+ 6 cours optionnels (18 crédits) en chimie et en microbiologie[2,4], dont 6 crédits de niveau 4000

~~+ 3 cours facultatifs (9 crédits)[4,6]~~
+ 5 cours facultatifs (15 crédits)[3,5]

Un minimum de 3 des 4 cours (stages) suivants : SCI 3981, SCI 3991, SCI 4981, SCI 4991

Notes:

1. ~~1.~~ MATH 1230 ou MATH 1510 peut être suivi au lieu de MATH 1501; ~~MATH 1232 ou MATH 1710 peut être suivi au lieu de MATH 1701~~
2. Plusieurs cours de la 3e et de la 4e année sont en rotation; il faut les suivre l'année où ils sont offerts.
3. ~~Il est possible de remplacer deux de ces trois cours par CHEM 4711.~~
3. ~~4.~~ À l'exception de : COMP 1261, l'ancien COMP 1270, COMP 1500, COMP 1600, MATH 1010, MATH 1020 et MATH 1191.
4. ~~5.~~ 18 crédits optionnels en chimie et en microbiologie, dont 6 crédits de niveau 4000 en microbiologie (il y certaines restrictions).
5. ~~6.~~ Les crédits facultatifs peuvent être choisis parmi la liste de cours acceptables en sciences ou à l'extérieur de la Faculté des sciences (il y a certaines restrictions).
6. **Ce cours n'est pas offert à l'USB.**

- **(Les lettres entre parenthèses indiquent la note requise pour continuer. Les chiffres entre parenthèses indiquent le nombre d'heure crédits du cours/laboratoires.)**
- **La lettre « L » après un code de cours, indique un cours avec un laboratoire.**

Pour la feuille de route du programme coopératif, consulter la page du programme sur le site Web de l'USB.

Cours optionnels (21 crédits)
Liste des cours optionnels en chimie et en microbiologie offerts à l'USB (on doit suivre un cours parmi les suivants : MBIO 3451, MBIO 3461 ou MBIO 4541*).

~~***N. B. : Les cours de chimie à suivre ont déjà été inclus dans le cheminement; on peut cependant choisir les cours de microbiologie selon ses intérêts. Des cours de chimie ont déjà été inclus dans le cheminement, cependant il est possible de faire une modification.***~~

- **CHEM 2301 (3)**
- **CHEM 2601 (3) ***
- **CHEM 3331 (3)**
- **CHEM 4371 (3) ***
- **CHEM 4711 (6)**
- MBIO 3011 (3)
- MBIO 3451 (3)

- MBIO 3461 (3) L
- MBIO 4021 (3)
- MBIO 4411 (3)
- MBIO 4541 (3) *
- MBIO 4581 (3) *
- ~~MBIO 4601 (3) L*~~ **MBIO 4603 (3) ***

* Cours en rotation; on doit les suivre l'année où ils sont offerts.

Cours facultatifs (21 crédits)

Les cours facultatifs peuvent être des cours de la Facultés des sciences, tels que ceux mentionnés ci-dessous, ou des cours dans d'autres facultés.

- BIOL 2201 (3) L*
- BIOL 2231 (6) L*
- BIOL 2261 (3) L*
- BIOL 2301 (3) L*
- BIOL 2381 (3) *
- BIOL 2411 (3)
- BIOL 2421 (3)
- BIOL 2501 (3) L
- BIOL 2521 (3)
- BIOL 3291 (3) *
- BIOL 3301 (3) L*
- BIOL 3501 (3) L*
- BIOL 3561 (3) L*
- STAT 2001 (3) L
- **PHYS 1031 (3) L ou PHYS 1071 (3) L**
- **MATH 1701(3) L**

* Cours en rotation; on doit les suivre l'année où ils sont offerts.

Note: À moins d'indication contraire explicite dans l'Annuaire, une note minimale de C est requise dans tout cours qui sert de préalable.

3.2 Assiduité

Les absences non motivées à six cours d'une heure (quatre cours d'une heure et demie ou deux cours de trois heures) durant une session peuvent entrainer des sanctions. Ces sanctions sont à la discrétion de la professeure ou du professeur et doivent recevoir l'assentiment de la doyenne ou du doyen.

3.3 Seuil de rendement (conditions de poursuite des études)

Une fois admis, l'étudiante ou l'étudiant doit répondre aux conditions suivantes pour demeurer inscrit dans le volet coopératif du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, sinon, elle ou il devra se retirer :

1. obtenir une cote globale minimale de 2 lors de l'évaluation des compétences linguistiques scientifiques en anglais et renforcer ses compétences en suivant les formations qui lui seront recommandées, le cas échéant;
2. compléter les ateliers d'intégration professionnelle dans les délais établis;
3. avoir la citoyenneté canadienne, le statut de résident permanent ou un permis de travail coop;
4. maintenir une moyenne pondérée cumulative du programme (MPCP) de 2,50 (C+) à chaque évaluation de rendement. (L'évaluation de rendement se fera après chaque fin de session académique. Si on n'obtient pas la moyenne pondérée cumulative du programme (MPCP) de 2,50 (C+), il faut se retirer du volet coopératif du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie.);
5. répondre aux exigences académiques du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie;
6. réussir ses stages professionnels (évaluation de l'employeur et réussite du rapport de stage);
7. étudier à temps plein.

L'étudiante ou l'étudiant doit être en session académique ou en stages professionnels. Elle ou il doit terminer son baccalauréat par une session académique.

L'étudiante ou l'étudiante qui ne satisfait pas aux exigences académiques, linguistiques et professionnelles devra se retirer du volet coopératif.

L'étudiante ou l'étudiant doit faire preuve d'un comportement professionnel irréprochable. Tout manque de professionnalisme ou comportement jugé insatisfaisant par l'employeur coop ou par la personne responsable des stages sera étudié et pourrait entrainer le retrait de l'étudiante ou l'étudiant du volet coopératif.

En cas d'un retrait volontaire du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet coopératif, le retrait entre en vigueur immédiatement s'il s'agit d'une session académique et qu'aucun énoncé d'acceptation d'offre de stage professionnel n'a été confirmé pour la période de stage qui s'annonce.

Le retrait volontaire du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet coopératif pourrait n'entrer en vigueur qu'au début de la session académique suivante si l'étudiante ou l'étudiant coop a déjà confirmé l'acceptation d'offre de stage professionnel avec une employeuse ou employeur coop ou si le stage professionnel est en cours.

En cas d'accord de retrait volontaire d'un stage professionnel, l'étudiante ou l'étudiant doit s'acquitter des droits de scolarité pour un stage professionnel si elle ou il a déjà confirmé une acceptation d'offre de stage professionnel avec une employeuse ou employeur coop ou si le stage professionnel est en cours.

L'étudiante ou l'étudiant qui échoue un cours obligatoire dans le programme, doit le reprendre. Un cours facultatifs au programme et qui est échoué pourra être remplacé par un autre cours facultatif avec l'autorisation du Département.

L'étudiante ou l'étudiant qui échoue plus de 18 crédits après avoir été admis au Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie - volet coopératif devra se retirer du programme.

L'étudiante ou l'étudiant qui se retire du volet coopératif, volontairement ou non, doit s'assurer de répondre à toutes les exigences de son nouveau programme.

Palmarès du doyen

Les étudiantes et les étudiants à la Faculté des sciences inscrits à un minimum de 12 crédits par session et qui obtiennent une moyenne pondérée de 3,75 ou plus seront inscrits au Palmarès du doyen.

3.4 Conditions d'obtention de diplôme

L'Université du Manitoba accordera le grade de Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie – volet coopératif à toute étudiante ou à tout étudiant de l'USB qui aura obtenu :

1. 120 crédits avec une note minimale de C+ dans le cours ~~CHEM 1311~~ **CHEM 1111**, une note minimale de C dans les cours propres à la majeure conjointe et une note minimale de D dans les autres cours du baccalauréat **(à moins d'une indication contraire)**;
2. un minimum de 6 crédits (avec un maximum de 36 crédits) sont exigés hors des sciences;
3. une moyenne pondérée cumulative du programme (MPCP) de 2,50 (C+);
4. une note de « réussite » dans un minimum de 3 stages professionnels et qui satisfait les exigences professionnelles;
5. un maximum de 18 crédits de cours échoués après avoir été admis au volet coopératif du Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie. Les cours échoués, s'ils sont requis au programme, doivent être repris. Un cours facultatif au programme et qui est échoué pourra être remplacé par un autre cours facultatif avec l'autorisation du Département.

Tout renseignement supplémentaire concernant les règlements ou les niveaux requis peut être obtenu en consultant l'annuaire de l'Université du Manitoba ou la doyenne ou le doyen de la Faculté.

3.5 Obtention d'un deuxième diplôme de premier cycle

Pour obtenir un B.Sc. après l'obtention d'un premier diplôme universitaire (B.A., B.Éd.), on doit :

- avoir dans son premier diplôme 30 crédits reconnus en sciences (avec une note minimale de C);
- obtenir 60 crédits supplémentaires en sciences.

Tout renseignement supplémentaire concernant les règlements ou les niveaux requis peut être obtenu en consultant l'annuaire de l'Université du Manitoba ou la doyenne ou le doyen de la Faculté.

3.6 Exigences de séjour

On doit suivre un minimum de 60 crédits en sciences (à l'USB ou à l'Université du Manitoba). Pour satisfaire à cette exigence de séjour, les cours doivent être reconnus comme crédits en sciences.

3.7 Équivalence de crédits

Les personnes intéressées à effectuer une équivalence de crédits devront consulter la liste des cours et les règlements particuliers qui s'y appliquent. Le calendrier universitaire contient les dates limites d'inscription pour ces équivalences de crédits.

Cours et disciplines

À moins d'indication contraire explicite dans l'Annuaire, une note minimale de C est requise dans tout cours qui sert de préalable.

[*En dessous du sous-titre* « Cours et disciplines » *et de l'entête* « Descriptions de cours », *juste avant le tableau des cours, ajouter cette note :*]

NOTE

La mention « (Laboratoire requis) » au début d'une description de cours indique que ce cours combine l'apprentissage théorique en classe et l'apprentissage pratique en laboratoire. Il faut réussir les deux composantes pour obtenir les crédits du cours.

La mention « (Laboratoire autonome) » au début d'une description de cours indique que ce cours consiste en une série d'activités d'apprentissage pratique en laboratoire. Il faut réussir cette composante unique pour obtenir les crédits du cours.

University of Manitoba
Office of the
University Secretary

312 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
P: 204-474-9593
F: 204-474-7511

Date: April 22, 2021

To: Dr. Michael Benarroch, President and Chair of Senate Executive

From: Jeff M. Leclerc, University Secretary

Subject: Election of Board of Governors Member-At-Large

Board of Governors Members-at-Large

According to Section 27(4) of *The University of Manitoba Act* (the "Act"), a member of Senate elected by a faculty or school council who has subsequently been elected by Senate to the Board and whose term of office on Senate expires before his or her term of office on the Board, shall be appointed by Senate to be a member-at-large of Senate for the remainder of his or her term on the Board unless re-elected to Senate.

Professor S. Prentice's membership on Senate as a representative of the Faculty of Arts will expire on May 31, 2021. Professor Prentice has indicated, however, that she would like the opportunity to complete her term as a Senate representative on the Board of Governors. It would be appropriate to adopt a motion to appoint Professor Prentice as member-at-large for the remainder of her term on the Board of Governors which expires May 31, 2022.

Recommendation:

THAT Senate appoint Professor S. Prentice as member-at-large for Senate for the remainder of her term on the Board of Governors which expires May 31, 2022.

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

Senate Membership 2021-2022

President

Michael Benarroch 2020.07.01

Chancellor

Anne Mahon 2019.06.01

Vice-Presidents

Provost and Vice-President (Academic)	Janice Ristock	2016.07.01
Vice-President (Administration)	Naomi Andrew	2020.08.31
Vice-President (External)	John Kearsey	2010.07.13
Vice-President (Indigenous)	Catherine Cook	2020.01.01
Vice-President (Research and International)	Digvir Jayas	2009.04.28

Deans of Faculties

Agricultural and Food Sciences	Martin Scanlon	2019.01.01
Architecture	Karen Wilson-Baptist*	2020.07.01
Arts	Jeffery Taylor	2011.09.01
Clayton H. Riddell Faculty of Environment, Earth, and Resources	Stephan Pflugmacher Lima	2020.09.01
Education	Thomas Falkenberg*	2020.08.01
Extended Education	David Mandzuk*	2019.07.01
Graduate Studies	Kelley Main*	2021.01.01
I.H. Asper School of Business	Gady Jacoby	2017.07.01
Kinesiology and Recreation Management	Douglas Brown	2013.09.01
Law	David Asper*	2020.07.01
Marcel A. Desautels Faculty of Music	Edward Jurkowski	2019.01.01
Price Faculty of Engineering	Marcia Friesen	2021.01.01
Rady Faculty of Health Sciences	Brian Postl	2014.02.01
School of Art	Edward Jurkowski*	2020.07.01
Science	Stefi Baum	2014.10.01
Social Work	Michael Yellow Bird	2019.07.01
University Librarian	Lisa O'Hara	2018.10.01
Vice-Provost (Students)	Laurie Schnarr	2019.06.01

Deans of Constituent Colleges

Dr. Gerald Niznick College of Dentistry	Anastasia Kelekis-Cholakis	2019.07.01
Max Rady College of Medicine	Brian Postl	2010.07.01
Nursing	Netha Dyck	2018.02.01
Pharmacy	Lalitha Raman-Wilms	2017.08.01
Rehabilitation Sciences	Reginald Urbanowski	2016.06.01
University College	Jeffery Taylor*	2011.09.01

Appointed by the Board of Governors

TBA	2021.06.01 – 2022.05.31
TBA	2021.06.01 – 2022.05.31

Members-at-large

N/A

President of UMSU

Brendan Scott	2021.05.01 - 2022.04.30

Appointed by Alumni Association

Mark Colley	2018.06.01 - 2020.05.31
Efrem Teklemariam	2019.10.01 - 2020.05.31

Elected by Faculty and School Councils

Agricultural and Food Sciences	Julieta Frank	2019.06.01 – 2022.05.31
	(l/r Robert Currie)	*2022.01.01 – 2022.05.31*
	David Lobb	2020.06.01 – 2023.05.31
	(l/r Robert Currie)	*2021.07.01 – 2021.12.31*
	Nazim Cicek	2015.06.01 – 2024.05.31
	Jitendra Paliwal	2021.06.01 – 2024.05.31
Architecture	Mercedes Garcia-Holguera	2020.05.01 – 2022.05.31
	Shauna Mallory-Hill	2020.06.01 – 2023.05.31
Art, School of	Grace Nickel	2021.02.08 – 2023.05.31
Arts	Glenn Clark	2019.06.01 – 2022.05.31
	Michelle Faubert	2019.06.01 – 2022.05.31
	Kenneth MacKendrick	2019.06.01 – 2022.05.31
	Tina Chen	2011.06.01 – 2023.05.31
	(l/r Robert Chernomas)	*2021.01.01 – 2021.12.31*
	Greg Sobie	2015.06.01 – 2023.05.31
	David Watt	2020.06.01 – 2023.05.31
	Shawna Ferris	2021.06.01 – 2024.05.31
	Jila Ghomeshi	2021.06.01 – 2024.05.31
	Mark Hudson	2021.06.01 – 2024.05.31
	Tracey Peter	2021.06.01 – 2024.05.31
Clayton H. Riddell Faculty of Environment, Earth and Resources	David Walker	2019.06.01 – 2022.05.31
	John Sinclair	2021.06.01 – 2024.05.31
Education	Merli Tamtik	2019.09.17 – 2022.05.31
	Amy Farrell-Morneau	2020.06.01 – 2023.05.31
Extended Education	Marcia McKenzie	2020.06.01 – 2023.05.31

I.H. Asper School of Business	Yuvraj Gajpal	2021.06.01 – 2022.05.31
	Robert Biscontri	2014.06.01 – 2023.05.31
	Nathan Greidanus	2021.06.01 – 2024.05.31
Kinesiology and Recreation Management	Steven Passmore	2019.07.02 – 2022.05.31
	Russell Field	2020.06.01 – 2023.05.31
Law	David Ireland	2019.09.18 – 2022.05.31
Libraries	Grace Romund	2019.06.01 – 2022.05.31
	Christine Neilson	2020.06.01 – 2023.05.31
	Maureen Babb	2021.06.01 – 2024.06.01
Marcel A. Desautels Faculty of Music	Colette Simonot-Maiello	2020.06.01 – 2023.05.31
	(l/r Minna Chung)	*2021.07.01 – 2021.12.31*
	Victoria Sparks	2020.06.01 – 2023.05.31
Price Faculty of Engineering	James Blatz	2017.06.01 – 2023.05.31
	Shawn Clark	2017.06.01 – 2023.05.31
	Ian Jeffrey	2020.06.01 – 2023.05.31
	Derek Oliver	2015.06.01 – 2024.05.31
Rady Faculty of Health Sciences	Noriko Boorberg	2019.06.01 – 2022.05.31
	Cheryl Dika	2019.01.01 – 2022.05.31
	Geoffrey Hicks	2019.06.01 – 2022.05.31
	Jason Peeler	2019.06.01 – 2022.05.31
	Afshin Raouf	2019.06.01 – 2022.05.31
	Genevieve Thompson	2019.06.01 – 2022.05.31
	Geoffrey Tranmer	2019.06.01 – 2022.05.31
	Silvia Alessi-Severini	2017.02.03 – 2023.05.31
	Eftekhar Eftekharpour	2020.06.01 – 2023.05.31
	Chase Figley	2020.06.01 – 2023.05.31
	Josée Lavoie	2020.06.01 – 2023.05.31
	Denise Mackey	2020.06.01 – 2023.05.31
	Quais Mujawar	2020.06.01 – 2023.05.31
	Jean-Eric Ghia	2021.06.01 – 2024.05.31
	Andrew Halayko	2021.06.01 – 2024.05.31
	Laura MacDonald	2021.06.01 – 2024.05.31
	Kirk McManus	2021.06.01 – 2024.05.31
	Trenna Reeve	2018.06.01 – 2024.05.31
	Sandra Webber	2021.06.01 – 2024.05.31
	Fred Zeiler	2021.06.01 – 2024.05.31
Science	Gerd Prehna	2020.06.01 – 2022.05.31
	John Sorensen	2019.06.01 – 2022.05.31
	Johan van Lierop	2019.06.01 – 2022.05.31
	John Anderson	2008.06.01 – 2023.05.31
	Myrle Ballard	2020.06.01 – 2023.05.31
	Kevin Scott	2020.06.01 – 2023.05.31
	Andrea Bunt	2021.06.01 – 2024.05.31
	Peter Blunden	2015.06.01 – 2024.05.31
	Mike Shaw	2018.06.01 – 2024.05.31

Social Work	Rusty Souleymanov	2019.06.01 – 2022.05.31
	Tracey Bone	2017.08.14 – 2023.05.31
	Hai Luo	2021.06.01 – 2024.05.31
Student Affairs	David Ness	2020.06.01 – 2023.05.31

Heads of Affiliated or Member Institutions

St. Andrew's College	Roman Bozyk*	2003.05.01
St. John's College	Christopher Trott	2011.07.01
St. Paul's College	Christopher Adams	2012.07.01
Université de Saint-Boniface	Sophie Bouffard	2019.08.01

Deputy Minister of Education

Deputy Minister of Economic Development and Training (or designate)	Grant Prairie

Elected by the Students (2021.05.01 – 2022.04.30)

Agricultural & Food Sciences	Hayley Jenkins
Architecture	vacancy
Art, School of	vacancy
Arts	Mary Bremfowaa-Mensah, Sophie George, Zlata Odribets
Clayton H. Riddell Faculty of Environment, Earth and Resources	Matthew Koldon
Education	vacancy, vacancy
Graduate Studies	AKM Monsurul Alam, William Dowie, Rubel Talukder
I.H. Asper School of Business	Kimberly Nicolasora, vacancy
Kinesiology and Recreation Management	vacancy
Law	Allison Kilgour
Marcel A. Desautels Faculty of Music	vacancy
Price Faculty of Engineering	Manjyot Singh Kalkat, vacancy
Rady Faculty of Health Sciences:	
Dr. Gerald Niznick College of Dentistry/Dental Hygiene	vacancy
Max Rady College of Medicine	Mira Villegas
Nursing	Suzan Palani
Pharmacy	Heather Smeltzer
Rehabilitation Sciences	Anna McGregor
Science	Kyra Cebula, Serena Phillips, Dana Segal
Social Work	vacancy

Assessors

Associate Vice-President (Partnerships)	Jay Doering
Associate Vice-President (Research)	Gary Glavin
Associate Vice-President (Students, Community and Cultural Integration	Christine Cyr
Associate Vice-President (Scholarship, Research and Curriculum)	TBA
Deputy Provost (Academic Planning and Programs)	Todd Mondor
Extended Education, Associate Dean	Rod Lastra

Faculty of Graduate Studies, Associate Dean	Stephen Kirkland
Graduate Students' Association (GSA), President	Silvia Sekander
Senate Committee on Curriculum and Course Changes (SCCCC), Chair	Greg Smith
Senate Planning and Priorities Committee (SPPC), Chair	N/A
Student Engagement and Success, Executive Director	Brandy Usick
Student Support, Executive Director	Don Stewart
Université de Saint-Boniface	Debra Radi
University of Manitoba Faculty Association (UMFA)	Orvie Dingwall
University of Manitoba Students' Union (UMSU), Vice-President	Emily Kalo
University Registrar and Enrolment Services, Executive Director	Jeff Adams
University 1 Students	TBA, TBA, TBA
Vice-Provost (Academic Affairs)	Diane Hiebert-Murphy
Vice-Provost (Teaching and Learning), and Centre for the Advancement of Teaching and Learning, Executive Director	Mark Torchia

* = acting
l/r = leave replacement
red = replacement still to be named

updated April 22, 2021

SCHEDULE OF MEETINGS AND AGENDA AVAILABILITY
SENATE AND SENATE EXECUTIVE COMMITTEE

Date for Items to the Secretary	Agenda to the Executive Committee	Executive Committee Meetings[1, 2]	Agenda available to Senate Members	Senate Meetings[1]
May 19, 2021[3]	May 26, 2021	June 2, 2021	June 9, 2021	June 16, 2021
September 8, 2021	September 15, 2021	*Thursday,* September 23, 2021[2]	September 29, 2021	October 6, 2021
October 6, 2021	October 13, 2021	October 20, 2021[2]	October 27, 2021	November 3, 2021
November 3, 2021	November 10, 2021	November 17, 2021	November 24, 2021	December 1, 2021
November 24, 2021	December 1, 2021	December 8, 2021	December 15, 2021	January 12, 2022
January 6, 2022	January 12, 2022	January 19, 2022	January 26, 2022	February 2, 2022
February 2, 2022	February 9, 2022	February 16, 2022	February 23, 2022	March 2, 2022
March 9, 2022	March 16, 2022	March 23, 2022	March 30, 2022	April 6, 2022[4]
April 20, 2022	April 27, 2022	May 4, 2022	May 11, 2022	May 18, 2022[5]
May 25, 2022[3]	June 1, 2022	June 8, 2022	June 15, 2022	June 22, 2022
September 7, 2022	September 14, 2022	September 21, 2022	September 28, 2022	*Thursday,* October 6, 2022[2]
October 5, 2022	October 12, 2022	October 19, 2022[2]	October 26, 2022	November 2, 2022
November 9, 2022	November 16, 2022	November 23, 2022	November 30, 2022	December 7, 2022

1. Meetings are normally scheduled at 1:30 p.m. on Wednesdays. Senate Executive meetings are held in the Alan A. Borger Sr. Executive Conference Room, E1-270 EITC. Senate meetings are held in the Senate Chambers, Room E3-262 EITC (*pending a return to in-person meetings*).
2. Exceptions are that (i) Senate Executive will meet on Thursday, September 23, 2021, to accommodate the observance of Sukkot on the Wednesday, and (ii) at 9:30 a.m. on October 20, 2021 and on October 19, 2022 due to Fall Convocation, and (ii) Senate will meet on Thursday, October 2, 2022, as Yom Kippur falls on the Wednesday.
3. Latest date by which to submit items for June Senate agenda, where approval is required in time for the subsequent academic session.
4. April 6, 2022 is the proposed date for the Senate meeting to be held at the Bannatyne Campus, in the Frederic Gaspard Theatre, 2nd Floor, Basic Medical Sciences Building (*pending a return to in-person meetings*).
5. Senate meets the third Wednesday in May to consider the list of graduands for Senate approval.

Preamble

1. The terms of reference for the Senate Committee on Academic Accommodation Appeals are found at the link: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/scaaap.html

2. In accordance with the Student Accessibility Appeal Procedure, if a student or an Academic Staff Member does not agree with the decision of the Coordinator of Student Accessibility Services (SAS) regarding a request for reconsideration of a proposed accommodation, the student or Academic Staff Member may file a formal appeal to the Senate Committee on Academic Accommodation Appeals.

   The Committee will meet to determine whether there are grounds to hear the appeal and whether the appeal falls within the jurisdiction of the Committee. The Committee will determine the appropriate accommodation on the basis of the student's disability and the Bona Fide Academic Requirements or Essential Skills Document of the course or program.

Observations

1. Members of the Committee for 2020 - 2021 were: Prof. R. Hoppa, Chair (Arts); Prof. T. Ashcroft (Health Sciences); Prof. N. Hansen (Graduate Studies); Professor C. Kelly (Health Sciences); Prof. K. Koczanski (Science); Ms. C. Madden (Science); Prof. Y. Martsynyuk (Science); Ms. J. Minarik (student, Graduate Studies); Ms. S. Phillips (student, Science); Mr. R. Talukder (student, Graduate Studies); Prof. L. Taylor (Social Work); Ms. E. Thomas (student, Engineering); Prof. V. Torrie (Law); Prof. E. Troutt (Arts)

2. The Committee did not receive any appeals during the reporting period.

Respectfully submitted,

Dr. Robert Hoppa, Chair
Senate Committee on Academic Accommodation Appeals

April 15, 2021

Annual Report of the Senate Committee on Academic Computing

Preamble

The current terms of reference for the Senate Committee on Academic Computing are found on the University Governance website at:

http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/485.html

Observations

1. Members of the Committee for 2020-2021 were:

   Mark Torchia (Vice-Provost (Teaching and Learning)), Chair
   Stefi Baum (Science)
   Franklin Bristow (Science)
   Sol Chu (Centre for the Advancement of Teaching and Learning)
   Jay Doering (Associate Vice-President (Partnerships))
   James Gilchrist (Health Sciences)
   Ian Jeffrey (Engineering)
   Kari Kumar (Extended Education)
   Mario Lebar (CIO, Information Services and Technology)
   Neil McArthur (Arts)
   Lisa O'Hara (Vice-Provost (Libraries) and University Librarian)
   Reg Urbanowski (Health Sciences)
   David Walker (Environment, Earth, and Resources)
   A.K.M. Monsurul Alam (graduate student)
   Lanlan Li (graduate student)
   Alexandre Morakis (student)
   Jessica Ritchie (student)
   Gilbert Detillieux (technical resource, Computer Science)
   Lynette Phyfe (resource, the Centre for the Advancement of Teaching and Learning)

2. During the reporting period, the Committee met on April 14, 2021. The committee is next scheduled to meet on September 8, 2021.

3. The Committee reviewed the presentation and proposal regarding Classroom Technology Frameworks from NV5 (formerly The Sextant Group), the successful vendor for the Request for Proposal and discussed the next steps as outlined in the presentation.

4. The Committee received updates on a number of ongoing matters and projects:

   - UMLearn Upgrades and Integrations
   - Wireless expansion project

- Information Technology (IT) Status and Initiatives
- Learning Management System

Respectfully submitted,

Dr. Mark Torchia, Chair
Senate Committee on Academic Computing

April 13, 2021

Annual Report of the Senate Committee on Academic Dress

Preamble

Terms of Reference for the Senate Committee on Academic Dress can be found at:

http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/486.html

Observations

1. Committee members (2020-2021):

   Edward Jurkowski (School of Art), Chair
   Kelley Beaverford (Architecture)
   Song Liu (Agricultural and Food Sciences)
   Jeff Adams (Registrar)
   Rubel Talukder (graduate student)
   Carlos Villa (undergraduate student)

2. The committee is scheduled to meet on May 3, 2021, at which time a proposed hood for the Master of Human Rights degree will be considered.

Respectfully submitted,

Dean Edward Jurkowski, Chair
Senate Committee on Academic Dress

May 19, 2021

Annual Report of the Senate Committee on Academic Freedom

Preamble

The Terms of Reference for the Senate Committee on Academic Freedom can be found on the University Governance website.

Observations

1. Committee members 2020-2021:

   A. Azeez (Student, Graduate Studies), E. Kalo (Student, Science), C. Morrill (Management), C. Simonot-Maiello, J. Taylor (Arts), P. Thulasiraman (Science), J. van Lierop (Science)

   Terms ending May 31, 2020: R. Cardwell (Agricultural and Food Sciences), R. Hechter (Education), N. Lam (Student, Arts), J. Minarik (Student, Graduate Studies)

2. The committee did not meet during the reporting period.

Respectfully submitted,
Jeff M. Leclerc, University Secretary

May 19, 2021

Annual Report of the Senate Committee on Academic Review

Preamble

The terms of reference for the Senate Committee on Academic Review (SCAR) are found on the University Governance website.

Observations

1. Committee members (2020-2021):

   T. Mondor (Deputy Provost, Academic Planning and Programs), Chair, A. Azeez (Student, Graduate Studies), T. Chen (Arts), R. Currie (Agricultural and Food Sciences), M. Czubryt (Health Sciences), K. Levasseur (Arts), K. Main (Graduate Studies), J. Ritchie (Student), R. Thulasiram (Science)

   Terms ended May 31, 2020: E. Podaima (Student), J. Minarik (Student, Graduate Studies). Term ended June 30, 2021: L. Simard (Graduate Studies)

2. The Committee met twice during the reporting period, on May 12, 2020 and April 5, 2021.

3. During this period, the Committee reported to Senate on the following matters:
   - Annual Report on the Status of Academic Program Reviews and Accredited Programs, May 1, 2019 – April 30, 2020 (*for information*, Senate, June 24, 2020)
   - Revised Mission Statement, Centre for Engineering Professional Practice and Engineering Education, Price Faculty of Engineering (Senate, June 24, 2020)
   - Summary of a combined undergraduate / graduate program review in Statistics (Senate, May 19, 2021)

Respectfully submitted,

Dr. Todd Mondor, Chair
Senate Committee on Academic Review

Preamble

1. The terms of reference for the Senate Committee on Admissions Appeals are found at the link:
http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/491.html

2. The Committee is charged to hear and determine appeals from:
   a) decisions of faculty and school Selection Committees;
   b) administrative decisions affecting the admission process;
   c) decisions related to the transfer of credit policy of the faculty/school; and
   d) the possible granting of advanced standing.

3. The Committee is to report to Senate on the determination of all appeals submitted to it; and recommend any changes in admission policies and procedures which should be considered as a result of the appeal.

Observations

1. Members of the Committee for 2020 - 2021 were: Dean D. Mandzuk, Chair (Education); Professor B. Hann, Vice-Chair (Science); Professor S. Alessi-Severini (Health Sciences); Professor R. Cardwell, (Agricultural & Food Sciences); Professor M. Domaratzki, (Science); Professor J. Paliwal, (Engineering); Professor J. Schulz, (Law); Professor S. Sivaramakrishnan, (Management); Professor L. Strachan (Kinesiology & Recreation Management); Professor L. Tromly, (Arts); Professor K. Wilson Baptist (Architecture); Mr. T. Gibbes (student, Engineering); Ms. T. Nagra (student, Graduate Studies); Ms. S. Phillips (student, Science); Ms. H. Ritter (student, School of Art); Ms. J. Dela Cruz (President of UMSU - Ex Officio); and Ms. E. Stone, (Director of Admissions - Ex Officio - Non-voting).

2. The Senate Committee on Admissions Appeals reports to Senate on an ongoing basis as appeals are heard. During the reporting period the Committee received 2 appeals which are summarized below:

#	Faculty	Decision
1	Faculty of Graduate Studies	Insufficient grounds to proceed to a hearing.
1	Faculty of Architecture	Appeal denied.

Respectfully submitted,

Dr. D. Mandzuk, Chair
Senate Committee on Admission Appeals

ANNUAL REPORT OF THE SENATE COMMITTEE ON ADMISSIONS (SCADM)
FOR THE YEAR FROM MAY 1, 2020 TO APRIL 30, 2021

The terms of reference for the Senate Committee on Admissions (SCADM) are found on the University website at:

http://www.umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/490.htm

The committee membership is as follows:

Incumbent	**Position**	**Composition**
Laurie Schnarr	Vice-Provost (Students)	(1) VP (Academic) or **designate, Chair**
Erin Stone	Deputy Registrar and Director of Admissions	(2) Vice Provost (Student Affairs) or **designate**
Jeff Adams	University Registrar and Executive Director, Enrolment Services	(3) University Registrar and Executive Director (Enrolment Services)
Dr. Heidi Marx	Dean, Faculty of Arts	(4) Dean, Faculty of Arts or **designate**
Dr. Ben Li	Associate Dean (Undergraduate), Faculty of Science	(4) Dean, Faculty of Science or **designate**
Dr. Sara Goulet	Associate Dean (Admissions), Max Rady College of Medicine	(4) Dean, Max Rady College of Medicine & Rady Faculty of Health Sciences or **designate**
Dr. David Mandzuk	Dean, Extended Education	(5) Senate-appointed dean/director
Dr. Edward Jurkowski	Dean, Desautels Faculty of Music	(5) Senate-appointed dean/director
Dr. Rusty Souleymanov	Faculty of Social Work, Assistant Professor	(6) Senate Appointee
Dr. Robert Biscontri	Asper School of Business, Assistant Professor	(6) Senate Appointee
Dr. Sarah Teetzel	Faculty of Kinesiology and Recreation Management, Associate Dean (Undergraduate Education)	(6) Senate Appointee
Dr. Derek Brewin	Faculty of Agricultural and Food Sciences, Head of the Department Agribusiness and Ag. Economics, Professor	(6) Senate Appointee

Dr. Karen Dow	Faculty of Engineering, Assistant Professor	(6) Senate Appointee
Dr. Mojgan Rastegar	Max Rady College of Medicine, Rady Faculty of Health Sciences, Associate Professor	(6) Senate Appointee
Serena Phillips	Faculty of Science, Student Representative	(7) Student
Kristin Smith	Faculty of Arts, Student Representative	(7) Student
William Dowie	Graduate Studies, Student Representative	(7) Student
Vacant (Declined)	Declined	(8) Deputy Minister of Education (or designate)
Kelly Teixeira	University Advisor, St. John's Ravenscourt	(9) Counsellor from a Manitoba high school

Subsequent to the previous Annual Report, SCADM met on May 19, 2020, June15, 2020, September 29, 2020, October 27, 2020, November 17, 2020, December 14, 2020, January 19, 2021, February 23, 2021, March 23, 2021 and April 20, 2021.

1. **Dr. Gerald Niznick College of Dentistry** - SCADM reviewed a proposal from the Dr. Gerald Niznick College of Dentistry to modify the admission requirements for the IDDP, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on May 19, 2020. Approved by Senate on June 24, 2020.
2. **Faculty of Science** - SCADM reviewed a proposal from the Faculty of Science to incorporate changes to their direct entry admissions requirements, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on May 19, 2020. Approved by Senate on June 24, 2020.
3. **Faculty of Social Work** - SCADM reviewed a proposal from the Faculty of Social Work to modify their advanced entry admission requirements to the Bachelor of Social Work Program, effective for the fall 2021 intake. Endorsed by the Senate Committee on Admissions on May 19, 2020. Approved by Senate on June 24, 2020.
4. **College of Nursing** - SCADM reviewed a proposal from the College of Nursing to create a new admission category for the Bachelor of Nursing Program's University College of the North cohort, effective for the fall 2021 intake. Endorsed by the Senate Committee on Admissions on May 19, 2020. Approved by Senate on June 24, 2020.

5. **Faculty of Education** - SCADM reviewed a proposal from the Faculty of Education to incorporate changes to the admission requirements for Physical Education Teachable Majors/Minors, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on June 15, 2020. Approved by Senate on October 7, 2020.
6. **Enrolment Services** - SCADM reviewed a proposal from Enrolment Services to modify the institutional English language proficiency requirements, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on September 29, 2020. Approved by Senate on November 4, 2020.
7. **Faculty of Science** - SCADM reviewed a proposal from the Faculty of Science to introduce a Dual Credit High School Admissions Category, effective for the fall 2021 intake. Endorsed by the Senate Committee on Admissions on September 29, 2020. Approved by Senate on November 4, 2020.
8. **Price Faculty of Engineering** - SCADM reviewed a proposal from the Price Faculty of Engineering to modify the admission requirements for the Bachelor of Science in Engineering degree program – Chemistry changes, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on October 27, 2020. Approved by Senate on December 2, 2020.
9. **Price Faculty of Engineering** - SCADM reviewed a proposal from Price Faculty of Engineering to modify the admission requirements for the Bachelor of Science in Engineering degree program, effective for the fall 2021 intake. Endorsed by the Senate Committee on Admissions on October 27, 2020. Approved by Senate on December 2, 2020.
10. **Price Faculty of Engineering** - SCADM reviewed a proposal from the Price Faculty of Engineering concerning an articulation agreement with UCSI College, effective upon approval by Senate. Endorsed by the Senate Committee on Admissions on October 27, 2020. Approved by Senate on December 2, 2020.
11. **College of Nursing** - SCADM reviewed a proposal from the College of Nursing to incorporate changes to the admission requirements for the Bachelor of Nursing Program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on November 17, 2020. Will be considered by Senate in due course.
12. **College of Pharmacy** - SCADM reviewed a proposal from the College of Pharmacy to modify the admission requirements for the Doctor of Pharmacy program, effective for the fall

2022 intake. Endorsed by the Senate Committee on Admissions on December 14, 2020. Approved by Senate on February 3, 2021.

13. **Asper School of Business** – SCADM reviewed a proposal from Asper School of Business to incorporate changes to the track 1 admission requirements for the Bachelor of Commerce (Honours) degree program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on January 19, 2021. Will be considered by Senate in due course.
14. **College of Rehabilitation Sciences** – SCADM reviewed a proposal from College of Rehabilitation Sciences to modify the admission requirements for the Bachelor of Respiratory Therapy degree program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on January 19, 2021. Approved by Senate on March 3, 2021.
15. **College of Nursing** - SCADM reviewed a proposal from the College of Nursing to incorporate changes to the admission requirements for the Bachelor of Midwifery degree program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on February 23, 2021. Will be considered by Senate in due course.
16. **Office of the Registrar and Enrolment Services** – SCADM reviewed a proposal from the Office of the Registrar and Enrolment Services to modify the English language proficiency requirements, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on February 23, 2021. Approved by Senate on April 7, 2021.
17. **Faculty of Kinesiology and Recreation Management** – SCADM reviewed a proposal from the Faculty of Kinesiology and Recreation Management to incorporate changes to the advanced entry admission requirements for the Bachelor of Recreation Management and Community Development Degree Program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on February 23, 2021. Approved by Senate on April 7, 2021.
18. **School of Dental Hygiene** – SCADM reviewed a proposal from School of Dental Hygiene to modify the admission requirements for the Dental Hygiene Diploma Program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on February 23, 2021. Approved by Senate on April 7, 2021.
19. **Rady Faculty of Health Sciences** – SCADM reviewed a proposal from Rady Faculty of Health Sciences to incorporate changes to the admission requirements for the Bachelor of

Health Studies (BHSt) Degree Program, effective fall 2022 intake. Endorsed by the Senate Committee on Admissions on February 23, 2021. Will be considered by Senate in due course.

20. **Clayton H. Riddell Faculty of Environment, Earth and Resources** – SCADM reviewed a proposal from Clayton H. Riddell Faculty of Environment, Earth and Resources to modify the advanced entry admission requirements for the Bachelor of Environmental Science program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on March 23, 2021. Will be considered by Senate in due course.
21. **School of Art** – SCADM reviewed a proposal from the School of Art to incorporate changes to the admission requirements for both General and Honours Bachelor of Fine Art – Art History programs, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on March 23, 2021. Will be considered by Senate in due course.
22. **Faculty of Agricultural and Food Sciences** – SCADM reviewed a proposal from the Faculty of Agricultural and Food Sciences to create a new admissions category for the B. Sc. Agribusiness, B. Sc. Agriculture and B. Sc. Agroecology programs, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on March 23, 2021. Will be considered by Senate in due course.
23. **Faculty of Agricultural and Food Sciences** - SCADM reviewed a proposal from the Faculty of Agricultural and Food Sciences to modify the transfer course pathway for the B. Sc. Agribusiness, B. Sc. Agriculture and B. Sc. Agroecology for the students that completed the UM Diploma in Agriculture program, effective for the fall 2021 intake. Endorsed by the Senate Committee on Admissions on March 23, 2021. Will be considered by Senate in due course.
24. **Faculty of Education** - SCADM reviewed a proposal from the Faculty of Education to modify the admission requirements for music teachable majors/minors for the Bachelor of Education Degree Program, effective for the fall 2022 intake. Endorsed by the Senate Committee on Admissions on April 20, 2021. Will be considered by Senate in due course.
25. **Faculty of Education** - SCADM reviewed a proposal from the Faculty of Education to incorporate changes to the admission requirements for physical education teachable majors/minors for the Bachelor of Education Degree Program, effective for the fall 2022

intake. Endorsed by the Senate Committee on Admissions on April 20, 2021. Will be considered by Senate in due course.

Preamble

1. The terms of reference for the Senate Committee on Appeals are found at the link: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/493.html

2. The Committee is charged to hear and determine appeals from:
   a) decisions made by academic administrators involving Senate regulations in which Faculty or School Councils have no jurisdiction; and
   b) appeals against decisions taken by Awards Selection Committees of Faculties and Schools.

3. The Committee is to report to Senate on the determination of all appeals submitted to it; and advise the Executive Committee of any Senate regulations affecting students which appear to be creating particular difficulties.

Observations

1. Members of the Committee for 2020 - 2021 were: Professor C. Enns (Education, Chair), Professor P. Blunden (Science, Vice-Chair), Professor D. Oliver (Engineering, Vice-Chair), Mr. J. Asaminew (student, Health Sciences), Mr. A. Azeez (student, Graduate Studies), Dean D. Brown (Kinesiology & Recreation Management), Professor M. Campbell (Environment Earth & Resources), Ms. K. Casalla (student, Science) , Ms J. Dela Cruz (UMSU, designate), Ms. M. P. Ehoussou (student, Université de Saint-Boniface), Dr. N Harland (Science), Mr. Md M. Hasan (student, Graduate Studies), Ms. E. Kalo (student, Science), Ms. N. Lam (student, Arts), Ms E. Labbé (student, Université de Saint-Boniface), Professor L. Landrum (Architecture), Dr. R. Lastra (Extended Education), Ms J. McNicholl (Science), Ms J. Minarik (student, Graduate Studies), Ms T. Nagra (student, Graduate Studies), Professor J. Paliwal (Agricultural and Food Sciences), Dean L. Raman-Wilms (Health Sciences), Dr. J. Rocque (Université de Saint-Boniface), Ms. L. Slegers (student, Management), Professor M. Smith (Management), Professor V. Swain (Dentistry), Professor M. Soderstrom (Arts), Professor C. Van Winkle (Kinesiology & Recreation Management)

2. The Committee reports to Senate on a regular basis and details of these reports are contained in the Senate minutes.

3. During the reporting period from April 1, 2020 to March 31, 2021 the Committee received 13 appeals which are summarized below. The summary below also includes the details of one appeal which was listed as pending in the previous year's annual report.

#	Faculty/College/School	Decision
1	Architecture	Granted
1	I. H. Asper School of Business	Granted
1	Dentistry	Pending

1	Education	Insufficient Grounds
2	Engineering	1 Insufficient Grounds 1 Granted
2	Graduate Studies	2 Insufficient Grounds
1	Medicine	Pending
1	Nursing	Insufficient Grounds
3	Science	1 Insufficient Grounds 2 Denied
1	Social Work	Granted

Respectfully submitted,

Charlotte Enns, Chair
Senate Committee on Appeals

May 19, 2020

Annual Report of the Senate Committee on Approved Teaching Centres

Preamble

1. Terms of reference for the Senate Committee on Approved Teaching Centres can be found on the University Governance website.
2. For the reporting period May 2020 – April 2021.

Observations

1. Committee members, 2020-2021:

   C. Cartmill (Arts), T. Chen (Arts; May–December 2020; on leave), R. Cossar (Arts; leave replacement), M. Faubert (Arts), L. Leboe-McGowan (Arts), R. Linden (Arts), J. Taylor (Arts), I. Whicher (Arts)

   Term ended December 2020: L. Tromley (Arts)

2. The Committee did not meet during the reporting period.
3. The following are Approved Teaching Centres at the University of Manitoba:

   Prairie Theatre Exchange
   William and Catherine Booth College

Respectfully submitted,

Senate Committee on Approved Teaching Centres

UNIVERSITY OF MANITOBA

Financial Aid and Awards
422 University Centre
65 Chancellor's Circle
Winnipeg, MB R3T 2N2

ANNUAL REPORT TO SENATE FROM THE SENATE COMMITTEE ON AWARDS

Number of meetings

The Senate Committee on Awards met 10 times between May 1, 2020 and April 30, 2021.

Terms of Reference

Terms of Reference for the Senate Committee on Awards can be found on the University of Manitoba website at:
http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/495.html

Committee Members

Academic Representatives:
Dr. Jared Carlberg (Chair / Faculty of Agricultural and Food Sciences)
Prof. Darcy MacPherson (Vice Chair / Faculty of Law)
Dr. Michelle Faubert (Faculty of Arts) (on leave from May 1, 2020-June 30, 2020)
Dr. Glenn Clark (Faculty of Arts) (leave replacement for Dr. M. Faubert)
Dr. Karen Kampen (Faculty of Arts)
Dr. Peter Cattini (Rady Faculty of Health Sciences)
Dr. Jennifer McLeese (Faculty of Science)

Student Representatives:
Ms. Jenna Hepburn (Faculty of Health Sciences)
Ms. Maryam Samsomikor (Faculty of Graduate Studies)

Director, Financial Aid and Awards
Ms. Jane Lastra

Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies
Ms. Sara Sealey (designate)

Non-voting members:
Mr. Jeff Adams (Executive Director, Enrolment Services)
Ms. Pamela Gareau (Resource / Financial Aid and Awards)
Ms. Mabelle Magsino (Financial Aid and Awards)
Ms. Regan Sarmatiuk (Recording Secretary / Financial Aid and Awards)
Ms. Mandy Laing (Financial Aid and Awards)
Ms. Carolyn Basha (designate, Alumni and Donor Relations)

Observations

1. In 2020-2021, the Senate Committee on Awards approved the establishment of 50 new awards, amendments to 58 existing awards, and the withdrawal of 27 awards. Of the 50 new awards, 37 are scholarships, prizes, travel awards, medals, or fellowships, and 13 are bursaries. 28 awards are funded out of endowments and 21 are annually funded.

Respectfully submitted,

Dr. Jared Carlberg
Chair, Senate Committee on Awards

Preamble

1. Terms of reference for the Senate Committee on the Calendar can be found at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/496.html

Observations

1. Committee members, 2020-2021:

   Mr. J. Leclerc (University Secretary), Chair, Mr. J. Adams (University Registrar and Executive Director of Enrolment Services), Professor O. Botar (School of Art), Professor S. Clark (Engineering), Acting Dean K. Main (Graduate Studies); Mr. N. Marnoch (Registrar) (until December 2020), Professor T. Peter (Arts), Acting Dean L. Simard (Graduate Studies), Ms. G. Saindon (Calendar Editor), Mr. R. Talukder (student, Graduate Studies)

2. The Committee did not meet during the reporting period.

Respectfully submitted,

Mr. Jeff M. Leclerc, Chair
Senate Committee on the Calendar

May 19, 2021

Annual Report of the Senate Committee Curriculum and Course Changes

Preamble

1. Terms of reference for the Senate Committee on Curriculum and Course Changes can be found on the University Governance website.
2. For the reporting period May 2020 – April 2021.

Observations

1. Committee members, 2020-2021:

   G. Smith (Chair; Arts), D. McNeill (Vice-Chair; Engineering), M. Bagamery (student, Graduate Studies), S. Bannatyne (designate, Registrar), C. Cook (Vice-President, Indigenous), C. Davidson (designate, Deputy Provost, Academic Planning and Programs), P. Dorrington (Université de Saint-Boniface), J. Hamilton (Health Sciences), J. Hughes (Social Work), R. Koop (Arts), K. Kruse (Libraries), Professor B. Li (Science), C. Miller (designate, Vice-President, Indigenous), H. Smeltzer (student, Health Sciences), S. Teetzel (Kinesiology and Recreation Management)

   Terms ended May 31, 2020: H. Jenkins (student, Agricultural and Food Sciences), J. Minarik (student, Graduate Studies), M. Pozdirca (student, Health Sciences), C. Simonot-Maiello (Music)
2. The Committee met on thirteen occasions: May 14, October 10, October 14, October 15, October 16, October 21, and October 28, 2020, and on March 18, March 22, March 23, March 25, March 30, and April 1, 2021. The committee also participated in one electronic poll conducted between November 9 – 12, 2020.
3. The Committee reported to Senate on:
   - Curriculum and Course Changes Totaling Fewer than Nine Credit Hours

     Various faculties, colleges, and schools (Senate, May 13, June 24, and December 2, 2020), and including proposals for:
     - new programs: Faculty of Arts
       - Bachelor of Arts (Single Advanced Major) in Central and East European Studies, Co-operative Education Option
       - Bachelor of Arts (Single Honours) in German, Co-operative Education Option
       - Bachelor of Arts (Double Advanced Major) in Native Studies
       - Bachelor Arts (Double Advanced Major) in Religion
     - new program: Faculty of Education
       - Concentration in Teaching English as an Additional Language
     - new programs: Faculty of Science
       - Bachelor of Science (Joint Honours) in Statistics and Mathematics, Co-Operative Option
       - Bachelor of Science (Joint Honours) in Mathematics and Physics, Co-Operative Option

- program closures (Area Specializations): Faculty of Science
  - Theoretical Computer Science
  - Networks and Security
  - Artificial Intelligence
  - Human Computer Interaction and Computer Graphics
  - Databases
  - Software Engineering
  - Computer Systems
  - Web-Based Systems

- Corrections to the Report of November 20, 2020 (*for information*)
  - Senate, February 3, 2021
  - Senate, April 7, 2021
- Undergraduate Course Changes Beyond Nine Credit Hours:
  - Course and Curriculum Changes, Faculty of Law (Senate, June 24, 2020)
  - School of Art (Senate, March 3, 2021)
- Program Proposal:
  - Bachelor of Arts (Honours) in Linguistics, Faculty of Arts (Senate, March 3, 2021)
- Program Modifications:
  - Revised Science and Faculty of Arts Course Requirements, Clayton H. Riddell Faculty of Environment, Earth, and Resources (Senate, May 13, 2020)
  - Major Curriculum Revisions, Department of Chemistry, Faculty of Science (Senate, May 13, 2020)
  - Modification of Program Requirements and Academic Regulations for the Post-Baccalaureate Diploma in Education Program, Faculty of Education (Senate, June 24, 2020)
  - Modification of the Preliminary Engineering Program (Senate, December 2, 2020)
- Program Closures:
  - Closure of Integrated Bachelor of Music / Bachelor of Education, Faculties of Education and Music (Senate, February 3, 2021)
- Articulation Agreements and Transfer Pathways:
  - Transfer Pathway, Diplôme en administration des affaires to Baccalauréat en administration des affaires, Université de Saint-Boniface (Senate, May 13, 2020)
  - Articulation Agreement Proposal, University of Manitoba, B.Sc. in Engineering – UCSI College, American Degree Transfer Programs (Senate, December 20, 2020)
- Annual Update on Academic Program Listing (*for information*, Senate, May 13, 2020)

Respectfully submitted,

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

April 14, 2021

Annual Report of the Senate Committee on Honorary Degrees

Preamble

The terms of reference for the Senate Committee on Honorary Degrees are found online at: *http://www.umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/501.htm*

Observations

1. The membership of the Committee for 2020-2021 included: Dr. David T. Barnard (President & Vice-Chancellor) until June 30, 2020, Dr. Michael Benarroch (President & Vice-Chancellor) from July 1, 2020, Mr. Peter Wheatley (Chair, Alumni Association), Dr. James Blatz (Engineering), Dr. Brenda Austin-Smith (Arts), Dr. Kelley Main (Asper School of Business), Dr. Chris Adams (St. Paul's College), Ms. Jelynn Dela Cruz (President of UMSU), Dr. William Pope (community representative), and Ms. Anne Mahon (Chancellor), as Chair.

2. The Committee on Honorary Degrees reports to Senate as required in closed session on candidates for honorary degrees, and the naming of buildings, parts of buildings, roadways and special units.

3. During the period from May 2020 to April 2021, the Committee reported to Senate on one occasion: January 6, 2021. Details of this report are available upon request by eligible members of Senate.

Respectfully submitted,

Chancellor Anne Mahon, Chair
Senate Committee on Honorary Degrees

/sf

Preamble:

The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) are found on the web at:

http://www.umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/502.htm

Observations:

1. Committee members, 2020-2021:

   Dr. M. Torchia, Vice-Provost (Teaching and Learning), Chair, Mr. J. Adams (University Registrar), Mr. A. Azeez (student, Graduate Studies), Professor M. Czubryt (Graduate Studies), Ms J. Dela Cruz (UMSU President) Mr. O. Efobi (student, Graduate Studies), Professor B. Elias (Heath Sciences), Dr. N. Harland (Science), Ms K. Koczanski (Science), Ms K. Macalinao (student, Science), Dean D. Mandzuk (Education), Mr. N. Marnoch (Registrar), Ms J. Minarik (student, Graduate Studies), Ms H. Morris (Director, Student Advocacy), Professor L. Neville (Management), Ms M. Nguy (student, Education), Ms M. Podzirca (student, Health Sciences), Ms L. Slegers, (student, Management), Professor E. Troutt (Arts), Professor V. Warne (Arts)

2. The Committee met 5 times during the reporting period on April 14, May 14, September 17 and November 19, 2020 and March 18, 2021.

3. During this period, the Committee reported to Senate on the following matters:

   - Modification of Time Limit and Lapse of Credit Regulation, Faculty of Agricultural and Food Sciences (May 13, 2020)
   - Modification of Transfer of Credit Regulations, Bachelor of Fine Arts Art History (General) and Bachelor of Fine Arts (General) Studio, School of Art
   - Proposed and Revised Academic Regulations, Faculty of Arts concerning:
     - Modification of Entrance, Continuation and Graduation Requirements, GPA Policy Alignment (November 4, 2020)
     - Modification of Entrance Requirements, Bachelor of Arts Advanced Major (November 4, 2020)
     - Modification of Entrance Requirements, Bachelor of Arts Honours (November 4, 2020)
     - Modification of Entrance Requirements and Minor Regulation, Bachelor of Arts General and Bachelor of Arts Single Advanced Major in Global Political Economy (November 4, 2020)
     - Indigenous Credit Requirement (November 2, 2020)
   - Revised Program Requirements and Transfer of Credit Regulations, Post Baccalaureate Diploma in Education, Faculty of Education (June 24, 2020)
   - Revised Academic Regulations, Clayton H. Riddell Faculty of Environment, Earth, and Resources, concerning:
     - Bachelor of Arts (Honours) in Geography (May 13, 2020)
     - Faculty of Science and Faculty of Arts Course Requirements (May 13, 2020)
   - Revised Academic Regulations, Undergraduate Medical Education Program, Max Rady College of Medicine concerning:

    - Definition of National Board of Medical Examiners (May 13, 2020)
    - Definition of Objective Structured Clinical Examination and Comprehensive Clinical Exam (May 13, 2020)
    - Examination Results Policy (May 13, 2020)
    - Policy on Midpoint In-Training Evaluation (MITER) and Final In-Training (FITER) Preparation, Distribution and Completion and Essential Clinical Presentation (ECP) Preparation Distribution, Audit and Remediation (May 13, 2020)
    - Promotion and Failure Policy (May 13, 2020)
    - Modification of Essential Skills and Abilities Technical Standards for Admission, Promotion or Graduation in the PGME Program, and Accommodation Policy (November 4, 2020)
- Academic Regulations, College of Nursing concerning:
    - Criminal Record, Child Abuse Registry, and Adult Abuse Registry checks (June 24, 2020)
    - Delivery of Bachelor of Nursing Program to a Collaborative University College of the North Cohort:
        - Transfer to an Alternate Delivery Site within the Program (June 24, 2020)
        - Professional Unsuitability Bylaw (June 24, 2020)
    - Proposed policy on Requisite Skills, Abilities and Standards for Capacity, Bachelor of Midwifery (June 24, 2020)
- Professional Unsuitability Bylaw, Master of Occupational Therapy, Department of Occupational Therapy (November 4, 2020)
- Bachelor of Respiratory Therapy, College of Rehabilitation Sciences concerning:
    - Academic Regulations (November 4, 2020)
    - Essential Skills and Abilities (November 4, 2020)
- Modification of Progression Regulations, Faculty of Science (January 6, 2021)
- Revised Academic Regulations, Bachelor of Social Work, Faculty of Social Work, concerning:
    - Scholastic Progress (June 24, 2020)
    - Field Instruction (June 24, 2020)
    - Transfer Credit Equivalency Policy (June 24, 2020)
- Final Report and Recommendations: Teaching and Course Evaluation Sub-Committee (May 13, 2020)
- Revised Academic Regulations, Université de Saint-Boniface concerning:
    - Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie (May 13, 2020)
    - Baccalauréat ès sciences avec majeure conjointe en biochimie-microbiologie, cooperative stream (May 13, 2020)

4. The Teaching and Course Evaluation Sub-Committee has continued to meet and work on recommendations related to Student Rating of Instructions.

Respectfully submitted,
Dr. Mark Torchia, Chair
Senate Committee on Instruction and Evaluation

Preamble

The Terms of Reference for the Joint Senate Committee on Master's Programs can be found online at:

https://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/503.html

Observations

1. Committee Membership (as of January 11, 2021):

Dr. Hugh Grant	Business & Economics, UW, **Chair**	Dr. Randall Jamieson, designate	Graduate Studies, UM, *ex officio*
Dr. Mavis Reimer	Graduate Studies, UW, *ex officio*	Dr. Sean Byrne	Peace & Conflict Studies, UM
Dr. Manish Pandey	Economics, UW	Dr. Mark Libin	English, Theatre, Film & Media, UM
Dr. Malcolm Bird	Political Science, UW	Dr. Andrea Rounce	Political Studies, UM
Dr. Eliakim Sibanda	History, UW	Vacant	Graduate Studies, UM Student Rep
Ms Vanessa Vertz	Graduate Studies, UW Student Rep		

2. Joint Senate Committee Meeting of June 24, 2020:

Second Cycle Graduate Program Review of the Master of Public Administration (MPA) (2019)

The JSC continued its discussions about the MPA review, having received an updated plan from the program's Joint Discipline Committee (JDC) on May 19, 2020. The plan identified several areas which the JDC committed to addressing over the coming 24 months and several areas of challenge requiring senior administration responses and action.

3. Submission of recommendations and proposed plans for the MPA

Second Cycle Graduate Program Review of the Master of Public Administration (MPA) (2019)

On December 9, 2020, I submitted the recommendations and proposed plan for the MPA on behalf of the JSC to the Provost and Vice-Presidents (Academic) of the University of Winnipeg and University of Manitoba.

4. Joint Senate Committee Meeting of April 8, 2021:

Second Cycle Graduate Program Review of the Master of Public Administration (MPA) (2019)

The JSC discussed various matters relating to the review process, responses to the recommendations and potential plans for implementing the proposed changes. Given the constructive discussions between the two Faculties of Graduate Studies, the JSC was confident that the matter was in good hands.

Respectfully submitted,

Hugh Grant

Dr. Hugh Grant, Chair
Joint Senate Committee

April 23, 2021

Annual Report of the Joint Senate Committee on Master's Programs Appeals

Preamble

The Terms of Reference for the Joint Senate Committee on Master's Programs can be found on the web at:

https://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/503.html

Observations

1. The Committee membership presently stands vacant until such time as the Committee is required.

2. No appeals were referred to the Committee for consideration; therefore, no meetings were held during the reporting period of May 2020 - April 2021.

Preamble

1. Terms of reference for the Senate Committee on Libraries can be found at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/505.html

Observations

1. Committee members (2020-2021):

   Ms. L. O'Hara, Vice-Provost (Libraries) and University Librarian (and designate for Provost and Vice-President (Academic)), Chair; Mr. M. Alam (student, Graduate Studies); Dean S. Baum (Science); Ms L. Best (student, Arts); Professor S. Ciurysek (School of Art); Ms L. Demczuk (designate, University Librarian); Ms O. Dingwall (Libraries) Dr. J. Doering (designate for Vice-President (Research and International)); Mr. W. Dowie (student, Graduate Studies); Dean N. Dyck (Health Sciences); Professor J. Gilchrist (Health Sciences); Ms A. Ginter (student, Social Work); Professor S. Kirkland (designate, Vice Provost (Graduate Education and Dean, Graduate Studies); Professor K. Main (designate, Vice Provost (Graduate Education) and Dean, Graduate Studies); Mr. C. Neumann (student, Graduate Studies); Professor M. Pawlak (Engineering); Professor P. Perkins (Arts); Mr. S. Rahman (student, Graduate Studies); Mr. M. Shaw (Science)

2. The Committee met once since the last annual report, on June 18, 2020.

3. The Committee received presentations on UML Administrative Organizational Chart, UML Phased Reopening, and Collections Review 2020. The Committee was also updated on the budget and on Open Access – next steps.

4. During this period the Committee reported to Senate on the Advancing Open Access Sub-Committee (October 7, 2020).

Respectfully submitted,

Lisa O'Hara, Chair
Senate Committee on the Libraries

Rady Faculty of Health Sciences | UM

Office of Academic Affairs
S204 Medical Services Building
750 Bannatyne Avenue
Winnipeg, MB R3E 0W2
Ph: 204 977 5647

M E M O R A N D U M

TO: Mr. Jeff Leclerc
University Secretary
312 Administration Building
Fort Garry Campus

FROM: Dr. Sara Israels, Vice-Dean, Academic Affairs

DATE: March 17, 2021

RE: ANNUAL REPORT OF THE SENATE COMMITTEE ON MEDICAL QUALIFICATIONS (SCMQ) MAY 2020 – APRIL 2021

The SCMQ considered the following applications under Subsection 181 of the Regulated Health Professions Act.

- August 12, 2020 - Dr. Giuseppe Retrosi (Pediatrics and Child Health). Dr. Retrosi's application was recommended to Senate and was approved on October 7, 2020.
- January 26, 2021 - Dr. Jongho Kim (Radiology). Dr. Kim's application is being presented to Senate at the April 7, 2021 meeting.

Members of the SCMQ:

Dr. Sara Israels, Chair, Designate, Dean of Max Rady College of Medicine
Dr. Diane Hiebert-Murphy, Designate, Vice Provost (Academic Affairs)
Dr. Anna Ziomek, Registrar, College of Physicians and Surgeons of Manitoba
Dr. Rakesh Arora, Faculty Member, Max Rady College of Medicine
Dr. Eric Jacobsohn, Faculty Member, Max Rady College of Medicine
Dr. Phil St. John, Faculty Member, Max Rady College of Medicine (term ending May 31, 2021. Agreed to serve another term)

/jv

April 22, 2021

Annual Report of the Senate Committee on Nominations

Preamble

The Terms of Reference for the Senate Committee on Nominations can be found on the University Governance website at:

https://umanitoba.ca/governance/sites/governance/files/2021-04/2021_04_07_Senate%20Committee%20on%20Nominations%20Terms%20of%20Reference.pdf

Observations

1. Committee members (2020-2021):

   Marie Edwards (Health Sciences), Chair
   Robert Biscontri (Management)
   Oliver Botar (School of Art)
   Helen Cameron (Science)
   Catherine Cook (Vice-President, Indigenous)
   Lori Giles-Smith (Libraries)
   Diane Hiebert-Murphy (Vice-Provost, Academic Affairs)
   Witold Kinsner (Engineering)
   Jitendra Paliwal (Agricultural and Food Sciences)
   Steven Passmore (Kinesiology and Recreation Management)
   Pamela Perkins (Arts)
   Reg Urbanowski (Health Sciences)
   Md Tanvir Hasnine (student)

2. During the reporting period, the Committee met two times on March 5, 2021 and April 19, 2021. The Committee met electronically on June 5 and September 18, 2020 to nominate academic members for vacancies on standing committees of Senate. The Committee will hold an electronic meeting in May to consider outstanding vacancies on Senate Committees and student nominees.

3. The Committee reported to Senate on May 13, June 24, and October 7, 2020 to consider academic member nominees for vacancies on standing committees of Senate.

4. The Committee reported to Senate on April 7, 2021 regarding changes to the terms of reference for the Senate Committee on Nominations to include representation from the office of the Vice-President (Indigenous) and the Vice-Provost (Academic Affairs).

Respectfully submitted,

Professor M. Edwards, Chair
Senate Committee on Nominations

May 19, 2021

Annual Report of the Senate Planning and Priorities Committee

Preamble

1. Terms of reference for the Senate Planning and Priorities Committee (SPPC) can be found on the University Governance website.

Observations

1. Committee members, 2020-2021:

   D. Watt (Arts; Chair), G. Anderson (Science), A. Azeez (student, Graduate Studies), J. Dela Cruz (President, UMSU), O. Dingwall (Libraries), J. Doering (designate, Vice-President, Research and International), M. Domaratzki (Science), M. Gabbert (Arts), M. Lebar (designate, Vice-President, Administration), K. Levasseur (Arts), C. Miller (Arts), T. Mondor (designate, President), D. Oliver (Engineering), M. Rastegar (Health Sciences), Ms. L. Schnarr (Vice-Provost, Students), C. Simonot-Maiello (Music), K. Smith (student, Arts), M. Torchia (designate, Provost and Vice-President Academic)

   Terms ended May 31, 2020: L. Forsythe (student, Graduate Studies), R. Perron (Architecture)

2. The work of the Committee is carried out by three sub-committees:

   - Program and Curriculum Planning – Chair, M. Gabbert
   - Campus Planning – Chair, M. Torchia
   - Finance Planning – Chair, D. Watt

3. The Chair of SPPC and the members of the Finance Planning subcommittee are members of the President's Budget Advisory Committee (BAC). This committee contributes to discussion of the University Budget through a series of meetings scheduled in February, March, and April 2021.

4. During the reporting period, the Senate Planning and Priorities Committee met on five occasions: September 28, October 26, and November 30, 2020, and March 29 and April 26, 2021. The committee also participated in one electronic poll conducted January 15 – 20, 2021.

5. During the reporting period, the Committee reported to Senate on the following matters:

   - Major Curriculum Revisions, Department of Chemistry, Faculty of Science (Senate, May 13, 2020)
   - Undergraduate Course Changes Beyond Nine Credit Hours:
     - Faculty of Law (Senate, June 24, 2020)
     - School of Art (Senate, March 3, 2021)
   - Graduate Course Changes Beyond Nine Credit Hours: Faculty of Law (Senate, January 6, 2021)
   - Proposals for Programs and Articulation Agreements:
     - Master of Supply Chain Management and Logistics, Asper School of Business (Senate, May 13, 2020)
     - Articulation Agreement Proposal, University of Manitoba, B.Sc. in Engineering – UCSI College, American Degree Transfer Programs (Senate, December 20, 2020)
     - Bachelor of Arts (Honours) in Linguistics, Faculty of Arts (Senate, March 3, 2021)
   - Proposals for Research Centres and Institutes:
     - Manitoba Quantum Institute (June 24, 2020)
     - Earth Materials and Archaeometry Centre (Senate, January 6, 2021)

6. At its meeting on April 26, 2021, the Committee received a presentation from the Chair of the University of Manitoba Sustainability Committee on *Climate Action at the University of Manitoba*. The presentation was arranged following the February 2021 Senate meeting, at which President Benarroch requested, in response to a question submitted for Question Period, that the SPPC consider how to involve Senate in the discussion of matters concerning sustainability at the University.

Respectfully submitted,

Professor David Watt, Chair
Senate Planning and Priorities Committee

April 15, 2021

Annual Report of the Senate Committee on Rules and Procedures

Preamble

Terms of reference for the Senate Committee on Rules and Procedures can be found at:

http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/509.html

Observations

1. Committee members (2020-2021):

   Jeffery Taylor (Arts), Chair
   John Anderson (Science)
   Tracey Peter (Arts)
   Reg Urbanowski (Health Sciences)
   Dustin Erickson (student)

2. During the reporting period, the Committee met on September 24, 2020, November 30, 2020, and February 25, 2021, and participated in an electronic meeting on March 22, 2021. Further, the Committee is scheduled to meet on May 27, 2021.

3. On November 4, 2020, the Committee reported to Senate regarding revisions to the Desautels Faculty of Music Council Bylaw. On February 3, 2021 the Committee reported to Senate regarding the deadline for questions to Senate. On April 7, 2021 the Committee reported to Senate regarding the proposed revisions to the Standing Rules of Senate Relating to Members Elected Under *Section 27 of the University of Manitoba Act* – Indigenous Senators

4. The Committee also provided comments and recommendations regarding:

   - Department of Architecture Council Bylaw
   - Department of Biochemistry and Medical Genetics Council Bylaw
   - Department of English, Theatre, Film and Media Council Bylaw
   - College of Nursing Council Bylaw
   - Department of Physiology and Pathophysiology Bylaw

Respectfully submitted,

Dean Jeffery Taylor, Chair
Senate Committee on Rules and Procedures

Preamble

The terms of reference for the Senate Committee on University Research (SCUR) can be found on the web at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/510.html

Observations

The members of the Committee during the Annual Report period of ***May 2020 - April 2021*** included:

- Digvir Jayas, Vice-President (Research & International), (Ex-Officio) as Chair
- David T. Barnard, President and Vice-Chancellor (Ex-Officio) (until June 2020)
- Michael Benarroch, President and Vice-Chancellor (Ex-Officio) (July 2020 – present)
- Diane Hiebert-Murphy, Provost and Vice-President (Academic Affairs) (Ex-Officio)
- Gary Glavin, Associate Vice-President (Research) (Ex-Officio)
- Jay Doering, Associate Vice-President (Partnerships) (Ex-Officio)
- Louise Simard, Dean, Faculty of Graduate Studies (Ex-Officio) (until December 2020)
- Kelley Main, Dean, Faculty of Graduate Studies (Ex-Officio) (January 2021 – present)
- Kerrie Hayes, Director of Research Contracts, Office of Research Services (Ex-Officio/Non-Voting)
- Stefi Baum, Dean, Faculty of Science
- Norm Halden, Dean, Faculty of Environment, Earth, and Resources (May 2020)
- Gady Jacoby, Dean, Asper School of Business
- Martin Scanlon, Dean, Agricultural and Food Sciences (September 2020 – present)
- Jeffery Taylor, Dean, Faculty of Arts
- Clea Schmidt, Professor, Dept. of Curriculum, Teaching and Learning, Faculty of Education
- Andrew Halayko, Professor and Canada Research Chair, Faculty of Health Sciences
- Jason Leboe-McGowan, Associate Dean, Faculty of Arts (May 2020)
- Roisin Cossar, Professor, Faculty of Arts (September 2020 – present)
- Anita Brûlé-Babel, Professor, Dept. of Plant Science, Faculty of Agricultural and Food Sciences
- Michelle Porter, Professor, Director, Centre on Aging, Faculty of Kinesiology and Recreation Management
- Samar Safi-Harb, Professor and Canada Research Chair, Faculty of Science
- Tamra Werbowetski-Ogilvie, Professor, Dept. of Biochemistry and Medical Genetics, Faculty of Health Sciences
- Shawn Clark, Professor, Dept. of Civil Engineering, Faculty of Engineering
- Laura Forsythe, GSA Student Rep (May 2020)
- Anjan Neupane, GSA Student Rep (May 2020)
- Etinosa Osemwota, GSA Student Rep (September 2020 – present)
- Berardino Petrelli, GSA Student Rep (September 2020 – present)

1. The Committee met five times during the reporting period on May 20, September 10 and November 12, 2020 and January 21 and March 18, 2021.

2. The committee reviewed and recommended to Senate for approval the following Chairs, Professorships, and Centres/Institutes:

   Professorships and Chairs

   Establishment of Research Chairs:

- Manitoba Crop Protection Chair in Weed Management (January 6, 2021 Senate; January 26, 2021 Board of Governors)

Establishment of Professorships:

- Professorship in Lab-On-Chip Technology (March 3, 2021 Senate; March 23, 2021 Board of Governors)

Centres and Institutes; and Research Groups

Establishment of a new Centre/Institute

- *Earth Materials and Archaeometry Centre (EMAC)*
  5 years effective January 26, 2021 through January 25, 2026 (January 6, 2021 Senate; January 26, 2021 Board of Governors)

Dissolution of Centre/Institute

- *Centre for Research and Treatment of Atherosclerosis (CRTA)*
  Effective December 1, 2020 (October 7, 2020 Senate; December 1, 2020 Board of Governors)

Centre/Institute Term Renewals:

- *Centre for Professional and Applied Ethics (CPAE)*
  5 years effective January 1, 2021 through December 31, 2025. (October 7, 2020 Senate)
- *Centre for Defense and Security Studies (CDSS)*
  5 years effective January 7, 2021 through January 8, 2026. (October 7, 2020 Senate)
- *University of Manitoba Institute for the Humanities (UMIH)*
  5 years effective June 30, 2021 through July 1, 2026 (pending Senate approval)

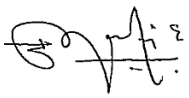
Establishment of Research Group

- *C-19 Wild Research Group* (June 24, 2020 Senate)

3. The Committee approved the *Membership of the Committee* for:
   - The 2020 Falconer Emerging Researcher Rh Awards

4. Other policy:
   - Review of Policy and Procedures governing Research Centres and Institutes (May 2020, ongoing)
   - Procedures for Ethics of Research involving Humans (November 2020)

Respectfully submitted,



Digvir S. Jayas
Chair, Senate Committee on University Research

/sv

University of Manitoba | Office of the President

Office of the President
Room 202 Administration Bldg.
University of Manitoba
Winnipeg, MB
Canada R3T 2N2
T: 204-474-9345
F: 204-261-1318
president@umanitoba.ca

DATE: April 12, 2021

TO: Jeff Leclerc, University Secretary

FROM: **Michael Benarroch, Ph.D.**
President and Vice-Chancellor

RE: Extension of the Suspension of Intake to the M.A., Icelandic; Internationally Educated Agrologists Post-Baccalaureate Program (IEAP); Post-Baccalaureate Certificate in E-Learning (PBCEL); and Post-Baccalaureate Certificate in Applied Leadership (PBCAL)

I attach a recommendation from Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs) to extend the suspension of admissions to the following programs:

- M.A., Icelandic,
- Internationally Educated Agrologists Post-Baccalaureate Program (IEAP),
- Post-Baccalaureate Certificate in E-Learning (PBCEL), and
- Post-Baccalaureate Certificate in Applied Leadership (PBCAL).

Under the Admission Targets Policy, the President may suspend admissions to a program following consultation and discussion with the applicable unit's dean or director, with Senate and with the Board of Governors, subject to the provisions of the provincial Programs of Study Regulation.

Accordingly, please place these items on the agenda for the May 5, 2021 Senate Executive meeting and the May 19, 2021 Senate Meeting.

Cc: Janice Ristock, Provost and Vice-President (Academic)
Laurie Schnarr, Vice-Provost (Students)
David Mandzuk, Acting Dean, Division of Extended Education
Martin Scanlon, Dean, Faculty of Agricultural and Food Sciences
Jeff Taylor, Dean, Faculty of Arts
Jeff Adams, Registrar and Executive Director, Enrolment Services
Randy Roller, Executive Director, OIA
Cassandra Davidson, Academic Program 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: April 12, 2021

To: Dr. Michael Benarroch, President and Vice-Chancellor

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

Re: Request for Extension of Suspension of Intake, Master of Arts, Icelandic

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Under the Admission Targets Policy and at the requests of Dr. Kelley Main, Acting Dean, Faculty of Graduate Studies, and Dr. Greg Smith, Associate Dean, Graduate Programs, Faculty of Arts, please find attached a proposal to extend the suspension of intake into the Master of Arts, Icelandic program.

Intake to the program has been suspended since 2015 in response to changes in staffing levels that resulted in insufficient resources to supervise graduate students. The Faculty is requesting suspension be extended for an additional two-years during which time a review will be undertaken to determine whether appropriate resources may be available to reopen intake to the program.

Consistent with the Admission Targets Policy and Procedure, the President may approve the suspension of admissions to a program following consultation with the Dean/Director, Senate, and the Board of Governors. If considered favourable, then the proposal will be forwarded to the province for their review and approval under the provincial Program of Study Regulations.

Cc: Janice Ristock, Provost and Vice-President (Academic)
Laurie Schnarr, Vice-Provost (Students)
Kelley Main, Acting Dean, Faculty of Graduate Studies
Jeff Taylor, Dean, Faculty of Arts
Greg Smith, Associate Dean, Graduate Programs, Faculty of Arts
Jeff Leclerc, University Secretary
Jeff Adams, Registrar and Executive Director, Enrolment Services
Randy Roller, Executive Director, OIA
Cassandra Davidson, Academic Program Specialist

/cd

UM | Faculty of Graduate Studies

500 University Centre
Winnipeg, Manitoba
Canada R3T 2N2
Telephone: (204) 474-9573
Graduate.studies@umanitoba.ca

MEMORANDUM

February 19, 2021

To: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs), Office of the Provost & Vice-President (Academic)

From: Dr. Kelley J. Main, Acting Dean, Faculty of Graduate Studies

Re: Request to Extend Status of Suspended Program

Cc: Ms. Cassandra Davidson, Academic Program Specialist, Office of the Provost & Vice-President (Academic)

I am writing in support of the continued temporary cessation of the **Master of Arts in Icelandic Language and Literature**. Following communication with Drs. Jeff Taylor and Greg Smith of Faculty of Arts, I am in agreement that the program should be suspended for another 24 months (2023). It is with hope that this unique program will one day have the resources to re-admit high quality graduate students.

University of Manitoba | Faculty of Arts

Associate Dean of Arts
316 Fletcher Argue Building
University of Manitoba
Winnipeg, Manitoba
Canada R3T 5V5
Telephone (204) 294-6309
Email Greg.Smith@umanitoba.ca

February 19, 2021

To: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs), Office of the Provost & Vice-President (Academic)

From: Dr. Greg Smith, Associate Dean, Graduate Programs, Faculty of Arts

Re: **Request to Extend Status of Suspended Program**

The Faculty of Arts supports the request from the Department of Icelandic Language and Literature to continue the temporary cessation of admissions to the **Master of Arts in Icelandic Language and Literature**. While the University of Manitoba holds a fantastic archive of Icelandic and Icelandic-Canadian print and manuscript materials, and the Faculty has capacity to support Icelandic language instruction, the Department currently lacks a research faculty member who would be in a position to supervise a Master's level project.

Cc: Ms. Cassandra Davidson, Academic Program Specialist, Office of the Provost & Vice-President (Academic)
Dr. Kelley J. Main, Acting Dean, Faculty of Graduate Studies
P.J. Buchan, Head, Department of Icelandic Language and Literature

Department of Icelandic Language and Literature
357 University College
220 Dysart Rd
Winnipeg, Manitoba
Canada R3T 2N8
T: 204.474.8487
um_icelandic@umanitoba.ca

University of Manitoba | Faculty of Arts

February 12, 2021

Dr. Todd Mondor
Deputy Provost (Academic Planning and Programs)
University of Manitoba

Dear Dr. Mondor,

Please find attached to this letter a request from the Department of Icelandic Language and Literature in the Faculty of Arts for an extension of temporary cessation of admissions to our graduate (M.A.) program.

The program was suspended in 2015 following the departure of Dr. Birna Bjarnadóttir and our resultant inability to ensure a full-time research supervisor for new students. Unfortunately, filling the position left vacant by Dr. Bjarnadóttir's departure is not currently a strategic resource priority for the Faculty of Arts, and no other supervisors in cognate disciplines are available.

The program is the only one of its kind in Canada and provides significant value to Manitoban society through the preservation and development of knowledge about Iceland and Icelandic-Canadian settlement. Prior to the cessation of admissions, the program had seen significant increases in enrolment from across North America. The program has much to recommend it, despite the current dearth of faculty to provide research guidance.

Efforts are ongoing to enhance the faculty complement in the department with support from the Icelandic-Canadian community, the Government of Iceland and through collaboration with the University of Iceland. We hope that the coming years will enable us to reopen this singular program.

We respectfully request that the current cessation of admissions be extended from 1 September 2021 to 31 August 2024.

Sincerely yours,

Peter John R. Buchan

Instructor and Department Head
Icelandic Language and Literature
Faculty of Arts
University of Manitoba

Application

TEMPORARY CESSATION OF A PROGRAM OF STUDY

Under The Advanced Education Administration Act

Manitoba Economic Development and Training

Universities and colleges requesting approval for the **temporary 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 refer to the Senate Policy and Procedures on Admission Targets (available online at: http://umanitoba.ca/admin/governance/governing_documents/academic/admission_targets.html).
2. Please complete the application below and submit with it the following supplemental documentation, to the Deputy Provost (Academic Planning and Programs):
   a. A cover letter justifying and summarizing the rationale behind the request for suspension of admissions (*as outlined in section 2.3 on the Admission Targets Procedures*).
   b. Letters of support from internal stakeholders that were consulted as part of this proposal.
   c. Enrolment and graduation trends for the past five years and forecasted trends for the next three to five years.
3. Please direct questions to Cassandra Davidson, Academic Programs Specialist, at Cassandra.Davidson@umanitoba.ca in the Office of the Provost & Vice-President (Academic).

SECTION A – PROPOSAL DETAILS

Institution**: University of Manitoba**

Applicable faculties/department with responsibility for the program: Faculty of Graduate Studies, Faculty of Arts, Department of Icelandic Language and Literature

If program is a joint program, list all participating institutions and the roles of each in delivering the program to be temporarily ceased:

Program name: Masters of Arts, Icelandic

Credential awarded: M.A.

Proposed start date for temporary cessation: 1 September, 2021

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 aim of the program is to develop the students' knowledge of modern and Old Icelandic language and literature and to train the students in methods of scholarship. Students entering the program will normally be expected to have taken an undergraduate major program in Icelandic or its equivalent. Those who do not meet these requirements may be required to take additional courses in preparation for their graduate work. Students who have already done post-graduate work elsewhere, particularly while in residence in Iceland, will be given recognition. A reading knowledge of a second language is required. Requirements for the M.A. degree include a thesis and three graduate courses.

Students can study works by Icelandic authors in their translated form, or in the original, or they can follow comparative literary approaches. The curriculum is driven by a coursework plus thesis model and normally involves supplementary training in the Icelandic language.

The program is almost unique in North America, and is the only graduate level program of its kind in Canada. Its capacity is deeply enhanced by the very strong library collections in Icelandic held in the Elizabeth Dafoe Library. Specialist study is possible in Icelandic-Canadian literature, Icelandic Literary History and Icelandic Literature in translation as well as Icelandic immigration and settlement and Icelandic-Indigenous contact in Manitoba.

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 degree is a two year program of study. Students must complete 18 credit hours of coursework at the 7000 level, normally in year one of their program. Students then research and write a master's thesis.

B-3 Describe the mode of delivery for this program:

The program follows a two year model of study, beginning with 18 credit hours of graduate study in Icelandic with up to 6 credit hours of graduate level coursework permitted in a cognate department (such as German, Slavic Studies, English, History).

SECTION C – INFORMATION REGARDING TEMPORARY CESSATION DEVELOPMENT PHASE

C-1 Identify and provide a detailed description of the rationale for the temporary cessation of this program of study:
(Such as changes in applications, enrolment, employer demand.)

The program is only viable when a full-time faculty member with a doctorate degree and an established research program and record is in place. Since the departure of Dr. Birna Bjarnadóttir in 2015, the Department dissuaded potential students from applying to the MA as they could not promise them a full-time research supervisor would be in place. Other faculty members in cognate departments, such as Dr. Arnason (Dept. English, Theatre, Film and Media) have since retired.

The faculty member who would direct graduate research would also be responsible for coverage of some portion of the undergraduate teaching curriculum in Icelandic literature and culture as well. With modest (though sustained) interest from graduate students along with modest undergraduate enrollments, it has not been a strategic resource priority for the Faculty of Arts to replace the full-time research faculty position in the face of competing enrollment pressures in other departments. Thus, the program does not currently hold the requisite research instructional capacity to commit to multi-year supervision of potential graduate students.

The Icelandic community in Winnipeg and across Canada, including a number of University of Manitoba alumni, has been supportive of an ongoing place for this program and a growing endowment fund has been established. The Government of Iceland has also been a major donor to the Icelandic Department and to the Icelandic Collection in the Dafoe Library. However, ongoing support for a moderate-sized program such as this one, will best occur once a solid and evergreen funding model has been secured in support of a new, full-time research faculty member. A fully endowed Chair would be the permanent solution.

C-2 Describe the expected outcome of the temporary cessation of this program and the timeframe of the temporary cessation process:

Efforts to enhance support for a Chair in Icelandic are ongoing and collaboration with the local Icelandic-Canadian community are ongoing. As well, the Department and University have continued to develop strategic partnerships with the University of Iceland and student exchange is possible, including for graduate students.
A delay in re-opening admissions is a responsible approach to students who would be unable to successfully compete an advanced program of study. The COVID-19 pandemic has disrupted graduate student mobility and interest internationally and the effects may also last more than 12 months.

During a further cessation of admissions, time can also be used to further build capacity with the potential supporters and to consider alternative teaching models with Icelandic or, indeed, other current or future university partners, willing to collaborate on a new model of graduate level instruction.

Cessation of admission is proposed for three years, from 1 September 2021 to 31 August 2024.

C-3 Outline the internal approval process (i.e. committees, governing bodies) for approving the temporary 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: dates will be inserted by the Provost's Office prior to submission to government.

UNIVERSITY OF MANITOBA:

Approval by President **Date** _____

Consultation with Senate: _____

Consultation with Board of Governors: _____

Additional Consultation *(as needed)*: _____ Details:

Final Decision: Y ☐ N ☐ _____

C-4 Responsibility to consult

C-4.1 What agencies, groups, or institutions have been consulted regarding the temporary cessation of this program?

C-4.2 How have students and faculty been informed of the intent to temporarily cease this program?
The Faculty of Arts has been in direct communication with the Department Head.

C-5 Describe the impact that the temporary cessation of this program may have on the labour market in Manitoba:

Graduate students in the program in the past have come from both within and outside of the Province. Students coming to Manitoba for postgraduate studies support local business, rent accommodations, and sometimes contribute academic labour by serving as teaching assistants or part time instructors at various institutions.

SECTION D – SYSTEM IMPACTS

D-1 Describe how the temporary cessation of this program will affect any specific laddering, articulation and/or credit transfer options for students in Manitoba and Canada:

There is no affect to such options as a result of this cessation.

D-2 Describe how the temporary cessation of this program may affect the academic, cultural, social and economic needs and interests of students and the province:

Given Manitoba's unique national and global position as a former hub of Icelandic emigration, and with the ongoing vibrancy of Icelandic culture in and around Gimli and the Interlake region, it is possible that the absence of the forum for training highly skilled keepers of Icelandic knowledge about language, literature, culture and history will lead to an unquantifiable loss to the fabric of Manitoba society. Potential spin offs from cultural vibrancy, migration studies, and cultural products will be likely as long as this program remains in limbo.

Moreover, highly trained personnel transfer their acquired skills from Master's program in research, writing, project management, interview, translation, public presentation and so on, to multiple fields and employment sectors beyond their field of study.

SECTION E– STUDENT IMPACTS

E-1 Provide a program completion plan for students currently enrolled in the program that is being temporarily ceased:

Year 1 N/A

Year 2 N/A

Year 3 N/A

Year 4 N/A

E-2 Will previous graduates of this temporarily ceased program be negatively affected by the temporary cessation of this program?

No.

E-3 What was the maximum seat capacity of the program that is being temporarily ceased?

3 students

E-4 What was the enrolment and graduation rate for this program over the past 5 years?

1 student / 5 years

SECTION F – FINANCIAL REALLOCATION

F-1 What portion of ongoing funding is allocated to this program?

None

F-2 Please provide a detailed description of how these funds will be reallocated during the temporary cessation of this program:

The current endowment Academic and Operating fund for the Department supports a portion of the administrative costs of the unit's undergraduate offerings as well as the salary for the other full-time Instructor in the program.

SECTION G – FINANCIAL REALLOCATION

(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

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: April 5, 2021

To: Dr. Michael Benarroch, President and Vice-Chancellor

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

Re: Request for Extension of Suspension of Intake, Internationally Educated Agrologists Post-Baccalaureate Program (IEAP)

Under the Admission Targets Policy and at the request of Dr. Martin Scanlon, Dean, Faculty of Agricultural and Food Sciences, please find attached a proposal to extend the suspension of intake into the Internationally Educated Agrologists Post-Baccalaureate Program (IEAP).

Intake to the program has been suspended since 2015, during which time the Faculty has consulted with industry partners and stakeholders on the long-term viability of the IEAP and alternative programming opportunities for internationally trained agrologists. The Faculty is asking for another two years in order to identify the final model of training and put forward any program proposals or revisions, as appropriate.

Consistent with the Admission Targets Policy and Procedure, the President may approve the suspension of admissions to a program 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.

Cc: Janice Ristock, Provost and Vice-President (Academic)
Laurie Schnarr, Vice-Provost (Students)
Martin Scanlon, Dean, Faculty of Science
Jeff Leclerc, University Secretary
Jeff Adams, Registrar and Executive Director, Enrolment Services
Randy Roller, Executive Director, OIA
Cassandra Davidson, Academic Program Specialist

/cd

Office of the Associate Dean
(Graduate Programs and Academic)

256 Agriculture Building
Winnipeg, Manitoba
Canada R3T 2N2
T: 204 474 6700
F: 204 474 7525

UM | Faculty of Agricultural and Food Sciences

MEMORENDUM

Date: March 15th, 2021
To: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)
From: Dr. Jitendra Paliwal, Associate Dean (Academic and Graduate Programs), Faculty of Agricultural and Food Sciences
Subject: Temporary Cessation of the Internationally Educated Agrologists Post-Baccalaureate Program (IEAP)

The Faculty of Agricultural and Food Sciences recommends a temporary cessation of the Internationally Educated Agrologists Post-Baccalaureate Program (IEAP) for two years until June 2023.

The IEAP was started in 2007 with significant support from the Province of Manitoba. Over the years, government priorities shifted and funding for the Program stopped. The costs of running the program such as industry tours, cost of the Program support staff (Administrative Assistant 2) became the responsibility of the Faculty. The financial burden combined with low enrollment led us to suspend the program in 2015.

The Faculty is committed to upgrading the credentials of new immigrants who are academically trained in agronomic sciences so that they are able to utilize their training in western Canadian context. To this end, we are working with Agrologists Manitoba to reinvent the program in a way that it aligns with their vision as well as University of Manitoba's new microcredential-based offerings.

In light of this, we formally request the IEAP be temporarily ceased for two years while we find alternative ways to address its underlying objectives in a sustainable manner. Please do not hesitate to contact me if you require any further information on this matter.

Application

TEMPORARY CESSATION OF A PROGRAM OF STUDY

Under The Advanced Education Administration Act

Manitoba Economic Development and Training

Universities and colleges requesting approval for the **temporary 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 refer to the Senate Policy and Procedures on Admission Targets (available online at: http://umanitoba.ca/admin/governance/governing_documents/academic/admission_targets.html).
2. Please complete the application below and submit with it the following supplemental documentation, to the Deputy Provost (Academic Planning and Programs):
   a. A cover letter justifying and summarizing the rationale behind the request for suspension of admissions (*as outlined in section 2.3 on the Admission Targets Procedures*).
   b. Letters of support from internal stakeholders that were consulted as part of this proposal.
   c. Enrolment and graduation trends for the past five years and forecasted trends for the next three to five years.
3. Please direct questions to Cassandra Davidson, Academic Programs Specialist, at Cassandra.Davidson@umanitoba.ca in the Office of the Provost & Vice-President (Academic).

SECTION A – PROPOSAL DETAILS

Institution**: University of Manitoba**

Applicable faculties/department with responsibility for the program: **Faculty of Agricultural and Food Sciences**

If program is a joint program, list all participating institutions and the roles of each in delivering the program to be temporarily ceased:

Program name: **Internationally Educated Agrologists Post-Baccalaureate Diploma (IEAP)**

Credential awarded: **Post-Baccalaureate Diploma**

Proposed start date for temporary cessation: **Fall 2021**

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 IEAP program facilitates the integration of foreign-trained Agrologists into the Canadian agriculture sector, through a one-year program of coursework and work experience. The program stresses the importance of essential skills and professional branding by Canadian Standards.

The objective of the program is to assist new Manitobans who hold an agricultural degree from outside of Canada to become trained in Canadian standards and achieve meaningful work in their field.

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)*

One year, 25 credit hours.

B-3 Describe the mode of delivery for this program:

The delivery mode of this program was in-classroom coursework and work experience.

SECTION C – INFORMATION REGARDING TEMPORARY CESSATION DEVELOPMENT PHASE

C-1 Identify and provide a detailed description of the rationale for the temporary cessation of this program of study:
(Such as changes in applications, enrolment, employer demand.)

The program began accepting students in Fall 2007. Enrolment numbers and applications to the program were not as high as anticipated. The program was costly to offer and the low registration serves as rationale for permanent cessation. In Fall 2015 intake into the program was suspended.

Fall	Registered	New Admits
2007	13	13
2008	9	7
2009	8	8
2010	7	7
2011	12	11
2012	16	14
2013	13	12
2014	10	9
2015	0	0
2016	1	0
2017	0	0
2018	0	0
2019	0	0
2020	0	0

C-2 Describe the expected outcome of the temporary cessation of this program and the timeframe of the temporary cessation process:

The eventual outcome would be the Faculty applying for permanent cessation of the program. This would occur once the Faculty has a good understanding of how microcredentials can be used to offer the communication, inter-personal and practical agronomy skills required by new immigrants with academic skills in agronomic sciences but lacking their application in a western Canadian context. The safety net for the Faculty wishing to offer these skills in the next two years is the IEAP program in case Agrologists Manitoba can secure support to re-establish it. We are currently engaging with Agrologists Manitoba to define courses or components of courses that will deliver the necessary programming for internationally educated agrologists. Therefore the timeframe for closure is June 2023.

C-3 Outline the internal approval process (i.e. committees, governing bodies) for approving the temporary 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: dates will be inserted by the Provost's Office prior to submission to government.

UNIVERSITY OF MANITOBA:

Approval by President **Date** _____

Consultation with Senate: _____

Consultation with Board of Governors: _____

Additional Consultation *(as needed)*: _____ Details:

Final Decision: Y ☐ N ☐ _____

C-4 Responsibility to consult

C-4.1 What agencies, groups, or institutions have been consulted regarding the temporary cessation of this program?

This program does not require approval by any external organizations. Agrologists Manitoba have been consulted and have expressed their concern with the closure of the program. However, there are other pathways for international student to upgrade their Agrology course work by applying to the University of Manitoba as Special Students, or through Extended Education and taking our degree courses, or through opportunities afforded by the new microcredential programming. Agrologists Manitoba may want to consider providing recommendations for upgrading upon assessment of academic transcripts for registration with them.

C-4.2 How have students and faculty been informed of the intent to temporarily cease this program?

The program has been suspended since 2015 and there are no current students left in the program to consult.

C-5 Describe the impact that the temporary cessation of this program may have on the labour market in Manitoba:

There is no perceived effect on developing a skilled workforce in the area of Agronomy by closing the IEAP program. Other degrees offered at the University of Manitoba in the Faculty of Agricultural and Food Sciences are producing trained Agrologists to send into the labour market, for example the BSc in Agriculture (Agronomy) and other programs. The low number of graduates produced through the IEAP program indicates closing the program would not make a significant difference on the workforce.

SECTION D – SYSTEM IMPACTS

D-1 Describe how the temporary cessation of this program will affect any specific laddering, articulation and/or credit transfer options for students in Manitoba and Canada:

No laddering or articulation agreements are in place with this program.

D-2 Describe how the temporary cessation of this program may affect the academic, cultural, social and economic needs and interests of students and the province:

There is no anticipated effect as there has been no impact reported since suspending intake to the program.

SECTION E– STUDENT IMPACTS

E-1 Provide a program completion plan for students currently enrolled in the program that is being temporarily ceased:

There are no students left in the program.

E-2 Will previous graduates of this temporarily ceased program be negatively affected by the temporary cessation of this program?

We are aware of no ways in which previous graduates of the program will be negatively affected, they have the credentials to continue working in the field.

E-3 What was the maximum seat capacity of the program that is being temporarily ceased?

The Admissions cap was 15 students per year.

E-4 What was the enrolment and graduation rate for this program over the past 5 years?

Enrolment:

Fall	Registered
2016	1
2017	0
2018	0
2019	0
2020	0

Graduation:

Year	February	May/June	October	Total
2016	0	0	0	0
2017	0	0	2	2
2018	0	0	0	0
2019	0	0	0	0
2020	0	0	0	0

SECTION F – FINANCIAL REALLOCATION

F-1 What portion of ongoing funding is allocated to this program?

None.

F-2 Please provide a detailed description of how these funds will be reallocated during the temporary cessation of this program:

There are no funds currently being towards administering the program to reallocate as it is suspended.

SECTION G – FINANCIAL REALLOCATION

(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

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: April 5, 2021

To: Dr. Michael Benarroch, President and Vice-Chancellor

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

Re: Request for Extension of Suspension of Intake, Post-Baccalaureate Certificate in E-Learning (PBCEL) and Post-Baccalaureate Certificate in Applied Leadership (PBCAL)

Under the Admission Targets Policy and at the request of Dr. David Mandzuk, Acting Dean, Division of Extended Education, please find attached requests to extend the suspension of intake into the Post-Baccalaureate Certificate in E-Learning (PBCEL) and Post-Baccalaureate Certificate in Applied Leadership (PBCAL) programs.

Intake to the programs has been suspended since Fall 2018 (PBCAL) and Fall 2019 (PBCEL) to allow for time for current students to complete the program and for the unit to complete a review of the long-term viability of the offerings. The Division is asking for an extension of one year in order to allow remaining students to complete their studies and to put forward any program proposals or revisions, as appropriate.

Consistent with the Admission Targets Policy and Procedure, the President may approve the suspension of admissions to a program following consultation with the Dean/Director, Senate, and the Board of Governors.

Cc: Janice Ristock, Provost and Vice-President (Academic)
Laurie Schnarr, Vice-Provost (Students)
David Mandzuk, Acting Dean, Division of Extended Education
Jeff Leclerc, University Secretary
Jeff Adams, Registrar and Executive Director, Enrolment Services
Randy Roller, Executive Director, OIA
Cassandra Davidson, Academic Program Specialist

/cd

University of Manitoba | Extended Education

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185 Extended Education Complex
Winnipeg, Manitoba
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T: 204 474 8010
eedean@umanitoba.ca

Date: March 30, 2021

To: Dr. Todd Mondor, Deputy Provost (Academic Planning & Programs)

From: Dr. David Mandzuk, Acting Dean, Extended Education

Re: **Request for Extension of Suspension of Intake to Post-Baccalaureate Certificate in Applied Leadership (PBCAL)**

Further to your recommendation to the Office of the President dated May 11, 2020 regarding a one-year extension to the suspension of intake to several programs including Extended Education's Post-Baccalaureate in Applied Leadership (PBCAL), I am writing today to request an additional one year's suspension of intake to the PBCAL, to Fall 2022. Our review of the program is ongoing, especially in light of the newly approved Certificate and Diploma Framework, but we anticipate being in a position to request permanent closure of the PBCAL, for consideration by your office, as of Fall 2022.

If further information would be helpful, please advise. We look forward to hearing from you.

cc. Dr. Rod Lastra, Associate Dean, Extended Education
Ms. Cassandra Davidson, Academic Program Specialist

University of Manitoba | Extended Education

Dean's Office
185 Extended Education Complex
Winnipeg, Manitoba
Canada R3T 2N2
T: 204 474 8010
eedean@umanitoba.ca

Date: March 30, 2021

To: Dr. Todd Mondor, Deputy Provost (Academic Planning & Programs)

From: Dr. David Mandzuk, Acting Dean, Extended Education

Re: **Request for Extension of Suspension of Intake to Post-Baccalaureate Certificate in E-Learning (PBCEL)**

Further to correspondence received by the University Secretary from the Office of the President dated July 4, 2019, in which Dr. Barnard approved the recommendation made by Dr. Collins to suspend admission of intake to the Post-Baccalaureate Certificate in E-Learning (PBCEL) for a period of two academic years effective Fall 2019, we are writing today to request an additional one year's suspension. At this time, there is one student in the PBCEL. Approval of this request would see continuation of suspension of intake to the program to Fall 2022, at which point we anticipate being in a position to request permanent closure of the PBCEL.

If further information would be helpful, please advise. We look forward to hearing from you.

cc. Dr. Rod Lastra, Associate Dean, Extended Education
Ms. Cassandra Davidson, Academic Program Specialist

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 April 8, 2021, the Senate Committee on Awards approved 7 new offers, 8 revised offers and 5 withdrawals as set out in the *Report of the Senate Committee on Awards (April 8, 2021)*.

Recommendations

On behalf of Senate, the Senate Committee on Awards recommends that the Board of Governors approve 7 new offers, 8 revised offers and 5 withdrawals as set out in the *Report of the Senate Committee on Awards (April 8, 2021)*. These award decisions comply with the Student Awards Policy.

Respectfully submitted,

Dr Jared Carlberg

Chair, Senate Committee on Awards

SENATE COMMITTEE ON AWARDS

April 8, 2021

1. NEW OFFERS

Barbara Chase Bursary in Fine Arts

Through a bequest, an endowment fund was established at the University of Manitoba with a gift of $231,000 in 2018. The purpose of the fund is to support students in the School of Art. Each year, beginning in 2021-2022, the available annual income from the fund will be used to offer bursaries to undergraduate students who:

(1) are enrolled full-time (minimum 60% course load) in the second year of study or higher in the Bachelor of Fine Arts program in the School of Art;

(2) have achieved a minimum degree grade point average of 2.5; 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 awards offered each year based on the available funds, as outlined in the criteria above.

The Director of the School of Art (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.

College of Nursing 75th Anniversary Legacy Fund Bursaries

Alumni, faculty, and friends of the College of Nursing established a Legacy Fund on the occasion of the College's 75th Anniversary. The 75th Anniversary Legacy Fund will be used to provide financial assistance to nursing students in any year of study in the Bachelor of Nursing program. Each year, beginning in 2021-2022, the available annual income from the fund will be used to offer bursaries to undergraduate students who:

(1) are enrolled full-time (minimum 60% course load) in any year of study in the Bachelor of Nursing program;

(2) have achieved a minimum degree grade point average of 2.5; 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 available funds, as outlined in the criteria above.

The College of Nursing Student Awards Committee will serve as 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.

David and Louise Fraser Scholarship

Through a bequest, Dr. David Fraser established an endowment fund at the University of Manitoba with a gift of $XXX,XXX in 2020. The purpose of the fund is to reward the academic achievements of students who are pursuing studies in the Faculty of Science at the University of Manitoba and who are focusing on physics. Each year, beginning in 2022-2023, the available annual income from the fund will be used to offer one scholarship to an undergraduate student who:

(1) is enrolled full-time (minimum 80% course load) in the second year of study or higher in the Department of Physics and Astronomy;

(2) is enrolled in the Physics Honours Degree Program; and

(3) has achieved a minimum degree grade point average of 3.5.

In the event that there are no eligible candidates who meet all of the criteria listed above, the scholarship may be awarded to the candidate who meets criteria (1) and (3), and who is enrolled in either the Physics and Astronomy Major, Astronomy and Astrophysics Honours Program, Honours Biological & Medical Physics, Physics & Chemistry Joint Honours Degree Program, Physics & Math Joint Honours Degree Program, or Physics & Computer Science Joint Honours Degree Program.

The Head of the Department of Physics and Astronomy 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.

Friends of Our History Scholarship

The Winnipeg Foundation, through its Centennial Institute, has established scholarships at the University of Manitoba to encourage and support graduate students in the Joint Master's Program who are conducting historical research relevant to Winnipeg and Manitoba. Each year, The Winnipeg Foundation will report the available earnings from the fund to Financial Aid and Awards at the University of Manitoba. Each year, beginning in 2021-2022, up to a maximum of five awards valued at $3,000 each will be offered to graduate students who:

(1) are enrolled full-time in the Faculty of Graduate Studies in the first or second year of study in the Joint Master's Program offered by the Department of History;

(2) have achieved a minimum grade point average of 3.0 based on the last 60 credit hours (or equivalent) of study; and

(3) are conducting historical research with current relevance to Winnipeg and Manitoba.

Applicants will be required to submit: (i) a description of their proposed major research paper, thesis, or comprehensive exam/course work and its current relevance to Winnipeg and Manitoba; (ii) a current *curriculum vitae*; and (iii) a copy of their most recent transcript.

Preference will be given to students who have not received other financial support in the current year from the Winnipeg Foundation through its Centennial Institute.

The Vice-Provost (Graduate Education) and Dean of the Faculty of Graduate Studies (or designate) will ask the Joint Discipline Committee in the Department of History to name the selection committee for this award.

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. Any future modifications that may be necessary due to changed conditions will require complete consultation with The Winnipeg Foundation.

President's Medal in Diploma Agriculture

The President's Medal in Diploma Agriculture is an award made by Faculty Council on recommendation of the Faculty of Agricultural and Food Sciences (FAFS) Awards Committee. The Medal is to be awarded to students who demonstrate excellence in scholarship and leadership. Each year, the medal will be awarded to a graduating student who:

(1) has completed the requirements for the Diploma in Agriculture from the School of Agriculture at the University of Manitoba;

(2) has achieved a minimum degree grade point average of 3.5; and

(3) has demonstrated leadership to the members of the graduating class throughout their time enrolled in their program.

The FAFS Awards Committee will advertise a call for nominations for the medal each year. All nominees will be required to submit a written statement (maximum 250 words) detailing how they meet criterion (3). The Faculty of Agriculture Students' Organization (FASO) will then conduct an election to select a winner and will provide the election results to the FAFS Awards Committee, who will make the final decision in selecting a recipient.

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.

Sunil Patel Memorial Bursary

Drs. Prafulchandra and Jayshree Patel generously established an endowment fund at the University of Manitoba in memory of their son, Dr. Sunil Patel (MD/'02). The fund will be used to support first-year medical students in the Undergraduate Medical Education program in the Max Rady College of Medicine. The donors have made an additional gift of $5,000 to offer the first bursary in 2021-2022. Each year, beginning in 2022-2023, the available annual income from the fund will be used to offer one bursary to an undergraduate student who:

(1) is enrolled full-time in the first year of the Undergraduate Medical Education program in the Max Rady College of Medicine;

(2) is in good standing; and

(3) has demonstrated financial need on the standard University of Manitoba bursary application.

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.

The Winnipeg Foundation Black History in Canada Scholarship

A scholarship fund was created through The Winnipeg Foundation to encourage and support graduate students in the Joint Master's Program who are conducting historical research in the area of Black History in Canada. Each year, beginning in 2021-2022, one scholarship valued at $7,000 will be offered to a graduate student who:

(1) is enrolled full-time in the Faculty of Graduate Studies in the first or second year of study in the Joint Master's Program offered by the Department of History;

(2) has achieved a minimum grade point average of 3.0 based on the last 60 credit hours (or equivalent) of study; and

(3) is conducting research related to Black History in Canada.

Applicants will be required to submit: (i) a description of their proposed major research paper, thesis, or comprehensive exam/course work related to issues in Black History, including the geographical focus of the research; (ii) a current *curriculum vitae*; and (iii) a copy of their transcript.

Preference will be given to students in their second year of study. In the event that there are no eligible candidates who meet the criteria above, the award may be offered to a student who meets criteria (1) and (2), and who is conducting research related to Black History in North America or global African diaspora histories.

The Vice-Provost (Graduate Education) and Dean of the Faculty of Graduate Studies (or designate) will ask the Joint Discipline Committee in the Department of History to name the selection committee for this award.

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. Any future modifications that may be necessary due to changed conditions will require complete consultation with the Winnipeg Foundation.

2. AMENDMENTS

Dr. John W. Steele Bursary/Scholarship

The following amendments were made to the terms of reference for the **Dr. John W. Steele Bursary/Scholarship**:

- The name was changed to: Dr. John W. Steele Bursary
- The preamble was revised to:

  An endowment fund was established by the friends and colleagues of Dr. W. Steele in recognition of his 38 years of outstanding service to the University of Manitoba and the profession of Pharmacy. The Manitoba Scholarships and Bursaries Initiative made a contribution to this fund. Each year, beginning in 1997, the available annual income from the fund will be used to offer one bursary to an undergraduate student who:

- The numbered criteria were revised to:

  (1) is enrolled full-time (minimum 60% course load) in the second year or higher in the degree program in the College of Pharmacy at the University of Manitoba;

(2) has achieved a minimum degree grade point average of 2.0; and

(3) has demonstrated financial need on the standard University of Manitoba bursary application.

- The following paragraph was removed:

  If the student to whom this bursary is offered does not register as required, the bursary will then be offered by reversion to the next qualified candidate. In any year in which there is no candidate with demonstrated financial need, the selection committee shall have the power to make the award on academic grounds solely.

- The selection committee paragraph was revised to:

  The selection committee for this award will be the College of Pharmacy Professional Program Awards Committee.

- The standard Board of Governors statement was added.

E.L. Drewry Memorial Award

The following amendments were made to the terms of reference for the **E.L. Drewry Memorial Award**:

- The preamble was revised to:

  As a memorial to their father and grandfather, members of the Drewry family established an endowment fund to provide a major research award for Ph.D. students in the Max Rady College of Medicine. The award will consist of a monetary component, a college-wide lecture and luncheon, and travel costs to present the lecture. Each year, one award will be offered to a graduate student who:

- The numbered criteria were revised to:

  (1) has been enrolled full-time in the Faculty of Graduate Studies in a Doctoral program offered by the Max Rady College of Medicine within the current academic year;

  (2) has achieved a minimum grade point average of 3.5 based on the last 60 credit hours (or equivalent) of study; and

  (3) is a recipient of one (or more) of the following major awards:

  (a) Children's Hospital Research Institute of Manitoba Inc. Award for Research in Child Health;

  (b) Health Sciences Centre Research Foundation Inc. Award for Neurobiology or Infection and Immunity

  (c) Emergent BioSolutions Award for Infectious Disease;

  (d) Manitoba Medical Service Foundation Award for Research Excellence; or

  (e) *St. Boniface Hospital Research Foundation Inc. Award for Cardiovascular Biology.*

- The following paragraphs were revised to:

  The recipient of this award will be invited to present at the Drewry Lecture within the context of the Canadian Student Health Research Forum (Research Days) (the Manitoba Research Awards Ceremony in the Max Rady College of Medicine), at a time mutually convenient to the recipient and the Major Awards Committee in the Max Rady College of Medicine.

  The selection committee will have the discretion to determine the value of the award offered each year based on the available funds, as outlined in the criteria above.

The award will be based primarily on the excellence of research. Documentation considered relevant by the awards committee will include the following: (i) a cover letter from the student summarizing his or her research accomplishments; (ii) a summary or copy of the thesis (if available); (iii) reprints of publications (published or manuscripts in press); (iv) a current curriculum vitae ; and (v) letters of support from the student's advisor and any other person knowledgeable of the student's research. These letters should clearly outline the merits of the student's research and also briefly describe other merits of the student. The awards committee may also seek further information (e.g., through personal interviews).

The submission of documents for consideration by the awards committee will be made by the student in consultation with the student's advisor. The submission will be accompanied by the indication of the category in which the student wishes to compete and, if relevant, a justification of the category chosen. A complete submission will include two copies of all documentation and an additional nine copies of the curriculum vitae and all letters.

The awards committee will not disqualify a given candidate because the topic of his or her research does not fit well into a given subject area. The submission shall be considered on its merits only.

The deadline for submissions will be announced annually by the Chair of the Major Awards Committee in the Max Rady College of Medicine.

An application from a student who has already received a major award shall be solely on the basis of new research conducted after the previous award.

- The selection committee paragraph was revised to:

  The Vice-Provost (Graduate Education) and Dean of the Faculty of Graduate Studies (or designate) will ask the Associate Dean (Research), Max Rady College of Medicine to name the selection committee.

- The standard Board of Governors statement was added.

Graduate Nursing Students Association Scholarship

The following amendments were made to the terms of reference for the **Graduate Nursing Students Association Scholarship**:

- The preamble was revised to:

  The Graduate Nursing Students Association (GNSA) offers scholarships to graduate nursing students at the University of Manitoba, when funds are available. The awards will be valued at $2,500 at the Master's level and $3,000 at the PhD level. The purpose of these scholarships is to promote excellence in academic and clinical settings by acknowledging and encouraging academic excellence and strong leadership abilities in nursing, including leadership in student governance.

  The GNSA will notify Financial Aid and Awards by September 1st each year to advise if funding is available to offer the scholarships. In any year that funds are available, the scholarships will be awarded as follows.

- The numbered criteria were revised to:

  One or more scholarships (Award # 45580) will be offered to graduate students who:

  (1) are enrolled full-time in the Faculty of Graduate Studies, in the Master of Nursing, Nurse Practitioner stream;

(a) if there are no full-time applicants who fulfill the terms of reference then a part-time applicant from the Nurse Practitioner stream may be considered for this award at the discretion of the selection committee.

(2) have achieved a minimum grade point average of 3.5 in the last 60 credit hours (or equivalent) of study;

(3) have demonstrated graduate student leadership within the College of Nursing (e.g. active participation in GNSA through committee work or related activities).

(a) If there are no applicants demonstrating leadership within the College of Nursing, the following criteria can be considered: leadership in other areas of the graduate program, leadership in previous and/or current employment positions; and/or in the community at large.

One or more scholarships (Award # 45580) will be offered to graduate students who:

(1) are enrolled part-time in the Faculty of Graduate Studies, in the Master of Nursing, Nurse Practitioner stream;

(a) if there are no part-time applicants who fulfill the terms of reference, then a full-time applicant from the Nurse Practitioner stream may be considered for this award, at the discretion of the selection committee.

(2) have achieved a minimum grade point average of 3.5, in the last 60 credit hours (or equivalent) of study

(3) have demonstrated graduate student leadership within the College of Nursing (e.g. active participation in GNSA through committee work or related activities).

(a) If there are no applicants demonstrating leadership within the College of Nursing, the following criteria can be considered: leadership in other areas of the graduate program, leadership in previous and/or current employment positions; and/or in the community at large.

One or more scholarships (Award # 45581) will be offered to graduate students who:

(1) are enrolled full-time in the Faculty of Graduate Studies, in the Master of Nursing, in any stream (other than Nurse Practitioner);

(a) if there are no full-time applicants who fulfill the terms of reference, then a part-time applicant from the Master's streams, except the Nurse Practitioner stream, may be considered for this award, at the discretion of the selection committee.

(2) have achieved a minimum grade point average of 3.5 in the last 60 credit hours (or equivalent) of study;

(3) have demonstrated graduate student leadership within the College of Nursing (e.g. active participation in GNSA through committee work or related activities).

(a) If there are no applicants demonstrating leadership within the College of Nursing, the following criteria can be considered: leadership in other areas of the graduate program, leadership in previous and/or current employment positions; and/or in the community at large.

One ore more scholarships (Award # 45581) will be offered to graduate students who:

(1) are enrolled part-time in the Faculty of Graduate Studies, in the Master of Nursing, in any stream (not Nurse Practitioner);

(a) if there are no part-time applicants who fulfill the terms of reference, then a full-time applicant from the Master's streams, except the Nurse Practitioner stream, may be considered for this award at the discretion of the selection committee.

(2) have achieved a minimum grade point average of 3.5 in the last 60 credit hours (or equivalent) of study;

(3) have demonstrated graduate student leadership within the College of Nursing (e.g. active participation in GNSA through committee work or related activities).

(a) If there are no applicants demonstrating leadership within the College of Nursing, the following criteria can be considered: leadership in other areas of the graduate program, leadership in previous and/or current employment positions; and/or in the community at large.

One or more scholarships (Award # 46215) will be offered to graduate students who:

(1) are enrolled full- or part-time in the Faculty of Graduate Studies, in the PhD of Nursing program;

(a) If there are no applicants who fulfill the terms of reference, then it may be considered to equally distribute the $3,000 for the PhD award to one full-time Master of Nursing, Nurse Practitioner stream student and one full-time Master of Nursing, in any stream (other than Nurse Practitioner) student at the discretion of the selection committee

(2) have achieved a minimum grade point average of 3.5 in the last 60 credit hours (or equivalent) of study;

(3) have demonstrated graduate student leadership within the College of Nursing (e.g. active participation in GNSA through committee work or related activities).

(a) *If there are no applicants demonstrating leadership within the College of Nursing, the following criteria can be considered: leadership in other areas of the graduate program, leadership in previous and/or current employment positions; and/or in the community at large.*

- The selection committee paragraph was revised to:

  The selection committee will have the discretion to determine the number of awards offered in each year based on the available funds, as outlined in the criteria above.

Laurie Price Memorial Scholarship

The following amendments were made to the terms of reference for the **Laurie Price Memorial Scholarship**:

- The preamble was revised to:

  The following sentence was deleted from the preamblIn memory of Laurie Price, her son, Justin Price, established an annual scholarship for a five-year term at the University of Manitoba. The purpose of this scholarship is to recognize the academic achievement of undergraduate students who have recently lost a parent, sibling, or custodial caregiver. Each year, beginning in 2020-2021 and ending in 2024-2025, one scholarship valued at $3,000 will be awarded to an undergraduate student who:

- The numbered criteria were revised to:

  (1) is enrolled full-time (minimum 80% course load) in University 1 or any faculty, college, or school at the University of Manitoba;

  (2) has either:

(a) as an entering student, achieved a minimum average of 85% on those courses considered for admission to the University of Manitoba;

(b) as a continuing student, achieved a minimum degree grade point average of 3.5;

(3) has lost a parent, sibling, or custodial caregiver within the last five years; and

(4) has demonstrated exceptional leadership skills or community service.

- The selection committee paragraph was revised to:

  The selection The Associate Registrar and Director of Financial Aid and Awards (or designate) will name the selection committee for this award, which will include the donor (or designate).

Science and Community Outreach Prize

The following amendments were made to the terms of reference for the **Science and Community Outreach Prize**

- The preamble was revised to:

  Past volunteers of the Let's Talk Science Program, a student-led outreach program, have established an annually-funded prize at the University of Manitoba. The purpose of the prize is to provide support to an outstanding undergraduate student volunteer with the Let's Talk Science Program. Each year, one prize valued at $500 will be offered to an undergraduate student who:

- The numbered criteria were revised to:

  (1) was enrolled full- or part-time at the University of Manitoba in the year in which the award was tenable;

  (2) has achieved a minimum degree grade point average of 3.0;

  (3) was an active volunteer in the Let's Talk Science Program in the year in which the award was tenable;

  (4) has demonstrated outstanding enthusiasm, commitment, and dedication as a Let's Talk Science Program volunteer, as determined by the coordinators of the Program.

- The tiebreaking paragraphs was added:

  Ties are to be broken using the following criteria, in priority order: (i) the Degree Grade Point Average, calculated to the fourth decimal place; (ii) the higher proportion of A+ and A grades in a total program; (iii) the highest number of credit hours completed in the degree program; (iv) the greater proportion of senior- or advanced-level courses in the total program.

- The selection following paragraph was removed:

  The donor will contact the Financial Aid and Awards Office by March 31 in any year this award will not be offered.

- The selection committee paragraph was revised to:

  The Dean of the Faculty of Science (or designate) will name the selection committee for this award, which shall include two Coordinators from the Let's Talk Science Program.

- The standard Board of Governors statement was added.

Shoppers Drug Mart Community Pharmacy Scholarships

The following amendments were made to the terms of reference for the **Shoppers Drug Mart Community Pharmacy Scholarships**:

- The preamble was revised to:

  The pharmacist/owners of Shoppers Drug Mart Stores established an annually funded scholarship to recognize the achievements of students in the College of Pharmacy at the University of Manitoba. Each year, two scholarships valued at $500 each will be offered to undergraduate students who:

- The numbered criteria were revised to:

  (1) are enrolled full-time (minimum 80% course load) in the third or fourth year of study in the degree program in the College of Pharmacy;

  (2) have obtained high standing in the previous academic year with a minimum sessional grade point average of 3.5; and

  (3) *have expressed an interest in community Pharmacy.*

- The paragraph after the numbered criteria was revised to:

  In order to demonstrate how they meet criterion(3), applicants must submit a written statement (maximum 250 words). This scholarship will be given to one third year student and one fourth year student each year.

- 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 added.

Weir Award

The following amendments were made to the terms of reference for the **Weir Award**.

- The preamble was revised to:

  The Department of Environment and Geography established an award fund in honour of Dr. Thomas R. Weir. Dr. Weir founded the Department of Geography in 1951, served as Head from 1951 to 1971, and was a Professor Emeritus. Dr. Weir passed away September 13, 1997. The purpose of the fund is to reward the academic achievements of graduate students in the Department of Environment and Geography at the University of Manitoba.

- The first set of numbered criteria were revised to:

  Each year, one half of the available annual income from the fund will be used to offer a convocation prize to a graduating student who:

  (1) was enrolled full-time in the Faculty of Graduate Studies in a Master's program delivered by the Department of Environment and Geography in the Clayton H. Riddell Faculty of Environment, Earth, and Resources in the year in which the award was tenable;

  (2) achieved a minimum grade point average of 3.5 based on the last 60 credit hours (or equivalent) of study; and

  (3) in the opinion of the selection committee, presented the most outstanding Master's thesis.

- The second set of numbered criteria were revised to:

Each year, one half of the available annual income from the fund will be used to offer a convocation prize to a graduating student who:

(1) was enrolled full-time in the Faculty of Graduate Studies in a PhD program delivered by the Department of Environment and Geography in the Clayton H. Riddell Faculty of Environment, Earth, and Resources in the year in which the award was tenable;

(2) achieved a minimum grade point average of 3.5 based on the last 60 credit hours (or equivalent) of study; and

(3) in the opinion of the selection committee, presented the most outstanding PhD thesis.

- The following paragraphs were added:

  In years in which there are no outstanding theses, no awards will be offered.

  Students must be nominated by their primary advisor or co-advisors for this prize. Each faculty member may nominate one student for the Master's award and one student for the PhD award, through the submission of a letter to the selection committee. Co-advisors must nominate the student together in a single letter. Nomination letters must speak to why the student's thesis is considered outstanding and worthy of the prize (including information such as: the scope and scale of the work, impact on the field, journal publications, media coverage, book or book chapters, etc.).

- The selection committee paragraph was revised to:

  The Vice-Provost (Graduate Education) and Dean of the Faculty of Graduate Studies (or designate) will ask the Head of the Department of Environment and Geography to name the selection committee for this award.

- The standard Board of Governors statement was added.

William McLeod Lougheed Memorial Bursary

The following amendments were made to the terms of reference for the **William McLeod Lougheed Memorial Bursary**:

- The preamble was revised to:

  From the testamentary gift of Florence Vivian Lougheed a fund was established at the University of Manitoba to support the William McLeod Lougheed Memorial Bursary. Each year, beginning in 1982, the available annual income from the fund will be used to offer one bursary to an undergraduate student who:

- The numbered criteria were revised to:

  (1) is enrolled full-time (minimum 60% course load) in second year or higher in the degree program in the College of Pharmacy at the University of Manitoba;
  (2) has achieved a minimum degree grade point average of 2.0; and
  (3) has demonstrated financial need on the standard University of Manitoba bursary application.

- The paragraphs following the numbered criteria were removed:

  If the winner of this bursary does not register as required for the normal program of studies, the bursary shall be awarded by reversion to the next qualified candidate. If in any given year there is no suitable candidate for this bursary, no award may be made in a subsequent year or the money returned to the capital of the fund and consideration given to increases in the value of the award.

The value of the bursary shall be $550. An annual income in excess of the amount awarded shall be added to the corpus of the fund. From time to time the amount of the award shall be reconsidered and, if accretions to the fund make it possible, increased by $25 per annum or multiples thereof.

- The selection committee paragraph was revised to:

  The selection committee for this award will be the College of Pharmacy Professional Program Awards Committee.

- The standard Board of Governors statement was added.

3. WITHDRAWALS

Arthritis Society Entrance Scholarship in Occupational Therapy
At the request of the donor

Arthritis Society Entrance Scholarship in Physical Therapy
At the request of the donor

Biovision Seed Labs Scholarship
At the request of the donor

Chinese Members Chapter of Engineers Geoscientists Manitoba Scholarship
At the request of the donor

DEFT Undergraduate Theory Prize
At the request of the donor

Preamble:

1. The terms of reference for the Senate Committee on Appeals (SCAP) are found on the web at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/493.html

2. The Committee is charged to hear and determine appeals from:
   a) decisions made by academic administrators involving Senate regulations in which Faculty or School Councils have no jurisdiction; and
   b) appeals against decisions taken by Awards Selection Committees of Faculties and Schools.

3. The Committee is to report to Senate on the determination of all appeals submitted to it; and advise the Executive Committee of any Senate regulations affecting students which appear to be creating particular difficulties.

Observations:

1. The Committee has received four new appeals since the last report to Senate in October 2020. These cases are summarized, along with the one open file previously reported, without compromising the confidentiality of the Appellant.

   - An appeal was received against a decision by the Faculty of Engineering. The grounds were failure of the Faculty/School or Dean/Director to follow procedures, failure of the Faculty/School or Dean/Director to follow the rules of natural justice and failure of the Faculty/School or Dean/Director to reasonably consider all factors relevant to the decision being appealed. The appeal was granted.
   - An appeal was received against a decision by the Faculty of Social Work. The grounds were failure of the Faculty/School or Dean/Director to follow procedures and failure of the Faculty/School or Dean/Director to reasonably consider all factors relevant to the decision being appealed. The appeal was granted.
   - An appeal was received against a decision by the Faculty of Graduate Studies. The grounds were failure of the Faculty/School or Dean/Director to follow procedures and failure of the Faculty/School or Dean/Director to reasonably consider all factors relevant to the decision being appealed. The committee determined that there were insufficient grounds to proceed to an appeal hearing.

   Currently the Committee has two open files.

Respectfully submitted,
Dr. Charlotte Enns, Chair
Senate Committee on Appeals

April 5, 2021

Report of the Senate Committee on Academic Review RE: Combined Program Review for Statistics (*for information*)

Preamble:

1. The terms of reference for the Senate Committee on Academic Review (SCAR) are found on the University Governance website.
2. At its meeting on April 5, 2021, the Committee considered a summary for a combined undergraduate and graduate program review for the Department of Statistics.

Observations:

1. The Committee considered a summary of a combined undergraduate and graduate program review for Statistics (Attachment I).

Respectfully submitted,

Dr. Todd Mondor, Chair
Senate Committee on Academic Review

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: June 18, 2020

To: Members of the Senate Committee on Academic Review (SCAR)

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

Re: Combined Academic Program Review, Department of Statistics

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Please find attached summary responses from the Deputy Provost (Academic Planning and Programs) and the Faculty of Graduate Studies to the combined undergraduate and graduate academic review for the Department of Statistics. This is the third and final combined review completed as part of a pilot exercise, and the second cycle undergraduate and third cycle graduate review completed under the current Senate policy and procedures.

Overall, the review was quite positive. The review team identified a well-functioning Department with satisfied students and categorized the programs as "*Adequate, with minor revisions*". Within this framework and within the potential for the Department to expand its role in modern research in statistics and data science, the review team provided over thirty recommendations or suggestions to improve on programming and services.

The attached reports address the recommendations specific to the undergraduate and graduate programs. However, the reviewers also make more general recommendations for the unit including a review of space allocation for PhDs and TAs, and a review of faculty teaching loads, specifically with regard to high enrolment 'service' courses. They also recommend that the unit review staffing roles in relation to academic and non-academic functions and redistribute workload accordingly. The Department is encouraged to work with the Office of the Dean of Science to clarify and possibly expand the role of the Statistical Consulting Service (SCS) and to review the allocation of lab fee revenue to strengthen teaching and lab offerings within the unit. I encourage the Department and the Dean's Office to continue engaging in these conversations, as appropriate.

Congratulations to everyone on a successful review. As the last review in a suite of pilot reviews, this review provided important information that led to a significant revision of the Academic Program Review policy that was approved by Senate for implementation in Fall 2020.

Cc: Janice Ristock, Provost and Vice-President (Academic)
Louise Simard, Acting Dean, Faculty of Graduate Studies
Stefi Baum, Dean, Faculty of Science
Liqun Wang, Head, Department of Statistics
Jeff Leclerc, University Secretary
Cassandra Davidson, Academic Programs Specialist

University of Manitoba

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Date: June 18, 2020

To: Members of the Senate Committee on Academic Review (SCAR)

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs)

Re: Report on the Academic Program Review of Undergraduate Programs in Statistics

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PREAMBLE

In May 2000, the Senate of the University of Manitoba endorsed a process for the periodic review of academic programs. The primary purpose of these comprehensive program-specific evaluations is to assess the overall quality of undergraduate and graduate education presently provided, and to stimulate strategic planning and identify areas for future enhancements.

The Department of Statistics participated in a pilot review combining undergraduate and graduate programs into a single review process. The purpose of this report is to summarize the highlights of the review team's evaluation of the undergraduate programs, and to identify any additional follow-up from the perspective of the Office of the Provost. A summary of the review of the Department's graduate programming can be found in the accompanying report from the Faculty of Graduate Studies.

On September 27-28, 2018, a review team comprised of Dr. Thomas Loughin (Simon Fraser University), Dr. David Stephens (McGill University), and Dr. Stephen Kirkland (University of Manitoba) convened on campus to review the undergraduate and graduate programs in the Department of Statistics. Their assessment report was received on November 11, 2018. Responses to the review were received from the Department in February, 2019 and subsequently from the Faculty of Science and the Faculty of Graduate Studies in April, 2019. On behalf of the Office of the Provost, I would like to thank everyone who participated in this review and for their thoughtful and meaningful feedback on both the programs and the process.

OVERALL REVIEW FINDINGS

The reviewers describe the undergraduate programs in Statistics as well-run, with a strong history of success. Students in the program are well-versed in the fundamentals of the discipline and the Department's move to more applied and data-oriented programming is seen as a positive shift forward. Enrolment growth trends in both the B.Sc. (Major) and B.Sc. (Honours) programs are indications that the Department is offering programs that appeal to students. However, the review team also provide a number of recommendations to strengthen programming, including the need to establish a clearer distinction between the Major and Honours programs, and the need for better coordination of student supports and teaching

workloads - most notably in relation to delivery of the high enrolment 'service' courses and associated labs. The review team also encourages the unit to continue developing applied aspects of the program, and to better exploit statistical practice in research and industry (internal and external to the university).

The review team categorized the programs as "*Adequate, with minor revisions*".

KEY RECOMMENDATIONS AND RESPONSES

The review report outlines over thirty recommendations or suggestions with respect to strengthening the programs and/or the unit. Thirteen of those recommendations are in relation to undergraduate programming and are highlighted below. The remaining recommendations are addressed in the Faculty of Graduate Studies response to the review or in the summary cover letter to this report.

The review team makes a number of recommendations to enhance and strengthen the core undergraduate degree programs – the B.Sc. (Major) and B.Sc. (Honours). They recommend that the unit modify the curriculum to reduce the emphasis on traditional theory and probability and to develop courses in areas of more modern interest, also suggesting that existing courses be renamed to attract new students and that optional courses be offered on a more regular basis. Further, they recommend more differentiation between the two programs, with the reviewers suggesting that the Major program could be used as a terminal program with a goal for employment following graduation. The Honours program could be enhanced with a thesis requirement in place of the current requirement to complete courses in an "area of application". Finally, the reviewers recommend that the department work closely with the co-op coordinator to expand enrolment and opportunities in the co-op option.

These recommendations were received favorably by both the Department and the Dean's Office of the Faculty of Science. The Department has already initiated a major revision to its undergraduate programs, with changes approved by Senate in December 2019 to be implemented for Fall 2020. In addition to moving forward with the recommended curriculum changes, the Department has also introduced a rotation system to increase the variety of course offerings and has committed to work with the co-op office to expand co-op opportunities.

The Department of Statistics is responsible for delivering high enrolment courses STAT 1000, STAT 1150, STAT 2000 and STAT 2150. Most significantly, STAT 1000 attracts large numbers of students from programs across the institution with varying levels of preparedness for the course. To address this challenge, the reviewers suggest strengthening the student support systems in place to deliver these courses – including lab delivery and structure, TA support, and expansion to the student drop-in help centre. They also note that it is important that the Department ensure the course is meeting the needs of the other programs, and wonder whether development of a statistics course with a reduced emphasis on calculations would be more appropriate for some.

In response, the Department has started to look at different models to improve TA effectiveness, better connecting lab content to lecture content, and strengthening the drop-in centre, noting that more lab space would be required to make the centre more effective. The Dean's Office supports these efforts suggesting further that the Department may want to develop extra materials, such as short instructional videos, as well as to look at ways to increase attendance in labs (currently at 50-60 %) to better be able to assess the efficacy of the current lab model. The

Department does indicate that they will be looking at modernizing STAT 1000 and STAT 2000 following their curriculum review, however did express reservations about developing a low-calculation statistics course citing concerns that students could experience difficulties transitioning to a program with a greater emphasis on statistical calculations. While noting these concerns, the Dean's Office still encourages the Department to consult with units to ensure that needs are being met within the current courses.

Finally, the reviewers recommend that the unit review different ways in which they can recruit and engage students. The Department agrees with this, and has already started activities to promote the unit, including offering different colloquia and speakers series, and completion of a major overhaul of the website.

FOLLOW-UP TO THE REVIEW

I would like to congratulate the Department on a successful review. While the review identifies a strong program, it also provides thoughtful suggestions as to how the unit could move forward the curriculum and build upon its growth in enrolment. It also provides suggestions as to how to better coordinate and strengthen student support and experience in the high enrolment courses. I am encouraged by the Department's efforts to address the recommendations to date and look forward to seeing the results.

As follow-up to the review, I request that the unit provide updates on the following for no later than **January 15, 2021:**

- An update on the implementation of any curriculum changes resulting from the review.
- An update on discussions with the co-op coordinator and plans on how to expand co-op opportunities in the programs.
- An update to any changes in the approach to high enrolment service teaching courses, including but not limited to, changes to TA structures, the drop-in centre, and any plans to review the efficacy of the current lab structure.
- An update on plans to review the service-teaching courses, including consultation plans with programs requiring the courses.

Congratulations again to everyone on a successful review.

Cc: Janice Ristock, Provost and Vice-President (Academic)
Stefi Baum, Dean, Faculty of Science
Liqun Wang, Head, Department of Statistics
Jeff Leclerc, University Secretary
Cassandra Davidson, Academic Programs Specialist

UNIVERSITY OF MANITOBA | Graduate Studies

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April 30, 2019

To: Dr. David Collins, Vice-Provost (Integrated Planning and Academic Programs)

From: Dr. Brooke Milne, Associate Dean, Faculty of Graduate Studies

Re: **Faculty of Graduate Studies Response to the Combined Academic Review of Graduate Programs in the Department of Statistics**

CC: Dr. Todd Mondor, Vice-Provost (Graduate Education) and Dean (Graduate Studies)
Dr. Jay Doering, Associate Vice-President (Partnerships)
Dr. Stefi Baum, Dean, Faculty of Science
Dr. Liqun Wang, Department Head, Department of Statistics
Dr. Saman Muthukumarana, Graduate Chair, Department of Statistics
Ms. Cassandra Davidson, Academic Programs Specialist

PREAMBLE

In May 2000, the University of Manitoba Senate endorsed a process for the periodic review of undergraduate and graduate academic programs. The main purpose of these comprehensive, program-specific evaluations is to assess the overall quality of education presently provided, and to inform strategic planning and actions for future enhancements.

In response to feedback on existing policies and procedures from academic program review teams and academic units, a need for a more integrated approach to the review process was identified. Thus, a pilot initiative to combine the review of undergraduate and graduate programs began in 2016. Such combined reviews aim to consider academic programs on their individual, stand-alone merit as well as components of an integrated structure, thereby providing a more complete picture of the academic unit under review. Several units have already participated in the combined review process.

An academic graduate program review is an important exercise that aims to identify those components that are working well for faculty, staff, students, and administrators within the academic unit, and those that might be improved upon. Such a review is time and energy intensive, and requires the participation of many individuals to successfully complete. The collective goal of a program review is to enhance the quality of student education at the University of Manitoba. On behalf of the Faculty of Graduate Studies, I thank all of those individuals who made the effort to constructively contribute to this undertaking.

The Department of Statistics combined academic program review team included Dr. Thomas Loughin (Simon Fraser University), Dr. David Stephens (McGill University), and Dr. Stephen Kirkland (University of Manitoba). The reviewers spent two days (September 27-28, 2018) in the Department of Statistics at the

University of Manitoba. The reviewers' assessment report was received in the Faculty of Graduate Studies (FGS) on November 11, 2018. The unit response was received on March 5, 2019, and the Faculty of Science's response was received on April 4, 2019.

Overall Evaluation

The review team evaluated the undergraduate and graduate programs in the Department of Statistics as "adequate, with minor revisions."

Key strengths identified include a history of success for both the MSc and PhD programs offered, a consistent track record of faculty funding through NSERC (which provides research opportunities and support for graduate students), and strong theoretical training in both statistics and mathematical statistics. Concerns with the graduate programs focused on course offerings (particularly for PhD students), equity in student funding levels, and the graduate admissions process.

Main Review Recommendations for Graduate Programs

1. Course offerings for graduate students:

The review team described the MSc coursework requirements as very reasonable and in keeping with the demands of other similar programs offered in Canada. However, they did remark that students who complete an MSc and then enroll in the PhD program are limited in the variety of courses available to fulfill the 12-credit hour PhD coursework requirement. Currently, PhD students have had to "hunt" around for other available courses, which in some instances do not fit their research interests and/or directly contribute to their preparation to undertake their dissertation research. The reviewers recommend that the Department Grad Chair surveys graduate level courses offered in other related departments including Mathematics, Computer Science, and Biostatistics to identify other courses that students can take. Furthermore, the review team suggests the department consider increasing their offerings of directed reading and research courses to build in some flexibility for PhD coursework options.

- *Unit/Faculty Response:* The department has already responded to this recommendation by updating the PhD program supplemental regulations so that students are required to take 6 credit hours of coursework within the first two years of study, choosing from four specific areas in statistical theory and application. The student and advisor will decide on the remaining 6 credit hours, which can now include courses outside of the department. The department also plans to offer more topic courses so that students will have more to choose from and the flexibility to do so. With the future development of the new Data Science program, it is expected that other regular offerings in this area will increase student options. The faculty further encourages the department to consider the development of a biostatistics course that would bridge a new interdisciplinary hire in Statistics and Microbiology.

2. Equity in graduate student funding levels:

The review team identified "extreme variability" among graduate student funding levels in the department. Sources of funding support identified by the reviewers include faculty research grants, GETS, SEGS, various scholarships, teaching assistant positions, and teaching stipends (e.g., through ICM). However, individual student access to these funds is inequitable depending on supervisory grants and access to matching programs, teaching opportunities, and the distribution of department funds. The reviewers recommend that the department carefully review all of its financial resources and identify ways to consistently distribute them among graduate students. The department is fortunate in that the review team feels they can reliably support

all incoming students with respectable funding offers (e.g., $18,000 for MSc; $20,000 for PhD). The reviewers suggest that students should be notified in their letters of offer that they will receive funding support through a combination of resources including scholarships, research and teaching support, and supervisory support. The review team also specified that the terms of the GETS and SEGS programs be reviewed to assess if they are adequately supporting supervisors who hold NSERC grants since these grants tend to be comparatively small, making it difficult to support multiple graduate students at one time.

- *Unit/Faculty Response:* The department has already responded to this recommendation and developed an internal scholarship, Graduate Entrance Scholarship in Statistics (GESS), which will be available to students in Fall 2019. This scholarship is open to both MSc and PhD students, and it is reserved for students who do not hold a major award. The objective is to have the supervisor match the GESS, so that a level of baseline funding would be in place when students begin their programs. These students will also be eligible to hold other non-major awards and teaching assistant positions. The department is also planning to offer guaranteed teaching assistant positions of $4,000/year for new students. As such, MSc students would receive $16,000 and PhD students would receive $20,000. The department has also included funding information in the offer letter that was sent to incoming students for Fall 2019. The department will review the success of this funding initiative; however, it is expected that further support from FGS and the Faculty will be required to maintain it in the future.

3. Graduate admission process:

The review team was concerned about the timing of admission letters to prospective students. They felt that if offers continued to be made so late in the spring, strong students will choose another program that makes its offer sooner. The delayed offer of admission likely also has negative impacts on international students, since it leaves them with less time to complete their student visas and study permits. To remedy these concerns, the review team recommends that the department shorten its review process and finalize offers by mid-February. They also encourage advisors to contact prospective students via Skype to gauge their research interests and communication skills. The review team feels this will encourage top-notch students to respond to their offers of admission more positively and to accept them.

- *Unit/Faculty Response:* The department has already responded to this recommendation and "streamlined" the review process for students applying for the Fall 2019 academic year. Applications were reviewed sooner and offers were made in the first week of February. Students were given two weeks to consider the offers and to accept them. The faculty supports these changes and encourages the department to carry out preliminary interviews with applicants prior to making an offer of admission.

Faculty of Graduate Studies Perspective

The graduate program in the Department of Statistics is in good standing with a well respected and accomplished faculty who have earned a reputation for excellence in graduate teaching, research, and mentorship. FGS is very pleased that the department has already responded to the main areas identified by the review team that needed attention/improvement. These efforts are commendable and demonstrate a willingness among department administrators and faculty members to work efficiently on improving an already strong graduate program.

Timeline for Action on Relevant Issues

	Action	Expected Completion Date
1.	Diversity of course offerings	**In process**. The department has acted on this recommendation and will help students, especially those in the PhD program, to identify prospective courses they can take in other related disciplines. Reading course offerings are being increased. New courses are anticipated with the establishment of the Data Science program. The department will update FGS on this item in **April 2020**.
2.	Equity in graduate student funding levels	**In process**. The department has established a pilot-funding program – GESS – for students who do not hold major awards, and will review its success/impact over the next year. The department will update FGS on this item in **April 2020.**
3.	Graduate admission process	**Completed**. The department made the recommended changes to their application review and admission process for the Fall 2019 intake. They will continue with these changes for future application reviews.

April 1, 2021

Report of the Senate Committee on Curriculum and Course Changes RE: Annual Update on Academic Program Listing (*for information*)

Preamble:

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are found on the University Governance website.
2. At the meeting on June 25, 2014, Senate received a Report of the SCCCC concerning an Audit of the University's Programs. The audit had been completed by the Office of the Vice-President (Academic) and Provost and the Registrar's Office, in consultation with deans and directors of faculties and schools. It includes degree programs, academic minors, and academic concentrations.
3. The purpose of the audit was to ensure an accurate and comprehensive listing of academic program offerings that can be used in the academic planning process and in support of strategic initiatives at the University.
4. The Office of the Provost and Vice-President (Academic) will report to the SCCCC and to Senate annually on any changes to the program listing.

Observations:

1. At its meeting on April 1, 2021, the SCCCC received, for information, an annual update on the academic program listing from the Deputy Provost (Academic Planning and Programs). The *Annual Update on Academic Program Listing: March 2020 – February 2021* is attached to the Report.

Respectfully submitted,

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

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: February 9, 2021

To: Senate Committee on Curriculum and Course Changes
Todd Mondor, Deputy Provost (Academic Planning and Programs)

From: Cassandra Davidson, Academic Programs Specialist

Re: **Annual Update on Academic Program Listing: March 2020 – February 2021**

In June 2014, Senate was presented with a comprehensive list of academic programs offered at the University of Manitoba. As part of this audit, it was identified that an update on any changes to the offerings would be provided to Senate on an annual basis. Please find below an update of the changes over the last year.

Should you have any questions or concerns about this process, please contact Cassandra Davidson, Academic Programs Specialist, at cassandra.davidson@umanitoba.ca.

***

Program Introductions	Review and Approval
Master in Supply Chain Management and Logistics, *I.A. Asper School of Business, Faculty of Management* **Effective**: Fall 2021	Senate, May 2020 BOG, June 2020 Province, Nov. 2020
Bachelor of Midwifery, *College of Nursing* Effective: Fall 2021	Senate, January 2019 BOG, January 2019 Province, March 2020
Bachelor of Science, Data Science, *Faculty of Science* Effective: Fall 2021	Senate, March 2020 BOG, March, 2020 Province, June 2020
Double Major Option, BA. Advanced, Native Studies; *Faculty of Arts* Effective: Fall 2021	Senate, December 2020
Double Major Option, B.A. Advanced, Religion; *Faculty of Arts* Effective: Fall 2021	Senate, December 2020
Teaching English as an Additional Language (TEAL) Concentration, Post-Baccalaureate Diploma in Education, *Faculty of Education* Effective: Fall 2020	Senate, May 2020
Graduate Focus on Aging; *Faculty of Graduate Studies* Effective: Fall 2020	Senate, May 2020

Program Introductions, Continued	Review and Approval
Engineering Education Concentration, Ph.D., Biosystems; *Faculty of Agricultural and Food Sciences* Effective: Fall 2020	Senate, June 2020
Graduate Specialization in Pharmacoepidemiology, M.Sc. Ph.D., Pharmacy; *College of Pharmacy* Effective: Fall 2020	Senate, June 2020

Program Closures	Review and Approval
Master of Science, Textile Sciences; *Faculty of Agricultural and Food Sciences* Effective: Fall 2020	Senate, December 2019 BOG, March 2020 Province, June 2020
All Focus Areas*, B.Sc. (Major) and B.Sc. (Honours), Chemistry; *Faculty of Science* Effective: Fall 2021 *Bioanalytical; Biopharmaceutical; Biophysical; Environmental; Inorganic; Materials Science; Organic; Physical; Quantum/Computational	Senate, May 2020
All Area Specializations, Bachelor of Computer Science (Honours) and Bachelor of Science (Major), Computer Science**; *Faculty of Science* Effective: Fall 2021 **Theoretical Computer Science; Networks and Security; Artificial Intelligence; Human Computer Interaction and Computer Graphics; Databases; Software Engineering; Computer Systems; Web-Based Systems	Senate, December 2020

Suspension of Admissions - Extensions	Review and Approval
B.H.Ecol., Family Social Sciences; *Max Rady College of Medicine* Effective: Fall 2019 Extended to: Fall 2023 Review: February 2023	Senate, February 2020 BOG, March 2020 President, April 2020 Province, June 2020
Post-Baccalaureate Diploma in Agrology (IEAP); *Faculty of Agricultural and Food Sciences* Effective: Fall 2015 Extended to: Fall 2021 Review: February 2021	Senate, June 2020 BOG, June 2020 President: July 2020
B.Mus/B.Ed. Integrated Program; *Desautels Faculty of Music* and *Faculty of Education* Effective: Summer 2017 Extended to: Fall 2021 Review: *N.A., formal proposal to close program has been submitted for approval*	Senate, June 2020 BOG, June 2020 President: July 2020
Post-bacc. Certificate in Applied Leadership; *Division of Extended Education* Effective: Fall 2018 Extended to: Fall 2021 Review: February 2021	Senate, June 2020 BOG, June 2020 President: July 2020
B.Sc.(Hons.), B.Sc. (Maj.), Biotechnology; *Faculty of Science* Effective: Fall 2018 Extended to: Fall 2021 Review: February 2021	Senate, June 2020 BOG, June 2020 President: July 2020

Program Name Changes	Review and Approval
M.A. in Canadian Studies renamed to **MA in Canadian and Intercultural Studies (Études canadiennes et interculturelles)**; *Université de Saint-Boniface* Effective: Fall 2020	Senate, May 2020
Dietics Preparation Concentration renamed to **Dietetics Concentration, Bachelor of Science in Human Nutritional Sciences, Second Degree Option**; *Faculty of Agricultural and Food Science* Effective: Fall 2020	Senate, May 2020

May 19, 2021

Report of the Senate Committee on Curriculum and Course Changes RE: Corrections to Report of November 20, 2020 (*for information*)

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. The current report is provided as a record of typographical and other editorial corrections to the Report of the SCCCC Submitted to Senate for Concurrence Without Debate [dated November 20, 2020]. The correction has been made on the page number indicated and it is highlighted in the December 2, 2020 Senate agenda.

Corrections:

Faculty of Arts

Canadian Studies

(Page 34)

In the list of List of Approved Courses in Canadian Studies, POLS 3680 will be struck out. The course does not, and has never, existed.

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

University of Manitoba

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Date: April 1, 2021

To: Dr. Thomas Falkenberg, Acting Dean, Faculty of Education
Dr. Edward Jurkowsi, Desautels Faculty of Music

From: Dr. Janice Ristock, Provost and Vice-President (Academic)

Re: **Notification – Closure of the Integrated Bachelor of Music/Bachelor of Education Program**

Please accept this letter as formal notification of the closure of the Integrated Bachelor of Music/Bachelor of Education Program, following Senate's recommendation on February 3, 2021 and the Board of Governor's approval on March 23, 2021 to close the program.

The Integrated B.Mus./B.Ed. program has been replaced by the four-year Bachelor of Music (Music Education) degree, which was implemented in the Fall 2018, following approval by Senate (March 7, 2018), the Board of Governors (March 20, 2018), and the province (June 12, 2018). The Integrated Bachelor of Music/Bachelor of Education Program was to be closed once current students had the opportunity to complete their program. Note that the closure of the program was approved by the province at the time it approved the introduction of the B.Mus. (Music Education) degree.

As there are currently no students enrolled in the program, the closure of the program is effective **September 1, 2021**.

Thank you to everyone involved in the process.

Cc.: Michael Benarroch, President and Vice-Chancellor
Todd Mondor, Deputy Provost (Academic Planning and Programs)
Jeff Leclerc, University Secretary
Jeff Adams, Register and Executive Director of Enrolment Services
Randy Roller, Executive Director, OIA
Cassandra Davidson, Academic Programs Specialist

University of Manitoba | Office of the University Secretary

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MEMORANDUM

DATE: April 21, 2021

TO: Michael Benarroch, President & Vice-Chancellor and Chair of Senate

FROM: Jeff M. Leclerc, University Secretary

SUBJECT: ***APPROVAL OF MOTION***
Board of Governors – April 20, 2021

At its meeting on April 20, 2021, the Board of Governors approved the following motions:

THAT the Board of Governors approve six new offers, seven amended offers, and the withdrawal of nine offers, as set out in the Report of the Senate Committee on Awards [dated February 25, 2021].

THAT the Board of Governors approve a proposal to change the name of the Department of Geological Sciences, in the Clayton H. Riddell Faculty of Environment, Earth, and Resources, to the "Department of Earth Sciences," effective July 1, 2021 [as recommended by Senate, April 7, 2021].

The Board received for information and discussion the following items from Senate:

- *Request to Extend Suspension of Admissions to Bachelor of Science (Major) and Bachelor of Science (Honours) in Biotechnology, Faculty of Science*
- *Request to Extend Suspension of Admissions to Bachelor of Science in Pharmacy (B.Sc.Pharm.), College of Pharmacy*

Copy: J. Ristock
D. Jayas
J. Kearsey
C. Cook
N. Andrew
S. Coyston

JL/sf

PRESIDENT'S REPORT: May 19, 2021

GENERAL

In a landmark acknowledgment of the growing health-care autonomy of Indigenous Peoples, the federal government has given Ongomiizwin, the Indigenous Institute of Health and Healing at UM, responsibility for leading the COVID-19 vaccination project in all 63 Manitoba First Nations. The vaccine rollout is being implemented in partnership with First Nations organizations, the federal government's First Nations and Inuit Health Branch, Shared Health (Manitoba), the Canadian Armed Forces and the Canadian Red Cross.

The winter edition of *ResearchLIFE* magazine is available online. This issue highlights the many ways that researchers accelerated the development, testing and implementation of measures to mitigate the spread of COVID-19 and its impacts on people, communities and health systems. *Feature stories are:*

- Hip to heparin - A UM research team is emerging as a global leader in COVID-19 anticoagulation trials thanks to their innovative, global trial studying different types of heparin, an anticoagulant (blood thinning) and anti-inflammatory drug
- On the wing - How birds changed their migrations during lockdowns
- Pandemic fallout - Newcomers and Indigenous people shoulder heavier burden
- Preventing unintended disaster - A UM team is starting a novel study to see if our cautionary measures are enabling a disaster somewhere else

To honour the International Day for the Elimination of Racial Discrimination on March 21, workshops were held on the topics of Dismantling Racism; and on Equity, Diversity and Inclusion in Research: What You Need to Know. Staff were invited to be part of the UM Community of Practice Equity, Diversity and Inclusion (EDI). At these meetings, EDI best practices were explored, guest speakers were invited for specific topics of interest, and group discussions around difficult issues were facilitated.

The University of Manitoba's 2021 Sustainability Day consisted of a full day virtual program that was open to UM students, staff, faculty and external partners. The theme of the event was Take Action for the UN Sustainable Development Goals (SDGs), and included 16 presentations, 221 participants logged in to join, and an average of 52 participants watching presentations at any given time throughout the day. A full recording of the event will be available through the event webpage for one year. At the same time, the University of Manitoba (UM) has hired Sustainable Solutions Group (SSG) to develop a Climate Action Plan, including carbon emission targets aimed at achieving emissions neutrality by 2050. To date, UM has provided SSG with all necessary data to create a business-as-planned analysis for UM, followed by suggested options to reach carbon neutrality by 2050. Campus-wide engagement will begin as soon as May 1.

The annual Board of Governors alumni representative election runs April 14-May 14. There are eleven candidates running in this election – five nominated by the Alumni Association Board of Directors and six nominated by alumni. Through this process, UM alumni elect fellow graduates to serve on three of the 23 University of Manitoba Board of Governors positions. Alumni elected to serve on the Board of Governors may do so for a maximum of three consecutive three-year terms. One of these term positions is ending.

ACADEMIC MATTERS

- Francis Amara, biochemistry and medical genetics in the Max Rady College of Medicine, will be honoured with a Certificate of Merit Award from the Canadian Association for Medical Education, recognizing his significant contribution to medical education. Amara is a scholar of teaching and learning whose research looks at curriculum development and teaching methods. He is an advocate for medical education that is firmly grounded in current scientific knowledge.

- Dr. Amine Choukou, occupational therapy, has been awarded the Gerry McDole Professorship. The professorship, funded by AstraZeneca Canada, supports deserving new academic faculty members in the Rady Faculty of Health Sciences, for research in health service delivery and/or health policy development with the goal to improving the delivery of healthcare services to rural, remote and underserved populations of Manitoba.

- Lisa Diamond-Burchuk, occupational therapy and Jared Bullard, pediatrics/child health and medical microbiology/infectious diseases were honoured with the 2020 CPD Educator of the Year Awards by the Office of Continuing Competency and Assessment in the Rady Faculty of Health Sciences. The awards recognize exemplary service in continuing professional development.

- Reagan Croy, student, occupational therapy, was named to the Honour 150 list by Manitoba 150. It recognizes dedicated Manitoba volunteers who were nominated by their communities. Reagan Croy was honoured for her volunteer coaching work with Special Olympics athletes.

- Tressa Alexiuk, student with Joyce Slater, human nutritional sciences has been awarded the Dr. Elizabeth Award for Technical Writing from the Canadian Home Economics Foundation. The award is presented annually to a graduate student from Faculties, Departments or Programs of Home Economics, Family and Consumer Studies/Sciences, Human Ecology, Foods, Dietetics and Nutrition, Clothing and Textiles, and home economics/human ecology/family studies Education.

- Grace Han, alumna, School of Art received an Emerging Artist Award from NCECA (National Council on Education for the Ceramic Arts). This is bestowed to six emerging artists in the ceramic field every year and is a highly prestigious international award that includes a presentation and an exhibition at the NCECA conference.

- Jocelyn Gould, alumna, Faculty of Music, was nominated for a JUNO Award for Jazz Album of the Year.

- Lori Blondeau, School of Art was awarded a Governor General's Award in Visual and Media Arts. The Awards funded by the Canada Council for the Arts are given each year to recognize outstanding contribution to the fields of visual and media arts.

- Wouter Deconinck, Physics and Astronomy, is the recipient of the 2021 UM Sustainability Award for Faculty. This award recognizes efforts on campus for, exceptional and continuous integration of sustainability into teaching, research and engagement activities.

- Jayanne English, Physics and Astronomy is the recipient of the 2021 Qilak Award. The Qilak Award for Astronomy Outreach and Communication recognizes individual Canadian residents, or teams of

residents, who have made an outstanding contribution either to the public understanding and appreciation of astronomy in Canada or to informal astronomy education in Canada.

- Dr. English was also awarded a 2nd Place National Radio Astronomy Observatory 2020 Visualization Award for her stunning composite HST-VLA image of the galaxy NGC 5775. In collaboration with composer Nicole Lizee, she produced "Colliding Galaxies: Colours and Tones", a unique integration of astronomy and electronic music. By designing and teaching courses such as "The Art of Scientific Visualization", Dr. English has also trained a next generation of astronomical visualization experts, guaranteeing that her work will have a multiplicative effect on the broader community.

- Anima Sharma, graduate student, Science working with D. Gerald Gwinner, physics & astronomy, won first prize for best student presentation at the annual Canadian Winter Nuclear and Particle Physics Conference.

- Melanie Lalonde, graduate student, working with Jeffrey Marcus, biological sciences, won the 2020 Graduate Student Scholarship award from the Entomological Society of Manitoba. Student recipients of the Entomological Society of Manitoba Graduate Student Scholarship must exhibit superior scholastic ability, high research potential and excellent communication skills.

- Matt Thorstensen, graduate student, working with Ken Jeffries, biological sciences was awarded the International Association for Great Lakes Research (IAGLR) Scholarship. The scholarship is awarded annually to a promising Ph.D. student whose dissertation research is likely to make a significant contribution to the understanding of large lakes.

- Chris Manchur, MSc student in Biological Sciences, was a contest winner of the 2021 Sustainability of Canadian Agriculture Conference Video Competition and also received the People's Choice Award for his video. Chris Manchur is supervised by Dr. Steve Whyard and Dr. Mark Belmonte.

- On March 29th The Decolonizing Lens presents free online screenings of Nappy Hair and an Eagle Feather and Au Fantôme du Père (To the Ghost of the Father). The film screenings will be followed by interviews with filmmakers Adeline Bird and Marie Laurentine Bayala.

- The Decolonizing Lens is a monthly film series co-organized by Jocelyn Thorpe (Women's & Gender Studies) and Kaila Johnston (National Centre for Truth and Reconciliation) that brings together Indigenous filmmakers, their films, and their audiences. The series is being sponsored by the Margaret Laurence Endowment Fund, Women's & Gender Studies, and the National Centre for Truth and Reconciliation. This month's series is also being supported by the African Movie Festival in Manitoba.

- The Glenlea Research Station team was recognized as producer number three for their excellence, in dairy. Each year, Lactanet, a Canadian network for dairy excellence, recognizes the top 25 dairy producers in the country. Through this process it also identifies the top three dairy producers in each province.

RESEARCH MATTERS

- At this time, research at the University of Manitoba (UM) is continuing within in the labs as well as remotely to the extent possible in compliance with the provincial Public Health Guidelines. Details on the current COVID-19 guiding principles, processes for requesting access and preventative measures are available in the updated Researcher FAQs section of the COVID-19 webpage.

- On March 3, the Canada Foundation for Innovation announced $4.7 million in funding to two University of Manitoba projects involving national and international teams supported by Innovation Fund grants. They are:

    - Raymond Frogner received $2,411,773 for the project: "NCTR Digital Architecture." This project implements the NCTR's digital architecture. It will enable advanced discovery and access of digital archival records to promote innovative research meaningful to Indigenous communities and Survivors.

    - Drs. Michael Gericke and Juliette Mammei received $2,336,900 for the project: **"**The MOLLER Detector: Expanding our understanding of matter in the universe with a new, precision electron detector." This project will enable experiments that aim to measure the interaction properties between pairs of electrons down to separation distances of zeptometers, which is roughly a million times smaller than the size of the smallest atomic nucleus, to unprecedented accuracy.

- On March 9, Genome Canada announced $2.1 million in funding to set up the Canadian Prairie Metabolic Network (CPMN), to ensure the timely and more cost-effective delivery of innovative and relevant genomic testing in the Prairies. The project lead is Distinguished Professor Dr. Cheryl Rockman-Greenberg (Pediatrics and Child Health; Biochemistry and Medical Genetics/Children's Hospital Research Institute of Manitoba) with Petr Kresta, Chief Operating Officer, Diagnostic Services, Shared Health and partners at Genome Prairie and Genome Alberta. Rockman-Greenberg is an internationally known researcher who has identified the molecular source of some of Manitoba's most devastating inherited diseases.

- Thirty-four research projects led by twelve investigators received a total of $2,107,815 in grant funding from a variety of sponsors. Those projects receiving more than $25,000 are:

PI	Sponsor	Title	Awarded
Farenhorst, Annemieke (Soil Science)	SSHRC New Frontiers Research Fund	Renewable feather keratin based advanced functional materials: nano-reinforced, biomimetically modified keratin polymer blends as wound healing material	$46,634
Jeffrey, Ian (Electrical and Computer Engineering)	Mitacs Accelerate	An integrated software suite for rail condition analysis using machine learning	$30,000
Jiang, Changmin (Supply Chain Management)	SSHRC Connection Grant	Building resilient logistics and supply chain networks	$25,000

Koper, Nicola (Natural Resources Institute)	Mitacs Accelerate	Ecology and conservation of grassland songbirds in the Waterton Park front area	$60,000
Kordi, Behzad (Electrical and Computer Engineering)	Mitacs Accelerate	A novel passive wireless printed circuit board cavity sensor for the measurement of electric and magnetic fields	$120,000
Ojo, Olanrewaju (Mechanical Engineering)	Research Manitoba	Development of post additive manufacturing treatments to enhance mechanical properties of IN718	$149,900
Ramjiawan, Bram (Pharmacology and Therapeutics)	Research Manitoba COVID-19	Evaluation of a novel saliva based test for detection of human coronavirus	$75,000
Rigatto, Claudio (Internal Medicine)	CIHR Project Grant - COVID-19	A pragmatic randomized controlled trial of a CKD specific telemonitoring platform to minimize adverse outcomes in high risk CKD patients	$562,275
Shalaby, Ahmed (Civil Engineering)	NSERC Alliance Grants	Enhanced characterization of asphalt mix performance to support balanced mix design and climate-resilient sustainable pavement structures	$141,295
Sivaramakrishnan, Subramanian (Subbu) (Marketing)	Mitacs Business Strategy Internship	Business strategy internship	$120,000
Urquia, Marcelo (Community Health Sciences)	CIHR Fellowship	Maternal and child health consequences of child removal by Child Protective Services	$135,000
Woodgate, Roberta (Nursing)	CIHR Project Grant - COVID-19	Making visible the life stories of families of children who are immunocompromised during COVID-19	$358,594

ADMINISTRATIVE MATTERS

- Collection bins were distributed to both the Bannatyne and Fort Garry campuses on Monday, March 22 to collect three-ply surgical dust masks, KN95 and N95 masks in addition to other disposable personal protective equipment (PPE). These bins are only for disposable PPE shown on the bin signage and are not intended to collect reusable cloth masks. Materials created from these masks are metal sheeting, composite decking, shipping pallets and other products. The wearing of reusable masks is still recommended to minimize waste.

- An interdisciplinary design charrette will highlight and focus on the Eastern Transportation Corridor multi-use path. The charrette will engage graduate students in designing three seating and wayfinding nodes along the Saunderson Street and Dysart Road pathway segment. The students will receive guidance from a steering committee, along with the Indigenous community at UM, various faculties and critical stakeholders to help them create their design proposals and inform an overall wayfinding and interpretive signage strategy for the corridor.

- The Implementation Committee chaired by the Vice-President (Administration) is responsible for implementation of the 43 recommendations from the Path Forward Report addressing sexual violence, harassment and discrimination at UM.

  The recommendations have been organized into 18 different projects in four major subject areas: training, policy and procedure, continuous improvement, and strategic planning.

  As of 1 April 2021, 23 of 43 recommendations (53%) have been implemented. Highlights from this year include the creation of the Sexual Violence Resource Centre, and the alignment of the RWLE and Sexual Violence policy and procedures with the report recommendations and the issuance of the report from the Presidential Taskforce on EDI. The Implementation Committee is currently prioritizing the remaining projects for FY2021.

  The Office of Human Rights and Conflict Management and the Legal Office are co-chairing the Advisory Committee on Mandatory Referrals, which will explore Recommendation #32 of the Path Forward Report, and will issue recommendations to the Path Forward Implementation Committee, including how to best implement Recommendation #32, and any modifications that may be necessary.

- The Federal Government has launched a consultation on the extension of the term of copyright from 50 years after the death of the creator to 70 years. In particular, the Federal Government has suggested three options that could apply to Libraries, Archives, and Museums to counterbalance the effect of the extension, although comment on other aspects and suggestions for the implementation of the term extension may be submitted. The Federal Government has extended the date for submissions to March 31, 2021.

- The Legal Office has been working closely with the Office of Risk Management to provide advice to the Office of the Vice-President (Research and International), and in particular to the Research Ethics Board (REB), in relation to the resumption of in-person research activities, and re-consenting of research participants. Assistance was provided to draft an informed consent form amendment that can be used by researchers and the REB.

- The Legal Office has also been working closely with the Vice-President (Research and International) and the Vice-Dean (Research) in the Rady Faculty of Health Sciences on matters related to the relationship with Shared Health as it pertains to research agreements. A first draft of a new research subsidiary agreement was prepared and recently sent to Shared Health. In addition, February continued to see a substantial increase in the number of research agreements being sent for review, negotiation and approval. In February 2020 the Legal Office received 70 research agreements, whereas 96 research agreements were received for review this February.

- The revised Signing of Agreements policy and procedure were approved by the Board of Governors at the March 23, 2021 meeting. The policy and procedure incorporate best practices from various other U15 universities, along with recommendations from the Audit Services Report on our signing processes. The revised policy and procedure are intended to create efficiencies and support UM's value of accountability.

- UM is in the process of creating a Brief and Temporary Student Absence Policy, which is intended to create a consistent mechanism for students to notify professors and instructors when they will be absent for a brief period of time, to replace the need for medical notes for brief illnesses, to create consistency in the handling of absences across faculties and classes, and to reduce demand on our medical system (by eliminating the need to obtain medical notes for brief ailments). The policy has been provided to the appropriate Unions for review and comment, and feedback is expected by early May.

- UM has been selected as one of Canada's Best Diversity Employers for 2021. This year's winners were announced on March 2 in a special magazine published in The Globe and Mail in print and online.

- An Information Services and Technology report was presented to the Board of Governors that provided an overview of the Higher Education cybersecurity landscape with particular emphasis on what was happening across Canada, as well as any impactful incidents at UM. Also described were initiatives planned to begin in the next six months or were currently underway to improve cyber security practices with emphasis on three key projects:

    - the roll out of multi-factor authentication for our virtual private network (VPN) service;
    - the continued implementation of Microsoft 365 and its improved security capabilities; and
    - the planned implementation of network segmentation across the internal UM network.

EXTERNAL RELATIONS

- For fiscal year ending March 31, 2021, total funds raised were $29.7 M exceeding the $28.6 M target. $12.6 M of this total was for student support including $926,511 specifically for pandemic relief.

- Funds were raised via 5,114 donors who included students, staff and faculty, alumni, gifts through estate, corporations and foundations who collectively made 8,969 gifts. These ranged in value from $5 to $3,000,000.

- The Spring 2021 Virtual Learning for Life series launches in early May with featured UM researchers and professors as speakers. This will be sponsored by UM affinity partner iA Financial Group.

- Communications from the COVID-19 Steering Committee continue to flow to the UM community – A Vaccination Awareness Campaign is scheduled for rollout in late April.

- President Benarroch continues his outreach to government partners and community.
  Meetings with Provincial partners included:
    - Tracy Maconachie – Acting Deputy Minister Advanced Education, Skills and Immigration
    - Dr. Jas Atwal – Medical Officer of Health

Meetings with Federal partners included:

- NDP Caucus
- Mitch Davies – National Research Council President

Updates to the community included:

- One year of remote working and learning – Direct message to alumni, donors, students, faculty and staff/UM Today.
- Fall term reopening- Email communication from President's office to all students, faculty and staff/UM Today.
- Vice-President Administration Announcement – UM Today/WAAG/Social Media/News Release.

- Hosted by Chancellor Anne Mahon, the UM Alumni Book Club commenced a fifth book selected by President Michael Benarroch –*Medicine Walk* by Richard Wagamese.

- The 2021 UM Distinguished Alumni Award nominations launched March 18 and will close on May 17 with final selections scheduled for mid-June.

- Reader attention was notable for announcements of UM's new Indigenous leadership as well as the recently awarded funding for the National Centre for Truth and Reconciliation archives. This engagement was predominantly driven by four UM Today stories contributed by the Marketing and Communications team which were shared across a variety of digital channels. Collectively, the stories received twice as many page views than average for UM Today, and four times as many engagements than average for UM's social media.

- UM's Sustainability Day content performed well due to a UM Today story and an event page published by the Office of Sustainability. Marketing and Communications supported the event ensuring promotion across the suite of digital UM channels.

- During March 2021, there were 3,142 news stories in media mentioning UM: 853 of these related to COVID-19.

- Major media coverage occurred related to UM included President Benarroch speaking via local media about fall term and future of UM. Professors Martin Scanlon, Rick Holley and Kees Plaizier (Faculty of Agricultural and Food Sciences) were featured in the Globe and Mail and on CBC Marketplace regarding "buttergate." Myrle Ballard (Natural Resources Institute) participated in a lengthy radio interview giving an Indigenous scholar's perspective on land and resource use.

May 5, 2021

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

Professor John Anderson will be the Speaker for the Executive Committee for the May meeting of Senate.

2. Appointment of Chair, Senate Committee on Admission Appeals

Dean David Mandzuk's term as Chair of the Senate Committee on Admission Appeals will conclude on May 31, 2021. Senate Executive has appointed Professor Derek Oliver to the position, for a term ending May 31, 2024.

3. Vacancies on the Senate Committee on Nominations

The report of the University Secretary on the Senate Committee on Nominations (SCN) is attached (Appendix A). Members of the SCN are nominated by the Senate Executive Committee and elected by Senate (see recommendation below). Senate Executive has made a recommendation on a nomination for one of the five vacancies for academic staff.

Four vacancies for academic staff remain, all for three-year terms: one for a representative of Science, one for a representative of Education, Kinesiology and Recreation Management & Extended Education, and one for a representative of Music and School of Art. One is for a representative of Libraries and Student Affairs, for a five-month term. Nominations will be brought forward to an upcoming meeting of Senate.

Two vacancies for student members (one-year terms) also remain.

4. Comments of the Executive Committee of Senate

Other comments of the Executive Committee accompany the report on which they are made.

Recommendation

The Senate Executive Committee recommends:

THAT the nomination of Professor Jitendra Paliwal (re-appointment), representing Agricultural and Food Sciences & Environment, Earth, and Resources, to the Senate Committee on Nominations, be approved by Senate for a three-year term ending May 31, 2024.

Respectfully submitted,

Dr. Michael Benarroch, Chair
Senate Executive Committee
Terms of Reference

Appendix A

April 22, 2021

Vacancies on the Senate Committee on Nominations

At the July 1977 meeting of Senate, Senate approved, without debate, area representations for the Senate Committee on Nominations. The representation was amended in July 1991 to include the Libraries, in June 2005 to include the Clayton H. Riddell Faculty of Environment, Earth and Resources, and in October 2014 to take into account the Rady Faculty of Health Sciences.

Members of the Senate Committee on Nominations are nominated by the Senate Executive Committee, and elected by Senate.

The current membership is as follows:

Agricultural and Food Sciences & Environment, Earth and Resources	Jitendra Paliwal*	2021
Architecture & Engineering	Witold Kinsner*	2022
Arts	Pam Perkins	2020
Education, Kinesiology and Recreation Management & Extended Education	Steven Passmore*	2021
Health Sciences (2)	Reg Urbanowski*	2023
	Marie Edwards	2022
Libraries & Student Affairs	Lori Giles-Smith	2022
Management, Law & Social Work	Robert Biscontri*	2023
Music & School of Art	Oliver Botar*	2021
Science	Helen Cameron	2021
Students (2)	Md Tanvir Hasnine	2021
	Vacant	2021

* denotes member of Senate presently or at time of appointment

The terms for Helen Cameron, Jitendra Paliwal, Steven Passmore, and Oliver Botar will end on May 31, 2021. Consequently, replacements are required for the following areas for the term of June 1, 2021 to May 31, 2024:

Science
Agricultural and Food Sciences & Environment, Earth and Resources
Education, Kinesiology and Recreation Management & Extended Education
Music and School of Art

Jitendra Paliwal has indicated their willingness to stand for re-appointment.

Additionally, Lori Giles-Smith will be on Research Study Leave from July 1, 2021 to December 31, 2021 and as such, a representative from Libraries & Student Affairs should be appointed as a six-month leave replacement.

The composition of the Senate Committee on Nominations calls for ten members of the academic staff, the majority of whom are to be members of Senate. Since three of the remaining academic members currently on the Committee are Senators, or were Senators at the time of appointment, at least three of the replacements must be a member of Senate at the time of election to the Senate Committee on Nominations.

The term of Md Tanvir Hasnine as student member will end on May 31, 2021. Additionally, a second position for a student is currently vacant. Consequently, two student replacements are required for the term of June 1, 2021 to May 31, 2022.

UM | Faculty of Agricultural and Food Sciences

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256 Agriculture Building
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MEMORANDUM

DATE: March 9, 2021

TO: Senate Committee on Admissions

FROM: Dr. Jitendra Paliwal, Associate Dean (Graduate Programs) and Associate Dean (Academic)

RE: **Diploma to Degree Pathway**

At its Faculty Council meeting on December 9, 2020 Agricultural and Food Sciences approved a new Diploma to Degree pathway. There are two parts of this proposal:

1. A request for a new admission's category and capacity of 25 for students after completion of our UM Diploma in Agriculture program applying to the B.Sc. Agribusiness, B.Sc. Agriculture or B.Sc. Agroecology degree programs.

2. A revised transfer course pathway for students that have completed the UM Diploma in Agriculture program for transfer into a specific Agricultural and Food Sciences degree program.

The materials that follow provide more details on our proposal.

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

Diploma to Degree Transfer Pathway

Students admitted to B.Sc. Agribusiness, B.Sc. Agriculture, or B.Sc. Agroecology degree programs for Fall Term 2021 and forward who have completed the UM Diploma in Agriculture program (current or historic program).

Section 1:

Background and Rationale for Change

The current diploma to degree pathway was approved by Senate on December 6, 2006. There have been many changes to both our diploma and degree programs since that time but regrettably, the pathway has not been updated. The Diploma in Agriculture went through a curriculum review and significant updates to curriculum were made in Fall 2018. All the FAFS degree programs were updated with major revisions in Fall 2020. The current pathway does not reflect the changes that have been made in either the Diploma or Degree curricula.

There were 16 students admitted over Fall 2020 and Winter 2021 from the UM Diploma in Agriculture program to our FAFS degree through advanced entry. Interest continues to increase within our Diploma students to transfer to our Degree programs.

Description of Proposed Changes:

1. Proposed Admission Requirements:

Upon completion of the University of Manitoba Agriculture Diploma program (current or historic), students are eligible to apply for the B.Sc. Agribusiness, B.Sc. Agriculture, or B.Sc. Agroecology degree programs providing they have met the requirements:

- **Graduated from the University of Manitoba's Diploma in Agriculture program (graduates require a Degree GPA of 2.0)**

Up to 25 seats will be reserved for this pathway each academic year. Unused Fall intake seats may be used for Winter intake. These 25 seats will be in addition to our current capacity of 165 for advanced entry.

If there are more than 25 applicants, the top graduating Degree GPAs from the Diploma program will be used to rank applicants. The additional applicants will be considered and ranked through the regular advanced entry capacity.

This pathway is only for students who have completed the UM Diploma in Agriculture program. Students who take but do not finish the Diploma program can apply via the regular advanced entry route and must meet the advanced entry admission criteria.

Every UM Diploma in Agirculture graduate is required to take a minimum of 93 credit hours and may obtain up to 60 credit hours of transfer credit within this proposed course transfer mapping. Therefore, students transferring to the degree program are effectively starting *year 3* of their degree program and should not count towards our admission quota (which is targeted at year two entry).

Report of the Senate Committee on Admissions concerning a proposal from the Faculty of Agricultural and Food Sciences to create a new admission category for students applying to the B. Sc. Agribusiness, B.Sc. Agriculture, and B.Sc. Agroecology degree programs (2021.03.23)

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 Agricultural and Food Sciences is proposing the creation of a new admission category for students applying to the B. Sc. Agribusiness, B.Sc. Agriculture, and B.Sc. Agroecology degree programs. Upon completion of the Diploma in Agriculture program eligible students can apply for admission to the B. Sc. Agribusiness, B.Sc. Agriculture, and B.Sc. Agroecology degree programs.

3. The proposal was approved by the Faculty of Agricultural and Food Sciences Faculty Council on December 9th, 2020, and the proposal was endorsed by SCADM on March 23rd, 2021.

Observations:

1. Each year up to 25 students can be admitted via this category.

2. In order to be eligible students must have graduated from the Diploma in Agriculture program at the University of Manitoba with a minimum degree grade point average of 2.0.

3. Up to 60 credit hours of course work can be transferred in and count towards the degree program.

Recommendation:

The Senate Committee on Admissions recommends that the proposal create a new admission category for students applying to the B. Sc. Agribusiness, B.Sc. Agriculture, and B.Sc. Agroecology degree programs for the Fall 2022 intake.

Respectfully submitted
Laurie Schnarr, Chair, Senate Committee on Admissions

2. Proposed Course substitution allocations for Diploma to Degree Transfer of Credit:

Students who have completed the University of Manitoba's Diploma in Agriculture

Students who have successfully completed the University of Manitoba's Diploma in Agriculture program and are admitted to the degree program will have transfer credit/course substitutions based on the following:

A minimum grade of 'C' or higher must be obtained to transfer the credit outlined in this chart:

Degree Course	Diploma course substitution from the 2018 UM Diploma in Agriculture program and forward	Diploma course substitution from previous UM Diploma in Agriculture program prior to 2018
Coures Completed by All Diploma Students		
ABIZ 1000	DAGR 0990	DAGR 0690
ABIZ 2510	ABIZ 0450	ABIZ 0450
AGRI 1600	PLNT 0410 and SOIL 0420	DAGR 0420
PLNT 2500	PLNT 0760	PLNT 0750 or PLNT 0760 or PLNT 0800 or PLNT 0820
Coures Completed depending on Diploma Option		
ABIZ 2620	DAGR 0530	DAGR 0530
BIOE 3100	One of BIOE 0600, BIOE 0710 or BIOE 0700	One of BIOE 0400, BIOE 0710, BIOE 0690, or BIOE 0700
ANSC 2500	ANSC 0670 or ANSC 0680 or ANSC 0690 or ANSC 0700	ANSC 0670 or ANSC 0680 or ANSC 0690 or ANSC 0700
SOIL 3600	SOIL 0630	SOIL 0620 and SOIL 0630

The approved degree level program electives that may have been taken in the Diploma in Agriculture that are eligible for transfer credit, where applicable, into a degree program may include the following: ABIZ 1000, ABIZ 1010, ABIZ 2610, ABIZ 2620, ABIZ 3530, AGRI 2500, AGRI 2510, ENTM 1000, FOOD 1000, HNSC 1200, HNSC 1210, PLNT 1000, AGRI 3030.

All students transferring after successful completion of the UM Diploma in Agriculture Program will be allocated the maximum number of credit hours of free electives permitted by their selected program (courses to be applied will be the top grades from diploma or degree level courses that are not already being transferred as a required course in a chosen degree program), any degree-equivalent course transfers, plus the following potential program-specific transfers. Only grades of 'C' or higher may be transferred in. A minimum of 60 credit hours must be taken within the degree program.

B.Sc. Agribusiness:
- up to the maximum allowable free electives (30 credit hours)
- ABIZ 1000
- ABIZ 2510
- AGRI 1600
- PLNT 2500
- plus, 6 credit hours from the above table if taken as an option for ABIZ 2620 and ANSC 2500
- plus, 9 credit hours to satisfy Group 2 Restricted Electives (Agrology) - which will be applied as core Diploma courses: DAGR 0910, DAGR 0920 and DAGR 0980.
- plus, any degree equivalent program electives taken as stated above (not including AGRI 2002).

B.Sc. Agriculture (Agronomy program):
- up to the maximum allowable free electives (30 credit hours)
- ABIZ 1000
- ABIZ 2510
- AGRI 1600
- PLNT 2500
- plus, 9 credit hours from the above table if taken as an option for ANSC 2500, BIOE 3100 and SOIL 3600
- plus, 3 credit hours for Restricted Elective Group 1 if students took both PLNT 0750 and PLNT 0820 (will be applied as PLNT 0820, 3 credits)
- plus, any degree equivalent program electives taken as stated above (not including AGRI 2002)

B.Sc. Agriculture (Animal Systems program):
- up to the maximum allowable free electives (27 credit hours)
- ABIZ 1000
- ABIZ 2510
- AGRI 1600
- PLNT 2500
- plus, 9 credit hours from the above table if taken as an option for ABIZ 2620, ANSC 2500 and SOIL 3600
- plus, any degree equivalent program electives taken as stated above (not including AGRI 2002)

B.Sc. Agriculture (Plant Biotechnology program):
- up to the maximum allowable free electives (21 credit hours)
- ABIZ 1000
- ABIZ 2510
- AGRI 1600
- PLNT 2500
- plus, 6 credit hours from the above table if taken as an option for ANSC 2500 and SOIL 3600
- plus, any degree equivalent program electives taken as stated above (not including AGRI 2002)

B.Sc. Agroecology:
- up to the maximum allowable free electives (30 credit hours)
- 9 credit hours of required courses from the above table
- ABIZ 1000
- AGRI 1600
- PLNT 2500
- plus, 6 credit hours from the above table if taken as an option for ANSC 2500 and SOIL 3600
- plus, 9 credit hours to satisfy the Restricted Elective Groups 3 and 4 - which will be applied as core Diploma courses: DAGR 0910, DAGR 0920 and DAGR 0980.
- plus, any degree equivalent program electives taken as stated above (not including AGRI 2002)

Students who have not completed the Diploma in Agriculture

Students who have not completed the Diploma in Agriculture can apply for regular admission (via Advanced or Direct Entry) to the degree programs in the Faculty of Agricultural and Food Sciences. Admitted students who have not graduated from the Diploma in Agriculture may receive credit for the indicated course combinations in the table below minimum "C" grade). Any additional courses can be used toward free electives or as any approved degree equivalent program electives taken. All applicable credit hours and grades will be applied upon admission.

The approved degree level program electives that may have been taken in the Diploma in Agriculture that are eligible for transfer credit, where applicable, into a degree program may include the following: ABIZ 1000, ABIZ 1010, ABIZ 2610, ABIZ 2620, ABIZ 3530, AGRI 2500, AGRI 2510, ENTM 1000, FOOD 1000, HNSC 1200, HNSC 1210, PLNT 1000, AGRI 3030

Degree Requirement	**Diploma course substitution from program revised for 2018 and forward**	**Diploma course substitution from previous Diploma program prior to 2018**
Courses completed by All Diploma Students		
ABIZ 1000	DAGR 0990	DAGR 0690
ABIZ 2510	ABIZ 0450	ABIZ 0450
AGRI 1600	PLNT 0410 and SOIL 0420	DAGR 0420
PLNT 2500	PLNT 0760	PLNT 0750 or PLNT 0760 or PLNT 0800 or PLNT 0820
Courses completed depending on Diploma Option		
ABIZ 2620	DAGR 0530	DAGR 0530
BIOE 3100	One of BIOE 0600, BIOE 0710 or BIOE 0700	One of BIOE 0400, BIOE 0710, BIOE 0690, or BIOE 0700
ANSC 2500	ANSC 0670 or ANSC 0680 or ANSC 0690 or ANSC 0700	ANSC 0670 or ANSC 0680 or ANSC 0690 or ANSC 0700
SOIL 3600	SOIL 0630	SOIL 0620 and SOIL 0630

Effective Date of Proposed Modification

We would like to request that the new admission diploma pathway category for a 25 student capacity for students applying to one of the FAFS degree program (B.Sc. Agribusiness, B.Sc. Agriculture, B.Sc. Agroecology) take effect September 1, 2022.

We are requesting that the course transfer and substitution credit requirements (submitted to SCCCC for Fall 2021 implementation) to take effect for September 1, 2021 to allow our diploma graduates to transition into our degree programs, which were revised in Fall 2020.

Section 2: Consultation with Other Faculties

There are no courses taught by other faculties in the proposed admission requirements. The course transfer pathway applies to the 3 FAFS degree programs: B.Sc. Agribusiness, B.Sc. Agriculture and B.Sc. Agroecology.

Section 3: Recommendation

We are requesting that the Senate Committee on Admissions endorse the proposal for a new diploma pathway admission category to our B.Sc. Agribusiness, B.Sc. Agriculture, or B.Sc. Agroecology degree with 25 seats for Diploma to Degree students become effective September 1, 2022.

We are requesting the Senate Committee on Admissions to endorse the above course transfer and substitution requirments to our B.Sc. Agribusiness, B.Sc. Agriculture, or B.Sc. Agroecology degree programs effective September 1, 2021 to allow our diploma graduates to transition into the degree program based on the the dipoma requirments, which were revised in Fall 2020.

Report of the Senate Committee on Admissions concerning a proposal from the Faculty of Agricultural and Food Sciences to modify the transfer course pathway for students applying to the B. Sc. Agribusiness, B.Sc. Agriculture, and B.Sc. Agroecology degree programs (2021.03.23)

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 Agricultural and Food Sciences is proposing the modification of the transfer course pathway for students applying to the B. Sc. Agribusiness, B.Sc. Agriculture, and B.Sc. Agroecology degree programs. The proposal outlines the transfer credit that students who complete the Diploma in Agriculture program and who are then admitted to one of the three degree programs will receive.

3. The proposal was approved by the Faculty of Agricultural and Food Sciences Faculty Council on December 9th, 2020, and the proposal was endorsed by SCADM on March 23rd, 2021.

Observations:

1. Students must have graduated from the Diploma in Agriculture program at the University of Manitoba in order to receive the credit.

2. Only grades of “C’ or higher will be transferred in.

Recommendation:

The Senate Committee on Admissions recommends that the proposal to modify the transfer course pathway for students applying to the B. Sc. Agribusiness, B.Sc. Agriculture, and B.Sc. Agroecology degree programs for the Fall 2021 intake.

Respectfully submitted
Laurie Schnarr, Chair, Senate Committee on Admissions

March 22, 2021

Report of the Senate Committee on Curriculum and Course Changes RE: Revised Diploma to Degree Transfer Pathway, Faculty of Agricultural and Food Sciences

Preamble:

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) can be found on the University Governance website.
2. At its meetings on March 26, 2020, and March 22, 2021, the committee considered a proposal from the Faculty of Agricultural and Food Sciences to modify the pathway for graduates of its Diploma in Agriculture to receive transfer credit upon admission to one of several degree programs in the Faculty.
3. The Senate Committee on Admissions considered the same proposal at its meeting on March 23, 2021.

Observations:

1. Following changes, in recent years, to courses and curricula for the Diploma in Agriculture (Senate, December 6, 2017) and for its various degree programs (Senate, December 4, 2019), the Faculty of Agricultural and Food Sciences is proposing modifications to the Diploma to Degree Transfer Pathway, to update the courses acceptable for transfer credit toward the Bachelor of Science in Agribusiness, Bachelor of Science in Agriculture, and Bachelor of Science in Agroecology degrees.
2. Under the revised Diploma to Degree Transfer Pathway, graduates of the Diploma in Agriculture who were admitted to one of the degree programs noted above would be eligible to receive up to 60 credit hours of transfer credit, for diploma and degree courses completed in the Diploma program with a grade of C or better.
3. Students admitted to a degree under the Transfer Pathway would be allocated transfer credit for the maximum number of credit hours of free electives in their degree program, any degree-equivalent courses, and program-specific course transfers, as detailed in the proposal.
4. The proposal also confirms that students admitted to a degree program through regular admission processes, who completed courses in but did not complete the Diploma program, may receive transfer credit for courses completed with a minimum grade of C, as described in the documents included with the Report. In some cases, students would graduate with slightly more than 120 credit hours completed, given that some diploma courses acceptable for transfer credit are 4 credit hour courses.

Recommendation:

The Senate Committee on Curriculum and Course Changes recommends:

THAT Senate approve a revised Diploma to Degree Transfer Pathway, for graduates of the Diploma in Agriculture to receive transfer credit upon admission to a Bachelor of Science in Agribusiness, Bachelor of Science in Agriculture, or Bachelor of Science in

Agroecology degree, in the Faculty of Agricultural and Food Sciences, effective September 2021.

Respectfully submitted,

Professor G. Smith, Chair
Senate Committee on Curriculum and Course Changes

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 Desautels Faculty of Music.

Observations

1. The **Desautels Faculty of Music** proposes a new program entitled Master of Arts in Music Research. Both the University of Manitoba and Brandon University offer a Master of Music degree (a performance-oriented degree), but this proposal addresses a significant lacuna for the Province of Manitoba and presents the first such Masters-level offering that focuses on graduate-level research in music, broadly in the areas of Musicology and Music Theory. One distinctive feature of the proposed program is the comprehensive, yet flexible nature of the program of study. On one hand, the degree prepares one for a broad range of arts-related employment opportunities; on the other, the degree strongly prepares graduates for the requirements of the primary Canadian Ph.D. programs in Musicology and Music Theory (specifically, UBC, Western Ontario, University of Toronto, Université Laval, McGill University, and Université de Montréal).

   The M.A. in Music Research will require a total of 21 CH of study over two years. Students must complete a thesis or practicum. The proposal includes (6) course introductions.

   Included in the attachments, please also find the external reviewers' report and unit response to the review.

   Course Introductions

   MUSC 7100 Proseminar in Musicology +3
   Survey of historiography and methodological approaches in musicology through critical examination of significant texts. Topics will include the history of the discipline, significant intellectual developments in the field, and key concepts in historical musicology and ethnomusicology.

   MUSC 7120 Seminar in Musicology +3
   Advanced graduate seminar investigating selected topics in musicology and/or music history. The content of this course varies and may be repeated for credit only when the topic subtitle differs from one previously taken.

   MUSC 7130 Seminar in Ethnomusicology +3
   Advanced graduate seminar investigating selected topics in ethnomusicology. The content of this course varies and may be repeated for credit only when the topic subtitle differs from one previously taken.

MUSC 7200 Proseminar in Music Theory **+3**
A survey of methodological approaches in music theory and analysis, related to tonal and post-tonal music. Critical examination of significant texts and analysis of selected repertoire, highlighting connections between analysis and musical performance.

MUSC 7210 Seminar in Music Theory and Analysis **+3**
Advanced graduate seminar investigating selected topics in music theory and music analysis. The content of this course varies and may be repeated for credit only when the topic subtitle differs from one previously taken.

MUSC 7240 Music Theory Pedagogy **+3**
A practice-based graduate seminar on philosophies and methodologies used in teaching undergraduate music theory. Critical examination of pedagogical resources, teaching techniques, assessment,
and curriculum design.

NET CREDIT HOUR CHANGE **+18**

Recommendations

Faculty Council of Graduate Studies recommends THAT the program proposal from the unit listed below be approved by Senate:

Desautels Faculty of Music

Respectfully submitted,

Dr. Kelley J. Main, Chair
Faculty Council of Graduate Studies

/ak

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

March 29, 2021

Report of the Senate Planning and Priorities Committee on a proposal for a Master of Arts in Music Research, Desautels Faculty of Music

Preamble:

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC), which are found on the University Governance website, charge SPPC with making recommendations to Senate regarding proposed academic programs. The SPPC is further charged with making recommendations to the President and reporting to Senate on matters requiring prioritization including the prioritization of new or modified programs with significant resource requirements.
2. At its meeting on March 29, 2021, the SPPC considered a proposal from the Desautels Faculty of Music, to establish a Master of Arts in Music Research.
3. The Faculty Council of Graduate Studies endorsed the proposal at its meeting on February 24, 2021.

Observations:

1. The purpose of the Master of Arts in Music Research would be to prepare graduates (i) for further study in Doctoral programs in Musicology or Music Theory offered at other institutions or (ii) for employment in a broad range of careers, including in the arts and culture sector, education, publishing, media, and marketing, as detailed in section C-6 of the proposal.
2. Establishment of the program would enhance the scholarly excellence of the Faculty's undergraduate and graduate programming, including the Master of Music degree. It would also make it possible for Manitoba students to remain in the province while they continued their academic training in the areas of musicology and music theory. Graduates who remained in Manitoba would contribute to the economy through employment within the province's diverse arts and culture industries.
3. The M.A. in Music Research would be a two-year, course-based program that would require students to complete 21 credit hours of coursework plus a written thesis or practicum.
4. Requirements for admission would include graduation from Bachelor of Music, a Bachelor of Arts with a major in Music, or a related degree with a sufficient music background, with a minimum 3.0 Grade Point Average.
5. Establishment of the program would require the introduction of six (6) courses totaling 18 credit hours, as described in the proposal. The program would also make use of a small number of existing 7000- level courses. The new courses would also be available for students in the M.Mus. to complete toward their program, either as required or elective courses.
6. The maximum seat capacity would be four (4) students.
7. The Desautels Faculty of Music would not require new resources to fund the program. The total cost of delivering the program would be $126,352, in Year 4. Revenue to support the program would be derived from the following sources (as of Year 4):
   - tuition and student fees, which would generate $23,760 and $5,104, respectively, assuming an enrolment of 6 students;

- existing resources in the Faculty (salaries and benefits for existing faculty and staff; $68,851);
- operating grant revenue ($36,137).

8. Revenues identified in observation 7 would be allocated to the items indicated below (figures are for Year 4):
   - salary and benefits for existing academic staff ($64,860), including an Excluded Academic Administrator (0.10 FTE), Associate or Assistant Professors or Senior Instructors (0.40 FTE), and a Librarian (0.05 FTE);
   - operating expenses ($6,334);
   - student support ($30,000);
   - indirect salary expenses ($3,991) for an AESES support staff member (0.05 FTE);
   - administrative overhead ($21,166).
9. The Faculty has sufficient teaching resources to deliver the program, including five full-time faculty members with expertise in the areas of musicology and music theory. The Faculty would strategically reduce the number of upper-level undergraduate elective courses, in order to offer the additional graduate-level courses. Advanced undergraduate students might be permitted to enroll in selected 7000-level courses in musicology and music theory.
10. The Faculty has indicated that additional resources would not be required to support any of the following: student services, practicum liability insurance, information technology, or computers, or space, including laboratories. In each of Year 1 ($10,000), Year 3 ($11,000), and Year 4 ($7,500), resources would be allocated for renovations of existing spaces, to accommodate enrolment growth.
11. University Libraries has indicated it can support the program with the purchase of additional books. Any additional materials that may be needed in future could be purchased or acquired through inter-library loan.
12. On the basis of the SPPC's criteria for assigning priority to new programs / initiatives,[1] the Committee recommended that a high priority level be assigned to the proposal for a Master of Arts in Music Research. The Committee noted that the proposal responds to all six of the criteria that it considers when assigning a priority level to a proposal.

Recommendation:

The Senate Planning and Priorities Committee recommends:

THAT Senate approve and recommend to the Board of Governors that it approve a proposal to establish a Master of Arts in Music Research, Desautels Faculty of Music. The Senate Committee on Planning and Priorities recommends that the Provost and Vice-President (Academic) not implement the program until satisfied that there would be sufficient space and sufficient funding to support the ongoing operation of the program.

Respectfully submitted,

Professor David Watt, Chair
Senate Planning and Priorities Committee

[1] http://umanitoba.ca/admin/governance/media/SPPC_Assigning_Priorities_to_New_Programs-Initiatives.pdf

Desautels
FACULTY of MUSIC

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music@umanitoba.ca

July 2, 2020

Dr. Louise Simard
Acting Dean, Faculty of Graduate Studies
University of Manitoba

I am writing to the Faculty of Graduate Studies to provide a proposal for a new graduate degree offering, a MA in Music Research. This proposal was unanimously approved at our May 7, 2020 Faculty Council meeting.

Accompanying this cover letter are three documents:

1. An UM New Program Application form
2. A Financial form that corresponds with the New Program Application form
3. A series of appendices that includes new course proposals, course syllabi, and library impact statements

Thank you for your time and consideration with our MA proposal. If you require any further information, please do not hesitate to contact me.

Yours sincerely,

Edward Jurkowski

Edward Jurkowski, Ph.D.
Dean, Desautels Faculty of Music

Application

NEW PROGRAM OF STUDY

Under The Advanced Education Administration Act

Manitoba Economic Development and Training

Universities and colleges requesting approval for a **new** 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. Following unit approval* please submit the complete proposal electronically (.pdf single file) to both the Office of the Provost & Vice-President (Academic) and, for:
   Undergraduate Programs*:* Office of the University Secretary (for Senate submission deadlines visit http://umanitoba.ca/admin/governance/meetings/index.html. Please also submit a **hard copy** version to the Office of the Secretary to their office as well.
   Graduate Programs: Faculty of Graduate Studies (for timelines visit http://umanitoba.ca/faculties/graduate_studies/admin/program_approval_timeline.html.
   ALL Programs: as preparation for submission to MET, please submit a .docx file of the proposal, an .xlsx file of the Financial Support Form and a .pdf file of all other supporting documents (letters of support, external reviews, etc.). Please date stamp these files for ease of tracking should any changes result from the Senate approval process and submit directly to the Provost's Office.

2. Along with the information requested in the proposal template, please **append** details on the following:
   a) **MEDT /SPPC Financial Support Form** [*available through the Office of the Provost &Vice-President (Academic)*]
   This form requires the signature of the Financial Planning Office. Please contact Giselle Martel, Executive Director, Financial Planning and Budgeting, for direction on completion of the form. Approval of the financial support form does not signify approval of any funding requests, either internally or from the province. Confirmation of resource availability and allocation of any new funds will be determined by the Provost at time of implementation.
   b) **Admission and/or transfer criteria** for the proposed program.
   c) **Course details** for required coursework, including title, course number, credit hours and calendar description. Highlight any proposed new courses and attach:
      Undergraduate Programs: for SCCCC Program and Course Change forms, as applicable, visit http://umanitoba.ca/admin/governance/forms/index.html
      Graduate Programs: for course change forms visit http://umanitoba.ca/faculties/graduate_studies/admin/course_changes.html
   d) Any **new academic regulations** for the program that are not currently addressed in existing faculty/college/school requirements.
   e) **Letters of support** from internal units that may be impacted by the proposed new program and any external letters of support as outlined below.
   f) **Library statement** of support.
   g) Where applicable, a **transition plan** for current students entering the new program.

3. Please direct questions to Cassandra Davidson, Academic Programs Specialist, at Cassandra.Davidson@umanitoba.ca in the Office of the Provost and Vice-President (Academic).

*Note: the complete proposal, including all appendices, and associated program and course forms, should be submitted to departmental (as appropriate) and faculty/college/school approving bodies for review and approval, prior to submission to the Office of the University Secretary.

Revised December 2019.

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SECTION A – PROPOSAL DETAILS

Institution**: UNIVERSITY OF MAITOBA**

Applicable faculties/department with responsibility for the program: Desautels Faculty of Music

If program is a joint program, list all participating institutions and the roles of each in delivering the proposed program:

Not a joint program

Program name: Music Research

Credential awarded: M.A.

Funding request: None

Office Use Only

One-time funding: _____

On-going funding: _____

Proposed start date: Fall 2022

List any critical issues that may impact the start date of the program: None

UM INTERNAL REQUIREMENT: Name of Person(s) responsible for the Program internally (please include contact information):

Dr. Edward Jurkowski
Dean, Desautels Faculty of Music
Dr. James Maiello
Associate Dean (Graduate Programs and Research) Desautels Faculty of Music

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 proposed MA in Music Research is a new graduate-level offering by the Desautels Faculty of Music. While both the University of Manitoba and Brandon University offer a Master of Music degree (a performance- oriented degree), the proposal addresses a significant lacuna for the Province of Manitoba and presents the first such Masters-level offering that focuses on graduate-level research in music, broadly in the areas of Musicology and Music Theory. One distinctive feature of the proposed program is the comprehensive, yet flexible nature of the program of study. On one hand, the degree prepares one for a broad range of arts-related employment opportunities, some of which are listed below under section C-6; on the other, the degree strongly prepares graduates for the requirements of the primary Canadian PhD programs in Musicology and Music Theory (specifically, UBC, Western Ontario, University of Toronto, Université Laval, McGill University, and Université de Montréal).

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 program contains twenty-one (21) credit hours, apportioned over four (4) semesters during two academic years. The program is course-based, with a written thesis or practicum as a final requirement for the degree.

B-3 Intended outcomes of the program:

B-3.1 Describe how this program serves and advances the academic, cultural, social and economic needs and interests of students and the province:

The proposed MA in Music Research enriches the quality of graduate offerings of the University of Manitoba; concomitantly, the program will also enhance the scholarly excellence of our M.Mus. programs in music performance, conducting, and composition, and of our undergraduate music programs. More broadly, such a program would ensure that Manitobans would not need to leave the province to pursue such studies. Graduates would be able to contribute to the economy through employment within the province's diverse and robust arts and culture industries. This program also provides ideal preparation for students who intend to enter doctoral programs in music theory, musicology, ethnomusicology, and other related disciplines.

B-3.2 Describe the existing and anticipated post-secondary learning needs of students in Manitoba that this program addresses and responds to:

As there is no current MA in academic Music Research in the province of Manitoba, in the short term this proposed degree will be attractive to anyone who up to now would need to leave the province in order to pursue this area of graduate study. As the reputation of the program builds, we anticipate accepting students from elsewhere in Canada and beyond.

B-4 Mode of Delivery

B-4.1 Provide the total program length through **<u>one</u>** of the following measures:

21 Total credit hours

Total contact hours

Total courses

B-4.2 What proportion of the total program length (as indicated above) can be completed through the two following modes of delivery? *(Note that one or both selections can be offered up to the total program length.)*

Up to 100% In-person

Up to 100% Online

Although it is the intention of the DFOM that this program be undertaken in person, there will be no limit to the number of credit hours that may be completed online, subject to the availability of online course offerings (including required and elective courses).

B-5 Provide an overview of the suggested progression of courses on a year-by-year basis for the program from start to maturity. *(Course level detail is not necessary, however, please include credit hours/contract hours, proportion of upper level courses, clinical placements or practicums, or subject area requirements where applicable)*

The Desautels Faculty of Music is proposing to offer a MA degree in Music Research. Consistent with other

MA degrees, the degree requires 21 credit hours in 2 years of study, with a written thesis or practicum as the final requirement for the degree.

The required courses for the MA degree in Music Research include: GRAD 7300 Research Integrity Tutorial (0 CRH), GRAD 7500 Academic Integrity Tutorial (0 CRH), MUSC 7050 Bibliography & Research Methods (3 CRH), one (1) 7000-level Musicology course (3 CRH), and one (1) 7000-level Music Theory course (3 CRH).

The remaining program requirements include four (4) courses (that is, 12 CRH) from a list of offerings that include:

MUSC 7100 Proseminar in Musicology (3 CRH), MUSC 7120 Seminar in Musicology (3 CRH), MUSC 7130 Seminar in Ethnomusicology (3 CRH), MUSC 7200 Proseminar in Music Theory (3 CRH), MUSC 7210 Seminar in Music Theory/Analysis (3 CRH), MUSC 7240 Music Theory Pedagogy (3 CRH). At least 9 CRH must consist of 7000-level Musicology and/or Music Theory courses. Additional elective(s) would be assigned by advisement.

MA Degree in Music Research Entry, Continuation, and Graduation requirements:

To enter the MA Music Research degree program, a student must have completed a BMus, a BA with a major in music, or a related degree with sufficient music background at an accredited post-secondary institution recognized by the University of Manitoba. The minimum entering GPA is 3.0. Further, applicants need to submit two (2) samples of writing as part of their application materials.

To continue in the MA Music Research degree program, a student must maintain a minimum GPA of 3.0 in their coursework.

To graduate with the MA Music Research degree program, a student must obtain a minimum GPA of 3.0 in all required and optional courses that contribute to the degree and successfully defend their written thesis or practicum.

UM INTERNAL REQUIREMENT: please complete the chart below to provide an overview of suggested progression through the program (indicate pre-requisites and related credit hours). Outline options for specializations within this program [minor(s) and/or concentration(s)].

YEAR 1	YEAR 2
GRAD 7500: Academic Integrity Tutorial (0 CRH) GRAD 7300: Research Integrity Tutorial (0 CRH) MUSC 7050: Bibliography & Research Methods (3 CRH) 3 CRH from List A: 7000-level Musicology Courses: -MUSC 7100: Proseminar in Musicology (3 CRH) -MUSC 7120: Seminar in Musicology (3 CRH)* -MUSC 7130: Seminar in Ethnomusicology (3 CRH)* 3 CRH from List B: 7000-level Music Theory Courses -MUSC 7200: Proseminar in Music Theory (3 CRH) -MUSC 7210: Seminar in Music Theory/Analysis (3 CRH)* -MUSC 7240: Music Theory Pedagogy (3 CRH)	GRAD 7000: Master's Thesis (0 CRH) Or GRAD 7030: Master's Practicum (0 CHR)
6 CRH chosen from: List A: 7000-level Musicology Courses MUSC 7100: Proseminar in Musicology (3 CRH) MUSC 7120: Seminar in Musicology (3 CRH)* MUSC 7130: Seminar in Ethnomusicology (3 CRH)* List B: 7000-level Music Theory Courses: MUSC 7200: Proseminar in Music Theory (3 CRH) MUSC 7210: Seminar in Music Theory/Analysis (3 CRH)* MUSC 7240: Music Theory Pedagogy (3 CRH) Electives by advisement *Please note that the content for MUSC 7210 will change each time these courses are offered, allowing students repeat these courses for credit when the subtitle differs.	6 CRH chosen from: List A: 7000-level Musicology Courses MUSC 7100: Proseminar in Musicology (3 CRH) MUSC 7120: Seminar in Musicology (3 CRH)* MUSC 7130: Seminar in Ethnomusicology (3 CRH)* List B: 7000-level Music Theory Courses: MUSC 7200: Proseminar in Music Theory (3 CRH) MUSC 7210: Seminar in Music Theory/Analysis (3 CRH)* MUSC 7240: Music Theory Pedagogy (3 CRH) Electives by advisement *Please note that the content for MUSC 7120 will change each time these courses are offered, allowing students to repeat these courses for credit when the subtitle differs.
TOTAL CR. HRS: 15	TOTAL CR. HRS: 6

B-6 Will the program be available for part-time study?
Yes

B-7 Indicate if this program will have a cooperative education, work placement, internship or practicum component and provide any relevant details:
N/A

B-8 Intake Information

B-8.1 Projected enrolment for the first intake: 2 students

B-8.2 Maximum seat capacity *(Defined as first-year enrolment capacity)*: By year 5 of the program we anticipate a first-year enrolment of four (4) students

B-8.3 Anticipated date of maturity:

09/2026

UM INTERNAL REQUIREMENT: please indicate the projected enrolment and graduates for the first 5 years of the program.

	Year 1	Year 2	Year 3	Year 4	Year 5
Enrolments	2	4	5	6	7
Graduates	0	2	2	3	3

SECTION C – INFORMATION REGARDING PROGRAM DEVELOPMENT PHASE

C-1 Describe how this new program aligns with the strategic plans of your institution:

The proposed MA in Music Research aligns with the goals of the U of Manitoba as a member of the U-15 Canadian institutions. More specifically, we seek to create an exceptional student experience with a program of study that situates directly with such pillars of the U of Manitoba's strategic plan, including such priorities as "Inspiring Minds through Innovative and Quality Teaching," "Driving Discovery and Insight through Excellence in Research, Scholarly Work and other Creative Activities," and "Building Community that builds an Outstanding Working and Learning Environment."

C-2 Outline the internal approval process (i.e. committees, governing bodies) for approving this new 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.

UM Undergraduate Programs:

Decision-Making Body	Date of Approval
Faculty/College/School	_____
SCCCC	_____
SPPC	_____
SCADM (*if applicable*)	_____
SCIE (*if applicable*)	_____
Senate Executive	_____
Senate	_____
Board of Governors	_____

UM Graduate Programs:

Decision-Making Body	Date of Approval
APC (*preliminary review*)	_____
External Review	_____
APC	_____
FGS Executive	_____
FGS Faculty Council	_____
SPPC	_____
Senate Executive	_____
Senate	_____
Board of Governors	_____

C-3 Responsibility to consult

C-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:

N/A

C-3.2 What agencies, groups, or institutions have been consulted regarding the development of this program?

Note: this includes any consultation with internal UM units, academic or otherwise.

Internal to the U of M: The Office of the Provost

External to the U of M: We have examined every MA in music program west of Toronto and consulted with the primary Canadian institutions offering doctoral programs in Music Research—specifically, UBC, University of Toronto, Western University, University of Ottawa, University of Toronto, and McGill University.

C-3.3 How have students and faculty been informed of the intent to establish this program?
Verbal and email communication

C-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.)*
Note: this includes any programs currently offered at UM.
There is no Masters- or Doctoral-level degree in Music Research in Manitoba.

C-4.1 Describe any specific laddering, articulation and/or credit transfer options for students that are anticipated in this program in Manitoba.
N/A

C-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.)*
Between the west coast and the University of Western Ontario, the following institutions also offer an MA in the areas of Music Theory and/or Musicology: University of Victoria, UBC, University of Alberta, University of Calgary, University of Saskatchewan, and the University of Regina. From studying these programs, we strongly believe that our comprehensive and broad program provides a unique curricular opportunity, given our faculty complement and broad expertise, on which we wish to capitalize.

C-5.1 Describe any specific laddering, articulation and/or credit transfer options for students that are anticipated in this program in Canada.
As is typical for Master-level programs, an applicant's portfolio would be assessed to determine their suitability into the program. A laddering option for a student from another institution may be possible, but would be assessed on a case-by-case basis.

C-6 Describe the current and projected labour market demands in Manitoba for graduates of this Program:
(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.)
One distinct pathway of the MA in Music Research is preparation for further study at the doctoral level. However, the breadth and generalist nature of the program of study prepares graduates for a comprehensive range of employment opportunities, including such diverse fields as:

Arts administrator

Arts consultant
Arts critic
Arts fund raiser
Arts consultant
Community arts worker
Educator
Freelance writer
Journalist
Marketing executive
Music librarian (via preparation for a Master of Library & Information Science and Management Information Systems)
Private tutor
Publishing editor
Talent agent
Television, radio, internet, or social media broadcaster
Television, radio, internet, or social media producer
A broad range of opportunities within Local, Provincial, and Federal Arts Council agencies

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C-7 If copies of any internal or peer evaluations with respect to this new 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:

N/A

SECTION D – REQUIRED RESOURCES AND FINANCIAL IMPLICATIONS

D-1 If one-time or pilot funding are being requested to support this new program of study, please identify the amount of funding being requested:

We are not asking for any funding for this program. Please see budget spreadsheet for details.

D-2 If ongoing funding being requested to support this new program of study, please identify the amount of funding being requested:

We are not asking for any funding for this program. Please see budget spreadsheet for details.

D-3 If new funding is not being requested, how will the program be funded?

The Desautels Faculty of Music will use existing resources to deliver and manage this program. For instance, some of the courses duplicate required courses in the MMus. The remainder of the program will be offered by strategically reducing the number of upper-level undergraduate electives. Rather than cross-listing undergraduate and graduate courses, advanced undergraduates may occasionally be permitted to enrol in selected 7000-level courses in musicology and music theory with the approval of the instructor and the Associate Dean responsible for undergraduate programs.

D-4 List any external sources of funding that will be used to support the implementation or delivery of this new program of study: *(Provide such information as agreements for funding from industry or external grants and indicate the anticipated length of time for each agreement.)*

None

D-5 What are the resource implications to the institution (budget, IT, library, laboratory, computer, space, practicum liability insurance, student services, etc) in delivering this new program of study?

The program of study can be accommodated within the workloads of the current Music Research faculty. Further, the program of study does not require additional IT, library, laboratory, computer, space, practicum liability insurance, or student services. In short, the resource implications of the proposed program of study are minimal.

D-6 Please describe new and existing staffing resources needed to provide this new program of study. *Include reallocation of existing faculty, hiring of new faculty, administrative and support services and any other considerations.*

There are five (5) full-time faculty available to provide this new program of study. There are four (4) administrative staff whose workloads will play some role with administering the undergraduate and MMus programs. The work associated with the proposed MA in Music Research can be accommodated within the portfolios of this administrative support.

In terms of specific costs, from our existing resources we will allocate FTEs as follows: 0.55 FTE Associate/Assistant Professor and 0.05 FTE of AESES Support Staff. (NB: These costs represent average salaries.)

D-7 Provide a program implementation plan for the new program of study by academic year (start to maturity) that includes any elements to be phased in (e.g., new faculty hires, distribution of existing faculty and support staff) from launch to maturity:

Not applicable: the program of study can be accommodated within the workloads of the current Music Research faculty and the resources within the Desautels Faculty of Music.

Year 1

Year 2

Year 3

Year 4

D-8 Please describe the effect of this new program on existing capital infrastructure and equipment:
This new Program will not have any effect on existing capital infrastructure and equipment. The Desautels Faculty of Music has all the necessary resources, but as the program grows renovation of the existing spaces is required. This is to accommodate student growth.

D-9 If capital funding is being requested to support additional specialized program materials such as infrastructure or equipment required to provide this new program of study, please provide a detailed description of the use of this capital:
N/A

SECTION E– TUITION

E-1 What are the proposed tuition fees?

Students will be assessed one year (two terms) of graduate program fees, assessed at the standard university rate, followed by a continuing fee every term thereafter until program completion. In 2019-2020, the standard program fee was assessed at $5,148*.

*Note that annual increases to tuition fees are subject to approval by the UM Board of Governors and limited by any constraints outlines in provincial legislation.

E-2 Please provide a rationale for the tuition fee proposed. (*For example, are these tuition fees comparable to tuition for existing programs within the academic unit or to tuition for similar programs offered at other institutions?)*

The proposed tuition fee aligns with the current fees for an MMus student.

E-3 Please describe any additional fees that would apply to a student in this program?

UM INTERNAL REQUIREMENTS: Please note any new course-fees proposed in support of this program. Please provide a rationale for any new fees. Are these fees comparable to fees for existing programs within the academic unit or for similar programs offered at other institutions?

N/A

E-4 Please describe any specific supports to encourage affordability and accessibility to the program:

The supports available are the same as those for existing programs in the Desautels Faculty of Music. Specifically, the Desautels Faculty of Music has endowments in place from which financial support can be generated. Additionally, Teaching Assistantships will be available for qualified students.

SECTION F – 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
- ☐ 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

Manitoba
Education and Training

Post-Secondary Education and Labour Market Outcomes

Program Proposal Financial Form

Form Instructions:

1. When proposing a new program *Current Fiscal Year* (the first column) should be left blank, with the first year of the program starting in year 1.
2. When proposing a new program expansion *Current Fiscal* should be entered in the first column.
3. If a program reaches maturity prior to *Fiscal Year 4,* remaining fiscal year columns must still be completed so that *Ongoing Program Funding* can be calculated.
4. Fill in line items for revenue, expenditure, and capital as these pertain to the program. Examples are correspondently listed to the right of the table.
5. Ensure that line items account for overhead. For example, include the amount of tuition that the program will receive after administrative overhead.
6. Only fill out areas shaded in green, using cash accounting. The increment, on-going and total will self-populate accordingly.

Overview	
Institution:	University of Manitoba
Program Name:	MA (Music Research)
Contact Information:	Dr. Edward Jurkowski, Dean, Desautels Faculty of Music
Date:	

	Current Fiscal Year	**Fiscal Year 1**	**Increment**	**Fiscal Year 2**	**Increment**	**Fiscal Year 3**	**Increment**	**Fiscal Year 4**	**Increment**	**Ongoing Program Funding**
	(Enter 0's if new program)	Budget Yr. 1	(change from current year to year 1)	Budget Yr. 2	(change from year 1 to year 2)	Budget Yr. 3	(change from year 2 to year 3)	Budget Yr. 4	(change from year 3 to year 4)	
REVENUE INFORMATON										
Contribution from Institution		$ 22,388	$ 22,388	$ 22,388	$ -	$ 36,137	$ 13,749	$ 36,137	$ -	$ 36,137
Tuition		$ 10,296	$ 10,296	$ 13,965	$ 3,669	$ 20,712	$ 6,747	$ 23,760	$ 3,048	$ 23,760
Student Fees		$ -	$ -	$ 3,000	$ 3,000	$ 3,195	$ 195	$ 5,104	$ 1,909	$ 5,104
Other		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contribution from Unit (Existing Resources)		$ 62,100	$ 62,100	$ 64,274	$ 2,174	$ 66,523	$ 2,250	$ 68,851	$ 2,328	$ 68,851
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
Total Revenue (A)	**$ -**	**$ 94,784**	**$ 94,784**	**$ 103,627**	**$ 8,843**	**$ 126,567**	**$ 22,940**	**$ 133,852**	**$ 7,285**	**$ 133,852**

Institution:	University of Manitoba
Program Name:	MA (Music Research)
Contact Information:	Dr. Edward Jurkowski, Dean, Desautels Faculty of Music
Date:	

	Current Fiscal Year	**Fiscal Year 1**	**Increment**	**Fiscal Year 2**	**Increment**	**Fiscal Year 3**	**Increment**	**Fiscal Year 4**	**Increment**	**Ongoing Program Funding**
	(Enter 0's if new program)	Budget Yr. 1	(change from current year to year 1)	Budget Yr. 2	(change from year 1 to year 2)	Budget Yr. 3	(change from year 2 to year 3)	Budget Yr. 4	(change from year 3 to year 4)	
EXPENDITURE INFORMATON										
New Academic Salaries - Direct		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Existing Academic Salaries - Direct		$ 58,500	$ 58,500	$ 60,548	$ 2,048	$ 62,667	$ 2,119	$ 64,860	$ 2,193	$ 64,860
New Professional/Support Salaries - Direct		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Existing Professional/Support Salaries - Direct		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Operating Expenses		$ 6,420	$ 6,420	$ 6,925	$ 505	$ 6,989	$ 64	$ 6,334	$ (655)	$ 6,334
Student Support		$ 10,000	$ 10,000	$ 20,000	$ 10,000	$ 25,000	$ 5,000	$ 30,000	$ 5,000	$ 30,000
Indirect Salary Expenses		$ 3,600	$ 3,600	$ 3,726	$ 126	$ 3,856	$ 130	$ 3,991	$ 135	$ 3,991
Administrative Overhead		$ 6,831	$ 6,831	$ 12,429	$ 5,598	$ 17,055	$ 4,627	$ 21,166	$ 4,111	$ 21,166
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
Total Expenditures (B)	**$ -**	**$ 85,351**	**$ 85,351**	**$ 103,627**	**$ 18,276**	**$ 115,567**	**$ 11,940**	**$ 126,352**	**$ 10,784**	**$ 126,352**

Institution:	University of Manitoba
Program Name:	MA (Music Research)
Contact Information:	Dr. Edward Jurkowski, Dean, Desautels Faculty of Music
Date:	

	Current Fiscal Year	**Fiscal Year 1**	**Increment**	**Fiscal Year 2**	**Increment**	**Fiscal Year 3**	**Increment**	**Fiscal Year 4**	**Increment**	**Ongoing Program Funding**
	(Enter 0's if new program)	Budget Yr. 1	(change from current year to year 1)	Budget Yr. 2	(change from year 1 to year 2)	Budget Yr. 3	(change from year 2 to year 3)	Budget Yr. 4	(change from year 3 to year 4)	
CAPITAL INFORMATON										
Major Equipment		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Vehicles		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Renovations		$ 10,000	$ 10,000	$ -	$ (10,000)	$ 11,000	$ 11,000	$ 7,500	$ (3,500)	$ 7,500
Furniture		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
			$ -		$ -		$ -		$ -	$ -
Total Capital (C)	**$ -**	**$ 10,000**	**$ 10,000**	**$ -**	**$ (10,000)**	**$ 11,000**	**$ 11,000**	**$ 7,500**	**$ (3,500)**	**$ 7,500**

Revenue less Expenditures and Capital (A-(B+C))	**$ -**	**$ (567)**	**$ (567)**	**$ (0)**	**$ 567**	**$ (0)**	**$ 0**	**$ 0**	**$ 1**	**$ 0**
Funding Request		**$ -**		**$ -**		**$ -**		**$ -**		

SENATE PLANNING AND PRIORITY COMMITTEE (SPPC)

New Program Approval - Financial Form

FACULTY / SCHOOL Desautels Faculty of Music

PROGRAM MA (Music Research)

1. STAFFING REQUIREMENTS (FTE)	Year 1	Year 2	Year 3	Year 4	Year 5
New Academic Positions (FTE) (Appendix A)	-	-	-	-	-
New Professional and Support Positions (FTE) (Appendix A)	-	-	-	-	-
New Indirect Staff (FTE) (Appendix A)	-	-	-	-	-
Subtotal Staffing Requirements (FTE)	-	-	-	-	-

2. PROGRAM COSTS					
Direct Program Costs					
New Academic Salaries (incl bpl) (Appendix A)	$ -	$ -	$ -	$ -	$ -
Existing Academic Salaries (incl bpl) (Appendix A)	58,500	60,548	62,667	64,860	67,130
New Professional/Support Salaries (incl bpl) (Appendix A)	-	-	-	-	-
Existing Professional/Support Salaries (incl bpl) (Appendix A)	-	-	-	-	-
Operating Expenses (Appendix B)	6,420	6,925	6,989	6,334	7,776
Student (Graduate/Undergraduate) Support (Appendix C)	10,000	20,000	25,000	30,000	35,000
Major Equipment (Appendix D)	-	-	-	-	-
Vehicles (Appendix D)	-	-	-	-	-
Renovations (Appendix D)	10,000	-	11,000	7,500	20,000
Furniture (Appendix D)	-	-	-	-	-
Other Capital (Appendix D)	-	-	-	-	-
Subtotal Direct Program Costs	$ 84,920	$ 87,473	$ 105,656	$ 108,694	$ 129,906

Indirect Program Costs

New Indirect Salary Expenses (incl bpl) (Appendix A)	$ -	$ -	$ -	$ -	$ -
Existing Indirect Salary Expenses (incl bpl) (Appendix A)	3,600	3,726	3,856	3,991	4,131
Tax on Grant and Tuition Revenue	5,801	5,920	9,524	9,726	13,907
Administrative Overhead	1,030	1,097	1,752	1,866	2,649
Subtotal Indirect Program Costs	$ 10,431	$ 10,743	$ 15,132	$ 15,583	$ 20,687

Total Program Costs (Direct & Indirect)	**$ 95,351**	**$ 98,215**	**$ 120,787**	**$ 124,277**	**$ 150,593**

3. ENROLMENT	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Expected Enrolment (headcount)	2	4	5	6	7
Expected Enrolment (credit hours)	24	48	60	72	84

4. PROGRAM REVENUE ALLOCATED TO FACULTY/SCHOOL					
Operating Grant Revenue (see note)	$ 22,388	$ 22,388	$ 36,137	$ 36,137	$ 51,856
Tuition Revenue (Appendix E)					
• Credit Hour Based					
Undergraduate	-	-	-	-	-
Graduate	-	-	-	-	-
• Program Based	10,296	10,965	17,517	18,656	26,491
• Program/Course Specific Fees	-	-	-	-	-
• Other Compulsory Student Fees	567	588	610	633	985
Other revenue	-	-	-	-	-
Total Program Revenue	$ 33,251	$ 33,941	$ 54,264	$ 55,426	$ 79,332

5. EXISTING RESOURCES					
From Operations:					
Academic Salaries (Appendix A)	$ 58,500	$ 60,548	$ 62,667	$ 64,860	$ 67,130
Professional and Support Salaries (Appendix A)	-	-	-	-	-
Indirect Salaries (Appendix A)	3,600	3,726	3,856	3,991	4,131
Current/prior years surplus (carryover)					
From Other Sources:					
Subtotal Existing Resources	$ 62,100	$ 64,274	$ 66,523	$ 68,851	$ 71,261

6. Program shortfall (surplus) (Program Costs -Program Revenue - Existing Resources)	**$ 0**	**$ 0**	**$ 0**	**$ (0)**	**$ (0)**

Internal Funds Requested through Strategic Allocation					
Funds Requested of the Provincial Government					
Balance (should be zero)	$ 0	$ 0	$ 0	$ (0)	$ (0)

Kanchana Sankar — **May 4, 2020**

Submitted by Faculty/School Budget Officer (signature) — **Date**

Kelley Main, Acting Dean, FGS — **March 1, 2021**

Reviewed by Graduate Studies Business Manager — **Date**
(For graduate program submissions only)

May 5,2020

Chester Wojciechowski

Reviewed by University Budget Officer (signature) — **Date**

Average Salary Increase	3.5%
Average Benefits and Pay Levy	20%

Appendix A - Salary Expenses

SENATE PLANNING AND PRIORITY COMMITTEE
NEW PROGRAM APPROVAL PROCESS

NEW	Year 1		Year 2		Year 3		Year 4		Year 5	
Academic	FTE	Total Salary	FTE	Total Salary	FTE	Total Salary	FTE	Total Salary	FTE	Total Salary
Excluded Academic Admin	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
Professor	-	-	-	-	-	-	-	-	-	-
Assoc/Asst Professor or Senior Instructor	-	-	-	-	-	-	-	-	-	-
Lecturer/Instructor/Sessionals			-	-	-	-	-	-	-	-
Librarians	-	-	-	-	-	-	-	-	-	-
Teaching Assistants	-	-	-	-	-	-	-	-	-	-
Subtotal New Academic Salaries	-	-	-	-	-	-	-	-	-	-
Benefits and Pay Levy		-		-		-		-		-
Total New Academic Salaries (including BPL)	-	**$** -	-	**$** -	-	**$** -	-	**$** -	-	**$** -
Professional and Support Staff										
EMAPS	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
AESES	-	-	-	-	-	-	-	-	-	-
CUPE TA's	-	-	-	-	-	-	-	-	-	-
Subtotal New Professional and Support Staff	-	-	-	-	-	-	-	-	-	-
Benefits and Pay Levy		-		-		-		-		-
Total New Professional and Support Staff (incl. BPL)	-	**$** -	-	**$** -	-	**$** -	-	**$** -	-	**$** -
Indirect Staff (Within your faculty/school)										
EMAPS	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
AESES			-	-	-	-	-	-	-	-
CUPE TA's			-	-	-	-	-	-	-	-
Subtotal New Indirect Staff	-	-	-	-	-	-	-	-	-	-
Benefits and Pay Levy		-		-		-		-		-
Total New Indirect Staff (including BPL)	-	**$** -	-	**$** -	-	**$** -	-	**$** -	-	**$** -
Total New Staff		**$** -		**$** -		**$** -		**$** -		**$** -

Appendix A - Salary Expenses

SENATE PLANNING AND PRIORITY COMMITTEE
NEW PROGRAM APPROVAL PROCESS

EXISTING (Within your faculty/school)	Year 1		Year 2		Year 3		Year 4		Year 5	
Academic	**FTE**	**Total Salary**	**FTE**	**Total Salary**	**FTE**	**Total Salary**	**FTE**	**Total Salary**	**FTE**	**Total Salary**
Excluded Academic Admin	0.10	$ 9,000	0.10	$ 9,315	0.10	$ 9,641	0.10	$ 9,978	0.10	$ 10,328
Professor	-	-	-	-	-	-	-	-	-	-
Assoc/Asst Professor or Senior Instructor	0.40	36,000	0.40	37,260	0.40	38,564	0.40	39,914	0.40	41,311
Lecturer/Instructor/Sessionals	-	-	-	-	-	-	-	-	-	-
Librarians	0.05	3,750	0.05	3,881	0.05	4,017	0.05	4,158	0.05	4,303
Teaching Assistants	-	-	-	-	-	-	-	-	-	-
Subtotal Existing Academic Salaries	**0.55**	**48,750**	**0.55**	**50,456**	**0.55**	**52,222**	**0.55**	**54,050**	**0.55**	**55,942**
Benefits and Pay Levy		9,750		10,091		10,444		10,810		11,188
Total Existing Academic Salaries (including BPL)	**0.55**	**$ 58,500**	**0.55**	**$ 60,548**	**0.55**	**$ 62,667**	**0.55**	**$ 64,860**	**0.55**	**$ 67,130**
Professional and Support Staff										
EMAPS	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
AESES			-	-	-	-	-	-	-	-
CUPE TA's	-	-	-	-	-	-	-	-	-	-
Subtotal Existing Professional and Support Staff	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Benefits and Pay Levy		-		-		-		-		-
Total Existing Professional and Support Staff (incl. BPL)	**-**	**$ -**	**-**	**$ -**	**-**	**$ -**	**-**	**$ -**	**-**	**$ -**
Indirect Staff										
EMAPS	-	$ -	-	$ -	-	$ -	-	$ -	-	$ -
AESES	0.05	3,000	0.05	3,105	0.05	3,214	0.05	3,326	0.05	3,443
CUPE TA's	-	-	-	-	-	-	-	-	-	-
Subtotal Existing Indirect Staff	**0.05**	**3,000**	**0.05**	**3,105**	**0.05**	**3,214**	**0.05**	**3,326**	**0.05**	**3,443**
Benefits and Pay Levy		600		621		643		665		689
Total Existing Indirect Staff (including BPL)	**0.05**	**$ 3,600**	**0.05**	**$ 3,726**	**0.05**	**$ 3,856**	**0.05**	**$ 3,991**	**0.05**	**$ 4,131**
Total Existing Staff		**$ 62,100**		**$ 64,274**		**$ 66,523**		**$ 68,851**		**$ 71,261**
GRAND TOTAL		**$ 62,100**		**$ 64,274**		**$ 66,523**		**$ 68,851**		**$ 71,261**

Appendix B - Operating Expenses

SENATE PLANNING AND PRIORITY COMMITTEE
NEW PROGRAM APPROVAL PROCESS

	Direct Expenses	Year 1	Year 2	Year 3	Year 4	Year 5
700BGT	Travel - Budget (includes visiting speakers, orientation, research day)	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
701BGT	Hospitality - Budget	$ -	$ -	$ -	$ -	$ -
704BGT	Printing and Duplicating - Budget	$ 200	$ 400	$ 500	$ 500	$ 500
706BGT	Consumable Materials/Supplies Budget (includes computers)	$ -	$ -	$ -	$ -	$ -
708BGT	Telecommunications - Budget					
710BGT	Other Expenses (Nonconsumble) Budget	$ 1,220	$ 1,525	$ 1,489	$ 834	$ 2,276
713BGT	Insurance - Budget	$ -	$ -	$ -	$ -	$ -
716BGT	Externally Contracted Serv - Budget	$ -	$ -	$ -	$ -	$ -
718BGT	Professional Fees - Budget	$ -	$ -	$ -	$ -	$ -
740BGT	Repairs and Maintenance - Budget	$ -	$ -	$ -	$ -	$ -
	Subtotal Direct Operating	**$ 6,420**	**$ 6,925**	**$ 6,989**	**$ 6,334**	**$ 7,776**

Appendix C - Student Support

SENATE PLANNING AND PRIORITY COMMITTEE
NEW PROGRAM APPROVAL PROCESS

Graduate / Undergraduate Support Expense		Year 1	Year 2	Year 3	Year 4	Year 5
7700	Scholarships	$ 10,000	$ 20,000	$ 25,000	$ 30,000	$ 35,000
7710	Bursaries	$ -	$ -	$ -	$ -	$ -
7720	Awards					
	Subtotal Operating	**$ 10,000**	**$ 20,000**	**$ 25,000**	**$ 30,000**	**$ 35,000**

Appendix D - Capital Costs

SENATE PLANNING AND PRIORITY COMMITTEE
NEW PROGRAM APPROVAL PROCESS

	Year 1			Year 2			Year 3			Year 4			Year 5		
Capital Item	**QTY**	**Unit Cost**	**Total**	**QTY**	**Unit Cost**	**Total**	**QTY**	**Unit Cost**	**Total**	**QTY**	**Unit Cost**	**Total**	**QTY**	**Unit Cost**	**Total**
Major Equipment	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -
Vehicles	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -
Renovations	1.00	$10,400	$ 10,000			$ -	1.00	$11,000	$ 11,000	1.00	$ 7,500	$ 7,500	1.00	$20,000	$ 20,000
Furniture	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -	-	$ -	$ -
Other (*list*)			-			-			-			-			-
…															
Subtotal Operating			**$ -**			**$ -**			**$ 11,000**			**$ 7,500**			**$ 20,000**

Appendix E - Tuition Fee Increase 6.5%

SENATE PLANNING AND PRIORITY COMMITTEE
NEW PROGRAM APPROVAL PROCESS

1. EXPECTED ENROLMENT	Year 1	Year 2	Year 3	Year 4	Year 5
Headcount					
Undergraduate	-	-	-	-	-
Graduate	2	2	3	3	4
Graduate (continuing only)	-	2	2	3	3
Credit Hours					
Undergraduate	-	-	-	-	-
Graduate	24	48	**60**	72	84

2. TUITION REVENUE GENERATED BY THE PROGRAM					
• Credit Hour Based - (enter credit hour rate in yr 1)	$ -	$ -	$ -	$ -	$ -
Undergraduate	-	-	-	-	-
Graduate	-	-	-	-	-
• Program Based - (enter annual program fee in yr 1)	$ 5,148	$ 5,483	$ 5,839	$ 6,219	$ 6,623
Undergraduate	-	-	-	-	-
Graduate	10,296	10,965	17,517	18,656	26,491
Total Tuition Fees	**$ 10,296**	**$ 13,965**	**$ 20,712**	**$ 23,760**	**$ 31,927**
• Continuing Fee - (enter annual continuing fee in yr 2)		$ 1,500	$ 1,598	$ 1,701	$ 1,812
Graduate	-	3,000	3,195	5,104	5,436
• Program/Course Specific Fees					
Lab Fees - (enter amount in applicable years)					
Field Trip Fees - (enter amount in applicable years)					
(Fee description/rate)					

….. *(add as required)…*					
….. *(add as required)…*					
Total Program/Course Specific Fees	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

TOTAL TUITION AND FEES GENERATED BY THE PROGRAM	**$ 10,296**	**$ 16,965**	**$ 23,907**	**$ 28,864**	**$ 37,362**

3. TUITION REVENUE ALLOCATED TO THE FACULTY					
• Credit Hour Based - Undergraduate (enter amount)					
• Credit Hour Based - Graduate	-	-	-	-	-
• Program Based	10,296	10,965	17,517	18,656	26,491
• Program/Course Specific Fees	-	-	-	-	-
• Other Compulsory Student Fees (enter amount)	567	588	610	633	985
TOTAL TUITION REVENUE ALLOCATED TO THE FACULTY	**$ 10,863**	**$ 11,553**	**$ 18,127**	**$ 19,289**	**$ 27,476**

Operating Worksheet

Acct	Expense	Year 1	Year 2	Year 3	Year 4	Year 5
700BGT	**Travel and Conferences**	$ -	$ -	$ -	$ -	$ -
7001	Travel Academic					
7002	Travel Administration					
7003	Relocation					
7004	Staff Recruitment					
7005	Field Trips					
7006	Team Travel					
7007	Local Travel					
7009	Student Recruitment					
7010	Student Travel					
7130	Airfare					
7131	Accommodation					
7132	Meals (Per Diem-No receipts)					
7133	Meals (with receipts)					
7134	Mileage (Km's)					
7135	Parking					
7136	Car Rental					
7137	Conference Registration					
7138	Taxis					
7139	Misc Travel/Incidentals					
7676	Hospitality					
704BGT	**Printing and Duplicating - Budget**	$ -	$ -	$ -	$ -	$ -
7040	Printing					
7041	Copying					
706BGT	**Consumable Materials/Supplies Budgt**	$ -	$ -	$ -	$ -	$ -
7060	Office Supplies					
7061	Lab Supplies					
7062	Audio Visual Supplies					
7063	Agricultural Supplies					
7064	Safety Supplies					
7065	Sports and Athletic Supplies					
7066	Books and Subscriptions					
7067	Other Supplies					
7068	Computing Supplies					
7069	Maintenance and Cleaning Supplies					
7070	Dental Supplies					
7071	Equipment Foreign Operations					
7072	Supplies Foreign Operations					
708BGT	**Telecommunications - Budget**	$ -	$ -	$ -	$ -	$ -
7080	IST Telecommunications					
7082	Physical Plant Postage					
7085	Departmental Communications					

Operating Worksheet

Acct	Expense	Year 1	Year 2	Year 3	Year 4	Year 5
710BGT	**Other Expenses (Nonconsumble) Budgt**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
7100	Affiliated Personnel Costs					
7101	Professional Development					
7102	Professional Memberships					
7103	Conferences/Events Hosted by U of M					
7104	Other Services					
7106	Bad Debts					
7107	Advertising and Promotion					
7108	Licenses and Permits					
7109	Software Maintenance					
7110	Staff Benefits					
7111	Other Non-Consumable Expenses					
7114	Internal Financing Expense					
7116	Internal Services Expense					
718BGT	**Professional and External Services**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
7160	Externally Contracted Services					
7180	Professional Fees					
7185	Investment Management Expenses					
740BGT	**Repairs and Maintenance**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
7400	Equipment Repairs & Maintenance					
7401	Building Repairs & Maintenance					
7402	Equipment Rental					
7403	Grounds Maintenance					

Existing Courses used in Proposed M.A. in Music Research

Existing GRAD Courses (with Academic Calendar Descriptions)

GRAD 7000 Master's Thesis (0 CRH)
Should show in general, that the student has mastery of the field and is fully conversant with relevant literature. The process, schedule, format, and style must meet the requirements of the Faculty of Graduate Studies. After approval of the thesis by the thesis examining committee and the completion of any revisions required by that committee, two copies of the thesis must be submitted to the Graduate Studies general office. Thesis students must pass an oral examination on the subject of the thesis and matters relating thereto as prescribed by the department. This course is graded pass/fail.

GRAD 7030 Master's Practicum (0 CRH)
Takes the form of an exercise in the practical application of knowledge and skills, involving the careful definition of a problem and a report on the results in a manner suitable for evaluation by an examining committee. This course is graded pass/fail.

GRAD 7300 Research Integrity Tutorial (0 CRH)
In a highly interactive environment, participants will be exposed to practical advice on how to deal with challenging situations that may arise while doing research within their own area of expertise. The course also addresses the latest standards, codes, and policies in the responsible conduct of research both locally and globally. Online tutorial delivered through UM Learn with no pre- or co-requisites. This course graded on a pass/fail basis.

GRAD 7500 Academic Integrity Tutorial (0 CRH)
New and continuing Masters and Doctoral students will learn about academic integrity by participating in online tutorials. A brief learning-check will be written after the tutorials have been viewed. Students newly admitted to a graduate program must successfully complete this course within the first term of registration. The course grade is a pass/fail.

Existing MUSC Course (with Academic Calendar Description)

MUSC 7050 Bibliography and Research Methods (3 CRH)
The techniques of bibliography and research methods in music are studied through research projects in selected areas relevant to each student's major field of study. Skill is developed in the use of primary and secondary sources, expository writing and documentation.

Course Proposals (with Academic Calendar Description)

MUSC 7100 Proseminar in Musicology +3
Survey of historiography and methodological approaches in musicology through critical examination of significant texts. Topics will include the history of the discipline, significant intellectual developments in the field, and key concepts in historical musicology and ethnomusicology.

MUSC 7120 Seminar in Musicology +3
Advanced graduate seminar investigating selected topics in musicology and/or music history. The content of this course varies and may be repeated for credit only when the topic subtitle differs from one previously taken.

MUSC 7130 Seminar in Ethnomusicology +3
Advanced graduate seminar investigating selected topics in ethnomusicology. The content of this course varies and may be repeated for credit only when the topic subtitle differs from one previously taken.

MUSC 7200 Proseminar in Music Theory +3
A survey of methodological approaches in music theory and analysis, related to tonal and post-tonal music. Critical examination of significant texts and analysis of selected repertoire, highlighting connections between analysis and musical performance.

MUSC 7210 Seminar in Music Theory and Analysis +3
Advanced graduate seminar investigating selected topics in music theory and music analysis. The content of this course varies and may be repeated for credit only when the topic subtitle differs from one previously taken.

MUSC 7240 Music Theory Pedagogy +3
A practice-based graduate seminar on philosophies and methodologies used in teaching undergraduate music theory. Critical examination of pedagogical resources, teaching techniques, assessment,
and curriculum design.

Total Credit Hour Value of Course Proposals +18

University of Manitoba Libraries

Statement for New Program

Faculty	Music
Program	MA in Music Research

The Libraries' collection can support this new programme with additional books the library will purchase.

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.

The University of Manitoba Libraries hold resources to support learning and research at this level, and will be able to support the interdisciplinary nature of this research programme with resources at various units. Most notable to this program is the collection held at the Eckhardt-Gramatté Music Library, which houses literature about music, scores/sheet music, reference materials, and audio/video recordings.

It is expected that any additional materials that may be needed in the future can either be purchased or acquired through inter-library loan.

Katherine J. Penner
Music Liaison Librarian,
Eckhardt-Gramatté Music Library

Donna Sikorsky
Acting Head, Eckhardt-Gramatté Music Library

Kristen Kruse
Coordinator, Collections Management

Lisa Hanson O'Hara
Vice Provost (Libraries) & University Librarian

June 22, 2020
Date

University of Manitoba Libraries

Statement for Graduate Curriculum Change

Faculty	Music
Department	
Course #	MUSC 7100
Course Name	Proseminar in Musicology

The Libraries' collection can support this new course, 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.

Please advise the liaison librarian about any future changes to the special topics discussed in this course so that they have an opportunity to assess the collection's coverage of new topics.

Katherine J. Penner
Music Librarian,
Eckhardt-Gramatté Music Library

Kristen Kruse

Kristen Kruse
Coordinator, Collections Management

Donna Sikorsky
Acting Head,
Eckhardt-Gramatté Music Library

Lisa Hanson O'Hara
Vice Provost (Libraries) & University Librarian

June 16, 2020
Date

University of Manitoba Libraries

Statement for Graduate Curriculum Change

Faculty	Music
Department	
Course #	MUSC 7120
Course Name	Seminar in Musicology

The Libraries' collection can support this new course, 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.

Please advise the liaison librarian about any future changes to the special topics discussed in this course so that they have an opportunity to assess the collection's coverage of new topics.

Katherine J. Penner
Music Librarian,
Eckhardt-Gramatté Music Library

Donna Sikorsky
Acting Head,
Eckhardt-Gramatté Music Library

Kristen Kruse
Coordinator, Collections Management

Lisa Hanson O'Hara
Vice Provost (Libraries) & University Librarian

June 16, 2020
Date

University of Manitoba Libraries

Statement for Graduate Curriculum Change

Faculty	Music
Department	
Course #	MUSC 7130
Course Name	Seminar in Ethnomusicology

The Libraries' collection can support this new course, 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.

Please advise the liaison librarian about any future changes to the special topics discussed in this course so that they have an opportunity to assess the collection's coverage of new topics.

Katherine J. Penner
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Kristen Kruse
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Lisa Hanson O'Hara
Vice Provost (Libraries) & University Librarian

June 16, 2020
Date

University of Manitoba Libraries

Statement for Graduate Curriculum Change

Faculty	Music
Department	
Course #	MUSC 7200
Course Name	Proseminar in Music Theory

The Libraries' collection can support this new course with additional books the library will purchase.

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.

Please advise the liaison librarian about any future changes to the special topics discussed in this course so that they have an opportunity to assess the collection's coverage of new topics.

Katherine J. Penner
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Eckhardt-Gramatté Music Library

Donna Sikorsky
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Kristen Kruse
Coordinator, Collections Management

Lisa Hanson O'Hara
Vice Provost (Libraries) & University Librarian

June 22, 2020
Date

University of Manitoba Libraries

Statement for Graduate Curriculum Change

Faculty	Music
Department	
Course #	MUSC 7210
Course Name	Seminar in Music Theory and Analysis

The Libraries' collection can support this new course with additional books the library will purchase.

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.

Please advise the liaison librarian about any future changes to the special topics discussed in this course so that they have an opportunity to assess the collection's coverage of new topics.

Katherine J. Penner
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Lisa Hanson O'Hara
Vice Provost (Libraries) & University Librarian

June 22, 2020
Date

University of Manitoba Libraries

Statement for Graduate Curriculum Change

Faculty	Music
Department	
Course #	MUSC 7240
Course Name	Music Theory Pedagogy

The Libraries' collection can support this new course with additional books the library will purchase.

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.

Please advise the liaison librarian about any future changes to the special topics discussed in this course so that they have an opportunity to assess the collection's coverage of new topics.

Katherine J. Penner
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Eckhardt-Gramatté Music Library

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Lisa Hanson O'Hara
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June 22, 2020
Date

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12 August 2020

Kelley Main, Ph.D.
Associate Dean (Social Sciences & Humanities)
Faculty of Graduate Studies
500 University Centre
University of Manitoba
Winnipeg, MB R3T 2N2

Dear Dr. Main:

As requested in Andrea Kailer's 4 August 2020 email to Dr. Edward Jurkowski, please find attached a draft of the Supplementary Regulations for the proposed M.A. in Music Research. The proposed degree differs substantially from the M.Mus. programs currently offered in the Desautels Faculty of Music (DFOM) in its closer alignment with standard academic graduate programs in the humanities. As such, I have developed Supplementary Regulations distinct from these M.Mus. programs. These Supplementary Regulations were endorsed by the DFOM Faculty Council on 12 August 2020.

Regarding Bona Fide Academic Requirements (BFARS) for the proposed M.A. in Music Research, the DFOM Faculty Council also endorsed on 12 August 2020 the adoption of the Faculty of Graduate Studies Bona Fide Academic Requirements without supplement. Please note that this endorsement applies only to the proposed M.A. in Music Research. M.Mus. programs will continue to adhere to the supplemental BFARS created for the M.Mus. in 2018.

Please contact me should you have questions or concerns, or should you require additional information.

Many thanks for your attention to this proposal. I look forward to working with the Programs & Guidelines Committee to strengthen the substance of the program and the language of the policy documents.

Sincerely,

James V. Maiello, Ph.D.
Associate Dean (Graduate Programs & Research)
Desautels Faculty of Music

cc: Dr. Edward Jurkowski, Dean, Desautels Faculty of Music
Ms. Andrea Kailer, Assistant to the Associate Deans & Program Coordinator, FGS

Supplementary Regulations
Faculty of Graduate Studies (FGS)

Name of Unit/Program: Music (M.A. in Music Research)

FGS Academic Guide Regulation 2020/21	Supplementary Regulation
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 supplementary regulations for these specific regulations. All unit supplementary regulations require approval of the Faculty of Graduate Studies. **Definitions** The "Dean, Faculty of Graduate Studies" shall be taken to mean the 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 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	Desautels Faculty of Music University of Manitoba 150 Dafoe Road—Taché Arts Complex Winnipeg, MB R3T 2N2 www.music.umanitoba.ca

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.

Applicants to the M.A. in Music Research must submit two (2) academic writing samples as part of their application materials. Writing samples should provide evidence of the student's research and writing skills.

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.

Deadlines for receipt by the Faculty of Graduate Studies Office for applications and all supporting material:

Session	Start Date	Canadian/US	International
Fall	September	December 1	December 1
Winter	January	June 15	June 15
Summer	N/A	N/A	N/A

1.1.3 Application Fee

A $100.00 (CDN) non-refundable fee must accompany admission applications from all Canadian, Permanent Resident, and International applicants. The Physician Assistant Studies and Orthodontics programs charge an additional fee of $25 and $50, respectively.

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

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specific test or test scores greater than those indicated above. Students should check department/unit supplementary 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.	
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 supplementary regulations of the particular department/unit, and if required, the scores must be submitted at the time of application.	Students admitted to the M.A. in Music Research program must demonstrate knowledge of music theory and music history comparable to that of B.Mus. graduates of the Desautels Faculty of Music. This will normally be assessed by diagnostic examinations administered in the week preceding the first week of classes in the Fall semester. Appropriate review materials will be made available to students in advance of the diagnostic examinations. Examinations will be evaluated by members of the music theory and musicology faculty, respectively. Incoming graduate students who do not achieve satisfactory results on any portion of these diagnostic examinations may be required to undertake remediation. Such remediation will normally take the form of successful completion of undergraduate coursework, normally not to exceed 9 CRH, in the Desautels Faculty of Music, which will not count for credit toward the M.A. in Music Research. The associate dean responsible for graduate programs will assign remedial coursework on the advice of the musicology and music theory faculty.
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).	

concentrated in aging. To be eligible, a "Student intention to receive the Graduate Focus on Aging Concentration" form must be submitted to the Faculty of Graduate Studies. Masters or Doctoral students must complete the requirements of the program to which they have been admitted and the requirements of the Graduate Focus on Aging Concentration. The Graduate Focus on Aging Concentration requirements include: 1. Six (6) credit hours of graduate (7000-level or higher) courses that focus on aging and are approved by the student's Advisory Committee; 2. A thesis/practicum on an aging-related topic; 3. Having at least one Advisory committee member who is officially affiliated with the Centre on Aging as a Research Affiliate; and 4. Participating in the annual Spring Research Symposium of the Centre on Aging at least once as a poster presenter. Graduate students may be able to attain their 6 credit hours of courses within the existing course requirements of their graduate program. Students must attain a minimum grade of C+ (or higher, if stipulated in the department/unit supplementary regulations), for the required 6 credit hours of aging courses. Graduate students who are not in a thesis/practicum will be considered on a case-by-case basis. Student progress in the Graduate Focus on Aging Concentration would normally be discussed with the student's Advisory committee, and progress documented on the "Graduate Focus on Aging Concentration Completion" form which must accompany the Progress Report form submitted to the Faculty of Graduate Studies. The final Graduate Focus on Aging Concentration Completion form must be submitted no later than at least one week prior to the FGS deadline for graduands to submit theses/practica and other reports.	
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.	*Specifically with respect to the M.A. in Music Research, please indicate whether or not your unit permits admission to the Pre-Master's* The M.A. in Music Research does not permit admission to the Pre-Master's progam at this time.
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	

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The regulations for the Master's program shall also prevail for diploma programs. All students should consult the department/unit supplementary 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.	For admission to the M.A. in Music Research, applicants must normally hold a Bachelor of Music, a Bachelor of Arts with a major in music, or a related degree with sufficient background in the content area (as determined by the Desautels Faculty of Music) from an accredited post-secondary institution recognized by the University of Manitoba. Applications for admission to the M.A. in Music Research are reviewed by the regular musicology and music theory faculty of the Desautels Faculty of Music. Candidates for admission are recommended by the Area Head to the DFOM Admissions Coordinator, who coordinates the remaining admissions process with the Faculty of Graduate Studies.
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	

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department/unit and may follow the department/unit's supplementary 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 supplementary 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 supplementary regulations indicate otherwise. The student must complete the thesis/practicum at The University of Manitoba.	The Desautels Faculty of Music offers the thesis/practicum route to the M.A. in Music Research. A total of 21 CH of coursework are required, as well as a thesis or practicum. MUSC 7050 Bibliography & Research Methods (3) 3 CH from List A below (7000-level musicology courses) 3 CH from List B below (7000-level musicology courses) 12 CH of coursework chosen by advisement. At least 9 CH must be musicology and/or music theory courses at the 7000-level unless approved by the Advisory Committee and the Faculty of Music's Associate Dean responsible for graduate programs. List A: 7000-level Musiciology Courses: MUSC 7100 Proseminar in Musicology (3 CH) MUSC 7120 Seminar in Musicology (3 CH)* MUSC 7130 Seminar in Ethnomusicology (3 CH)* List B: 7000-level Music Theory Courses: MUSC 7200 Proseminar in Music Theory (3 CH) MUSC 7210 Seminar in Music Theory/Analysis (3 CH)* MUSC 7240: Music Theory Pedagogy (3 CH) *Please note that the content for MUSC 7120, MUSC 7130, and MUSC 7210 will change each time these courses are offered. This topical change will be reflected in the course subtitle; students may repeat these courses for credit provided the course subtitle differs.
4.4.2 Course-based or 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 fourty-eight (48) credit hours of coursework is allowed unless a department/unit's supplementary regulations indicate otherwise. A comprehensive examination is required for some course-based programs.	
4.4.3 Accredited Professional Route	

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The credit hours and course requirements shall reflect the requirements of the department/unit's external accrediting body. Students should check department/unit supplementary regulations regarding this requirement.	
4.4.4 Language Requirements Some department/units specify a language requirement for the Master's degree. Students should check department/unit supplementary regulations regarding this requirement.	Reading knowledge of one language other than English—normally French, German, or Italian— is required of all students in the M.A. in Music Research program. Other languages must be approved by the Advisory Committee. The language requirement may be satisfied by one of the following: 1. Evidence of the completion of an undergraduate language course at the 1000 level or above, with a grade of B (3.0) or better, in the five years preceding acceptance into the program; 2. Successful completion of a language exam administered by the Faculty of Music. This exam shall consist of a timed, proctored translation, using a dictionary, of a passage in the chosen language; 3. Completion of a University of Manitoba language course at the 1000 or higher level or above, with a grade of B+ (3.0) or better, after registration in the Master's Degree program (e.g. as auxiliary courses). 4. Determination by the Graduate Committee, upon recommendation of the student's Advisory Committee, that the requirement has been met through previous education and/or experience.
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 "Recommendation for 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. • Courses taken while in the Pre-Masters program may not be used for credit in a Master's program. Regardless of the extent of advanced credit granted, all students are required to pay all applicable program fees.	

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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 not exceed 50% of the minimum credit hours of coursework required of the student's graduate program at The University of Manitoba. 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 supplementary 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 supplementary 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 and 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;	Upon admission, M.A. in Music Research students normally indicate a preferred advisor. If none is indicated, or if the student's first choice is unavailable, an alternate will be arranged in consultation with the musicology/music theory faculty and the Associate Dean responsible for graduate programs.

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Additional specifications, if any, regarding the advisory committee are found in the department/unit supplementary regulations and students should consult these regulations for specific requirements.	
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 supplementary regulations and students should consult these regulations for specific requirements. If there is an advisory committee and two or more committee members are in a personal relationship, the "Conflict of Interest Disclosure Form" (https://umanitoba.ca/admin/governance/governing_documents/community/962.html) must be completed and submitted to the Faculty of Graduate Studies. See The University of Manitoba's Conflict of Interest policy: https://umanitoba.ca/admin/governance/governing_documents/community/248.html.	
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 supplementary regulations and students should consult these regulations for specific requirements. If there is an advisory committee and two or more committee members are in a personal relationship, the "Conflict of Interest Disclosure Form" (https://umanitoba.ca/admin/governance/governing_documents/community/962.html) must be completed and submitted to the Faculty of Graduate Studies. See The University of Manitoba's Conflict of Interest policy: https://umanitoba.ca/admin/governance/governing_documents/community/248.html.	
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.	Students wishing to transfer between the thesis and practicum options may do so with the approval of the Advisory Committee and the Associate Dean responsible for graduate programs.
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/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.	

• 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 supplementary 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 supplementary 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 supplementary 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 practicum. 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 supplementary 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 M.A. in Music Research offers thesis and practicum options. <u>Thesis Option:</u> Students electing the thesis option will write a research-based thesis, normally of approximately 20,000-30,000 words (excluding bibliography, footnotes, figures, etc.). The overall purpose of the thesis is to allow the student to conceive and execute a major research study that demonstrates mastery in the content area and highly developed research, writing, and critical thinking skills. The thesis must address a significant topic within the field of music research; it must be functionally related to the student's program. For example, musicological, ethnomusicological, and/or music-theoretical studies, issues of performance practice, and/or organology are all appropriate general areas of study, though this list is representative, not exhaustive. <u>Practicum Option:</u> Students electing the practicum option will develop a project that applies music research of similar quality and scope to the thesis described above. The overall purpose of the practicum is to allow the student to conceive and execute a major project that demonstrates mastery in the content area and highly developed research, writing, and critical thinking skills in a manner for which a traditional thesis format is not appropriate. For example, practica may include lecture-recitals, major editing projects, etc. This list is representative, not exhaustive. The practicum must address a significant topic within the field of music research; it must be functionally related to the student's program. For example, musicological, ethnomusicological, and/or music- theoretical studies, issues of performance practice, and/or organology are all appropriate general areas of study, though this list is representative, not exhaustive. <u>Thesis/Practicum Proposal:</u> The thesis/practicum proposal is normally submitted to the student's Advisory Committee at

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	the end of the first year of study and will normally be approved or rejected by the Advisory Committee within one (1) month of submission. The proposal should present a clear research problem, a critical review of the current literature and the historiography related to the chosen topic, as well as an overview of proposed theoretical and/or methodological approaches and how they will be applied in the thesis/practicum. The proposal must include a bibliography. For the thesis, a preliminary outline of chapters/major sections is required. For the practicum, a detailed preliminary overview of the format, scope, and outcomes of the project is required.
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 supplementary 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 and students should consult department/unit supplementary regulations for specific requirements. Graduate students, Post-Doctoral fellows, and Research Assistants or Associates may not serve on graduate student examining committees. If two or more examining committee members are in a personal relationship, the "Conflict of Interest Disclosure Form" (https://umanitoba.ca/admin/governance/governing_documents/community/962.html) must be completed and submitted to the Faculty of Graduate Studies. See The University of Manitoba's Conflict of Interest policy: https://umanitoba.ca/admin/governance/governing_documents/community/248.html. 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.	Occasionally, a qualified external examiner from outside the University of Manitoba may be invited to join the examining committee. External examiners must be approved by the Faculty of Music's Associate Dean (or designate) responsible for graduate programs. Normally, an external examiner will be faculty member in music or an allied discipline at another post-secondary educational institution, a professional musician, or another professional with specialist expertise related to the student's program.

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 supplementary regulations for specific requirements. A student has the right to an examination of the thesis/practicum if they believe it is ready for examination. It is the department/unit's responsibility to advise the student of any risk involved should they 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. Only under very exceptional 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, Université de Saint-Boniface, or the St. Boniface Hospital Albrechtsen Research Centre normally during regular 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 (or delegate). 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 supplementary 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 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 their opinion by their signature. If two (2) or more examiners do not approve the thesis/practicum, the student is deemed to have failed the examination.	An oral examination will be scheduled once the thesis has been deemed acceptable by members of the examining committee. The duration of the oral examination will normally be 60-90 minutes. The student will present introductory comment on the thesis or practicum (approximately 10 minutes in duration), followed by questions from the examiners. Although the oral examination is principally a defence of the thesis, the candidate is also required to demonstrate a sound knowledge of the field in which the thesis/practicum has been undertaken. When the Chair of the Examining Committee is satisfied that the questioning is complete (not to exceed 90 minutes), the student will be asked to withdraw while the committee deliberates and arrives at an assessment. The committee will recall the student an inform them of the result. The oral examination is assessed pass/fail, but the chair of the Examining Committee will submit a report to the Associate Dean responsible for graduate programs that provides a concrete evaluation of the student's performance in the examination. Following completion of the examination of the thesis or practicum, the examiners will determine the nature of and procedures for approval of any revisions that will be required prior to submission of the final copy of the thesis/practicum to the Faculty of Graduate Studies. Normally, the advisor is responsible for ensuring that revisions are completed according to the instructions from the examining committee.
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 report from the Chair will address proposed measures to remediate the failure and it will

FGS Academic Guide Regulation 2020/21	Supplementary Regulation
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/practicum; • The oral examination; 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.	indicate a tentative timeline for when the second attempt should occur.
4.8.2 Course-based or 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 supplementary regulations. In those department/units where comprehensive examinations are required, students should consult the department/unit's supplementary 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.	
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 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).	
4.11 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	

WINNIPEG SYMPHONY ORCHESTRA

October 6, 2020

James V. Maiello, Ph.D.
Desautels Faculty of Music
University of Manitoba
150 Dafoe Road West—Taché Arts Complex
Winnipeg, MB R3T 2N2

Dear Dr. Maiello,

I am writing in support of the creation of a Master of Arts in Music Research.

There are many ways in which training in music, music history, theory, musicology and research methods can be a great advantage to the student and to the workplaces in the cultural sector and beyond. While the development of performing musicians and music educators is an obvious focus of activities for an institution like the Desautels Faculty of Music, the advanced training of scholars in this related area brings a whole series of additional benefits to the U of M and to the community as a whole.

Research, writing, and researching music by people with these highly developed skills can add immeasurably to the performance culture within organizations, to the field of music criticism, or to the strengths of organizations such as the Winnipeg Symphony Orchestra. Building the capacity of those who enter careers in arts administration, public policy, broadcasting, music criticism, journalism, and artistic programming roles.

I would be pleased to provide additional support to this letter, I would be pleased to do so. If the program would be one that would offer a co-op option for the students, the WSO would be pleased to have a student do a placement with our artistic planning or marketing departments.

Sincerely,

Trudy Schroeder

Trudy Schroeder, OM, MBA, ARCT, BA
Executive Director

University of Manitoba | Faculty of Arts

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September 28, 2020

James V. Maiello
Associate Dean, Graduate Programs and Research
Desautels Faculty of Music
University of Manitoba

Dear James,

I am very pleased to write a letter in support of the Desautels Faculty of Music's proposal to establish an M.A. program in Music Research. I understand that in addition to teaching the high-level critical skills expected of such a program, Music Research will also include instruction in music theory and musicology.

The Department of English, Theatre, Film & Media (ETFM) is an interdisciplinary one, with three inter-related programs. Our Theatre program combines rigourous academic courses in drama with equally challenging courses in which acting, directing, and stage management skills are taught and then applied in a variety of production opportunities. The scope of creative work in our Film Studies is less broad, but students in that program study a range of approaches to cinema, and have the chance to learn both introductory and advanced filmmaking skills. In the English program, students can enrol in creative writing courses as well as courses in textual analysis and historical literature. I mention the details of our department streams because the possibilities and benefits of the new program of study in Music Research are numerous, and exciting, and touch on all three elements of my department.

In each program in ETFM, there are areas of focus that could very easily connect with the Music Research program. There are already some informal connections between Music and Theatre born in part because of shared space in Gail Asper Centre for Performing Arts. But a graduate program in Music Research could extend the possibilities for collaborative production work between students in Theatre, and grad students in the Desautels Faculty. Students in the Music Research program would be able to tap into the multidisciplinary expertise of faculty in ETFM, who could act as committee members, for example. Interdisciplinary and multi-media projects led by faculty from both the Music Research program and programs in our department also offer much potential for high-level conceptual exploration, and for practical application of interdisciplinary skills. Projects exploring sonic effects in experimental films, as well as the communicative and affective dimensions of film scores come to mind right away. Research and production links between this proposed program and ETFM would also provide opportunities for projects that could qualify for internal and external funding, enhancing the reach and profile of academic staff and graduate students involved in these projects. It is easy to imagine, for example, proposals that engaged several of the pillars of the University's Strategic Plan, and that explored ways of indigenizing music research and performance.

The Department of English, Theatre, Film & Media is very supportive of this proposal, and we look forward to rich and varied collaborations with students and faculty committed to the establishment of this new program.

Sincerely,

Brenda Austin-Smith

Brenda Austin-Smith
Head

University of Manitoba Desautels Faculty of Music
MA in Music Research Program Proposal
Report of the Review Committee

Dr. John Roeder, University of British Columbia / Dr. Robin Elliott, University of Toronto

The Review Committee (RC) conducted an on-site visit of the University of Manitoba (UM) via Zoom October 28–29, 2020. The RC spoke with UM Faculty of Graduate Studies and Desautels Faculty of Music (DFOM) administrators, as well as faculty, staff, the UM music librarian, and former students of the UM music program. Prior to the site visit, the RC received a video tour of the DFOM facilities and the 146-page program proposal. In this report we address the six points outlined in the "Review Committee—Assessment Guidelines".

1. Comparison with related programs to which the reviewers are familiar

There are currently 15 MA programs in some aspect of music research across Canada. These do not exactly correspond with the institutions of the U15 Group of Canadian Research Universities (https://u15.ca/), of which the University of Manitoba is a member. Of the U15 group, Manitoba, McMaster, Queen's, and Waterloo do not (yet) offer an MA in any area of music research, whereas Memorial, Carleton, Regina, and Victoria (not U15 members) do offer such a degree. Canadian universities which offer an MA in some area of music research, from east to west, are as follows: Memorial, Dalhousie, Laval, Montréal, McGill, Ottawa, Carleton, Toronto, Western, Regina, Saskatchewan, Alberta, Calgary, UBC, and Victoria.

None of these universities offers an MA in Music Research. Almost all MA programs in Canadian universities are situated within one of the three main sub-disciplines of music research: ethnomusicology, musicology, or music theory. Memorial, for example, offers only an MA in ethnomusicology, and Dalhousie offers only an MA in musicology. Perhaps the programs most similar to the one proposed by UM are the MA in Music and Culture at Carleton University and the MA in Music at the University of Ottawa. Carleton offers an interdisciplinary approach to music research grounded in cultural theory. The Ottawa MA includes courses in music theory and musicology, but not ethnomusicology; it also (like the UM proposal) includes the possibility of doing a practicum instead of a thesis as the capstone project.

All of the MA programs in music across Canada require two years of study, with the exception of a recently introduced one-year (12 month) MA in musicology or music theory at Western University (https://music.uwo.ca/graduate/new-ma-programs.html). The MA is usually offered with either a thesis or coursework option; Ottawa seems to be the only other program to offer the practicum option (instead of a thesis) that UM proposes. Application requirements across virtually all of the MA programs under review include completion of a BMus (or BA with music specialization), with a minimum B or B+ average; materials requested include a CV, a letter of intent, 1 to 3 writing samples, transcripts, 2 or 3 letters of reference, an online form, and a processing fee. A small minority of programs require a prospective student to have identified and secured the agreement of a potential supervisor for their thesis research. The UM proposal of 24 credit hours is standard; a few programs require somewhat fewer hours and an even smaller number require more, but 24 hours is the average credit requirement.

Given that there are 15 other MA programs across Canada in the various sub-disciplines of music research, one might ask, is there a need for yet another one? There are several good reasons in support of the proposal. One is to give graduates of the undergraduate music programs

in Manitoba an MA option closer to home. Comparable MA programs in Saskatchewan are not very active and with the recent retirement or transfer of three of the senior musicologists in Alberta (two at U of A and one at Calgary), the timing is good for the launch of a vigorous new program in Western Canada. DFOM, with its cohort of younger faculty members, is well placed to pitch this new program to prospective graduate students. The branding of the UM degree as an MA in Music Research helps this degree program to stand out in a crowded field. Music students who are fresh out of their undergraduate degree studies and enjoy music research may want to keep their options open in terms of area of research specialization. The proposed UM MA degree gives them the chance to continue cultivating their interests in music research at an advanced level before making up their mind to continue in musicology, music theory, or ethnomusicology (assuming that they do decide to go on to a doctoral degree program). With faculty strengths in musicology, music theory, and to a lesser extent in ethnomusicology (as outlined in greater detail below), the DFOM is well positioned to launch the proposed MA program.

2. BREADTH AND DEPTH OF THE CURRICULUM

The proposed array of courses offers students a solid grounding in the basic principles of music research. Courses in musicology, ethnomusicology, and music theory offer an appropriate mix of standard, foundational topics and more advanced courses that reflect faculty research specialities.

7050 (Bibliography and Research Methods) is foundational to all further work in the MA degree program. No course outline was supplied, but a course similar to this one is a required first-year offering in virtually all MA level courses in music research across Canada. Any DFOM faculty member in musicology or music theory would be able to teach this course.

7100 (Proseminar in Musicology) offers a wide-ranging introduction to the field of musicology, from its origins in Germany in the 19th century up to 21st-century developments in the field. The course outline provided is admirably thorough, with a comprehensive bibliography of readings and a capstone project of a literature review / annotated bibliography. The course provides an excellent preparation for all further work in musicology.

7120 (Seminar in Musicology) is a place holder for a range of more specialized courses, the content of which will change each year and will reflect the research specializations of DFOM musicology faculty members. The course outline supplied ("Plainchant & Liturgy in Medieval Europe") offers an excellent introduction to plainchant, the foundational repertoire of Western classical music, and reflects the research specialization of Dr. Maiello. The course readings, organizational structure, and list of topics selected for advanced study are all exemplary.

7130 (Seminar in Ethnomusicology) is a place holder for a range of specialized courses in ethnomusicology, which will also change each year according to faculty member teaching interests in this area. The sample course outline supplied ("Italian Folk Music Traditions") offers a historically contextualized consideration of Italian folk music, concentrating on literature review rather than fieldwork. One DFOM faculty member (Collette Simonot-Maiello) has a graduate degree in ethnomusicology and research interests in Indigenous music in Canada; she is encouraged to offer courses in ethnomusicology that address Métis and Indigenous music in Manitoba (one of her growing areas of research interest) in future. Other ethnomusicology courses could potentially be offered by local specialists in this field on a contract basis.

7200 (Proseminar in Music Theory) is a survey required of all students in the new program. The sample syllabus covers a broad range of topics in the theory and analysis of tonal and post-tonal music. It seems that it would have to be offered every year, because it is foundational to the other theory courses in the program.

7220 (Analysis of Tonal Music) and 7230 (Analysis of Post-Tonal Music) present a more focused survey of a panoply of analytical techniques for tonal and post-tonal European/American art music. They are designed to vary in topic; some topics (such as Schenkerian analysis) will require the entire course to cover, while other iterations of the course can cover two or more approaches. The range of topics include recent important analytical methods, including very recent ones in professional journals. As surveys, they are likely to be of interest to all students in the MA program. We recommend that the instructors endeavor to be inclusive of historically underappreciated composers, and that they encourage critical reflection about the methods.

7240 (Music Theory Pedagogy) addresses an important area of the discipline, and most good master's programs in music theory offer something like it. Although it may be of less relevance to students intending to focus on musicology, it will likely attract upper-level undergraduates who may be interested in learning techniques they can use in private teaching. The course outline includes a standard mix of textbook reviews, teaching observation, and applications, and the bibliography includes important recent writings about the topic. The instructor should also consider issues of diversifying the repertoires that are current in the field, and examples of teaching post-tonal music.

7210 (Seminar in Music Theory/Analysis) offers a more in-depth look at a single theoretical topic. The five proposed topics are all specialties of Dr. Byrne and Dr. Simpson-Litke, and they tap into important current streams in the discipline.

The sequencing of the theory courses is not specified and might be challenging for just two faculty members to offer in addition to the undergraduate courses they are assigned. 7050 and 7200 must be offered every year, presumably in the fall. In order to provide the whole range of subject matter, at least two of the remaining four theory courses would need to be offered each year, say 7220 and 7240 in odd years and 7230 and 7210 in even years. Some of the topics of 7210 overlap with the suggested topics in the survey seminars; we recommend that the topics be chosen so that students who study a topic intensively in 7210 don't encounter it again in less detail as part of 7220 or 7230 that they would take in the following semester or year. Given DFOM strengths in the area, it would be logical for a course on Music History Pedagogy to be introduced into the curriculum, to complement 7240 ("Music Theory Pedagogy").

3. DEMAND FOR GRADUATES WITH THE PROPOSED CREDENTIAL

The RC had the opportunity to speak with four recent graduates of the DFOM undergraduate program in music, all of whom are now pursuing graduate degrees at universities in Canada and the United States (one in performance, one in music theory, and two in musicology). All four spoke of the excellent preparation that their undergraduate degree training provided for graduate studies, and all stated that they would have been happy to do MA studies in music research at

DFOM. As far as demand in doctoral programs for graduates of the proposed MA in Music Research program is concerned, there will be ample places for these students to continue their studies in universities across Canada and in the United States. The RC predicts that they will have their choice of offers at prestigious doctoral programs across North America.

Other students may decide to pursue the MA in Music Research as a terminal degree. For those students who choose that route, potential career opportunities include work in a variety of fields including, but not limited to, arts administration, broadcasting, and music education, as outlined in section C-6 of the proposal. While such opportunities inevitably wax and wane according to the overall economic situation and employment statistics, graduates of the proposed program will offer potential employers a sophisticated skill set as capable researcher/writers.

4. EXCELLENCE OF THE FACULTY AND BREADTH OF EXPERTISE

A. MUSICOLOGY

The three musicology faculty members at DFOM devote approximately equal time to teaching and research interests. Although chronologically they do not cover a wide spectrum of the field (with one medievalist and two 20th-century specialists), their research and teaching activity is in sympathy with current trends in the field. Currently one (Maiello) is at the associate level, but the two assistant professors (Simonot-Maiello and Deruchie) will in all likelihood soon be promoted to the associate rank. Their collective educational background and professional activity ranges across North America and abroad (New Zealand and Europe).

Dr. Maiello currently serves as the Associate Dean (Graduate Programs and Research) at DFOM. He completed his PhD in medieval music at the University of California, Santa Barbara in 2007. After five years at Vanderbilt University in Nashville, he arrived at DFOM in 2013 and received tenure along with promotion to associate professor in 2017. He has published in the areas of medieval music and music history pedagogy. His intellectual leadership at DFOM is indicated by the fact that he shepherded the proposal for an MA in Music Research program through, with the support and full agreement of the Dean and other music theory and musicology faculty members.

Dr. Simonot-Maiello completed her PhD at McGill in 2011, with a thesis on Francis Poulenc's opera *Dialogues des Carmélites* (composed in 1956). Her research interests now concentrate on Canadian music, with a special interest in Métis/Indigenous music. She completed an MA degree in ethnomusicology at York University in 1997 and so will be well positioned to contribute courses in this field to the MA in Music Research proposed degree program. After seven years at Brandon University, where she received tenure in 2016, she moved to DFOM in 2018. She was tenured at UM in 2020, and is currently under consideration for promotion to associate professor.

Dr. Deruchie is the most recently arrived of the three musicologists on faculty; he is currently in his first year of service at DFOM. He completed his PhD at McGill University in 2009 (under the same supervisor as Simonot-Maiello) and came to DFOM after two years as an instructor at Douglas College in Vancouver. Prior to that he was on faculty for seven years at University of Otago in Dunedin, New Zealand, where he was granted tenure in 2016. His area of research specialization is French symphonic music of the late-19th and early-20th centuries; he has published a monograph on this subject with University of Rochester Press (2013).

B. MUSIC THEORY

For advanced studies in music theory, it is important not only that the faculty be excellent teachers at the graduate level, but also that they model good scholarship through active research programs and familiarity with recent trends in the field. Aside from the Dean (whose participation in this new program will necessarily be limited) the relatively junior full-time theory faculty show some achievement and promise of growth in the future.

Dr. Byrne began teaching at UM in 2013 and finished his dissertation in 2018. He specializes in the analysis and history of theory of late-19th/early-20th century tonal music, a repertoire that despite its frequency on the concert stage remains relatively underexplored by theorists. He co-edited a forthcoming update of a textbook, but otherwise he has not published any research since 2012 (two earlier articles appeared in a graduate-student journal). He has, however, delivered numerous papers at selective, prominent conferences, and it seems likely that his plans to publish this material soon will be successful.

Dr. Simpson-Litke took up her position at UM in 2018 after a string of positions in the USA and Canada. She has been developing a productive research program that considers interactions of Latin dance and music, which is starting to come to fruition, with articles that have appeared or will be imminently published in excellent journals, and several other projects that are in the pipeline with good publishers. She has also given conference papers on early 20th-century French music.

Dr. Jurkowski, although his decanal duties currently occupy him completely, expressed interest in teaching in the program. A full professor, he has published in several areas, including surveys of music of 20th-century Finnish and Estonian composers, theories of tonal form, and post-tonal theory.

Drs. Byrne and Simpson-Litke are still in early stages of their publication careers, but they both have many years of success in presenting high-quality scholarship. Their specializations—while not spanning a broad cross-section of the discipline—are of current topical interest. Their syllabi show that they are familiar with important streams of theoretical research, and in our interviews, they showed awareness of contemporary disciplinary issues around diversity and inclusion. Equally important, they both expressed enthusiasm and commitment to the proposal, as indeed did everyone with whom the RC spoke, including Katherine Penner, the music librarian.

5. ADEQUACY OF FACILITIES, SPACE, AND OTHER RESOURCES

The students in this proposed program will have minimal physical requirements: space for seminar-format classes, a study carrel, and access to a good library collection, both physical and electronic. DFOM is blessed with generous teaching, performance, library, and office facilities that we believe will easily accommodate the proposed program.

Most of the courses proposed for the curriculum would work best in a room arranged and furnished so that students can view each other (say, around a large table), rather than focus on a teacher at the front. While there is only one small seminar room, in the library, the need can be fulfilled in the smaller classrooms, which have been designed to be reconfigured from lecture to

seminar format. The RC did not get into details of scheduling and room availability with the faculty, but since the plan is to have no net gain in the number of music courses, rooms should be available. It should be kept in mind, though, that seminars typically run longer than undergraduate courses, so we would advise that the current classroom schedule be examined to make sure that there are blocks of time in which several 2–3 hour seminars can be slotted without impinging on other courses.

Graduate students in music research need dedicated desks in a quiet area where they can think, read, and write, especially if they commute into campus. The DFOM already offers some carrels to MMus students, in open configuration in a quiet room. These can also be made available to MA students as well, and the Dean expressed willingness to find more space as needed. If the students serve as teaching assistants, as is contemplated, there should be at least one TA office where they can meet privately with students. Again, the Dean expressed confidence that this could be arranged.

For the success of the courses and the students' individual thesis research, it is critical to provide easy access to a large variety and quantity of musical scores, recordings, and academic writings (journals, textbooks, monographs, edited essay collections) both contemporary and historically significant. We appreciated the opportunity to speak to faculty, the music librarian Katherine Penner, and students about this, and to view a virtual tour of the Eckhardt-Gramatté Music Library. We were not able to inspect the bookstacks ourselves, of course, but we were able to browse the online catalog. The library website is well organized and features an abundance of custom videos to help students do their research.

The Eckhardt-Gramatté Music Library collection, by all accounts, is oriented in the first instance towards music performance and collected editions, which are certainly crucial resources for music scholarship as well. Since most new research is published electronically, sometimes exclusively so, it is important for the music library to provide students with online access, often through paid subscriptions. We noticed some lacunae in this respect. For example, the system does not currently seem to offer online access to some recent Oxford University Press monographs in music theory (such as Yust, *Organized Time*, 2018).

Some small holes are only to be expected, considering that a graduate music research program does not yet exist. It is important to know whether, especially in these financially challenging times, the library will be able to receive and act on faculty direction for growing the collection. We were impressed to hear that it has a secure ongoing acquisitions budget, and that the librarian is confident that she can meet the anticipated demand for more print and electronic publications. Faculty members confirmed that their requests for materials have always been fulfilled.

In order to attract and retain students in the proposed program, it is important to offer sufficient financial support. Typical financial packages offered to music-scholarship master's students in Canada cover tuition and some living expenses for at least a year. The Dean told us that the Faculty of Music has the resources to offer all students renewable scholarships that will cover tuition – about $5000 for each of two years ($10,000/year for international students). In some cases, students would be eligible for awards from the Faculty of Graduate Studies, and in any case can be encouraged to apply for SSRHC Canada Graduate Scholarships. It would also be

helpful to the students, and make the program more attractive, to offer teaching assistantships or research assistantships (the faculty should be encouraged to seek SSHRC grants to fund the latter). Teaching assistantships, in particular, would help students put into practice what they will learn in the graduate pedagogy classes, and help qualify them to enter PhD programs. They would also help mitigate the possible extra faculty workload that comes from offering many graduate courses and supervising theses.

6. Strengths and weaknesses of the program proposal

In summary, we perceive a number of strengths in the proposed program.

- As a degree in "music research" rather than specifically in theory, musicology, or ethnomusicology, the program can offer maximum flexibility, allowing specialization in musicology or theory while also offering a more general interdisciplinary blend that is appropriate for the current state of the discipline.
- The option to complete the program without thesis accommodates students who do not plan to proceed into a PhD program but will use their training to pursue careers in music administration, journalism, and entrepreneurial activities.
- Scholarship packages are reliably resourced, and there is the possibility of augmenting them with TA or RA employment.
- It is supported by a good in-house library with resources to grow the collection appropriately.
- There are available spaces in the current buildings that are well suited for seminars, study, and offices.
- The faculty members who will be involved are enthusiastic and dedicated. They have a proven track record of preparing students for advanced studies in music scholarship.
- The program is well positioned geographically, likely to draw not only from Manitoba but also other nearby provinces, providing a graduate music research option in an area of the country where there are no comparable options. Administrative staff see a demand for it and are confident that the new program will not place an onerous burden on them.
- It has at most a small impact on budgets, space, and workload, and no new resources are sought to implement it.
- Competitive scholarship packages will be offered from existing resources.
- The plan for a small initial intake and slow growth seems realistic.
- It addresses a logistical problem in the current undergraduate program of low enrolment in some upper-level theory and musicology courses.

We identified only two weaknesses in the proposal, both of which we feel can be addressed.

- Without a full-time specialist in ethnomusicology, one of the three main areas of music scholarship will necessarily play a somewhat smaller role in the program than the umbrella term "music research" might suggest. This is somewhat unfortunate, as the city and province offer very rich possibilities for ethnomusicological fieldwork. The faculty are of course aware of this imbalance, and plan to address it by offering methodology courses. They also floated the idea of hiring an external examiner to direct fieldwork for a student who wants to undertake fieldwork as a practicum. There is also the possibility that contract faculty might be hired on an occasional basis (if funds are available) to fill out course offerings in the area of ethnomusicology.

- The idea that the program will incur no net cost is premised on the idea that the faculty loads currently allocated to upper-level undergraduate courses will simply be shifted to graduate-level courses. But there is more work to offering a graduate program than just the course hours. Graduate seminars, in order to be up-to-date and to provide appropriate depth, take more time to prepare, especially for courses in which the topics change every year. It takes more time to mark graduate papers, and to coach students to write them. Graduate students need and deserve more individual attention, not only in seminars but also in advising, and mentoring for grant and conference paper proposals. Once the full cohort of students is phased in, faculty members will have additional work directing thesis projects. Also, if overlap is to be avoided in the theory courses, faculty will need to prepare new versions of some courses every year. We recommend offering teaching assistantships in undergraduate core courses to help offset the extra work, and some open discussion between the administration and the faculty to determine appropriate ways to count thesis supervision and new course preparation as part of the workload.

In light of the above comments, the RC warmly endorses the proposal for a new MA in Music Research program at the University of Manitoba, and we wish those involved every success in getting the program off the ground.

Respectfully submitted by

Dr. Robin Elliott
Jean A. Chalmers Chair in Canadian Music
Professor of Musicology
Faculty of Music
University of Toronto

Dr. John Roeder
Associate Director, Academic
Professor of Music Theory
School of Music
University of British Columbia

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20 November 2020

Dr. Louise Simard, Acting Dean
Faculty of Graduate Studies
University of Manitoba
500 University Centre
Winnipeg, MB R3T 2N2

Dear Dr. Simard:

First, the DFOM is grateful for the considerable time and effort the external reviewers devoted to this assessment, including a virtual visit and what is clearly a carefully considered report. Likewise, we would like to thank the Faculty of Graduate Studies administration and staff, in particular Dr. Kelley Main and Ms. Andrea Kailer, for their work in strengthening the program proposal and organizing the external review. Their experience, expertise, and genuine collegiality have made this experience productive and rewarding.

We are deeply gratified that the review committee "warmly endorses the proposal" for a new Master of Arts program in Music Research at the University of Manitoba and we have made improvements to both the proposed program and to the music theory/musicology area operations based on their feedback. Please find attached a revised program application that reflects the adjustments made in response to the external review.

The external review identified only two weaknesses, both of which the reviewers felt could be addressed. Regarding the lack of a full-time specialist in ethnomusicology, the weakness may be remedied relatively easily. Although the DFOM does not employ a full-time ethnomusicologist, one tenured faculty member, Dr. Colette Simonot-Maiello, holds a M.A. in Ethnomusicology from York University (in addition to a Ph.D. in Musicology from McGill University), and her current research integrates the content and methodologies of ethnomusicology and historical musicology. We would point out also that the most recent developments in ethnomusicology have moved away the traditional conception of the discipline that the reviewers have in mind, especially as ethnomusicologists continue to wrestle with accusations of cultural appropriation and ethnocentrism. Indeed, Dr. Simonot-Maiello's methodological approach is more reflective of these recent trends in the field, especially an increasingly porous boundary between the two subdisciplines.[1] Additional expertise may be brought into the program by the inclusion of

[1] See, for example, Gregory F. Barz and Timothy J. Cooley, eds. *Shadows in the Field: New Perspectives for Fieldwork in Ethnomusicology*, second edition (Oxford: Oxford University Press, 2008); Kevin Korsyn, *Decentering Music:A Critique of Contemporary Musical Research* (Oxford: Oxford University Press, 2003); Bruno Nettl, "Mozart and the Ethnomusicological Study of Western Music," in *Disciplining Music: Musicology and its Canons*,

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qualified sessional faculty; there is currently sufficient expertise locally, as the reviewers have acknowledged. They also note our intention to supplement local expertise with external examiners for theses and practica as appropriate.

The second weakness identified by the reviewers is one of workload, and as they have recognized, an open conversation was necessary to address this issue. The music theory/musicology faculty are confident that, with reasonable accommodation from the Dean's office regarding workload and course assignments, they can deliver all necessary courses for the current and proposed undergraduate and graduate programs and still remedy the concerns identified in the external review, in particular with respect to the added duties of graduate supervision, teaching, new course preparation, and research productivity. The Dean is fully committed to developing a workload model that will reduce the workloads of the Music Research faculty over the period of the next several years to allow for the appropriate time investment required to offer high-quality graduate seminars and thesis supervision, while ensuring appropriate time is preserved to allow the faculty to conduct the quantity and quality of research at a level commensurate for a U-15 institution.

The external review also led us to consider two minor curriculum adjustments. Although the proposed program is average among other programs in Canada in terms of credit hours required, the thesis/practicum (in this case GRAD 7030: Thesis/Practicum) carries no credit hours, unlike other institutions. To account for this, we have adjusted the total credit hours for the degree from 24 to 21 CRH, eliminating one course; this will allow students more load room to focus on the thesis/practicum in the final year of the program. We have also removed two named music theory courses (MUSC 7220: Advanced Analysis of Tonal Music and MUSC 7230: Advanced Analysis of Post-Tonal Music), the content of which will be addressed in offerings of MUSC 7210: Seminar in Music Theory/Analysis as necessary to allow the flexibility to meet changing student needs and to accommodate faculty workloads and research/study leaves.

Finally, it is necessary to correct a small error in the reviewers' characterization of the faculty. The report identifies incorrectly Dr. Andrew Deruchie as a specialist in twentieth century music and notes a lack of breadth in specialization among the faculty. Dr. Deruchie is, in fact, a specialist in the music of the nineteenth century. As such the DFOM provides more than sufficient breadth of expertise for a unit of its size.

---

edited by Katherine Bergeron and Philip Bohlman, (Chicago: University of Chicago Press, 1992)137-155. Chicago: University of Chicago Press, 1992; Jonathan Shull, "Locating the past in the Present: Living Traditions and the Performance of Early Music." *Ethnomusicology Forum* 15, no. 1(2006): 87-111.

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As you can see, the external review was overwhelmingly positive, and we have developed viable remedies to the concerns expressed by the reviewers. Please find attached a revised proposal that reflects the program changes described above.

Should you have questions, concerns, or require additional information, please do not hesitate to contact either of us.

As always, thank you for your continued guidance and support.

Sincerely,

Edward Jurkowski

Edward Jurkowski, Ph.D., Dean

James V. Maiello

James V. Maiello, Ph.D. Associate Dean (Graduate Programs & Research)

Enc: Revised Application for M.A. in Music Research

Cc: Dr. Kelley Main, Associate Dean, Faculty of Graduate Studies
Ms. Andrea Kailer, Programs Coordinator, Faculty of Graduate Studies

Report of the Senate Committee on Admissions concerning a proposal from the School of Art to modify the admission requirements for the Bachelor of Fine Art (Art History) degree programs (2021.03.23)

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 School of Art is proposing some amendments to the admission requirements for the Bachelor of Fine Art (Art History) General and Honours degree programs. The proposed changes involve:

- The addition of EVDS 1660 and EVDS 1670 as equivalent to FAAH 1030 and FAAH 1040 respectively.
- The addition of ENGL 1400 to the list of English courses that can be presented in order to be eligible for admission.

3. The EVDS portion of the proposal was approved by the School of Art Council on April 26th, 2019, and the English portion of the proposal was approved by the School of Art Council on October 30th, 2020; the proposal was endorsed by SCADM on March 23rd, 2021.

Observations:
1. Students at times have difficulty fitting a six-credit hour English course into their schedule so providing the ENGL 1400 three-credit hour alternative will help alleviate this pressure.

2. The EVDS and FAAH equivalents have already been approved as equivalents for pre-requisites for 2000 level courses so extending this as an alternative for admission requirements was deemed to be a logical approach.

3. The Faculty of Architecture was consulted, and they are support of this proposal.

4. The Department of English, Theatre, Film, and Media was consulted, and they are support of this proposal.

Recommendation:
The Senate Committee on Admissions recommends that the proposal to modify the admission requirements for the Bachelor of Fine Art (Art History) degree programs be approved effective for the Fall 2022 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.

University of Manitoba

School of Art

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Date: February 22, 2021

To: Ms. Laurie Schnarr, Chair

From: Dr. David Foster, Associate Director, School of Art

Re: Proposed Changes to the B.F.A. Art History Programs Admission Requirements

---

The School of Art is proposing program modifications to both the Bachelors of Fine Art – Art History programs, General and Honours.

We are requesting to add EVDS courses as an equivalent to FAAH 1030 Introduction to Art 1A and FAAH 1040 Introduction to Art 2A as well as modifying the list of English literature courses in response to student feedback. We have already established that the content of the EVDS 1660 and 1670 is sufficiently comparable to that of FAAH 1030 and 1040 to make them pre-requisites for upper-level Art History courses, and as such should also be equivalent for admission into the Art History program. This motion was passed at the School of Art Council on April 26, 2019.

The addition of ENGL 1400 seeks to address the fact that ENGL 1300 is no longer consistently offered, and students often have difficulties scheduling a 6-credit hour spanned course. ENGL 1400 also fulfills the Art History program requirement of 3 credit hours of English literature. This motion was passed at the School of Art Council on October 30, 2020.

If approved, the ideal effective term would be September 2022.

The School of Art requests SCADM to consider the proposed program modifications for the BFA Art History, General and Honours programs.

Submission template for the Senate Committee on Admissions

All submissions should contain a covering memo from the faculty, college, or school submitting the proposal. Please include the date the proposal was approved by faculty council and the desired effective date of the regulation.

Section I – Description of the change

1) That EVDS 1660 and EVDS 1670 be added as equivalent to FAAH 1030 and FAAH 1040, respectively, as course qualifying for admissions to the BFA Art History degree program. Previously, EVDS 1660 and EVDS 1670 have been approved as equivalent to FAAH 1030 and FAAH 1040 for pre-requisite requirements for 2000-level courses, and it is prudent to make them similarly equivalent for admissions. These course share nearly identical content. The current requirements states "Of the minimum 24 required credit hours, at least 12 credit hours must come from the following list of courses: FAAH 1030: Introduction to Art 1A (3); FAAH 1040: Introduction to Art 2A (3)…" Thus we would propose that the requirement state: "Of the minimum 24 required credit hours, at least 12 credit hours must come from the following list of courses: FAAH 1030: Introduction to Art 1A (3) or EVDS 1660: History of Culture, Ideas, and Environment 1 (3); FAAH 1040: Introduction to Art 2A (3) or EVDS 1670: History of Culture, Ideas, and Environment 2 (3)…". This proposal was approved by the School of Art Council on April 26, 2019. This change would be effective for September 2022.
2) That ENGL 1400 be added to the list of courses qualifying for admissions to the BFA Art History degree program. ENGL 1200 and ENGL 1300 already appear on this list, but since ENGL 1300 is infrequently offered, and students can have difficulties fitting ENGL 1200 into their schedules, ENGL 1400 is an appropriate option. The current requirement states, "Of the minimum 24 required credit hours, at least 12 credit hours must come from the following list of courses: FAAH 1030: Introduction to Art 1A (3); FAAH 1040: Introduction to Art 2A (3); One of: ENGL 1200: Representative Literature (6) or ENGL 1300: Twentieth Century Literature (6);…" Thus we would propose that the requirement state "Of the minimum 24 required credit hours, at least 12 credit hours must come from the following list of courses: FAAH 1030: Introduction to Art 1A (3); FAAH 1040: Introduction to Art 2A (3); One of: ENGL 1200: Representative Literature (6) or ENGL 1300: Twentieth Century Literature (6) or ENGL 1400: Thematic Approaches to the Study of Literature (3);…" This proposal was approved by the School of Art Council on October 20, 2020. This change would be effective for September 2022.

Section II - Consultation with other faculties

1) The Faculty of Architecture has been consulted and has provided a letter of support, which accompanies this submission.

2) The Department of English, Theatre, Film, and Media has been consulted and has provided a letter of support, which accompanies this submission.

Section III - Recommendation

The School of Art asks that SCADM endorse the proposed changes to the admissions requirements for the BFA Art History programs to allow EVDS 1660 and EVDS 1670 to be included in the list of courses

for admission as alternatives to FAAH 1030 and/or FAAH 1040, and for ENGL 1400 to be included in the list of courses for admission alongside ENGL 1200 or ENGL 1300.

Report of the Senate Committee on Admissions concerning a proposal from the Clayton H. Riddell Faculty of Environment, Earth, and Resources to modify the admission requirements for the Bachelor of Environmental Science degree program (2021.03.23)

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 Clayton H. Riddell Faculty of Environment, Earth, and Resources is proposing a number of amendments to the admission requirements for the Bachelor of Environmental Science degree program. The changes call for:

- The modification of first year chemistry courses to align with the changes made in the Department of Chemistry.
- The inclusion of STAT 1150 as an alternative to STAT 1000, and the inclusion of STAT 2150 as an alternative to STAT 2000.
- The addition of MATH 1230 as an additional first-year calculus option.
- The removal of an outdated reference to Université de Saint-Boniface course numbers.

3. The proposal was approved by the Clayton H. Riddell Faculty of Environment, Earth, and Resources Faculty Council on January 25th, 2021 and was endorsed by SCADM on March 23rd, 2021.

Observations:

1. The chemistry course changes are being made in order to align with the changes made in the Department of Chemistry.

2. The math and statistics changes are being made to ensure that students taking more advanced courses are not disadvantaged in the admissions process.

3. The Faculty of Science has been consulted regarding these changes and they have no concerns

Recommendation:

The Senate Committee on Admissions recommends that the proposal to modify the admission requirements for the Bachelor of Environmental Science degree program be approved effective for the Fall 2022 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.

7.2 Advanced Entry Entrance Requirements

Advanced Entry students are placed in the Major degree program in either the Bachelor of Environmental Science or Bachelor of Environmental Studies until they have completed a minimum of 48 credit hours after which they can transfer to the General or Honours program or remain in the Major. To make a program transfer, students must consult with a Riddell Faculty student advisor.

Transfer students, and Second Degree students may be eligible for direct entry into the General or Honours programs. These students should consult with a Riddell Faculty student advisor in the Faculty Dean's Office.

7.2.1 and 7.2.2 define the Advanced Entry Entrance requirements for the degree programs in the Bachelor of Environmental Science and Bachelor of Environmental Studies, respectively.

7.2.1 Bachelor of Environmental Science Advanced Entry Entrance Requirements[1]

Degree Program in B.Env.Sc.	Minimum Number of Credit Hours	Minimum Degree Grade Point Average	Additional Advanced Entry Entrance Requirements
Honours	48	3.25	No failures on ~~entry~~[1]entry[2]; a grade of 'B' or better in ENVR 1000 and ENVR 2000 as well as a minimum 'C+' in 6 hours of- BIOL 1020[3], BIOL 1030[3] or CHEM 11~~0~~10-~~CHEM 1310~~[3,5] and 'C' in the other course.
Honours (Coop)[2][3]	60	3.25	No failures on ~~entry~~[1]entry[2]; ENVR 2900; students must satisfy the requirements for entrance/continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2810, ENVR 3160, STAT 1000[3,4], STAT 2000[3], BIOL 2300[3] (AGEC 2370), ECON 2390(ABIZ 2390), BIOL 1020[3], BIOL 1030[3] and one of GEOG 1290[3]or GEOL 1340.
Major	24	2.00	12 credit hours in ENVR 1000, ENVR 2000, BIOL 1020[3], BIOL 1030[3], CHEM 1100-~~CHEM 1300~~[3,5], CHEM -1110-~~CHEM 1310~~[3,5], STAT 1000[3,4], STAT 2000[3], MATH 1500[3] (or MATH 1230, MATH 1200[3], MATH 1300[3], MATH 1310, MATH 1510, MATH 1520), one of GEOG 1290[3] or GEOL 1340, PHYS 1020[3] (or PHYS 1050[3]), PHYS 1030[3] (or PHYS 1070[3]), with a grade of 'C+' or better in six of the 12 credit hours, and a grade of 'C' or better in the remaining six credit hours.
Major (Coop)[2][3]	60	2.50	ENVR 2900; students must satisfy the requirements for continuation in the regular program and (normally) have completed ENVR 1000, ENVR 2000, ENVR 2810, ENVR 3160, STAT 1000[3,4], STAT 2000[3], BIOL 2300[3](AGEC 2370), ECON 2390 (ABIZ 2390), BIOL 1020[3], BIOL 1030[3], and one of GEOG 1290[3]or GEOL 1340.
General	48	2.00	

[1] Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified courses identified in the entrance requirements chart. ~~Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with a Student Advisor for further information.~~

[2] Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with a Student Advisor for further information. ~~Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information.~~

[3] Students may be permitted to enter the program without satisfying all requirements listed. Students should consult with the Cooperative Education Coordinator for further information. ~~Equivalent courses offered through Université de Saint-Boniface may be used in lieu of the specified course identified in the entrance requirements chart. Université de Saint-Boniface courses end in the number'1' (e.g. CHEM 1301)~~.

[4] STAT 1150 and STAT 2150 may be used in lieu of STAT 1000 and STAT 2000.

[5] The former CHEM 1300 and CHEM 1310 may be used in lieu of CHEM 1100 and CHEM 1110.

Report of the Senate Committee on Admissions concerning a proposal from the Asper School of Business to modify the admission requirements for the Bachelor of Commerce (Honours) degree program (2021.01.19)

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 Asper School of Business is proposing an amendment to the admission requirements for the Bachelor of Commerce (Honours) degree program. The change calls for the addition of MATH 1510 as a calculus option for admission under the track 1 admission category. The Faculty also wanted to make SCADM aware that the academic calendar was being updated to include process information for admission reconsideration and appeals.

3. The proposal was approved by the Asper School of Business Faculty Council on December 4th, 2020 and was endorsed by SCADM on January 19th, 2021.

Observations:

1. From time to time applicants have asked if MATH 1510 could be presented as an acceptable calculus option for the purpose of admission.

2. The Faculty has determined that this course is acceptable and is equivalent, from an admissions perspective, to other courses already deemed to be acceptable for admissions.

3. The Faculty of Science was consulted regarding this proposal and has no concerns.

Recommendation:

The Senate Committee on Admissions recommends that the proposal to modify the admission requirements for the Bachelor of Commerce (Honours) degree program be approved effective for the Fall 2022 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.

University of Manitoba | Asper School of Business

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December 9, 2020

MEMORANDUM

To: **Senate Committee on Admissions**
c/o Jeff Adams, Executive Director (Enrolment Services), University of Manitoba

From: Dr. S. Sivaramakrishnan, Associate Dean, Asper School of Business

Copies: Erin Stone, Director Admissions
Shannon Coyston, Academic Specialist

Subject: Asper Track 1 Admission Requirement Amendment

The Asper School of Business wishes to submit a proposal for an amendment to the Track 1 admission requirements for the Bachelor of Commerce (Honours) Program. The motion for these revisions were passed by the Asper School of Business Faculty Council a meeting held on December 4, 2020.

Brief description of change.

> The Asper School of Business would like to add the following Senate-approved equivalent course from the University of Manitoba to the accepted Track 1 requirements. The following course equivalency would be added as an approved alternate Track 1 required MATH course: MATH 1510 for MATH 1500 or MATH 1520.
>
> Asper is adding information to the academic calendar about the processes for Admission Reconsideration and Appeals of Admission. The processes are not being modified only added to the academic calendar.
>
> The goal is to have the amendments in effect for the for September 2022 admission intake.

The full proposal is outlined in the following pages.

Modification of Asper School of Business Track 1 Admission Requirements

Section I – Description of the change

a) Clearly state the change being proposed
The Asper School of Business would like to add the following Senate-approved equivalent course from the University of Manitoba to the accepted Track 1 requirements. The following course equivalency would be added as an approved alternate Track 1 required MATH course: MATH 1510 for MATH 1500 or MATH 1520.

Asper is adding information to the academic calendar about the processes for Admission Reconsideration and Appeals of Admission. The processes are not being modified only added to the academic calendar.

b) Include any relevant contextual and background information.
MATH 1510 is being added as an alternate calculus option for admission under the Track 1 admission category. This is because occasionally and primarily Faculty of Engineering students who have taken MATH 1510 apply for admission to the Asper School; they would currently be excluded from Track 1 consideration for being deficient in an appropriate math course. Rather than exclude the application under Track 1 for not presenting MATH 1500 or Math 1520, Asper would like to accept MATH 1510 as an alternative calculus course. MATH 1510 is equivalent to MATH 1500/MATH 1520 but it has an additional prerequisite from high school (40S Physics) which Asper does not require in our program.

c) Include the current requirement (exact wording/calendar description etc.)
See attached Calendar modification proposal.

d) Specify the rationale for the change and any other observations
Asper would like the addition of MATH 1510 listed as an acceptable course alternate in the footnotes in the Calendar and Applicant Bulletin. While the Faculty prefers students to present the listed Track 1 courses, the Faculty would not want an applicant who presents MATH 1510, instead of MATH 1500 or MATH 1520, to be excluded from admission consideration under the Track 1 admission category.

e) Include the effective date of the proposed modification
The goal is to have the changes in effect for the for September 2022 admission intake.

Section II - Consultation with other faculties
If the proposed change will have an impact on other faculties the proposal should include documentation or letters of support from the faculties. As an example, if a required course taught by another faculty is being added to a set of admission requirements a letter of support would be appropriate to assure the committee that there are no capacity issues.

Section III – Recommendation
This should be a clear statement of what SCADM is being asked to endorse.

The recommendation from the Asper School of Business is that the Calendar and Applicant

Bulletin be updated to include the following two items:

1) The Asper School of Business would like to add MATH 1510 as an acceptable course alternative to MATH 1500 and MATH 1520, for the Track 1 admission requirements. Therefore the following course equivalencies would be approved Track 1 required MATH courses: MATH 1500 or **MATH 1510** or MATH 1520.
2) The Asper School of Business is adding information to the academic calendar about the processes for Admission Reconsideration and Appeals of Admission. The processes are not being modified only added to the academic calendar.

The goal is to have the amendments in effect for the for September 2022 admission intake.

Faculty of Management/I.H. Asper School of Business
Calendar Modification
Effective for September 2022

2.1 Admission Requirements from High School and Previous Post-Secondary Institutions

…Skip to…

Track 1 Transfer Students
The following is a summary of the admission requirements for the Bachelor of Commerce (Honours) for Track 1 transfer students. Equivalent courses completed at other universities will be considered for admission and transfer credit only if the courses have been taken within the last 10 years. All admission requirements, as well as application deadline dates and forms, are included in the Applicant Information Bulletin that is available from the Admissions Office, 424 University Centre. This information is also posted on the University of Manitoba's website.

Requirements (for Track 1 Transfer students) [1]
• [ECON 1010 (3) and ECON 1020 (3)] (6)
• 6 credit hours from: Anthropology, History, Mathematics, Philosophy, Political Studies, Psychology, or Sociology (6)*[2]
• Mathematics MATH 1520 (3) or MATH 1500 (3) or MATH 1230 (3)[3]
• Statistics STAT 1000 (3) or STAT 1150 (3)
• A 3 credit hour Written English ("W") course from a specific discipline (ARTS 1110, GMGT 1010 and GMGT 2010 are not considered to be from a specific discipline) (3)
• 3 credit hours of electives (3)**[4]

Minimum 24 credit hours completed by April 30. Although 24 credit hours is the minimum requirement for admission, a full year course load would require 30 credit hours; therefore, students only taking 24 credit hours for admission will need to pick up an extra 6 credit hours of course work once in the Asper School of Business.

An Elective is any three or six credit hour course freely chosen by the student from courses taught in the degree programs of other faculties and schools, excluding the Asper School of Business.

If students want to complete 30 credit hours in Year 1, students are recommended to take 6 credit hours from this suggested list of recommended courses: GMGT 1010 plus one of GMGT 2060, GMGT 2070 or MKT 2210.

*[1] Students must achieve a minimum grade of "C" on each course listed above.
[2] Courses chosen for this requirement must be independent from courses taken to fulfill other degree requirements.
[3] MATH 1510 will be accepted as an alternate for MATH 1500 or MATH 1520.
***[4]Critical Thinking (Philosophy) PHIL 1290 is a preferred elective choice**

Admission in this category is competitive.

Reconsideration for Admission Decisions
Individuals who wish to have their applications reconsidered should submit their request to the Chair of the Asper School of Business Admission Reconsideration Committee. Valid grounds for reconsideration will include: a lack of correct adherence to published

policies and procedures in the admission decision. Subjective issues or the relative merits of the application will not be deemed a valid ground for reconsideration. Most inquiries can be satisfied at this level without further reference.

Persons wishing reconsideration by the Asper School of Business Admission Reconsideration Committee shall direct their request to the Chair within ten (10) days of the date of the posted decision from the Admissions Office. Reconsiderations will only be considered following an admission refusal.

Appeals of Reconsideration Decisions for Track 1 Admissions
Applicants are advised that appeals of reconsideration decisions are made to the Senate Admissions Appeal Committee and focus on questions of correct adherence to published policies and procedures outlined in this document, and NOT on subjective issues or the relative merits of the application.

See Applicant Bulletin for complete details.

Asper School of Business

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July 16, 2020

MEMORANDUM

To: Faculty of Science (Department of Mathematics and Dean of Science)

From: Dr. S. Sivaramakrishnan, Associate Dean, Asper School of Business

Subject: New Proposal for Asper Track 1 Admission Requirement Amendment

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We have revised our previously circulated proposal to amend the Asper Track 1 Admission Requirements; thank you in advance for reviewing this revised proposal. The Asper School of Business is seeking support from the Faculty of Science for a proposal for an amendment to the Track 1 admission requirements for the Bachelor of Commerce (Honours) Program.

The Asper School of Business would like to be able to accept the following Senate approved equivalent Mathematics course for the Track 1 Mathematics requirement listed as admission requirements in the Applicant Bulletin. We wish to have the following course equivalency added as a footnote for alternate Track 1 required courses: MATH 1510 for MATH 1500 or MATH 1520.

The goal is to have the changes in effect for the for September 2021 admission intake. Please identify any impacts on course/curricula in your unit. Indicate whether and why your unit supports the proposed amendment or outline any specific concerns. **I request that you confirm receipt of notification of this modification by July 31, 2020.**

Thank you,

Dr. Subbu Sivaramakrishnan, Associate Dean, Asper School of Business

Attachment: Track 1 Proposal Effective Sept 2022 – July 13, 2020.docx

From: "Ben Li" <Ben.Li@cs.umanitoba.ca>
To: "Subbu Sivaramakrishnan" <Subbu.S@umanitoba.ca>
Cc: "Christine Adams" <Christine.Adams@umanitoba.ca>
Sent: 29-Sep-20 9:44:50 AM
Subject: Re: Request for Support for Asper Track 1 Admission Requirement Amendment

Dear Subbu,

The Faculty of Science has no issues with your request to include MATH 1510 in your revised admission requirements. This change will have no impact on our Faculty and will hopefully makes things more automated for your admission process.

Sincerely,
Ben.

--
Ben Pak Ching Li
Associate Professor, Department of Computer Science
Office: E2-479 EITC
Email: Ben.Li@cs.umanitoba.ca

March 18, 2021

Report of the Senate Committee on Instruction and Evaluation RE: Revised Co-op Entrance and Employment Term Requirements, Agriculture Diploma, Faculty of Agricultural and Food Sciences

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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 March 18, 2021 the committee considered a proposal by the Faculty of Agricultural and Food Sciences (FAFS) to revise the entrance and employment term requirements of the Cooperative Education Program of the Agriculture Diploma.

Observations:

1. The Faculty is proposing to reduce the number of credit hours required for entrance to the Agriculture Diploma Cooperative Education Program from 47 credit hours to 24. In 2018 the Diploma in Agriculture program was revised, with a full course load in year one consisting of 46 credit hours, which is less than the current cooperative education program entrance requirement of 47 credit hours.
2. The credit hour requirement reduction would also allow students who choose to take three years to complete the program to participate in cooperative education. Students may decide to complete the diploma over three years for a number of reasons, for example, academic ability, health or personal reasons. These students may benefit from participating in the experiential learning opportunities provided in cooperative education.
3. The Faculty is proposing to reduce the Degree Grade Point Average requirement for entrance to the Agriculture Diploma Cooperative Education Program from 2.5 to 2.0, as this is the minimum Degree Grade Point Average required to be in good standing and graduate.
4. At the Committee's request, the Faculty has clarified that a student's full admission into the Cooperative Education Program is dependent upon receiving a job placement through the FAFS Cooperative Education Office.
5. The Faculty is also proposing to remove an employment term requirement that the Cooperative Education Program occur between the first and second year in the program.

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

> ***THAT Senate approve the proposed revisions to the entrance and employment term requirements of the Cooperative Education Program, Agriculture Diploma, Faculty of Agricultural and Food Sciences, effective September 1, 2021.***

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.

UM | Faculty of Agricultural and Food Sciences

Office of the Dean
256 Agriculture Building
Winnipeg, Manitoba
Canada R3T 2N2
T: 204 474 6026
F: 204 474 7525

MEMORANDUM

DATE: February 11, 2021

TO: Senate Committee on Instruction and Evaluation

FROM: Dr. Jitendra Paliwal, Associate Dean (Graduate Programs) and Associate Dean (Academic)

RE: **Faculty of Agricultural and Food Sciences Proposed Changes**

Through its Faculty Council on December 9, 2020, Agricultural and Food Sciences approved the following revision to its Diploma in Agriculture's Cooperative Education requirements. Materials in support of these proposed changes are attached including the program modification form and academic calendar modifications.

4.12 Cooperative Education Program

Co-operative Education is a process that alternates periods of academic study with periods of paid work experience relating to the co-op student's area of study. Through the Co-operative Education Program, full-time, paid work terms provide the students with practical experience and provide guidance for further career specialization or further academic study.

Degree Program

Students who have been admitted to an undergraduate program are eligible to apply to the Co-op Program. Students are advised that satisfying the entrance requirements does not guarantee a place in the Co-operative Education Program. Full admission into the Program is dependent upon a student's ability to secure a work term placement. Normally, the first work term would take place at the end of the second academic year allowing students to pursue professional development activities in year one. However, with approval of the Faculty and employer, the first work term could commence after the first year of a four-year or second-degree program. Students admitted into the Program must maintain good academic standing (minimum DGPA of 2.0).

Work Term Requirements: The Co-operative Education Program requires the student to secure two full-time, paid co-op work terms (minimum of 420 hours each) with a faculty approved employer(s). A third work term is optional. Prior to starting the work term, students are required to register in the appropriate Agricultural and Food Sciences Co-operative Education Work Term Course within the set deadlines and pay the fee. Successful completion of a work term includes participating in a mid-work term interview with the Co-op Coordinator and completion of a written work term report at the end of each work term. Students who receive a passing grade on the work term reports for all required work terms graduate with the Co-operative Education designation acknowledged on their parchment.

During a work term, a co-op student may take a maximum of one additional course worth up to six credit hours for a total of nine (9). Co-op credit hours earned can be used towards free elective requirements in any degree program.

Diploma Program

Admission: To be considered for admission in the Cooperative Education Program, a first-year diploma student must have a minimum Degree GPA of ~~2.5~~ **2.0** and have completed at least ~~47~~ **24** Credit Hours of studies by the end of the academic year of application.

Students are advised that satisfying the entrance requirements does not guarantee a place in the Cooperative Education Program. ~~Acceptance~~ **Full admission** into the program is dependent upon the student receiving a job placement through the Cooperative Education Office.

Employment Term Requirements: ~~The Cooperative Education Program is a five-month program between the first and second year with a faculty- approved employer.~~ The student will receive three credits for completing the Cooperative Education Program. Students are required to register in the employment term course and pay the fee prior to starting the employment term.

April 15, 2021

Report of the Senate Committee on Instruction and Evaluation RE: Assessment of Student Academic Performance, Post Baccalaureate Diploma in Education, Faculty of Education

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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 April 15, 2021 the committee considered a proposal from the Faculty of Education regarding modification of the Assessment of Student Academic Performance, Post Baccalaureate Diploma in Education.

Observations:

1. The Faculty is proposing to expand upon the requirements for reinstatement in the Post Baccalaureate Diploma program after an academic suspension by requiring a written request for reinstatement addressed to the Associate Dean Undergraduate Programs prior to readmission to the program. The written request would be required to include actions taken during the suspension period which would better prepare the student for meeting the academic requirements of the program.

2. The written request would not be used to determine whether or not a student would be permitted to return to their program, but rather to ensure that the student is aware of supports available to assist them in being successful in the program.

3. The Faculty would require that the written request be submitted no later than 30 days before the application deadline.

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

> ***THAT Senate approve the proposed modification of the Assessment of Student Academic Performance, Post Baccalaureate Diploma in Education, Faculty of Education, effective September 1, 2022.***

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.

UNIVERSITY OF MANITOBA | Faculty of Education
Office of the Dean

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DATE: March 24, 2021

TO: Dr. Mark Torchia, Committee Chair, SCIE
FROM: Dr. Thomas Falkenberg, Chair, Faculty of Education Council

RE: Motions for Senate

CC: Ms. Marcia Yoshida, Student Appeals and Academic Governance Officer
Dr. Amy Farrell-Morneau, Senator
Dr. Merli Tamtik, Senator
Dr. Melanie Janzen, Acting Chair, Undergraduate Programs Committee (UPC)
Ms. Desiree Kennedy, Coordinator of Undergraduate Programs
Ms. Tara Baxter, Committee Secretary, UPC

The following motion was passed by the Faculty of Education Undergraduate Programs Committee (UPC) [on December 7, 2020] and subsequently by Faculty of Education Council [on January 11 ,2021]. Please consider this motion at the next SCIE meeting.

MOTION: ***THAT,*** effective Fall 2022, the current PBDE regulation (section 6.5.2) of the Faculty of Education Undergraduate Calendar) related to the assessment of student academic performance be revised to the proposed PBDE regulation in the attached Academic Calendar revisions.

Rationale:

The proposed regulation is intended to: 1) align the process for reinstating PBDE students with the process implemented for B.Ed. students who are required to withdraw on academic grounds and suspended for two years; 2) signal to PBDE students not in good standing that academic enhancements and supports should be pursued to enable future success; and 3) provide an opportunity for reflection, growth, and re-entry interaction between the returning student, ADU and Academic Advisor to provide resources, information, and supports if necessary and appropriate.

PROPOSED CALENDAR REVISIONS – Clean copy

SECTION 6: Post Baccalaureate Diploma in Education

6.5.2 Assessment of Student Academic Performance

Academic performance is normally assessed at the completion of nine credit hours of course work and at the end of every session thereafter. A minimum grade of "C" is required for each course that is to be included in the student's diploma program. Effective September 2011, a student must maintain a minimum Degree Grade Point Average (DGPA) of 2.50 to continue in the program. A student whose DGPA falls below 2.50 will be placed on academic suspension for two years. Reapplication and written request for reinstatement addressed to the Associate Dean Undergraduate Programs is required for readmission to the program. The written request must be received no later than 30 days prior to the application deadline and must identify actions the student has taken during the suspension period to better prepare for meeting the academic requirements of the program.

PROPOSED CALENDAR REVISIONS - Current Academic Calendar content with changes

SECTION 6: Post Baccalaureate Diploma in Education

6.5.2 Assessment of Student Academic Performance

Academic performance is normally assessed at the completion of nine credit hours of course work and at the end of every session thereafter. A minimum grade of "C" is required for each course that is to be included in the student's diploma program. Effective September 2011, a student must maintain a minimum Degree Grade Point Average (DGPA) of 2.50 to continue in the program. A student whose DGPA falls below 2.50 will be placed on academic suspension for two years. Reapplication **and written request for reinstatement addressed to the Associate Dean Undergraduate Programs** is required for readmission to the program. **The written request must be received no later than 30 days prior to the application deadline and must identify actions the student has taken during the suspension period to better prepare for meeting the academic requirements of the program.**

March 18, 2021

Report of the Senate Committee on Instruction and Evaluation RE: Graduation with Distinction and Credit Hours Per Term, Faculty of Music

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 March 18, 2021 the committee considered a proposal by the Faculty of Music regarding Graduating with Distinction and Credit Hours per Term regulations.

Observations:

Graduation with Distinction

1. The Faculty is proposing that students in the Bachelor of Music or Bachelor of Jazz Studies programs who graduate with a Degree Grade Point Average of 3.80 graduate "With Distinction".

Credit Hours Per Term

1. The current practice within the Faculty is to require students who wish to take more than 16 credit hours per term to obtain permission from a student advisor.

2. The Faculty is proposing allow students to take 17 credit hours per term, which would allow students greater flexibility to substitute a 3 credit hour course for a 2 credit hour course.

Recommendation

The Senate Committee on Instruction and Evaluation recommends:

> ***THAT Senate approve the proposed Graduation with Distinction and Credit Hours Per Term regulations, Faculty of Music, effective September 1, 2021***

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.

Desautels
FACULTY of MUSIC

319-150 Dafoe Road
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music@umanitoba.ca

April 6, 2021

Dr. Mark Torchia
Chair, Senate Committee on Instruction and Evaluation

I am writing to this body to consider two motions from the Desautels Faculty of Music. Both motions were brought before the January 26, 2021 Desautels Faculty of Music Curriculum Committee, which recommended that these items be brought forward to Faculty Council for ratification, which occurred at the February 22, 2021 meeting.

Motion 1: Graduation with Distinction

Date of curriculum committee meeting, at which the motion was passed: January 26, 2021
Motion approved by Faculty Council: February 22, 2021

Context and rationale for motion: many other faculties and departments at the University of Manitoba award a Graduation with Distinction designation for graduates that achieve a minimum degree GPA. Until now, the Faculty of Music has not had such a designation, and we want to institute it at this time. We have proposed a degree GPA of 3.8 as the threshold for Graduation with Distinction, as 3.8 is the level specified by several other faculties and departments, including Arts, Engineering and some Science departments.

Wording for the Academic Calendar:
Students graduating with a Bachelor of Music or Bachelor of Jazz Studies will have their degree granted 'With Distinction' if they have a minimum Degree Grade Point Average of 3.80. The term 'Degree with Distinction' will appear both on the parchment and on the student's transcript.

Motion 2: Raising credits per term from 16 to 17 credits

Students will be allowed to take up to 17 credits per term (raised from 16 credits), without permission or approval from the Student Advisor, and without any specified GPA level. Students who want to exceed 17 credits per term will still need approval from the Student Advisor.

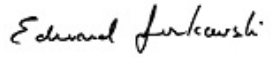
Date of curriculum committee meeting, at which the motion was passed: January 26, 2021
Motion approved by Faculty Council: February 22, 2021

Context and rationale for motion: because we have numerous courses that are worth 2 credits (instead of the usual 3 credits), Faculty of Music students who want to add a course, or to substitute a 3-credit course for a 2-credit one, often want or need to take 17 credits per term. However, our current guidelines specify that 16 is the maximum credits per term that students can take without receiving approval from the Student Advisor. This motion will allow students to take up to 17 credits per term without receiving permission from the Student Advisor. The change will provide students with some more flexibility, and will eliminate some paperwork for both students and staff.

Please do not hesitate to contact me if you require any further information or clarification on any point.

Thank you for your consideration of this submission.

Yours sincerely,



Edward Jurkowski, Ph.D.
Dean, Desautels Faculty of Music

April 15, 2021

Report of the Senate Committee on Rules and Procedures Regarding the Addition of Senate Assessors

Preamble

1. The terms of reference of the Senate Committee on Rules and Procedures (SCRP) are available on the University Governance website. The SCRP is "to consider and recommend on any matter concerning rules and procedures".

2. Since last reporting to Senate, the Committee met electronically on March 22, 2021 to review a request from the Vice-President (Indigenous) regarding the addition of the Associate Vice-Presidents (Indigenous) as assessors to Senate.

Observations

1. The addition of the Associate Vice-President (Indigenous), Students, Community, and Cultural Integration; and Associate Vice-President (Indigenous) Scholarship, Research and Curriculum as assessors to Senate would be in keeping with other Vice-Provosts and Associate Vice-Presidents who already serve as assessors to Senate.

2. The previous Vice-Provost (Indigenous Engagement) and Executive Lead for Indigenous Achievement roles had served as assessors on Senate.

3. The addition of these roles as assessors to Senate will provide Senate with additional resources around matters related to Indigenous achievement.

Recommendation:

The Senate Committee on Rules and Procedures recommends:

THAT Senate approve the addition of the Associate Vice-Presidents (Indigenous) as Assessors to Senate .

Respectfully submitted,

Dr. Jeffery Taylor, Chair
Senate Committee on Rules and Procedures

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

THE SENATE COMMITTEE ON UNIVERSITY RESEARCH
REPORT ON THE REVIEW OF THE
University of Manitoba Institute for the Humanities (UMIH)

Preamble:

1. The terms of reference for the Senate Committee on University Research (SCUR) can be found at:
http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/510.html

2. At its meeting of March 18, 2021, SCUR received a report from the University of Manitoba Institute for the Humanities (UMIH) for its periodic review, as per University policy.

3. The Policy for *Research Centres, Institutes and Groups*, stipulates that all research centres/institutes be reviewed by the Senate Committee on University Research (SCUR) on a periodic basis but not less than once every 5 years. Accordingly and following the approval by Senate of this Policy, the Senate Committee on University Research established a schedule for the review of all research centres/institutes

4. For each research centre/institute identified for review, a sub-committee of the Senate Committee on University Research was established. In accordance with the Policy, the task of each sub-committee was to recommend to SCUR on whether a formal, independent review committee should be struck to conduct a full review. If a sub-committee was of the view that a full review of a specific research centre/institute was not warranted, it was further charged with recommending to SCUR on the continuance or termination of the research centre/institute.

Observations:

1. The review process followed that which is outlined in sections 2.6 to 2.13 of the Procedures, and involved a review of annual reports of each centre/institute as well as a report prepared by each research centre/institute director which (as per section 2.8 of the Procedures) contained:
    a) A description of how and why the centre/institute has achieved or revised its original objectives; a detailed listing of its research and training accomplishments; a current membership list; and a detailed financial statement;
    b) A five-year plan which identifies future research directions and development strategies;
    c) Letters indicating continued support for the research/centre institute from appropriate department heads and faculty/school deans/directors; and
    d) The names of individuals who could provide external assessments of the research centre/institute.

2. The membership of this sub-committee was as follows:

   Roisin Cossar, Faculty of Arts (Chair)
   Kelley Main, Faculty of Graduate Studies
   Etinosa Osemwota, Faculty of Graduate Studies

3. The assessment of the sub-committee was as follows:
   a) The extent to which the research centre/institute has fulfilled:
      (i) The general objectives of research centres/institutes as stipulated under the Policy:

      The UMIH has achieved its mandate under the policy. It was established in 1990 and has been continuously approved to operate as an Institute. It has had no changes to its management structure. Its Director is normally a tenured faculty member who receives a 6-credit hour release for the position. The only staff member is an administrative assistant who works 80% for UMIH and 20% for the Faculty of Arts. UMIH is overseen by a Board of Management consisting of 9 members from Arts and 3 from other faculties, all appointed by the Dean of Arts. The Institute supports Research Affiliates who may be graduate students, post-doctoral researchers, and early career scholars. There are also graduate fellows and undergraduate student interns. During the period under review, the Institute has also supported 8 distinct Research Clusters comprised of both faculty and graduate students working on humanities topics. The internal letters of support unanimously praise the Institute for the support that it has offered to researchers, particularly for the way in which it has fostered interdisciplinary connections both within the faculty and outside.

      (ii) Its specific objectives, as indicated on its establishment:

      The institute's objectives are as follows:
      1. To foster research and scholarship in the humanities at the University of Manitoba.
      2. To promote interdisciplinary research in the humanities.
      3. To help obtain external funding for humanities research.
      4. To address the needs and interests of researchers in a broad range of subjects including literature and languages, film and visual culture, philosophy, history and religion, and also the literary, philosophical, theological and historical aspects of the social and physical sciences,

mathematics, the arts, and professional studies.
5. To serve the entire humanities constituency in the University and the general community.
6. To serve the community through outreach programs and lecture series for the general public.

During the review period, the institute sponsored 181 presentations of diverse natures (note that this is higher than the number presented in the UMIH report). See the list below. The sub-committee was particularly struck by the wide variety of audiences for these presentations and the strong commitment to community outreach that they demonstrate.

• fifty-three (53) public lectures by visiting scholars
• fifty-two (52) public lectures by UMIH Research Affiliates, Graduate Fellows, and University of Manitoba faculty and graduate students researching the humanities.
In addition, the Institute also organized or supported seventy-six (76) other types of research presentations:
• thirty-four (34) workshops/panels/roundtables
• ten (10) conferences/symposiums/colloquia
• thirteen (13) reading seminars, and
• nineteen (19) public humanities programming events/community collaborations.

Publications stemming from work done under the auspices of the Institute from 2016-2020, include two (2) academic monographs, twenty-seven (27) academic articles and academic book chapters, two (2) chapbooks, seven (7) blog articles, and one (1) ongoing column in a popular local newspaper. These publications under-represent the output of members of the Institute, since Research Affiliates' appointments are one year only, and work done during that period may have been published at a later date.

Research Clusters in this period included Critical Environmental Research; Alternate Histories; Collecting, Citing, and Curating; Shelter; Occupy Bartleby (notable for undergraduate student participation) and Graphic Narratives: Medical Humanities; Power and Resistance in Latin America.

Community engagement has been a notable strength of the Institute in recent years. The institute describes its mission to "quality humanities-related programming into the community." As such they have sponsored

events at the Gas Station Theatre and West End Cultural Centre looking at issues of diversity, race and racism, and sexuality. The sub-committee was also impressed with work of the current Director and their development of a microgrant initiative for students and community members engaging in humanities related work in the broader community.

These events meet both the objectives of the Institute and the most recent University Strategic Plan, particularly Pillars 4 and 5, "Building Community" and "Forging Connections," as well as Pillar 2, "Driving Discovery."

b) Highlight past research training and funding of the centre. Discuss the appropriateness of its proposed five-year plan for future research directions and development strategies:

Training opportunities are available for Research Affiliates, graduate student fellows, and in more recent years, undergraduate students in the form of internships. During the period under review there were total 22 research affiliateships (some of which were occupied by the same person more than once), 5 graduate fellowships, and 4 undergraduate student internships. Research training also includes student members across the research clusters. The administrative assistant previously had formal access to research opportunities and support but has less time for that now that their position is divided between UMIH and Arts. Their interactions with the Director do provide opportunities for discussion of research methods, ethics, and similar topics. Recent initiatives by the Institute also include a focus on alternate academic careers and on graduate student-driven projects. There is also a real spirit of engagement with community members in the city and province, as seen for instance in the microgrant program started in summer 2020, which allows community members to pursue their own projects with Institute support. The emphasis on engagement with diverse populations has been particularly notable in this period.

The Institute plans to continue its currently successful initiatives both within the university and the broader community. Its specific future plans include developing/coordinating with the developing Arts co-op program for undergraduate students, offering courses to incarcerated people, and developing both a Summer Institute for studies of a particular humanities-related theme, and a First Book Institute, to support early career researchers. These all seem like laudable goals.

c) Its current and projected financial viability:

The Institute for the Humanities receives the majority of its support from the Faculty of Arts. This includes an operating grant which grew in the period under review from c. $28,000 to c. $65,000 in 2019-20. In 2019 the Institute also gained access to a $1 million fund which cannot be endowed and which it plans to spend at a rate of $40,000 annually over the next 25 years. They also have a small endowed fund (c. $83,000 book value in 2018) which it uses for graduate fellowships. Many members of the Institute receive external funding for research and conferences with UMIH support.

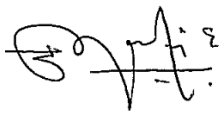
The $1 million grant confirms the support of the Faculty of Arts for the operations of the Institute for the foreseeable future.

The Institute notes that its operating budget has doubled but its personnel remains the same. That is, it is staffed by a Director and an administrative assistant only. Growth will be difficult without a way to address this problem. There is a suggestion that hiring an Associate or Executive Director would alleviate this problem, and in winter 2021 the Board began planning for this possibility. This would also change the duties of the assistant to the program.

Recommendation:

THAT the University of Manitoba Institute for the Humanities, be renewed for a term of 5 years, from June 30, 2021 through July 1, 2026.

Respectfully submitted,



Dr. Digvir Jayas, Chair
Senate Committee on University Research

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

May 5, 2021

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 on April 19, 2021 to consider nominations to fill vacancies on the standing committees of Senate.

Observation

Listed below are Senate committees with vacancies to be filled, along with the names of the nominees being proposed, their faculty/school, and the expiry date of their terms. Unless otherwise stated, all terms begin on June 1, 2021.

Following the list is the membership list for each of those committees, including the names of the nominees, which have been highlighted.

Recommendations

The Committee recommends to Senate the following list of faculty nominees:

COMMITTEE	NOMINEE(S)	FACULTY/ SCHOOL	TERM END DATE
Senate Committee on Academic Accommodation Appeals	Nancy Hansen (R)*	Education	2024.05.31
	Christine Kelly (R)	Health Sciences	2024.05.31
	Krystyna Koczanski (R)	Science	2024.05.31
	Trina Arnold	Health Sciences	2024.05.31
Senate Committee on Academic Computing	Franklin Bristow (R)	Science	2024.05.31
	James Gilchrist (R)	Health Sciences	2024.05.31
	Ian Jeffrey (R)	Engineering	2024.05.31
	Martin Scanlon (S)**	Agricultural & Food Sciences	2024.05.31
Senate Committee on Academic Dress	Wen Zhong	Agricultural & Food Sciences	2024.05.31
Senate Committee on Academic Freedom	Nathan Greidanus (S) *(Term Starts July 1, 2021)*	Management	2021.12.31
	Jeff Taylor (S) (R)	Arts	2024.05.31
Senate Committee on Academic Review	Shawn Clark (S)	Engineering	2024.05.31
	Netha Dyck (S)	Health Sciences	2024.05.31

Senate Committee on Admissions	Mojgan Rastegar (S) (R)	Health Sciences	2024.05.31
	Sarah Teetzel (R)	Kinesiology & Recreation Management	2024.05.31
	David Mandzuk (S) (R)	Extended Education	2024.05.31
Senate Committee on Admission Appeals	David Mandzuk (S) (R) *(Term Starts July 1, 2021)*	Extended Education	2023.05.31
	Ryan Cardwell (R)	Agricultural & Food Sciences	2024.05.31
	Leisha Strachan (R)	Kinesiology & Recreation Management	2024.05.31
	Lucas Tromly (R)	Law	2024.05.31
Senate Committee on Appeals	Melanie Glenwright *(Term Starts July 1, 2021)*	Arts	2022.05.31
	Robert Biscontri *(Term Starts July 1, 2021)*	Management	2023.05.31
	Peter Blunden (S) (R)	Science	2024.05.31
	Vanessa Swain (R)	Health Sciences	2024.05.31
Senate Committee on Awards	Glenn Clark (S)	Arts	2024.05.31
Senate Committee on the Calendar	Grace Nickel	School of Art	2024.05.31
Senate Committee on Curriculum and Course Changes	Dean McNeill (S) (R)	Engineering	2024.05.31
	Dawn Sutherland	Education	2024.05.31
Senate Committee on Honorary Degrees	Christopher Adams (R)	St. Paul's College	2024.05.31
Senate Committee on Instruction and Evaluation	Reg Urbanowski (S)	Health Sciences	2024.05.31
	Trina Arnold	Health Sciences	2024.05.31
Senate Committee on Libraries	Michael Yellow Bird (S) *(Term Starts July 1, 2021)*	Social Work	2023.05.31
	James Gilchrist (R)	Health Sciences	2024.05.31

	Michael Shaw (S) (R)	Science	2024.05.31
Senate Committee on Medical Qualifications	Phil St. John (R)	Health Sciences	2024.05.31
Senate Planning and Priorities Committee	John Sorensen *(Term Starts July 1, 2021; L/R for Colette Simonot-Maiello)*	Science	2021.12.31
	Myrle Ballard (S)	Science	2022.05.31
	Cary Miller (R)	Arts	2025.05.31
	Mogjan Rastegar (S)	Health Sciences	2025.05.31
	Colette Simonot-Maiello	Music	2025.05.31
Senate Committee on Rules and Procedures	Tracey Peter (S) (R)	Arts	2024.05.31
Senate Committee on University Research	Gady Jacoby (S) (R)	Management	2024.05.31
	Stephan Pflugmacher Lima (S)	Environment, Earth & Resources	2024.05.31
	Samar Safi-Harb (R)	Science	2024.05.31
	Warren Cariou	Arts	2024.05.31

* (R) indicates re-appointment
** (S) indicates a member of Senate at time of appointment/re-appointment

Respectfully submitted,

Professor M. Edwards, Chair
Senate Committee on Nominations

SENATE COMMITTEE ON ACADEMIC ACCOMMODATION APPEALS

last updated April 20, 2021

Composition	Incumbents	Faculty/School	Term
Chair, appointed by the President	Robert Hoppa	Arts	2021.05.31
Vice-Chair, elected by and from the academic staff members	TBD		2021.05.31
Ten members of the academic staff appointed by Senate	Terri Ashcroft	Health Sciences	2023.05.31
	Carrie Madden	Science	2023.05.31
	Virginia Torrie	Law	2023.05.31
	Elizabeth Troutt	Arts	2023.05.31
	Vanessa Warne	Arts	2023.05.31
	Nancy Hansen	Education	2024.05.31
	Krystyna Koczanski	Science	2024.05.31
	Christine Kelly	Health Sciences	2024.05.31
	Trina Arnold	Health Sciences	2024.05.31
	VACANT		
Two students appointed by Senate	Serena Phillips	Science	2021.05.31
	Rubel Talukder	Graduate Studies	2021.05.31

Resource: Marcia Yoshida 474-6166

Terms of Office: three-year terms; students = one-year terms

SENATE COMMITTEE ON ACADEMIC COMPUTING

last updated April 22, 2021

Composition	Incumbents	Faculty/School	Term
Provost and Vice-President (Academic) (or designate), Chair	Mark Torchia, designate		*Ex-officio*
Vice-President (Research and International)(or designate)	Jay Doering, designate		*Ex-officio*
CIO, Information Services and Technology (or designate)	Mario Lebar, designate K-L Holter		*Ex-officio*
University Librarian (or designate)	Lisa O'Hara, designate Les Moor		*Ex-officio*
Manager, Learning Management Systems	Sol Chu		*Ex-officio*
Two Deans of Faculties or Colleges or Directors of Schools	Reg Urbanowski	Health Sciences	2022.05.31
	Martin Scanlon	Agricultural and Food Sciences	2024.05.31
Six members of the academic staff (including at least one from the Bannatyne campus)	Kari Kumar	Extended Education	2022.05.31
	Neil McArthur	Arts	2022.05.31
	David Walker	Environment, Earth, and Resources	2022.05.31
	Franklin Bristow	Science	2024.05.31
	James Gilchrist	Health Sciences	2024.05.31
	Ian Jeffrey (S)	Engineering	2024.05.31
Four Students (two grads, two undergrads)	Alexandre Morakis	Management	2022.05.31
	Jessica Ritchie	Health Sciences	2022.05.31
	A.K.M. Monsurul Alam	Graduate Studies	2022.05.31
	Lanlan Li	Graduate Studies	2022.05.31

Resource:	Laura Orsak-Williams	474-8174
Resource (technical):	Gilbert Detillieux	474-8161
Resource:	Lynette Phyfe	474-8013
Terms of Office:	three-year terms; students = two-year terms	

SENATE COMMITTEE ON ACADEMIC DRESS

last updated April 28, 2021

Composition	Incumbents	Faculty/School	Term
Director, School of Art, Chair	Edward Jurkowski	School of Art	*Ex-officio*
Head, Department of Interior Design	Kelley Beaverford	Architecture	*Ex-officio*
University Registrar and Executive Director of Enrolment Services	Jeff Adams		*Ex-officio*
One member of academic staff from Textile Sciences	Wen Zhong	Agricultural & Food Sciences	2024.05.31
Two students	Carlos Villa	Education	2021.05.31
	Rubel Talukder	Graduate Studies	2021.05.31
Resource: Laura Orsak-Williams 474-8174 Terms of Office: three-year terms; students = one-year terms			

SENATE COMMITTEE ON ACADEMIC FREEDOM

last updated April 22, 2021

Composition	Incumbents	Faculty/School	Term
Five members of academic staff, at least three of whom shall be Senators. At least one of the five shall be from among those excluded from collective bargaining units	Johan van Lierop (S)	Science	2022.05.31
	Colette Simonot-Maiello (S) *l/r Nathan Greidanus (S)*	Music *Management*	2023.05.31 *2021.07.01 – 2021.12.31*
	Parimala Thulasiraman	Science	2023.05.31
	Jeffrey Taylor (S) (Excl)	Arts	2024.05.31
	VACANT		
Two students, at least one of whom shall be a student Senator	Emily Kalo (S)	Science	2021.05.31
	Akeem Azeez (S)	Graduate Studies	2021.05.31

Resource: Shannon Coyston 474-6892
Terms of Office: three-year terms; students = one-year terms

SENATE COMMITTEE ON ACADEMIC REVIEW

last updated April 28, 2021

Composition	Incumbents	Faculty/School	Term
Provost and Vice-President (Academic)(or designate), Chair	Todd Mondor, designate		*Ex-officio*
Deputy Provost (Academic Planning and Programs)	Todd Mondor		*Ex-officio*
Dean, Faculty of Graduate Studies (or designate)	Kelley Main, designate Stephen Kirkland		*Ex-officio*
Two members of Senate holding the rank of Dean of a Faculty or College, Director of a School or Head of a Department*	Tina Chen (S)	Arts	2022.05.31
	Netha Dyck (S)	Health Sciences	2024.05.31
Two students who are members of Senate	Jessica Ritchie (S)	Health Sciences	2021.05.31
	Akeem Azeez (S)	Graduate Studies	2021.05.31
Three members of the academic staff, at least one of whom shall be a member of Senate*	Karine Levasseur	Arts	2022.05.31
	Ruppa Thulasiram	Science	2022.05.31
	Shawn Clark (S)	Engineering	2024.05.31
Resource: Shannon Coyston 474-6892 Terms of Office: three-year terms; students = one-year terms			

* Of the committee members elected from these two categories, at least one shall be from the Bannatyne campus

SENATE COMMITTEE ON ADMISSIONS

last updated April 22, 2021

Composition	Incumbents	Faculty/School	Term
Provost and Vice-President (Academic) (or designate), Chair	Laurie Schnarr, designate		*Ex-officio*
Vice-Provost (Students) (or designate)	Erin Stone, designate		*Ex-officio*
University Registrar and Executive Director of Enrolment Services	Jeff Adams		*Ex-officio*
Dean, Faculty of Arts (or designate)	Heidi Marx, designate		*Ex-officio*
Dean, Faculty of Science (or designate)	Sean McKenna, designate Peter Loewen (alternate)		*Ex-officio*
Dean, Rady Faculty of Health Sciences (or designate)	Brian Postl, designate Sara Goulet		*Ex-officio*
Two Deans of Faculties or Directors of Schools from faculties or schools other than the Faculties of Arts, Science or Health Sciences	Edward Jurkowski (S)	Music	2023.05.31
	David Mandzuk (S)	Extended Education	2024.05.31
Six members of the academic staff, at least three shall be Senators, with no two from the same faculty or school	Rusty Souleymanov (S)	Social Work	2022.05.31
	Robert Biscontri (S)	Management	2023.05.31
	Derek Brewin	Agricultural and Food Sciences	2023.05.31
	Karen Dow	Engineering	2023.05.31
	Mogjan Rastegar (S)	Health Sciences	2024.05.31
	Sarah Teetzel (S)	Kinesiology & Recreation Management	2024.05.31
Three students	Serena Phillips	Science	2021.05.31
	Kristin Smith	Arts	2021.05.31
	William Dowie	Graduate Studies	2021.05.31
Deputy Minister of Economic Development and Training (or designate)	DECLINED		*Ex-officio*
One Counsellor from a High School to be nominated by the Manitoba School Counsellors' Association	Kelly Teixeira	St. John's-Ravenscourt School	2021.05.31

Resource: Olga Kuznetsova 474-8820
Terms of Office: three-year terms; students = one-year terms

SENATE COMMITTEE ON ADMISSION APPEALS

last updated April 22, 2021

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*	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	Brenda Hann, Vice-Chair	Science	2021.05.31
Eight members with broad representation across Faculties/Schools/Colleges holding academic appointments in the University	Jim Young	Science	2022.05.31
	Jennifer Schulz	Law	2022.05.31
	Jitendra Paliwal	Engineering	2023.05.31
	Subbu Sivaramakrishnan	Management	2023.05.31
	Karen Wilson Baptist *David Mandzuk*	Architecture *Ext. Education (starts 07.01)*	2023.05.31 *2021.07.01*
	Ryan Cardwell	Agricultural & Food Sciences	2024.05.31
	Leisha Strachan	Kinesiology & Recreation Management	2024.05.31
	Lucas Tromly	Law	2024.05.31
Two students	Serena Phillips	Science	2021.05.31
	Halley Ritter	School of Art	2021.05.31
President of UMSU (or designate)	Jelynn Dela Cruz		*Ex-officio*
Deputy Registrar and Director of Admissions (non-voting)	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 April 28, 2021

Composition	Incumbents	Faculty/School	Term
One academic member appointed as Chair by Senate Executive	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)	Peter Blunden	Science	2022.05.31
	Derek Oliver	Engineering	2022.05.31
Three members from among Deans of Faculties or Colleges and Directors of Schools appointed by the President	Lalitha Raman-Wilms	Health Sciences	2022.05.31
	Martin Scanlon	Agricultural & Food Sciences	2022.05.31
	Douglas Brown	Kinesiology & Rec. Mgt.	2023.05.31
Five academic members of Senate	Lisa Landrum (S)	Architecture	2022.05.31
	Derek Oliver (S)	Engineering	2022.05.31
	Jitendra Paliwal (S)	Agricultural & Food Sciences	2022.05.31
	Malcolm Smith (S) *Robert Biscontri*	Management *Management (starts 07.01)*	2023.05.31
	Peter Blunden (S)	Science	2024.05.31
Six academic members	Michael Campbell	Environment Earth & Res.	2022.05.31
	Nicholas Harland	Science	2022.05.31
	Melanie Soderstrom *l/r Melanie Glenwright*	Arts *Arts (starts 07.01)*	2022.05.31
	Rod Lastra	Extended Education	2023.05.31
	Vanessa Swain	Health Sciences	2024.05.31
	vacant		
President of UMSU (or desig.)	Jelynn Dela Cruz		*Ex-officio*
Six students (four undergrads from different Faculties or Schools, and two grads)	Joseph Asaminew	Health Sciences	2021.05.31
	Emily Kalo	Science	2021.05.31
	TBD		2021.05.31
	Lauren Slegers	Management	2021.05.31
	Akeem Azeez	Graduate Studies	2021.05.31
	Md Mahmudul Hasan	Graduate Studies	2021.05.31
One member of USB	Jules Rocque		2023.05.31
One student of USB	Marie Paule Ehoussou		2021.05.31
Resource: Marcia Yoshida 474-6166 Terms of Office: three-year terms; students = one-year terms			

SENATE COMMITTEE ON AWARDS

last updated April 22, 2021

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	Jared Carlberg, Chair	Agricultural and Food Sciences	2022.05.31
	Peter Cattini	Health Sciences	2022.05.31
	Karen Kampen	Arts	2022.05.31
	Darcy MacPherson, Vice-Chair	Law	2023.05.31
	Jennifer McLeese	Science	2023.05.31
	Glenn Clark (S)	Arts	2024.05.31
Two students (one graduate and one undergraduate)	Jenna Hepburn	Health Sciences	2021.05.31
	Maryam Samsamikor	Graduate Studies	2021.05.31
Vice-Provost (Graduate Education) and Dean, Faculty of Graduate Studies (or designate)	Michael Czubryt, designate		*Ex-officio*
Associate Registrar and Director of Financial Aid and Awards (or delegate)	Jane Lastra, designate Lesli Lucas-Aseltine		*Ex-officio*
Associate Vice-President (Alumni & Donor Relations) (or delegate)	Carolyn Basha, designate		*Ex-officio (non-voting)*
University Registrar and Executive Director of Enrolment Services (or delegate)	Jeff Adams		*Ex-officio (non-voting)*
Up to three Awards Establishment Coordinators and one Awards Selection Coordinator from Financial Aid and Awards	Pamela Gareau		*Non-voting*
	Mabelle Magsino		*Non-voting*
	Regan Sarmatiuk		*Non-voting*
	Mandy Laing		*Non-voting*
Resource: Pamela Gareau 474-9261 Terms of Office: three-year terms; students = one-year terms			

SENATE COMMITTEE ON THE CALENDAR

last updated April 28, 2021

Composition	Incumbents	Faculty/School	Term
University Registrar and Executive Director of Enrolment Services	Jeff Adams		*Ex-officio*
Dean, Faculty of Graduate Studies (or designate)	Kelley Main, designate Randy Jamieson		*Ex-officio*
Chair of the Senate Committee on Rules and Procedures (or designate)	Tracey Peter, designate		*Ex-officio*
Two members of the academic staff elected by and from Senate	Grace Nickel (S)	School of Art	2024.05.31
	VACANT		
Student Senator	Rubel Talukder (S)	Graduate Studies	2021.05.31
Calendar editor	Gloria Saindon	Registrar's Office	*Ex-officio (non-voting)*
University Secretary, Chair	Jeff Leclerc	University Secretary	*Ex-officio*

Resource: Marcia Yoshida 474-6166
Terms of Office: three-year terms; students = one-year terms

SENATE COMMITTEE ON CURRICULUM AND COURSE CHANGES

last updated April 22, 2021

Composition	Incumbents	Faculty/School	Term
Seven members of the academic staff	Sarah Teetzel (S)	Kinesiology & Recreation Management	2022.05.31
	Greg Smith, Chair	Arts	2022.05.31
	Joanne Hamilton	Health Sciences	2022.05.31
	Judith Hughes	Social Work	2023.05.31
	Ben Li	Science	2023.05.31
	Dean McNeill, Vice-Chair	Engineering	2024.05.31
	Dawn Sutherland	Education	2024.05.31
Three students	TBD		2021.05.31
	Heather Smeltzer	Health Sciences	2021.05.31
	Michael Bagamery	Graduate Studies	2021.05.31
One representative from the Université de Saint-Boniface named by the Recteur	Peter Dorrington		*Ex-officio*
One librarian named by the University Librarian	Kristen Kruse		*Ex-officio*
Deputy Provost (Academic Planning and Programs) (and/or delegate)	Cassandra Davidson		*Ex-officio (non-voting)*
Vice-President (Indigenous) (or delegate)	Catherine Cook, designate Cary Miller		*Ex-officio (non-voting)*
University Registrar and Executive Director of Enrolment Services (or delegate)	Sharon Bannatyne, designate		*Ex-officio (non-voting)*
Resource: Shannon Coyston 474-6892 Terms of Office: three-year terms; students = one-year terms			

SENATE COMMITTEE ON HONORARY DEGREES

last updated April 22, 2021

Composition	Incumbents	Faculty/School	Term
Chancellor, Chair	Anne Mahon		*Ex-officio*
President, Vice-Chair	Michael Benarroch		*Ex-officio*
President, UMSU	Jelynn Dela Cruz		*Ex-officio*
Chair, Alumni Association	Peter Wheatley		*Ex-officio*
Four faculty members from Senate	Brenda Austin-Smith (S)	Arts	2022.05.31
	James Blatz (S)	Engineering	2022.05.31
	Kelley Main (S)	Management	2022.05.31
	Christopher Adams (S)	St. Paul's College	2024.05.31
One representative of the community-at-large to be appointed by the Chancellor	William Pope		2021.05.31
Resource: Shelley Foster 474-6165 Terms of Office: three-year terms			

SENATE COMMITTEE ON INSTRUCTION AND EVALUATION

last updated December 14, 2020

Composition	Incumbents	Faculty/School	Term
Provost and Vice-President (Academic) (or designate), Chair	Mark Torchia, designate		*Ex-officio*
Seven members of the academic staff, at least one of whom shall be a Senator and at least one should be teaching courses in University 1. The seven shall include one Dean or Director, at least one from each of Arts and Science, and at least two from other faculties/schools (one shall be from the Bannatyne Campus)	Nicholas Harland	Science	2022.05.31
	Krystyna Koczanski	Science	2022.05.31
	Lukas Neville	Management	2022.05.31
	Vanessa Warne	Arts	2022.05.31
	Reg Urbanowski (S) (Dean)	Health Sciences	2024.05.31
	Trina Arnold	Health Sciences	2024.05.31
	vacant		
Four students, at least one graduate student	TBD		2021.05.31
	Michelle Nguy	Education	2021.05.31
	Lauren Slegers	Management	2021.05.31
	Akeem Azeez	Graduate Studies	2021.05.31
UMSU President or Vice-President	Jelynn Dela Cruz		*Ex-officio (non-voting)*
Dean or Associate Dean, Graduate Studies	Michael Czubryt		*Ex-officio (non-voting)*
Executive Director, Centre for the Advancement of Teaching and Learning (or designate)	Mark Torchia		*Ex-officio (non-voting)*
University Registrar or Associate Registrar (or designate)	Jeff Adams, designate Sharon Bannatyne		*Ex-officio (non-voting)*
Director, Student Advocacy (or designate)	Heather Morris, designate Matthew Carvell		*Ex-officio (non-voting)*
Resource: Marcia Yoshida 474-6166 Terms of Office: three-year terms; students = one-year terms			

SENATE COMMITTEE ON LIBRARIES

last updated April 28, 2021

Composition	Incumbents	Faculty/School	Term
Provost and Vice-President (Academic) (or designate), Chair	Lisa O'Hara, designate		*Ex-officio*
Vice-President (Research and International) (or designate)	Jay Doering, designate		*Ex-officio*
University Librarian (or designate)	Lisa Demczuk, designate		*Ex-officio*
Dean, Faculty of Graduate Studies (or designate)	Stephen Kirkland, designate		*Ex-officio*
Two Deans of Faculties or Colleges or Directors of Schools	Netha Dyck	Health Sciences	2022.05.31
	Michael Yellow Bird	Social Work	2023.05.31
Six academic members - at least two shall be Senators. Of the six, at least one each shall be from the Faculty of Arts, the Faculty of Science and the Bannatyne Campus	Sarah Ciurysek	School of Art	2022.05.31
	Orvie Dingwall	Libraries	2022.05.31
	Pam Perkins	Arts	2022.05.31
	Miroslaw Pawlak	Engineering	2023.05.31
	James Gilchrist (S)	Health Sciences	2024.05.31
	Michael Shaw (S)	Science	2024.05.31
Four students (two graduate, two undergraduate)	Lilja Best	Arts	2022.05.31
	Ashley Ginter	Social Work	2022.05.31
	Wiliam Dowie	Graduate Studies	2022.05.31
	A.K.M. Monsurul Alam	Graduate Studies	2022.05.31
Resource: Marcia Yoshida 474-6166 Terms of Office: three-year terms; students = two-year terms			

SENATE COMMITTEE ON MEDICAL QUALIFICATIONS

Last updated April 22, 2021

Composition	Incumbents	Faculty/School	Term
Dean, Max Rady College of Medicine (or designate), Chair	Brian Postl, designate Sara Israels	Health Sciences	*Ex-officio*
Provost and Vice-President (Academic) (or designate)	Diane Hiebert-Murphy, designate		*Ex-officio*
Three academic members from the Max Rady College of Medicine	Eric Jacobsohn	Health Sciences	2022.05.31
	Rakesh Arora	Health Sciences	2023.05.31
	Phil St. John	Health Sciences	2024.05.31
One member appointed by the College of Physicians and Surgeons of Manitoba	Anna Ziomek	Registrar/CEO, College of Physicians and Surgeons	2024.05.31
Resource: Jasmina Veinot 204-977-5647 Terms of Office: three-year terms			

SENATE PLANNING AND PRIORITIES COMMITTEE

last updated April 28, 2021

Composition	Incumbents	Faculty/School	Term
Provost and Vice-President (Academic) (or designate)	Mark Torchia, designate		*Ex-officio*
Vice-President (Administration) (or designate)	Mario Lebar, designate		*Ex-officio*
Vice-President (Research and International) (or designate)	Jay Doering, designate		*Ex-officio*
Ten members of academic staff (excluding Deans, Directors and Associate/Assistant Deans or Directors), three must be members of Senate, and one must be from Bannatyne campus	Myrle Ballard (S)	Science	2022.05.31
	Derek Oliver (S)	Engineering	2022.05.31
	David Watt (S), Chair	Arts	2022.05.31
	Mark Gabbert	Arts	2023.05.31
	Karine Levasseur	Arts	2023.05.31
	Gary Anderson	Science	2024.05.31
	Orvie Dingwall	Libraries	2024.05.31
	Cary Miller	Arts	2025.05.31
	Mogjan Rastegar (S)	Health Sciences	2025.05.31
	Colette Simonot-Maiello (S) *l/r John Sorensen*	Music *Science*	2025.05.31 *21.07.01-21.12.31*
Three students, one graduate, one undergraduate and the President of UMSU or designate	Kristin Smith	Arts	2022.05.31
	Akeem Azeez	Graduate Studies	2022.05.31
	Jelynn Dela Cruz		2021.04.30
President	Todd Mondor, designate		*Ex-officio*
Vice-Provost (Students)	Laurie Schnarr		*Ex-officio*

Resource: Shannon Coyston 474-6892
Terms of Office: four-year terms; students = two-year terms

SENATE COMMITTEE ON RULES AND PROCEDURES

last updated April 22, 2021

Composition	Incumbents	Faculty/School	Term
Four members of the academic staff who, at time of appointment/re-appointment, are members of Senate	Jeffery Taylor (S), Chair	Arts and School of Art	2022.05.31
	John Anderson (S)	Science	2023.05.31
	Reg Urbanowski (S)	Health Sciences	2023.05.31
	Tracey Peter (S)	Arts	2024.05.31
One student who, at time of appointment/re-appointment, is a member of Senate	Dustin Erickson (S)	Science	2021.05.31
Resource: Laura Orsak-Williams 474-8174 Terms of Office: three-year terms; students = one-year terms			

SENATE COMMITTEE ON UNIVERSITY RESEARCH

last updated April 28, 2021

Composition	Incumbents	Faculty/School	Term
Vice-President (Research and International), Chair	Digvir Jayas		*Ex-officio*
President	Michael Benarroch		*Ex-officio*
Provost and Vice-President (Academic)	Diane Hiebert-Murphy, designate		*Ex-officio*
Associate Vice-President (Research) Associate Vice-President (Partnerships)	Gary Glavin Jay Doering		*Ex-officio*
Dean, Faculty of Graduate Studies	Kelley Main		*Ex-officio*
Research Grants Officer	Kerrie Hayes, Director of Research Contracts		*Ex-officio (non-voting)*
Four Deans or Directors representing a range of research activities	Martin Scanlon	Agricultural & Food Sciences	2022.05.31
	Jeffery Taylor	Arts	2023.05.31
	Gady Jacoby	Management	2024.05.31
	Stephan Pflugmacher Lima	Environment, Earth & Resources	2024.05.31
Eight faculty members actively engaged in research and representing a range of research activities, at least two of whom are from the Bannatyne Campus	Andrew Halayko	Health Sciences	2022.05.31
	Roisin Cossar *(I/r for Jason Leboe-McGowan)*	Arts *(Arts)*	2021.06.30 *(2022.05.31)*
	Tamra Werbowetski-Ogilvie	Health Sciences	2022.05.31
	Anita Brûlé-Babel	Agricultural & Food Sciences	2023.05.31
	Shawn Clark (S)	Engineering	2023.05.31
	Michelle Porter	Kinesiology & Recreation Management	2023.05.31
	Samar Safi-Harb	Science	2024.05.31
	Warren Cariou	Arts	2024.05.31
Two graduate students selected by GSA	Etinosa Osemwota	Graduate Studies	2022.05.31
	Berardino Petrelli	Graduate Studies	2022.05.31
Resource: Sarah Vanderveen 474-7952 Terms of Office: three-year terms; students = two-year terms			

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: April 23, 2021

To: Mr. Jeff Leclerc, University Secretary

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs) & Chair, COVID-19 Recovery Steering Committee (CRSC)

Re: **E**xtension of Approval of Co-op Program Requirement for Asper School of Business

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Please see attached a proposal from the I.H. Asper School of Business to extend the approval of Asper Co-op Program Requirement, previously approved by the Senate Executive at its May 20, 2020 meeting. As a result of the pandemic and continuing public health measures, the Co-op program continues to see significant reduction in job postings which affects placement of students in work environments. The request proposes substituting the 3rd Co-op work term with the IDM 4050 Applied Small Business Consulting course for the 2021-2022.

The proposal is recommended for approval by the COVID-19 Steering Committee and the Provost and Vice-President (Academic).

I would ask that the item be considered by Senate Executive on May 05th and by Senate at its May 19th 2021 meeting.

Cc.: Dr. Janice Ristock, Provost and Vice-President (Academic)
Dr. Mark Torchia, Vice-Provost (Teaching and Learning); Academic Team Lead, CRSC
Dr. Gady Jacoby, Dean, I.H. Asper School of Business
Mr. Jeff Adams, Registrar and Executive Director, Enrolment Services

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

Asper School of Business

Extension of Approval of Asper Co-op Program Requirement Revision

Senate Executive Committee had previously approved our request for substituting the 3rd c-op work term with IDM 4050 Applied Small Business Consulting course for the 2020-2021 year. We are requesting approval for a modified proposal for the 2021-2022 year, given the continuing poor economic conditions due to the pandemic.

The Asper Co-op Program continues to experience significant reduction in job postings in 2021 due to the COVID-19 pandemic. Indications are this will likely continue into 2022 also. Many employers have withdrawn positions they normally offer due to the economic conditions or an inability to offer students safe work environments as mandated by public health directives. As a result, there is a possibility that we will not have sufficient number of work placements for students looking to complete their co-op work term in Fall 2021 or Winter 2022.

As per the rules and regulations of the Asper Co-op Program, students wishing to complete a Co-op option within their Bachelor of Commerce (Honours) degree must complete three, 4-month work terms with an employer. The only current option for students unable to find a co-op work term is to withdraw from the Asper Co-op Program or to extend their degree program until they complete a pending work term. Neither is a desirable option.

In Winter 2022 (or possibly Fall 2021), the Asper School intends to continue offering a Topics course IDM 4050 Applied Small Business Consulting (Fall 2020 course outline attached). The aim of this course is to have students assist local small businesses manage the current economic crisis. In this experiential course, students will help a local small or medium business overcome the current COVID-19 economic crisis. The course offers a significant work-integrated learning experience for students. It is our request, given the nature of the course, that it be allowed to be used in place of either IDM 3982 (2nd co-op work term) or IDM 4982 (3rd co-op work term) if a student is unable to secure a co-op work placement over the 2021-2022 year.

If our request is granted, the student would register for the 3-credit hour Business Option course and pay the corresponding tuition for that course. Standard Co-op work term fees would we waived. Although they would have paid for 2 credit hours above the required 120 CH required for the BComm degree, it is more than compensated for by the Co-op work term fee (about $800) which they would otherwise have paid.

The course would have the following as course prerequisite: For Asper Students only in Year 3 or later [or IDM 2982 (C)]. It should be noted that the special topics IDM 4050 course is open to any student who meets these criteria. However, priority will be given to those co-op students who are unable to secure a work placement.

It should be noted that the substitution being requested is temporary, given the current COVID-19 economic conditions.

The Bachelor of Commerce Honours program requirements stipulates that students may not hold more than 6 hours of readings or research courses. As some of the co-op students may already have 6 hours of such courses, they will need to be allowed to exceed that maximum.

Senate Executive Committee previously unanimously approved the below two motions. We are requesting that Senate extend these requests for the coming academic year also, given that the pandemic is still around. The Asper School is now making the following Motions for Senate approval:

THAT Senate approve the revision of graduation requirements for the Bachelor of Commerce Honours (Co-operative Education Option); specifically:

> **The requirement that "the program will include 12 months spent in co-op work terms with a co-op office approved employer, typically taken in three, 4-month-long co-op work terms with a minimum grade of 'C' in each co-op work term course and combine the work terms together to satisfy 3 credit hours of Business Options" be temporarily amended to allow students to substitute their second or third co-op work term (IDM 3982 or IDM 4982 respectively; 1 credit hour), with IDM 4050 Applied Small Business Consulting (3 credit hours) with a minimum grade of 'C'.**

THAT Senate approve revising graduation requirements for the Bachelor of Commerce Honours; specifically:

> **The stipulation that "Students are limited to a maximum of six hours of readings and research courses" be amended to "Students are limited to a maximum of nine hours of readings and research courses".**

Attached:

- **IDM 4050 Applied Small Business Consulting** course outline draft

IDM 4050 A01 (3 CH)
Topics Course: APPLIED SMALL BUSINESS CONSULTING
FALL 2020

W 2:30-5:15
Zoom meeting room (see UMLearn)

CONTENTS

INSTRUCTORS

Name:	Nathan S. Greidanus	Keri L. Kettle	Fang Wan
Office:	649 Drake	650 Drake	496 Drake
Phone:	204-474-7325	N/A	204-474-9886
Email:	nathan.greidanus@umanitoba.ca	keri.kettle@umanitoba.ca	fang.wan@umanitoba.ca
Office Hours:	By Appointment	By Appointment	By Appointment

COURSE DESCRIPTION

This course has three purposes. First, this course is designed to give students hands-on experience in conducting consulting work, particularly for a small business. Second, it gives small businesses that cannot otherwise afford professional consulting, access to *pro bono* business consulting by senior business students guided by a business professor. Third, it gives the Asper School of Business the opportunity to give back to the community and contribute to growing local businesses; this is especially important at this economically-challenging time when many small businesses have been hit hard by the COVID-19 crisis and are struggling to stay afloat.

From a business education perspective, this Applied Small Business Consulting course provides students with a first-hand insight into the idiosyncrasies of a small business, its unique constraints, challenges, and gives students the opportunity to come up with innovative and affordable solutions to problems

faced by businesses that do not have the resources, reputation, customer base, networks, or financial leverage that large and medium businesses do.

At the end of the course, it is expected that a local small business will have practical recommendations on how to overcome the challenges it faces from the COVID-19 economic crisis. At the same time, students would receive valuable experience in consulting for a business and applying the knowledge and tools they have gained in their education at the Asper School of Business.

COURSE OBJECTIVES

This course is intended to:

1. To provide you with hands-on consulting experience, particularly for a small business client.
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COURSE MATERIALS

As some classes will be delivered synchronously via videoconferencing, a device enabled with a camera and microphone is required. Further, you are expected to be in a location with a reliable Internet connection that is strong enough for streaming video.

Readings will largely come from background research into the specific business and industry under study. It is expected students will perform extensive background research to frame the specific project.

COURSE FORMAT

In this course, students will conduct a consulting project for a small business client, either as individuals or in small groups. The projects for this course will be sourced by the Stu Clark Centre for Entrepreneurship at the Asper School. In general, projects will be chosen such that they give students the opportunity to apply their knowledge in a variety of business areas, although they are likely to require a subsequent focus on one or more of those areas. Further, the project will be such that it is expected to take the duration of the term, but will conclude by the end of the term.

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Each project will be overseen by one of the three instructors, based on their discipline expertise. The role of the instructor will be that of a guide and coordinator. The specific instructor will also be the one who will determine the graded components of the project, grading criteria, course deliverables, and course grade for the students that he/she is guiding. As every project is different, it should not be expected that all projects will have the same graded components, grading criteria, or course deliverables. At a minimum,

you should expect every project to require a detailed written consulting report, a presentation to the client, and a reflective journal on what you learned from the project for course deliverables.

Being an experiential course, the instruction component of the course will be relatively unstructured compared to other courses you may be taking at the university. During the initial weeks of the course, there will be an introductory class and an initial meeting with client. During the latter part of the course when you will begin working on the project, there will be no regularly scheduled classes. However, you should expect multiple meetings with the instructor and occasional meetings with the small business client throughout the term. These will be scheduled at times that work for all parties concerned.

ASSESSMENT OF LEARNING

You will be informed what the graded components are prior to your accepting the project assigned to you. Below is an example of what they might look like.

Written Consulting Report (to client TBA; final report due Dec 15)	-	50 % *
Presentation to Client and class (date TBA)	-	20 % *
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Overall Professionalism in report and interactions with client and updating the instructor on progress	-	20 %

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CONSULTING PROJECT

During the course, you will be exposed to the basics of consulting. The topics will include:

a) Business, Ethical, and Legal Aspects of Consulting
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h) How to Work in Teams
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l) Follow-up and Obtaining Client Feedback

Further details of what's expected in the project, timeline, disclosures, etc. are provided in the Appendix.

In the event of a skewed distribution of grades, the total course marks may be curved up or down as necessary (the weighting of each component will remain unchanged).

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93 and above	A+
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	Goals and Objectives in the Undergraduate Program	**Goals and Objectives Addressed in this**	**Course Item(s) Relevant to these Goals and Objectives**
1	**Quantitative Reasoning**		
	A. Determine which quantitative analysis technique is appropriate for solving a specific problem.	X	Main report
	B. Use the appropriate quantitative method in a technically correct way to solve a business problem.	X	Main report
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2	**Written Communication**		
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	A. Identify ethical issues in a problem or case situation		
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IDM 4050 A01 (3 CH)
Topics Course: APPLIED SMALL BUSINESS CONSULTING
FALL 2020

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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: April 28, 2021

To: Mr. Jeff Leclerc, University Secretary

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs) & Chair, COVID-19 Recovery Steering Committee

Re: Bachelor of Education – Proposed Changes to the 2021-22 Academic Schedule

---

Please find attached a proposal from the Faculty of Education to revise the 2021-22 Academic Schedule for the Bachelor of Education program

The proposal was reviewed by the Office of the Registrar and Enrolment Services, the COVID-19 Recovery Steering Committee, and by the Provost and Vice-President (Academic) and no concerns were raised.

I would ask that the item be placed on the May 5, 2021 Senate Executive agenda to be considered by Senate at its May 19, 2021 meeting.

Cc.: Dr. Janice Ristock, Provost and Vice-President (Academic)
Dr. Mark Torchia, Vice-Provost (Teaching and Learning); Lead, Academic Team, COVID-19 Recovery Steering Committee
Dr. Thomas Falkenberg, Acting Dean, Faculty of Education
Dr. Shannon Coyston, Associate University Secretary (Senate)
Mr. Jeff Adams, Executive Director, Enrolment Services

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

UM | Faculty of Education

225 Education Building
University of Manitoba
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9001
Fax (204) 474-7551
dean.education@umanitoba.ca
www.umanitoba.ca/education

DATE: April 27, 2021

TO: COVID-19 Recovery Steering Committee

CC: Jeff Adams, University Registrar
Mark Torchia, Academic Team Lead

FROM: Thomas Falkenberg, Acting Dean

RE: **Request to revise the B.Ed. 2021-2022 Academic Schedule**

I am writing to request a revision to the B.Ed. 2021-2022 Academic Schedule, section 1.8.1 and 1.8.2 as per the attached document. These changes affect the B.Ed. student days of obligation. Their first days are now September 1, 2021 for new students and September 2, 2021 for returning students, instead of September 7 and 13, 2021. Their last day of obligation has changed from April 25, 2022 to April 26, 2022.

These changes reflect a review of the dates after the Fall Term 2021 was determined to continue with mostly remote learning and a review of Manitoba Education requirements around the practicum.

We have checked with Colton Pasternak in the Registrar's office, and he responded that the RO has no concerns with our request.

Thank you for your consideration of this request.

Thomas

1.8 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.

***All dates are tentative and dependent on decisions made by the Province regarding K – 12 schools during and post-pandemic.**

1.8.1 Orientation

~~Year 1~~ New Students……Sept 1 ~~7~~, ~~2021~~
~~Year 2/Integrated~~ ~~5~~ Returning Students ……Sept 2 ~~13~~, 2021

1.8.2 Start and End Dates

Note: Practicum dates may vary by practicum placement.

Fall Term

Practicum Block……Sept 7 to 10, 2021
Practicum Mondays……Sept 13, 27, Oct 25, Nov 1, 2021
Day Classes……Sept 14 to Nov 9, 2021
MTS PD Day……Oct 22, 2021
Practicum Block……Nov 15 to Dec 14, 2021

Winter Term

Day Classes……Jan 11 to Mar 18, 2022
Practicum Mondays……Jan 10, 17, 24, 31,
Feb 7, 14, 28, Mar 7, 14, 2022
Practicum Block……Mar 21 to 25;
Apr 4 to 26 ~~5~~, 2022

1.8.3 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*……Nov 10 to 12, 2021
Winter Term Break……See section 1.2.5
Winter Practicum Break *Note: Dates may vary by school division and/or practicum placement.* Mar 28 to Apr 1, 2022

1.8.4 Examination and Test Dates

Fall Term (as required)……Nov 6, 2021
Winter Term (as required)……Mar 19, 2022

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Date: April 28, 2021

To: Mr. Jeff Leclerc, University Secretary

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs) & Chair, COVID-19 Recovery Steering Committee

Re: Master of Occupational Therapy Program – Proposed Changes to the 2021-22 Academic Schedule

---

Please find attached a proposal from the College of Rehabilitation Sciences to revise the 2021-22 Academic Schedule for the Master of Occupational Therapy program in the Department of Occupational Therapy.

The proposal was reviewed by the Office of the Registrar and Enrolment Services, the COVID-19 Recovery Steering Committee, and by the Provost and Vice-President (Academic) and no concerns were raised.

I would ask that the item be placed on the May 5, 2021 Senate Executive agenda to be considered by Senate at its May 19, 2021 meeting.

Cc.: Dr. Janice Ristock, Provost and Vice-President (Academic)
Dr. Mark Torchia, Vice-Provost (Teaching and Learning); Lead, Academic Team, COVID-19 Recovery Steering Committee
Dr. Reg Urbanowski, Dean, College of Rehabilitation Sciences, Rady Faculty of Health Sciences
Dr. Shannon Coyston, Associate University Secretary (Senate)
Mr. Jeff Adams, Executive Director, Enrolment Services

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

University of Manitoba

College of Rehabilitation Sciences

TO: **Mark Torchia, Academic Team Lead, COVID-19 Recovery Steering Committee**

COPY TO: **Jeff Adams, University Registrar**
Lori Muzychka, Senior Office Administrator, Occupational Therapy
Liane Allen, Confidential Assistant to the Dean

FROM: **Reg Urbanowski, Dean, College of Rehabilitation Sciences**
Leanne Leclair, Department Head, Occupational Therapy

DATE: **April 26, 2021**

SUBJECT: **Master of Occupational Therapy Program - 2021-2022 Academic Schedule Changes**

Please consider the following changes to the 2021-2022 Academic Schedule for the Master of Occupational Therapy program in the Department of Occupational Therapy, College of Rehabilitation Sciences.

		Proposed Changes
Orientation:		
Year 1	Aug 23 & 24, 2021	no changes
Year 2	Aug 23, 2021	no changes
Year 1:		
Fall Term Classes	Aug 25 to Nov 19, 2021	no changes
Basic Fieldwork	Nov 22 to Dec 17, 2021	no changes
Winter Term Classes	Jan 5 to Apr 29, 2022	Jan 5 **to May 6, 2022**
Intermediate Fieldwork 1	May 2 to June 24, 2022	**May 9 to June 30, 2022**
Year 2:		
Fall Term Classes	Aug 24 to Dec 17, 2021	no changes
Intermediate Fieldwork 2	Jan 3 to Feb 25, 2022	no changes
Winter Term Classes	Mar 7 to June 17, 2022	Mar 7 **to June 24, 2022**
Advanced Fieldwork	June 20 to Sept 16, 2022	**June 27** to Sept 16, 2022
Year 1 & Year 2:		
Fall Term Break	N/A	**Oct 12 to 15, 2021**
Winter Term Break	Feb 28 to Mar 4, 2022	no changes

Rationale:

Our experience with the pandemic over the past year has made it apparent that the Master of Occupational Therapy (MOT) students require additional time for the academic blocks of the program. This is also consistent with feedback we have received from students. The MOT program is a demanding two-year lockstep program that was developed for in-person delivery. Students do not choose their courses; we have a set curriculum and course load that students follow. In year 1, students complete 43 credit hours of academic courses: 16 credit hours in a 12-week block and 27 credit hours in a 16-week block. In year 2, students complete 38 credit hours of academic courses: 19 credit hours in two 16-week blocks. The timetable is extremely full; students are in class from 8:00-4:00 on most days. While we have adapted the curriculum to offer some asynchronous learning opportunities, we have not been able to reduce synchronous contact hours significantly. Spending full days in-person is very different from spending full days online. We would like to provide students more time offline to support their learning and overall mental health during the academic blocks without affecting the student's graduation timelines.

When we developed the academic schedule for 2021-22, we included an additional week in the Fall Term to allow more time for rest and integration. This term already included a Fall Term break that was not listed in the academic schedule. The proposed changes list the Fall Term break (Oct 12 to 15, 2021).

We recognize that the plan for winter 2022 is still unknown; however, students will continue to have a full schedule regardless of the delivery method. Even with a potential full return to in-person classes in the Winter Term, we anticipate that students will still require a transition period to this method of delivery. We will continue to look for ways to modify the curriculum for the next academic year, but to further assist in addressing this issue, we are proposing extending the academic block in the Winter Term by 1 week. The addition of one week to the academic blocks requires changes to the subsequent fieldwork blocks. These changes will not affect student's graduation timelines.

Please advise if you require any additional information to approve these adjustments to the 2021-2022 academic schedule. Thank you for considering this request.

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Date: May 5, 2021

To: Mr. Jeff Leclerc, University Secretary

From: Dr. Todd Mondor, Deputy Provost (Academic Planning and Programs) & Chair, COVID-19 Recovery Steering Committee (CRSC)

Re: **Request for a temporary change to the supplemental examination regulations for the undergraduate Dentistry program**

Please see attached a proposal from the Gerald Niznick College of Dentistry for a temporary change to the supplemental examination regulations for the undergraduate Dentistry program for students in the 1st, 2nd, and 3rd years. The requested change would allow supplemental examinations to be held between May 28 and June 16 and would apply only to the 2020-21 academic year. This temporary change follows from an extension to the academic schedule for Dentistry that was previously approved by Senate.

The proposal is recommended for approval by the COVID-19 Steering Committee and the Provost and Vice-President (Academic).

I would ask that the item be considered by Senate Executive on May 05th and by Senate at its May 19th, 2021 meeting.

Cc.: Dr. Janice Ristock, Provost and Vice-President (Academic)
Dr. Mark Torchia, Vice-Provost (Teaching and Learning); Academic Team Lead, CRSC
Dr. Brian Postl, Vice-Provost (Health Sciences) & Dean, Rady Faculty of Health Sciences
Dr. Anastasia Cholakis, Dean, Gerald Niznick College of Dentistry
Mr. Jeff Adams, Registrar and Executive Director, Enrolment Services

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

COVID-19 Recovery Steering Committee

EXCEPTION REQUEST FORM: IN-PERSON ACTIVITIES

Please complete the form below to request an exception for on- or off-campus activities. Please refer to the end of this document for governing principles for each activity type. All requests must be submitted to the COVID-19 Recovery Steering Committee at crsc@umanitoba.ca ***at least 3 weeks in advance of the activity***.

EXECUTIVE SUMMARY:

Brief Summary of the Activity (program, course, event etc.):

The Gerald Niznick College of Dentistry requests a temporary change to its Undergraduate Dentistry 1st, 2nd and 3rd year programs' supplemental examination regulation.
This temporary change is required due to a COVID-19 imposed, previously approved by Senate, extension of the 2020-21 academic year.

Requesting Unit: Dr. Gerald Niznick College of Dentistry

Date(s) of Activity*:
**The committee requests that as much as possible, please try to submit requests at least 3 weeks in advance.*

May 28 to June 16, 2021

Date of submission: May. 3, 21

Contact: Dr. John B. Perry, Associate Dean (Academic) **Email:** john.perry@umanitoba.ca

APPROVED BY DEAN/DIRECTOR OF UNIT HEAD, IF APPLICABLE: Dr. Anastasia Kelekis-Cholakis, Dean

ACTIVITY REQUEST

1. TYPE OF ACTIVITY REQUESTED: Other: A temporary change to the Dr. Gerald Niznick College of Dentistry Undergraduate Dentistry supplemental examination regulation

2. DESCRIPTION OF ACTIVITY

Describe the proposed activity. For academic activities, clearly articulate learning outcomes associated with the proposed activity.

The academic years of the Dentistry 1, 2 and 3 undergraduate programs have been extended from their usual mid-May year end to an end-of-June year end for a small number of clinical and pre-clinical courses in order to accommodate a COVID-19 imposed decrease in hours available to students in clinics and pre-clinical labs between September 2020 and May 2021. Final grades in these few courses will not be known until the end of June. The grades of all didactic courses and

performance in the didactic portions of the extended pre-clinical/clinical courses, however, will be known by mid-May.

There is a possibility that some students may fail didactic courses/didactic portions of courses. These students would normally be granted remediation and supplemental examination privileges for these didactic courses/didactic portions of courses at the end of the academic year, as per College regulations (see 3.14 of the 2020-2021 Undergraduate Academic Calendar under the Dr. Gerald Niznick College of Dentistry, Section 3 College Academic Regulations), if they have not exceeded a specific number of course failures, based on their program year, and have attained a certain minimum grade point average. The number of failures and the grade point averages, however, cannot be calculated until all final grades have been determined.

It would be beneficial to these students, and their instructors, to hold supplemental examinations of failed didactic courses/didactic portions of courses, along with their required remediation periods, between May 28 and June 16, 2021 as students, academics and support staff require July for vacation, during which time the Dr. Gerald Niznick College of Dentistry will be closed.

On May 3, 2021, Dental College Council passed the following motion:

that, as a COVID-19 related consequence, any Dentistry 1, 2 and/or 3 dental student who has received a failure in a didactic course, or a didactic portion of a combined didactic/clinical course, be allowed supplemental examination privileges related to the didactic course or didactic portion of a course to be conducted between May 28 and June 16, 2021. The result of the supplemental examination, for progression in the Dentistry program, is conditional on the student meeting the Dr. Gerald Niznick College of Dentistry regulations related to the number of course failures and grade point average once all final grades are known. This supplemental examination regulation change applies only to the 2020-2021 academic year.

The Dr. Gerald Niznick College of Dentistry requests that the CRSC reviews this proposal, and if in agreement, recommends the proposal to Senate Executive and Senate on behalf of the College.

3. LOCATION OF ACTIVITY: Other: Not Applicable

Building: Not Applicable Room #: Not Applicable

If outdoor, please provide location: Not Applicable

☐ Off-Campus: Not Applicable

4. EXPECTED NUMBER OF STUDENTS/PARTICIPANTS: Not Applicable

5. EXTERNAL / COMMUNITY PARTNER *(where applicable)*

Not Applicable

6. RATIONALE

Explain why this activity cannot be delivered remotely. If this is an academic program activity, why was this activity not considered as part of the process for determination of in-person activities for that Term? Is this activity a core part of the course? Is the activity a program or degree requirement? Will failure to offer this activity result in incompletion of the course or delay in the student's progression.

Not Applicable

7. OPERATIONAL PLANS OR NEEDS

Outline operational plans/needs for the activity (including caretaking, security, and occupancy details).

Not Applicable

Please consider and respond, if relevant, to the following:

- *What supports are required by the University for these activities?*
- *What supports are provided by the requestor?*
- *If the activity is taking place off-campus, how will participants arrive to the location safely?*
- *Is the activity maintaining physical distancing at all time? If 'NO', describe your mitigation measures.*
- *If the activity involved external parties, did you consult with Legal regarding liability/waivers.*

**Note that all facets of any activity must adhere to all provincial and UM health and safety requirements and protocols in place at the time the activity occurs.*

Click or tap here to enter text.

8. OTHER CONSIDERATIONS

None

SUBMIT TO CRSC@UMANITOBA.CA

University of Manitoba | Faculty of Arts

Dean of Arts
310 Fletcher Argue Bldg.
Winnipeg, Manitoba
Canada R3T 5V5
Tel. (204) 474-9271
Fax (204) 474-7590
Email jeff_taylor@umanitoba.ca

DATE: 19 April 2021

TO: Jeff Leclerc, University Secretary

FROM: Jeff Taylor, Dean, Faculty of Arts

SUBJECT: Motion for Senate regarding Laurentian University

I am submitting the following motion and background information for consideration by Senate.

MOTION:
"That the University of Manitoba Senate send our colleagues, staff, and students at Laurentian University a message of support as follows:

The University of Manitoba Senate expresses its deepest concerns and condolences for our colleagues, staff, and students at Laurentian University for the unprecedented cuts to faculty and staff announced on 12 April 2021. We are hurt, angry, and outraged at the resolution of the financial mismanagement that has plagued the University. We stand in solidarity with the faculty, staff, and students at this fine – but now sorely diminished – University at this terrible time."

BACKGROUND:

The Arts Faculty Council unanimously passed the following motions at its meeting of 14 April 2021:

First Motion:
"That the Faculty of Arts send our colleagues, the staff, and the students at Laurentian University a message of support."

Message:
"The Faculty of Arts at the University of Manitoba sends its deepest concerns and condolences for our colleagues, the staff, and the students at Laurentian University for the unprecedented cuts

to faculty and staff announced this week. We are hurt, angry, and outraged at the resolution of the financial mismanagement that has plagued the University. We stand in solidarity with the faculty, staff, and students at this fine – but now sorely diminished – University at this terrible time."

Second Motion:
"That Arts Faculty Council request the Faculty of Arts Senators take today's motion to Senate for further discussion and consideration by Senate."

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the Report to Senate.

Senate Assessment Survey
Summary Report
April 12, 2021

This report summarizes the results of the Senate Assessment Survey administered in early-2021, outlining key findings and major themes that emerged in the survey responses.

The Senate Assessment Survey was administered between January 7 and February 16, 2021. The Survey was sent to all voting members of Senate and to Senate assessors. A total of 93 responses out of a possible 155 were received for a response rate of 60%. Thank you to all those who participated in the Survey. The Survey was administered by the Centre for Social Science Research and Policy, and the results were summarized and provided to the Office of the University Secretary. The Office expresses its appreciation to the Centre, and to its Academic Director, Dr. Tracey Peter, for their excellent support.

The Senate Assessment Survey included 39 survey items, including general information, Senate assessment, Senator self-assessment, Senate meetings and information, Senate Chair, Senate Committees and diversity. As part of the Survey, there were 15 open-ended qualitative responses.

Notable Results

A series of slides attached to this summary outlines the Survey responses. The summary below is of notable findings in the responses, including to the open-ended qualitative questions.

Part 1 - Participants

- Participants in the Survey were 47% faculty members, 28% administrators, 16% students and 9% others. These proportions closely reflect the actual composition of Senate.
- One-third of the respondents have served less than one year on Senate, and one-third have served for more than three years.
- 52.5% of participants identified as male and 47.5% identified as female.
- 55% of participants are over the age of 50.
- In response to the diversity questions:
    - 5% identified as Indigenous
    - 16% identified as racialized
    - 11% identified as LGBTQ+
    - 5 % identified as having a disability

Part 2 - Senate Assessment Questions

- There was general agreement with most statements in the general Senate assessment section. A few areas stood out where there was greater disagreement:
    - 39% of participants disagreed with the statement “academic approval processes are timely”.
    - 39% of participants disagreed with the statement “I am comfortable asking questions during Senate meetings”, and 36% disagreed with the statement “I am comfortable expressing views during Senate meetings”. Significantly more

women respondents disagreed with each of these statements than male respondents.

- Also significant was that 54% of racialized participants strongly agreed with the statement “I feel valued for my contribution as a member of Senate” compared to 11% of non-racialized participants.

- Several recurring themes were raised in the open-ended responses to this series of questions, including:
  - **Timelines for approval are too long** and the review process is too bureaucratic.
  - **Most of the work of Senate occurs at the committee level, resulting in limited discussion at Senate**. Substantive deliberation or discussion of items of business, by Senate, occurs infrequently, leading some to describe Senate's role in the approval process as "rubber-stamping." Respondents viewed this in two ways:

    One was that this reflected the practical reality that most of the work occurs at the Senate-Committee level. Respondents who shared this view suggested that, given this, some items might be dealt with in electronic agendas, as items for consent, or that responsibility for certain decisions might be delegated to committees to allow more time for Senate to debate/discuss topics or issues of importance to the University.

    Another view was that the lack of discussion was a consequence of moving through the Senate agenda too quickly, without allowindg time for discussion and debate. The need for Senators to be provided with more background information and context for proposals was also cited as contributing to limited discussion of items of business.
  - **Senate should have more robust discussion on topics important to UM community**; Senate should create a platform to discuss how to improve academic directions.
  - Agendas are too large.
  - A small number of strong voices on Senate are perceived to silence others.

- In response to the question “In what ways do you think Senate could better fulfill its role, the following themes emerged:
  - **Senate meetings should promote, and dedicate more time to, generative discussions** on academic matters, including broad issues concerning academic planning, value of academic programs (effectiveness, societal and labour market needs), strategic issues, challenges facing the University.
  - Long-standing problems and critical issues of the University aren’t discussed at Senate, and they should be.
  - Senate might also be engaged, to a greater extent, in the discussion of budget process and in meaningful discussions of issues/strategic areas and receive more presentations on key topics.
  - Both Senate and the committees need to look at bigger picture of issues, not just the details.
  - **Streamlining approvals** - Consider adding more items to the consent agenda (items for concurrence without debate) or having Senate grant certain Senate committees responsibility to make some decisions on its behalf.

- A number of particular issues or priorities for Senate to consider in the upcoming year were raised:
    - **EDI**, including with respect to EDI in governance processes and membership on Senate, Senate committees
    - **Reconciliation**
    - **Planning for post-COVID-19**, including considerations for well-being of students
    - **Review of Senate committees** (number and structure of) **and processes** to increase efficiency and transparency, reduce / eliminate redundancies in documentation provided to more than one committee
    - **Strategic planning**
    - **Climate change**
    - **Autonomy of the University**

- Themes identified in response to the question of topics for future presentations at Senate:
    - Mentors or small group sessions to develop relationships
    - **Communication of, presentations on planning documents and significant reports**
    - **Vision** for the institution, academic units, including how to increase the national and international stature of the University
    - **Sustainability**
    - **Performance-based funding**
    - **Role of the University and faculties/schools in the broader community**
    - **Governance orientation**, including information on the role of Senate, why the agenda is organized in the way that it is, considerations for evaluating proposals/items on the agenda, roles/responsibilities of Senate committees
    - **Role of affiliated Colleges within the University**

Part 3 - Senator Self-Assessment Questions

- Participants generally gave average to high ratings on the self-assessment questions. A more significant number of 'low' assessments were given in three areas:
    - Overall contribution to the functioning of Senate
      (**34% low**, 44% average, 21% high)
    - Degree of participation at Senate meetings
      (35% low, 47% average, 21% high)

      Significantly, women respondents gave 'low' assessments at a rate more than two times that of male respondents (53% to 21%)
    - Active engagement at Senate meetings
      (**23% low**, 44% average, 20% high)
- Participants with longer service on Senate assessed themselves much higher on active engagement and overall contributions than those with two or fewer years of service.
- 72% of participants spend less than one hour reviewing the agendas and preparing for a Senate meeting.

- 35% of participants responded that the actual role as a Senator was somewhat or very different from their anticipated role. Thoughts shared in response to this question included:
    - Very passive compared to what I expected. Expected more dialogue. Much of the deliberation happens at the committees.
    - Doesn't feel the same because of the pandemic and Zoom meetings.
    - Lots of materials to review compared to the length of the meetings.
    - Only a few people speak up at Senate.
    - Didn't expect meetings to move so quickly.
    - When a Dean speaks up against administration, they get a call.
    - Senate needs to know about some items before they come for approval, shouldn't only come at end for a vote.
    - Some important discussions happen- proud of colleagues when they do.
    - Surprised by grandstanding and attention-seeking.
    - Senate takes its role as academic protector seriously.
    - Has allowed me to learn about the University and connect with colleagues.
    - Thought my opinion, not just my approval would be solicited more. Want to be more than a rubber-stamp.

Part 4 – Senate Meetings and Information

- Participants largely felt that the current number of meetings annually was the right number (86%).
- 91% of participants responded that they are provided with everything they need to be an effective Senate member, and largely agreed that the information provided in agendas was timely, clear, easily accessible and appropriate.
- **31% of participants responded that too much information is provided in agendas**. In one response to an open-ended question, it was noted that, "too much information is as bad as too little information… [A] shorter agenda with summaries and appended supplemental documents might help".
- Participants were largely satisfied with the service provided by the Office of the University Secretary; however, satisfaction rates were somewhat lower from student Senators. In response to the open-ended question a number of comments/suggestions were raised, including:
    - The move to SharePoint for Committees has made a massive improvement to access to information. Suggestion to post Senate materials in the SharePoint portal as well.
    - Comments of support and appreciation for the contributions and helpfulness of Office of the University Secretary staff were made. "The Senate secretariat is a major resource for the University. Both the Secretary and the Associate Secretary are admirably competent and effective. They make a major contribution to Senate's work and to the preservation of a healthy collegiality. We are very fortunate to have them."
    - It was noted that it would be helpful if minutes could be made available sooner.

- Over 90% of participants indicated that the Senate Orientation session was either helpful or very helpful. Participants also provided a number of suggestions for future orientations:

    - **Offer at different times throughout the year, at different times of the day/evening**
    - **Increase engagement in the session:** Include active learning, invite a returning Senator to speak about their role/experience
    - **Offer orientation for all/individual Senate committees**
    - **Orientation Manual –** ensure this is provided to Senators throughout the Senate-year, if they happen to be elected to Senate following the Fall Orientation Session (and/or offer Senate Orientation more than once/year)
    - **Develop FAQs/Answers**
- Provide an overview of the different avenues for bringing items to Senate, other than through Senate committees or Faculties/Schools

Part 5- Senate Chair

- The Participant's responses respecting the Chair of Senate were positive overall, with a few people noting that the current Chair had been in the role for only a few meetings by the point at which the Survey was conducted. Comments provided included:
    - The President clearly respects Senate and wants to make it work as a collegial body where members are comfortable participating.
    - I see Dr. Benarroch as working towards greater engagement among Senate members.
    - Chair is open, honest and listening to comments made.
    - Supportive and engaged.

Part 6 – Senate Committees

- 53% of the participants indicated they had previously served, or currently serve, on a Senate Committee. Those with longer tenures of service on Senate were more likely to have served on Senate Committees.
- 68% of respondents feel that the balance of work done by committees and by Senate is about right.
- Participants expressed confidence that reports of committees were well-researched and ready for Senate consideration.
- Participants who have not served on a Senate Committee offered some thoughts on some of the perceived barriers to serving:
    - **It is not clear how one would go about being nominated/invited/offered an opportunity** to serve on a committee.
    - **It would be useful to have information when there are vacancies on committees**.
    - Comments about not being invited, it is a "closed shop," difficult for the rank-and-file members to be nominated.
    - Support staff Senators noted that restrictive terms of reference of many committees prevent them from being able to serve.
- Many participants had suggestions respecting changes to the number, type, or composition of Standing Committees. Themes identified included:

    - **Review to amalgamate/disband those committees that never meet or meet infrequently.**
    - **Combine committees with overlapping areas of responsibility**, in order to reduce the number of committees and reduce the number of approvals needed.
    - **Streamline committee structure**, keep core committees and combine/reorganize work of others. Make the process nimbler while maintaining rigor.
    - **Rethink mandate of SPPC** given recent changes to the University's budget model.
    - Ensure better representation from both campuses.
    - All Senators should serve on at least one Senate committee, including new Senators.
- Suggestions were made to use a document flow and file system, similar to the idea of Concur, use most effective committees as a model, distribute work undertaken across committees more evenly, as some committees appear to be overworked.
- Several comments were made speaking to the importance of Senate Committees and the contributions they make:
    - "As indicated earlier, I think it is inevitable that much of Senate's work is carried out by the standing committees. It is possible that some committees are overworked and that an assessment of the current array of committees and their duties might make service on some of them easier and the processing of business more efficient. But overall, this is a big institution with a lot of academic decisions that have to be made. They cannot be made in Senate as a whole, so that the committee system is essential."
    - "These committees are the "engine room" for the mechanics of Senate. I think that their role is not well-understood outside the Senate."
    - "The Senate Committees that I deal with are all very thorough and I am very confident that the materials have been thoroughly vetted by the time they reach Senate for discussion / decision."

<u>Areas for Further Improvement</u>

The responses to the Survey have helped to highlight a number of areas for development to continue to improve the work of Senate and the engagement of those involved in academic governance, both for Senate and for the Office of the University Secretary. Such areas include:

Committee Review:

- Taking into consideration the mandate of Senate as the academic governing body of the University as defined in *The University of Manitoba Act*, review the Senate Committee structure and make recommendations on a structure that best ensures that Senate meets its mandate.

Process Review/Redesign:

- Review the processes for academic approvals in a number of areas, for undergraduate and graduate programs, including processes in the Faculty of Graduate Studies:
    - Curriculum and course changes
    - Program approval, modification (major and minor), and closure

    - Admission requirements
    - Academic regulations

Senate Process:

- Provide greater clarity in meeting agendas and orientation materials about the purpose of Question Period.
- Reconsider how much material is included in the Senate Agenda itself versus what is provided as supplemental information.
- Develop ways to more broadly disseminate committee service opportunities.
- Provide a means to have information provided about candidates for elections (i.e., to the Board and Senate Executive) to Senators.
- Put Senate Agendas/Minutes on the Governance SharePoint portal.

Education/Orientation:

- Further develop educational opportunities about academic governance for members of the University community.
- Review and reconsider Senate Orientation, including:
    - Timing of Orientation Session
    - Multiple learning modalities
    - Hearing from experienced Senators
    - Separate orientations for Senate Committee members

Meetings/Connection:

- Pursue opportunities for the Board of Governors and Senate to meet together.
- Continue having meetings with the President and small groups of Senators, as was done in the summer of 2020.
- Have more breakout group discussions as part of Senate.
- Develop a list of strategic, big picture items to discuss at Senate.
- Improve the technology in the Senate Chamber and other meeting rooms to allow for some remote participation, particularly from the Bannatyne Campus.
- Change the seating in the Senate Chamber to improve comfort and access.

Next Steps

- Present these results to Senate Executive and Senate.
- Discuss and validate the results and the proposed areas for further improvement.
- Develop a plan and timing for undertaking these improvements and reviews and bring a proposal forward to Senate Executive and Senate for consideration, feedback and approval.

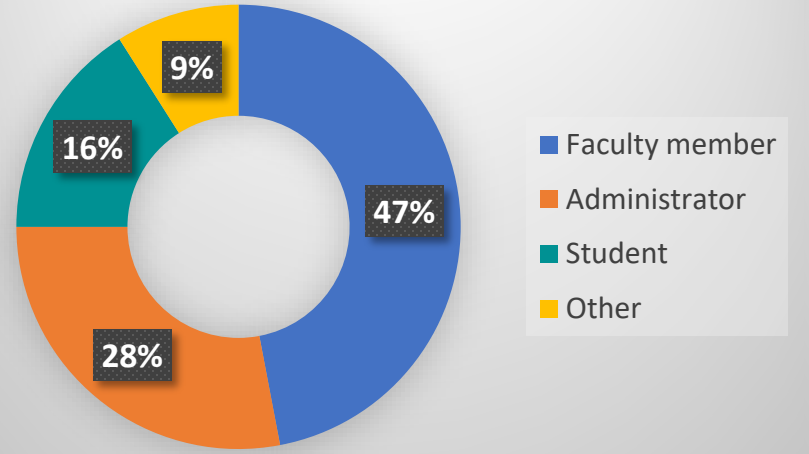
Senate Assessment Survey

University of Manitoba

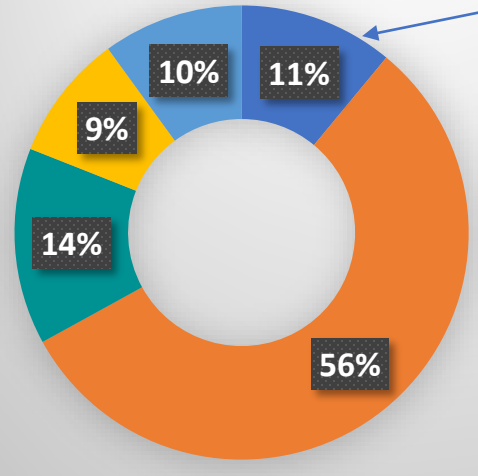
Data Collection & Survey Instrument

- Administered between January 7th to February 16th, 2021
- 93 participants out of 155
  - 60% response rate
- 39 survey items
  - General information, Senate assessment, Senator self-assessment, Senate meetings and information, Senate Chair, Senate Committees, and diversity
  - 15 open-ended questions for qualitative responses

Participant Information



- Faculty member
- Administrator
- Student
- Other



- Ex-officio
- Elected by Faculty or School Council
- Elected by Students
- Assessor
- Other (staff, alumni, BOG, UMFA)

YEARS ON SENATE

<1 | 1 to 2 | 3 to 5 | 6 to 9 | 10+

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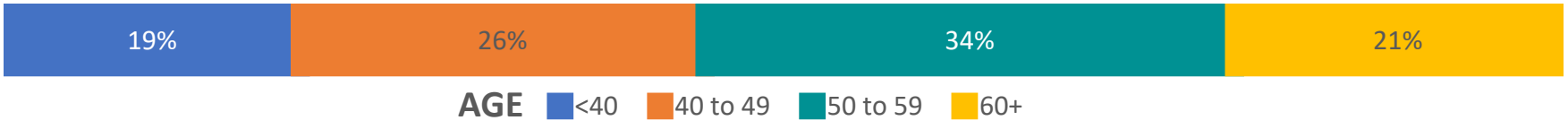
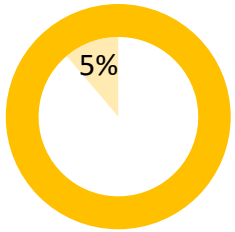
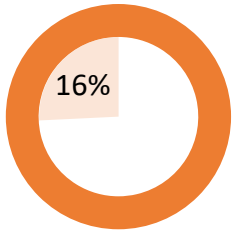
Participant Information

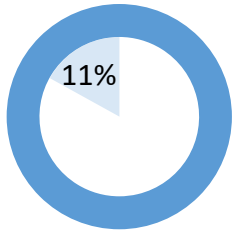




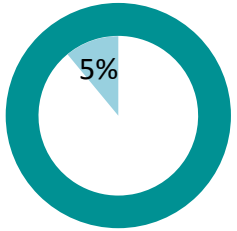
INDIGENOUS



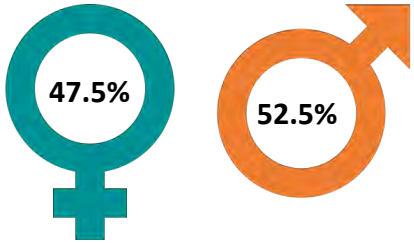
RACIALIZED



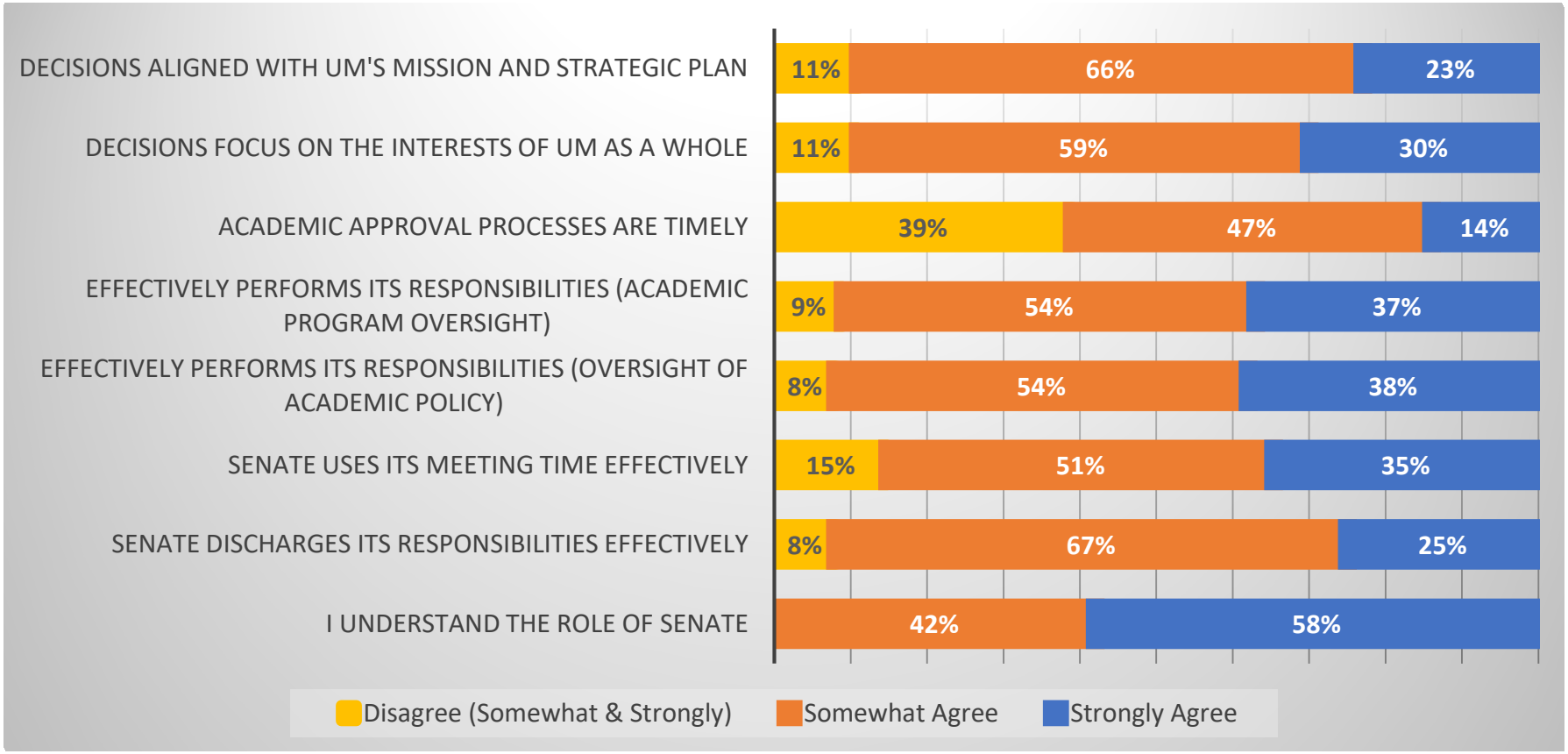
LGBQ+



DISABILITY



General Senate Assessment



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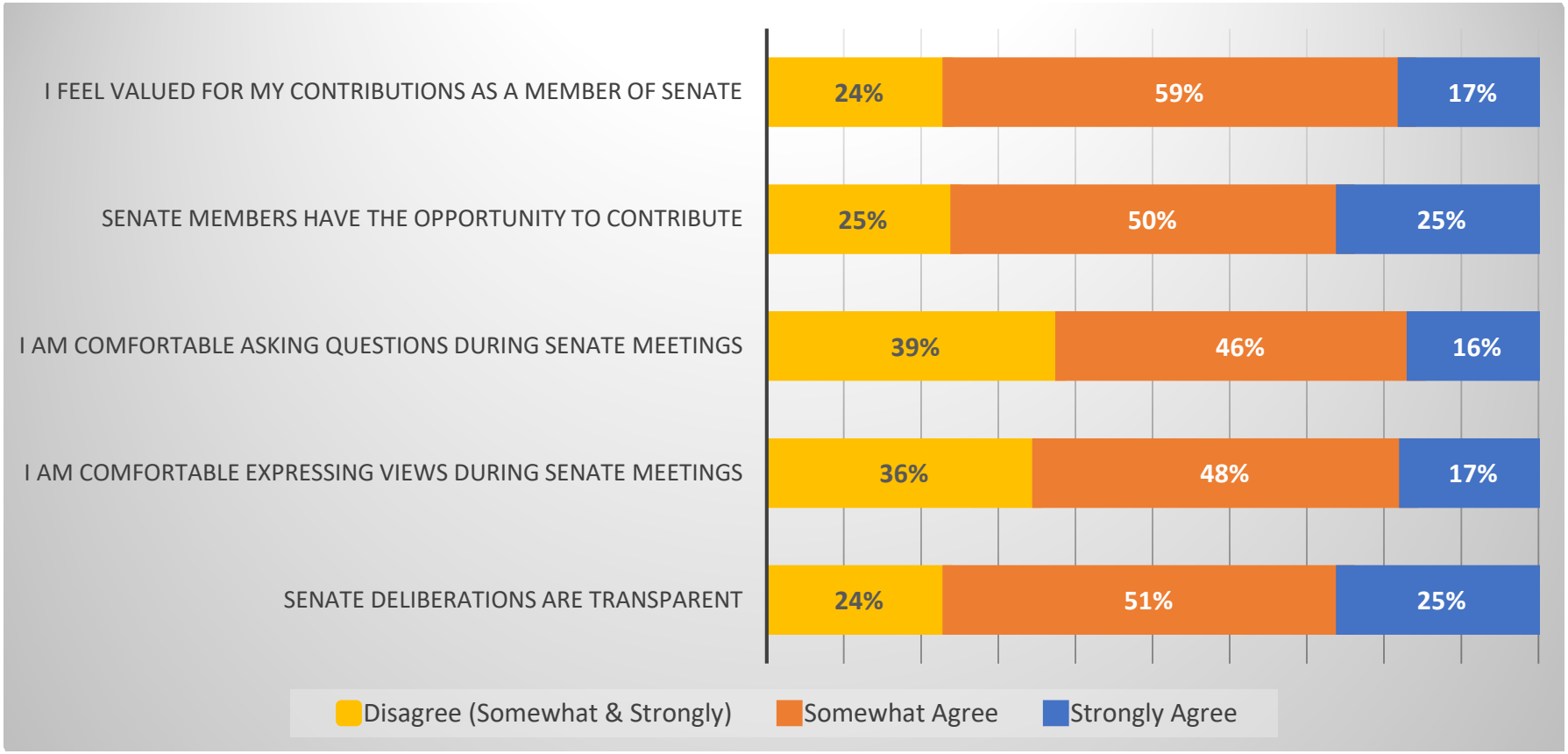
General Senate Assessment, Cont'd



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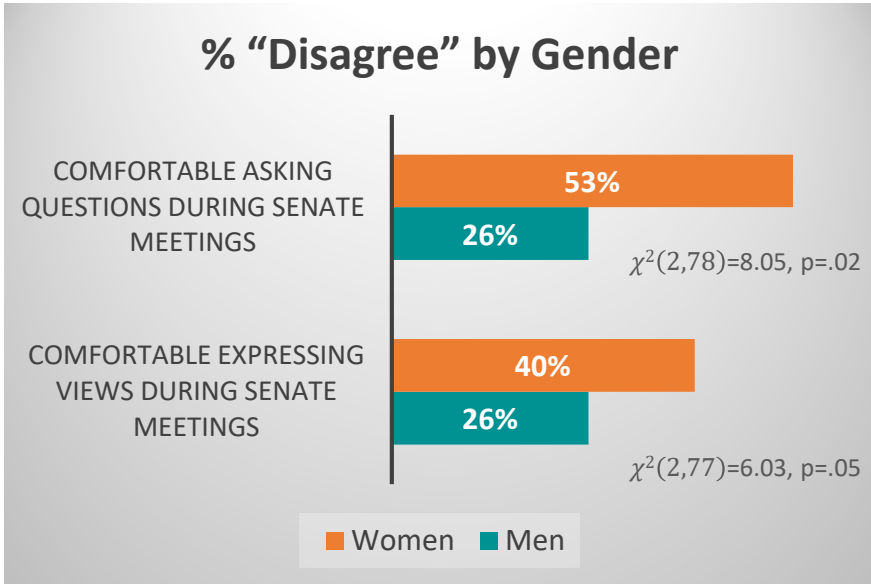
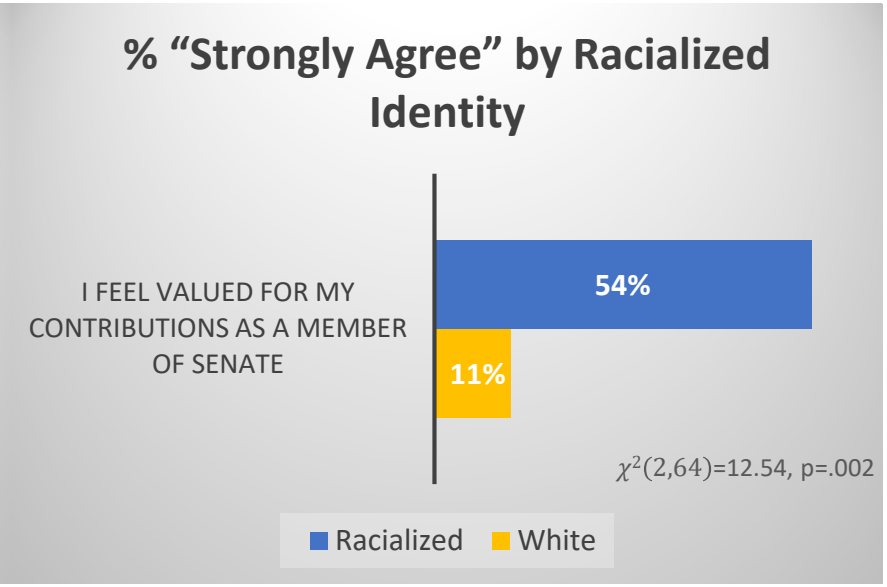
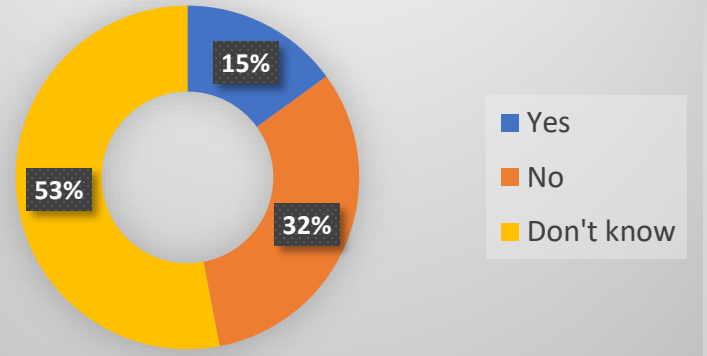
Significant Differences

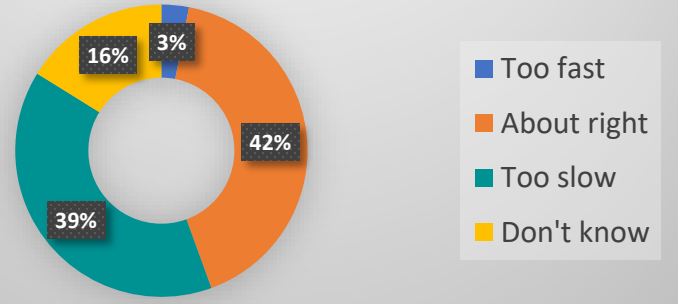




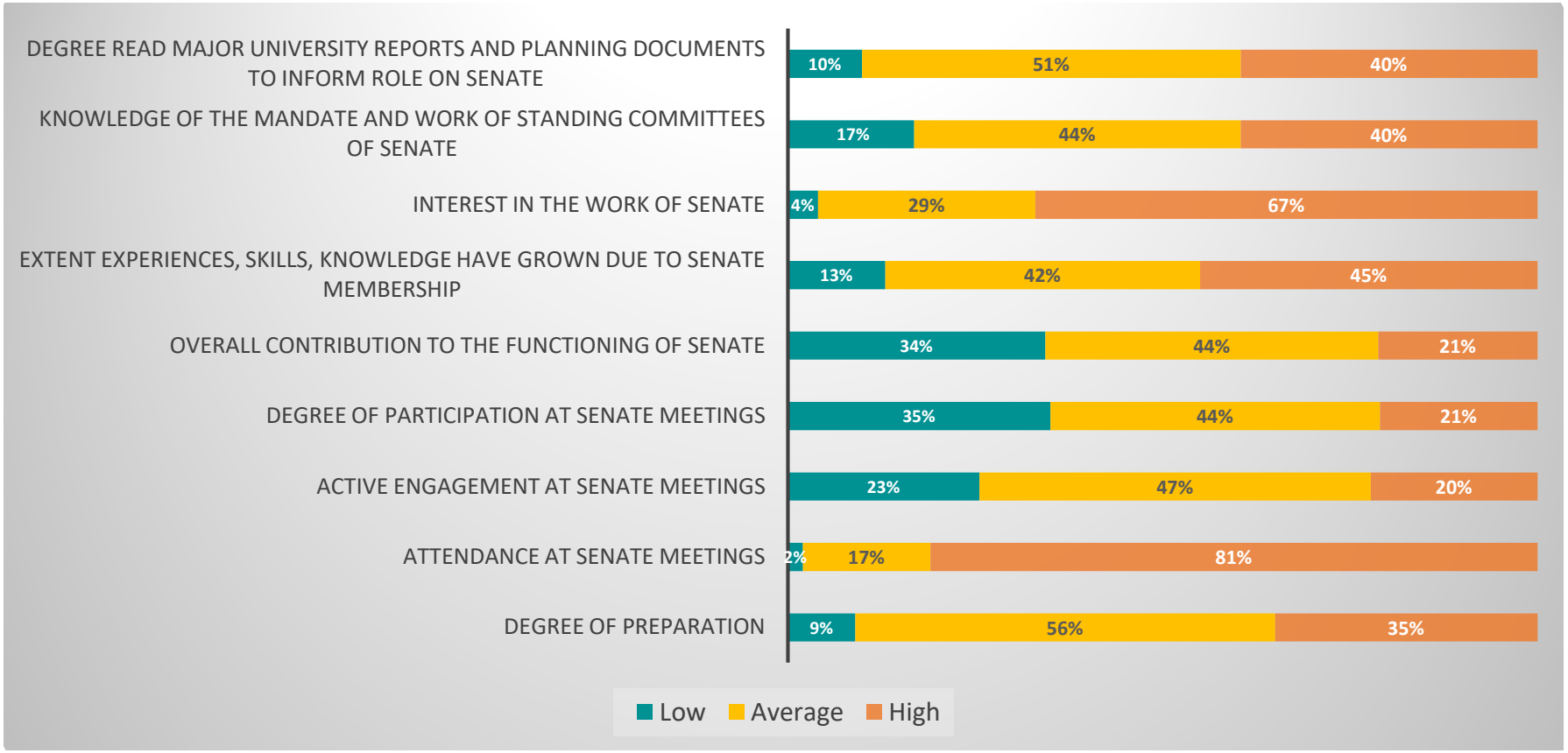
Are there things that Senate and/or its Committees are not now doing that you believe they should be doing?



Generally speaking, the time flow for securing approvals through the Faculty Council Senate Committee-Senate process is:

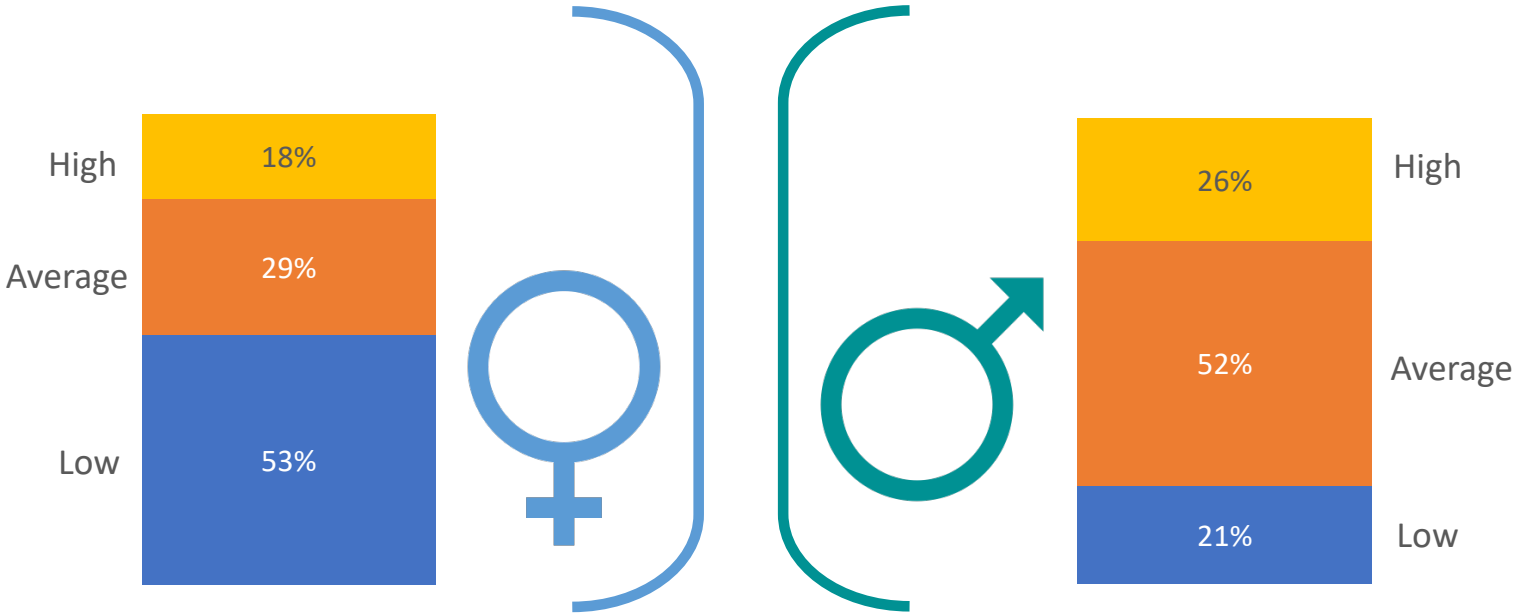


General Senator Assessment



UM | Centre for Social Science Research and Policy

Significant Differences: Gender



Degree of participation at Senate meetings

$\chi^2(2,80)=8.55$, p=.01

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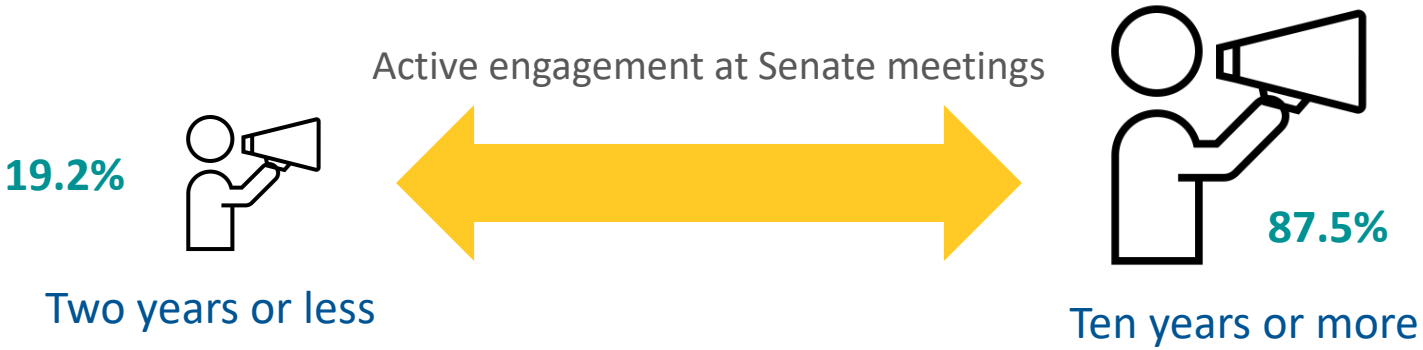
Significant Differences: # Years as Senator

Active engagement at Senate meetings



Overall contribution to the functioning of Senate

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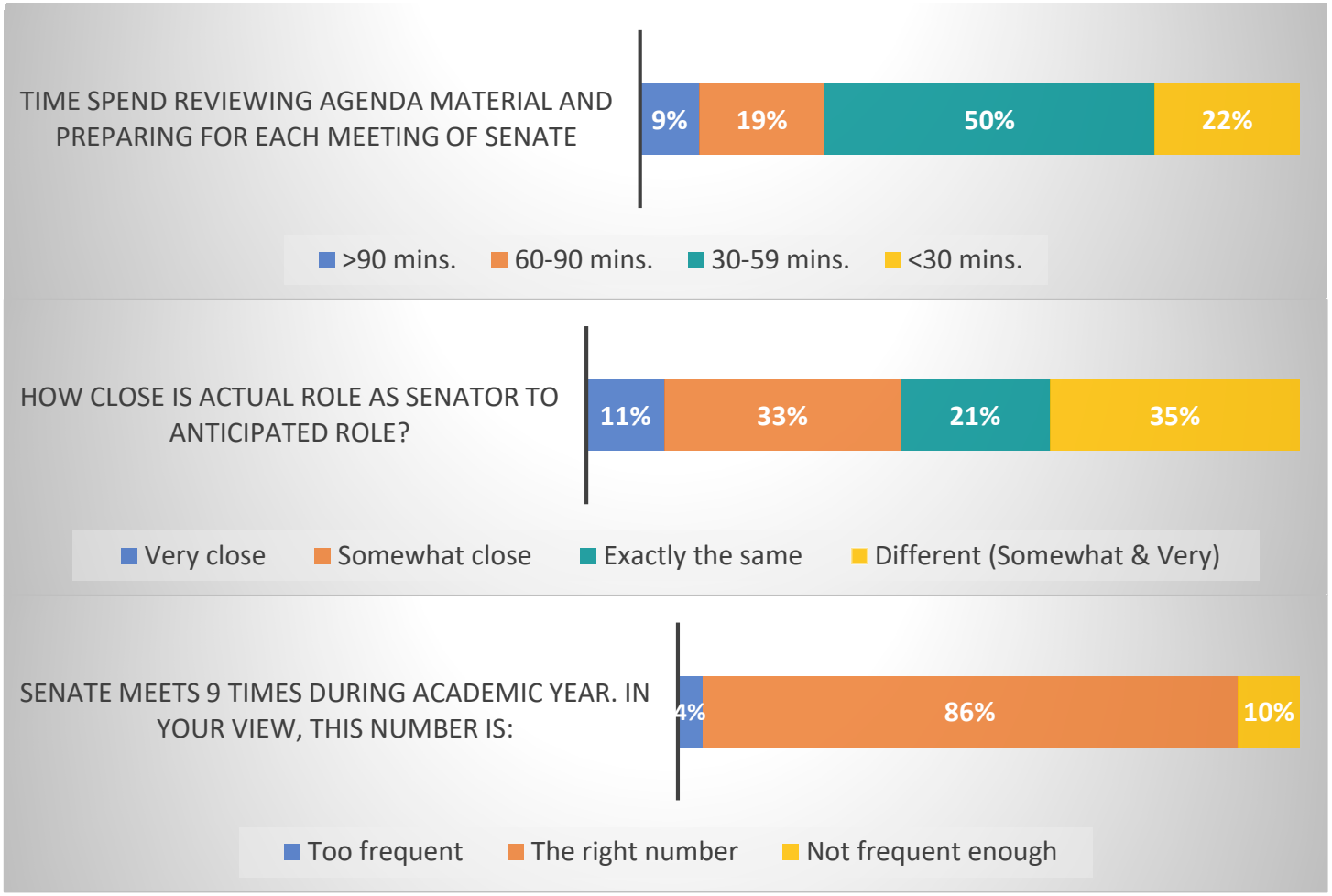
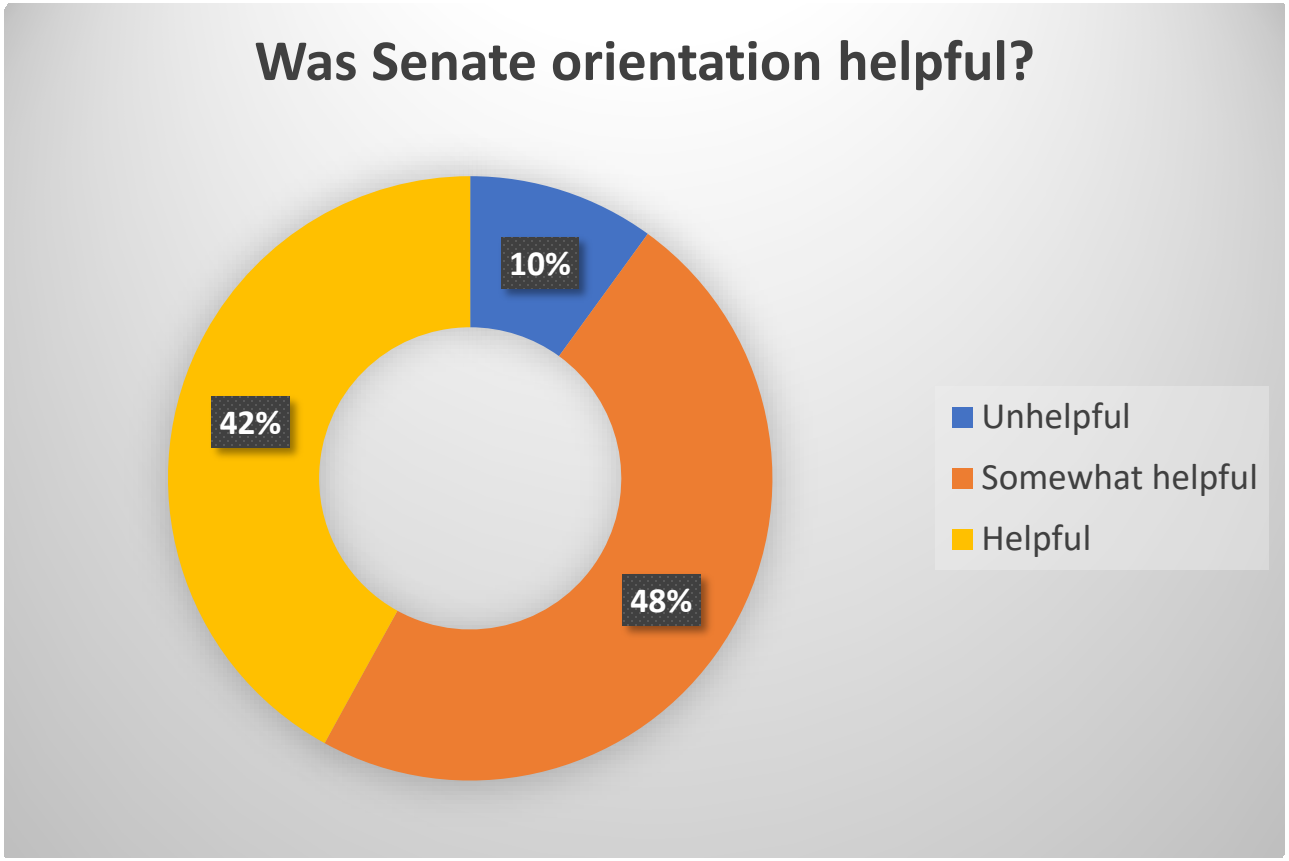
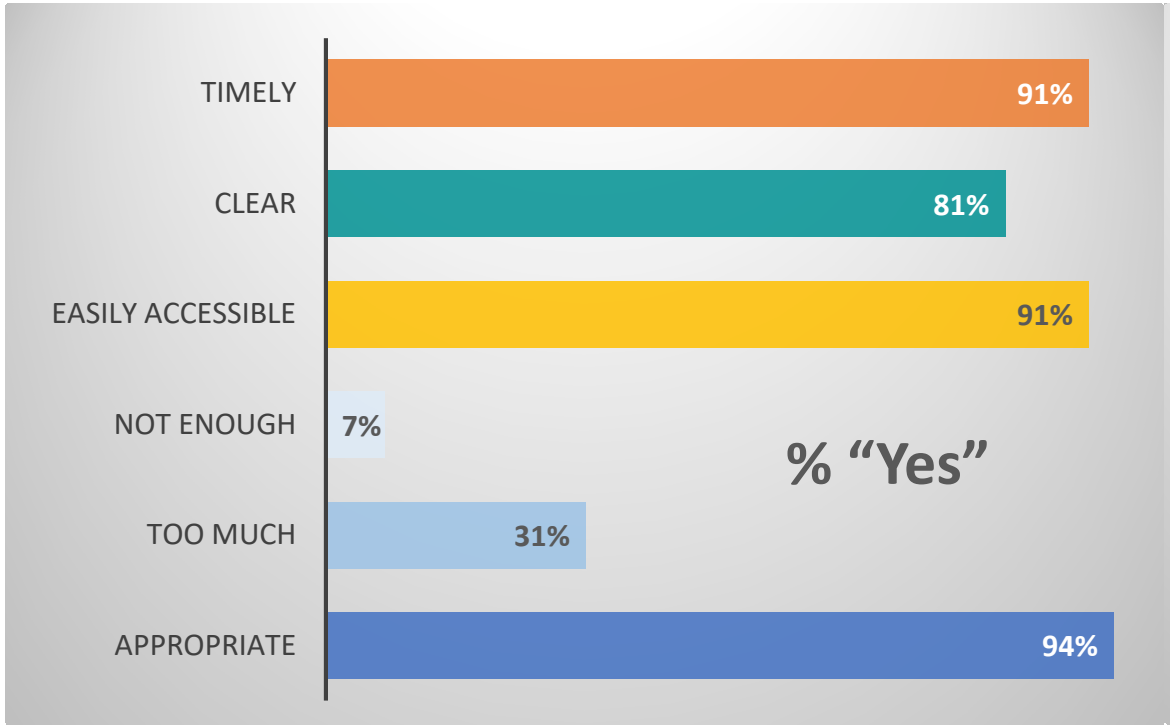
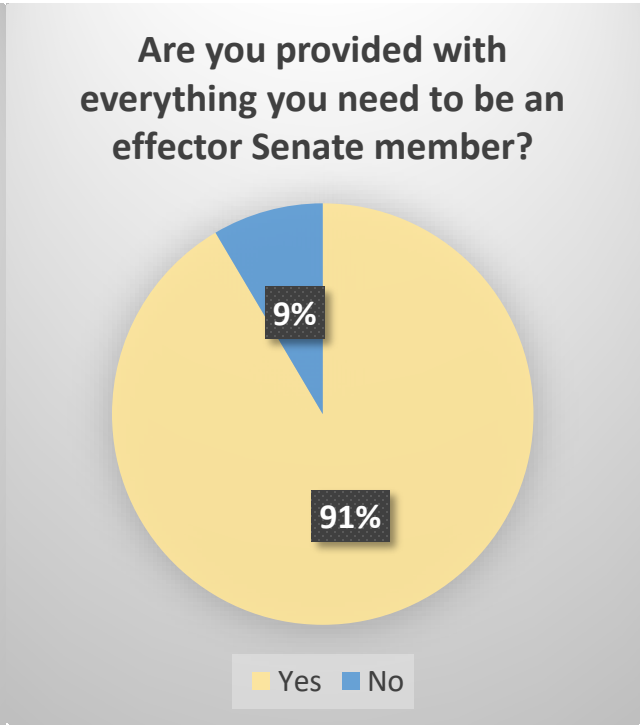

TIME SPEND REVIEWING AGENDA MATERIAL AND PREPARING FOR EACH MEETING OF SENATE
9%
19%
50%
22%
>90 mins.
60-90 mins.
30-59 mins.
<30 mins.
HOW CLOSE IS ACTUAL ROLE AS SENATOR TO ANTICIPATED ROLE?
11%
33%
21%
35%
Very close
Somewhat close
Exactly the same
Different (Somewhat & Very)
SENATE MEETS 9 TIMES DURING ACADEMIC YEAR. IN YOUR VIEW, THIS NUMBER IS:
4%
86%
10%
Too frequent
The right number
Not frequent enough

Senate Orientation

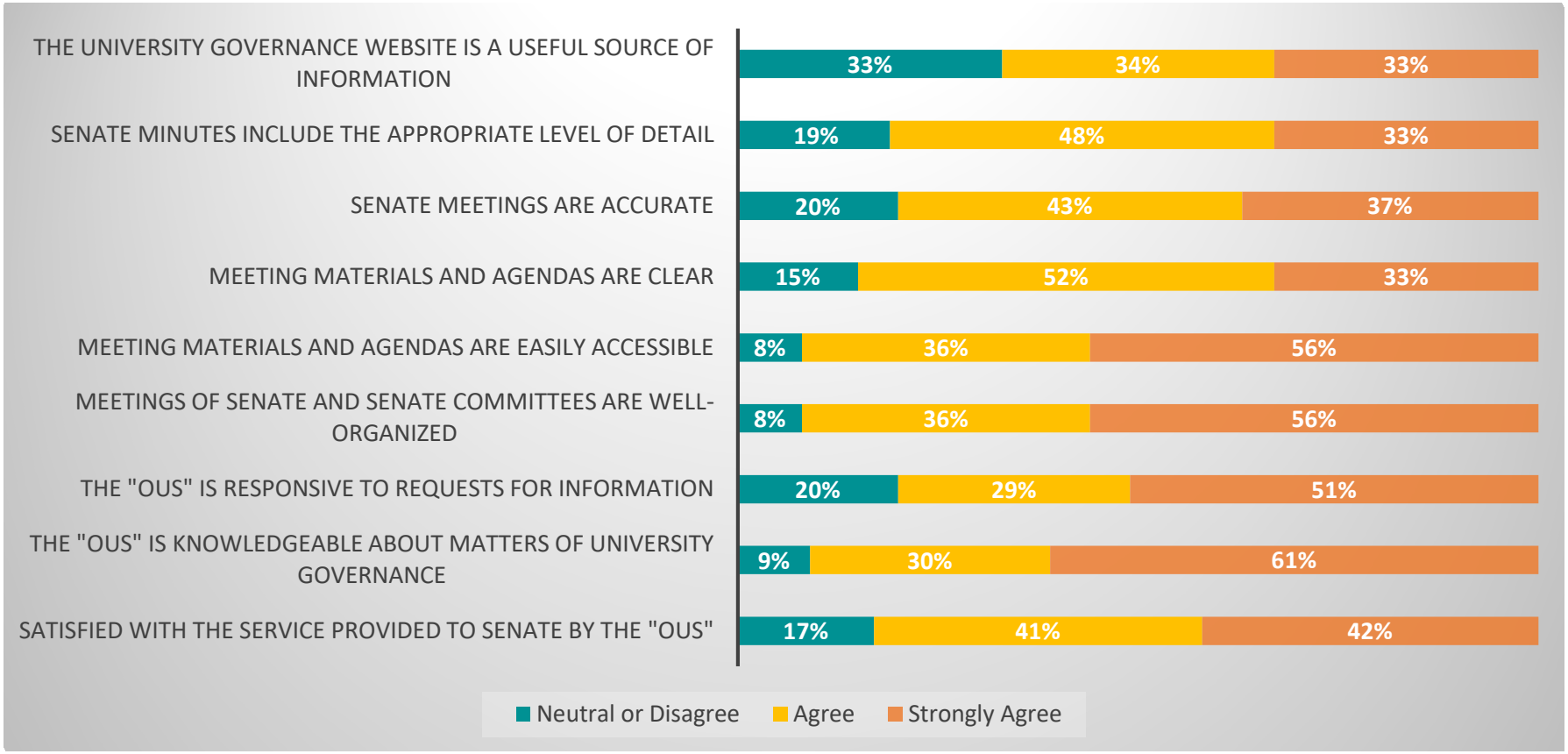


Information and agendas provided for decision making at Senate:





Office of the University Secretary ("OUS") and Meetings



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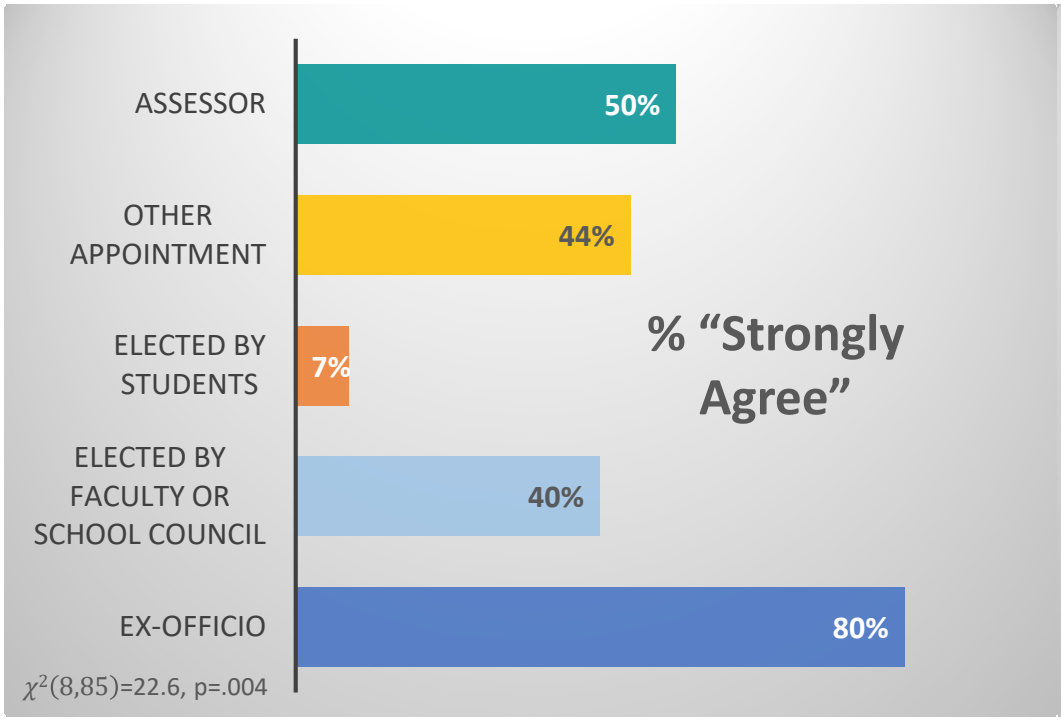
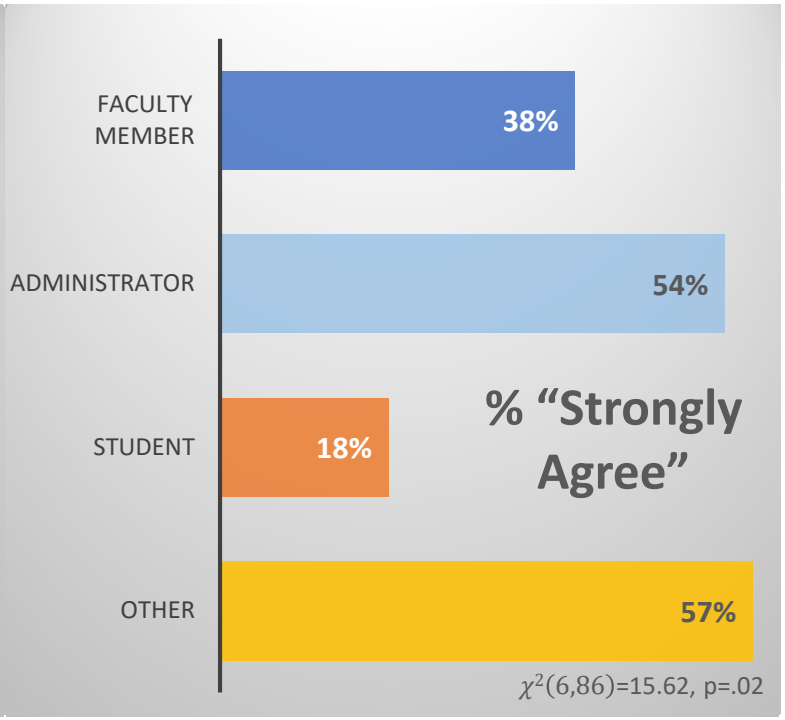
Satisfied with the service provided by the Office of the University Secretary, BY:

Means by which serve on Senate



Current role within the University



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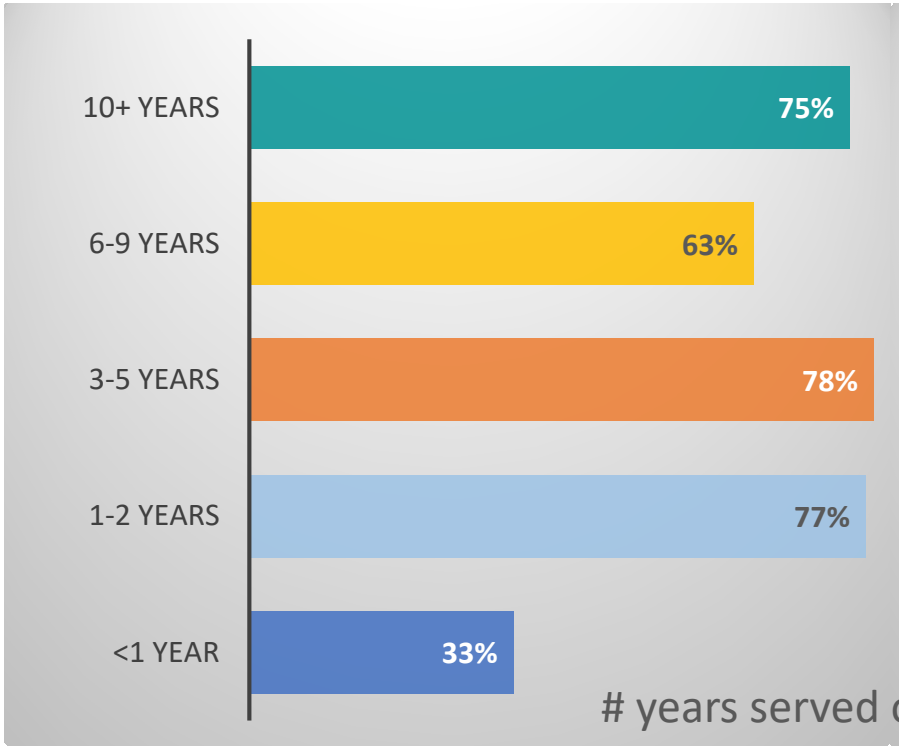
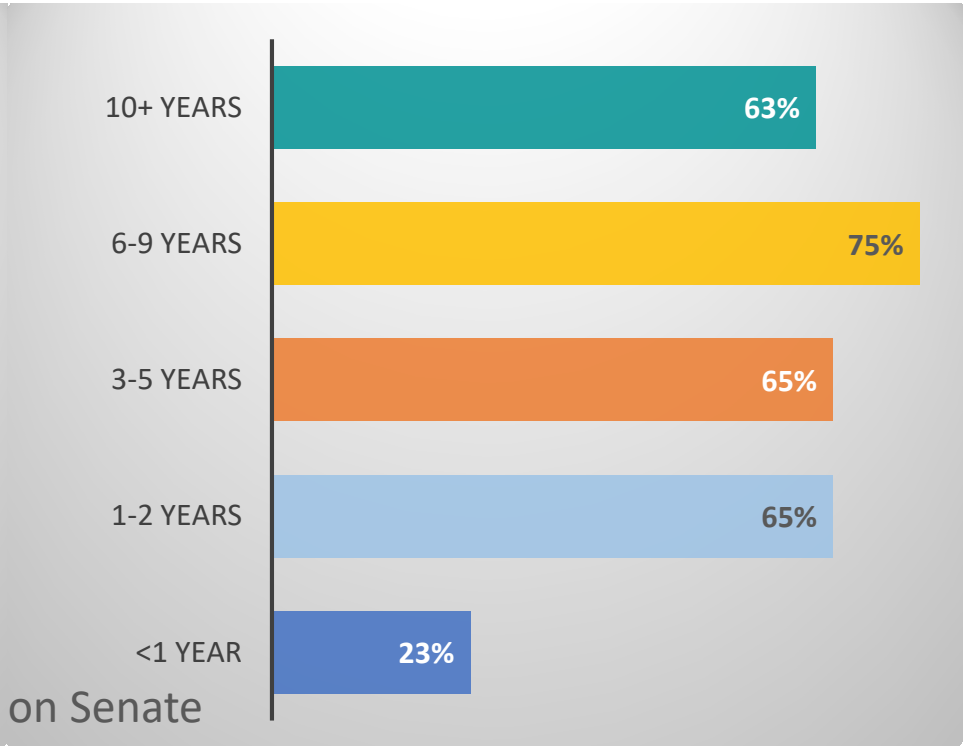
The Office of the University Secretary is knowledgeable about matters of University Governance

% "Strongly Agree"



$\chi^2(8,86)=16.91$, p=.03

The Office of the University Secretary is responsive to requests for information



$\chi^2(8,86)=15.75$, p=.05

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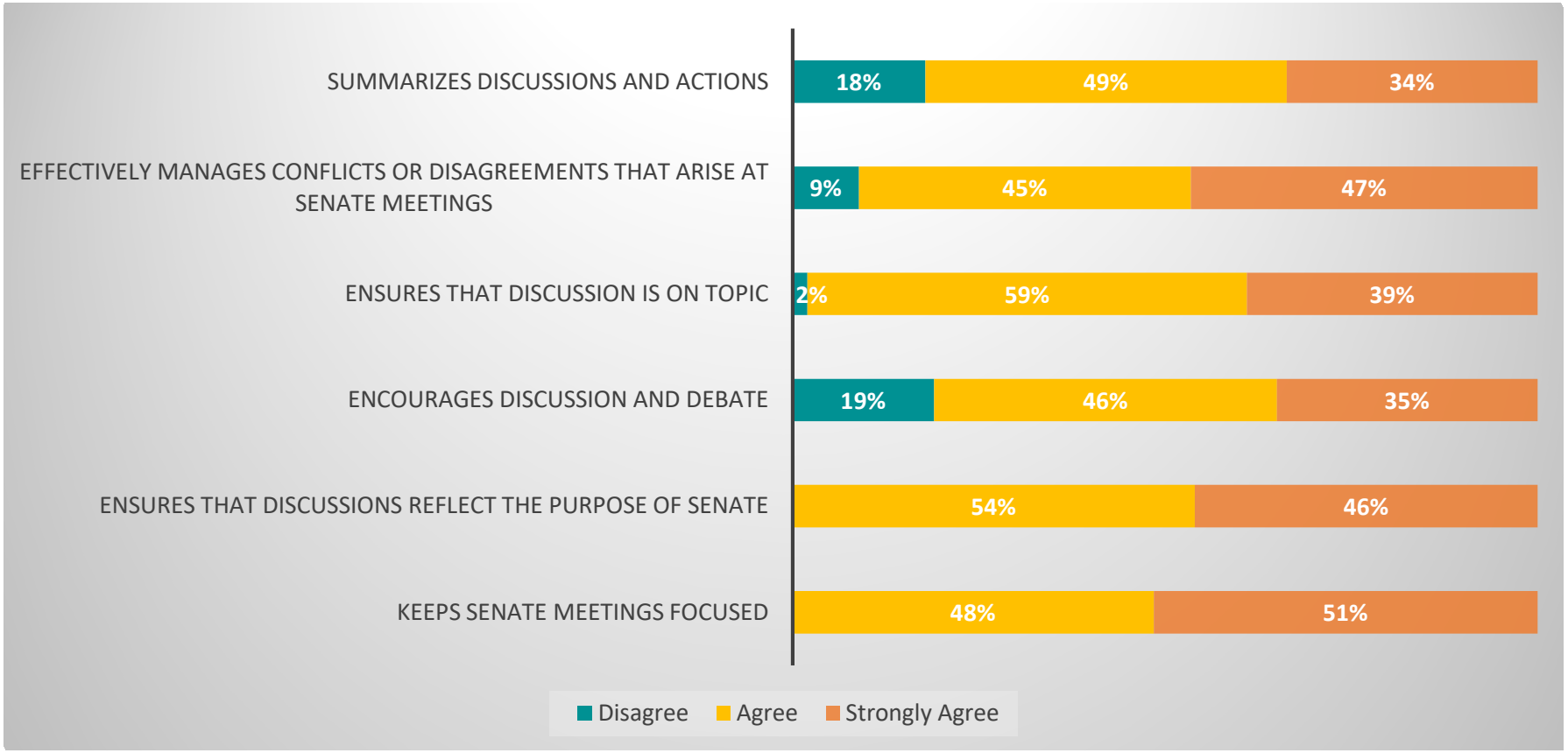
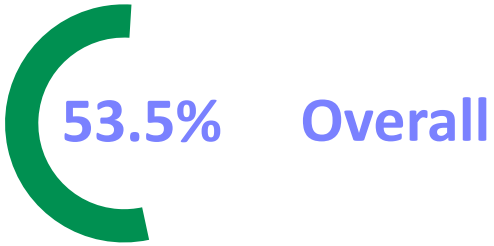
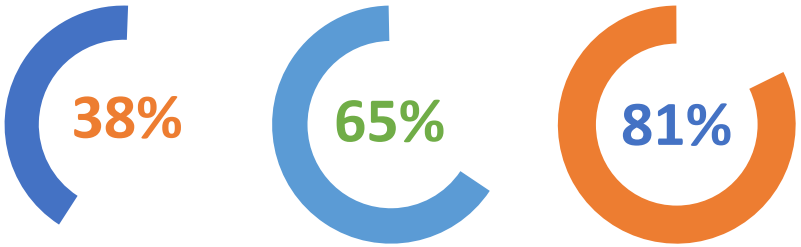
Chair of Senate



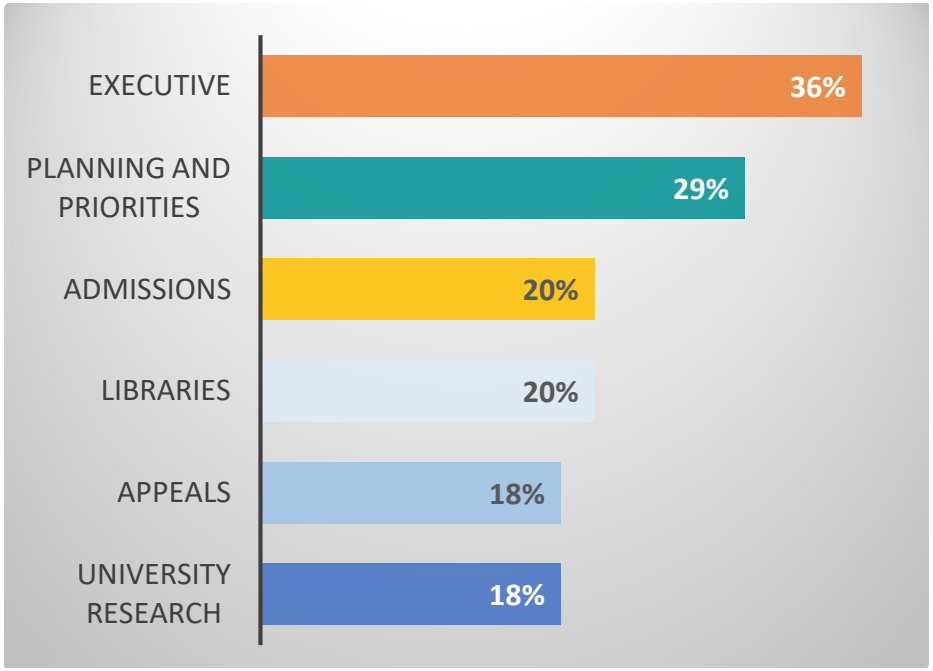
Served, or currently serve, on a Senate Standing Committee



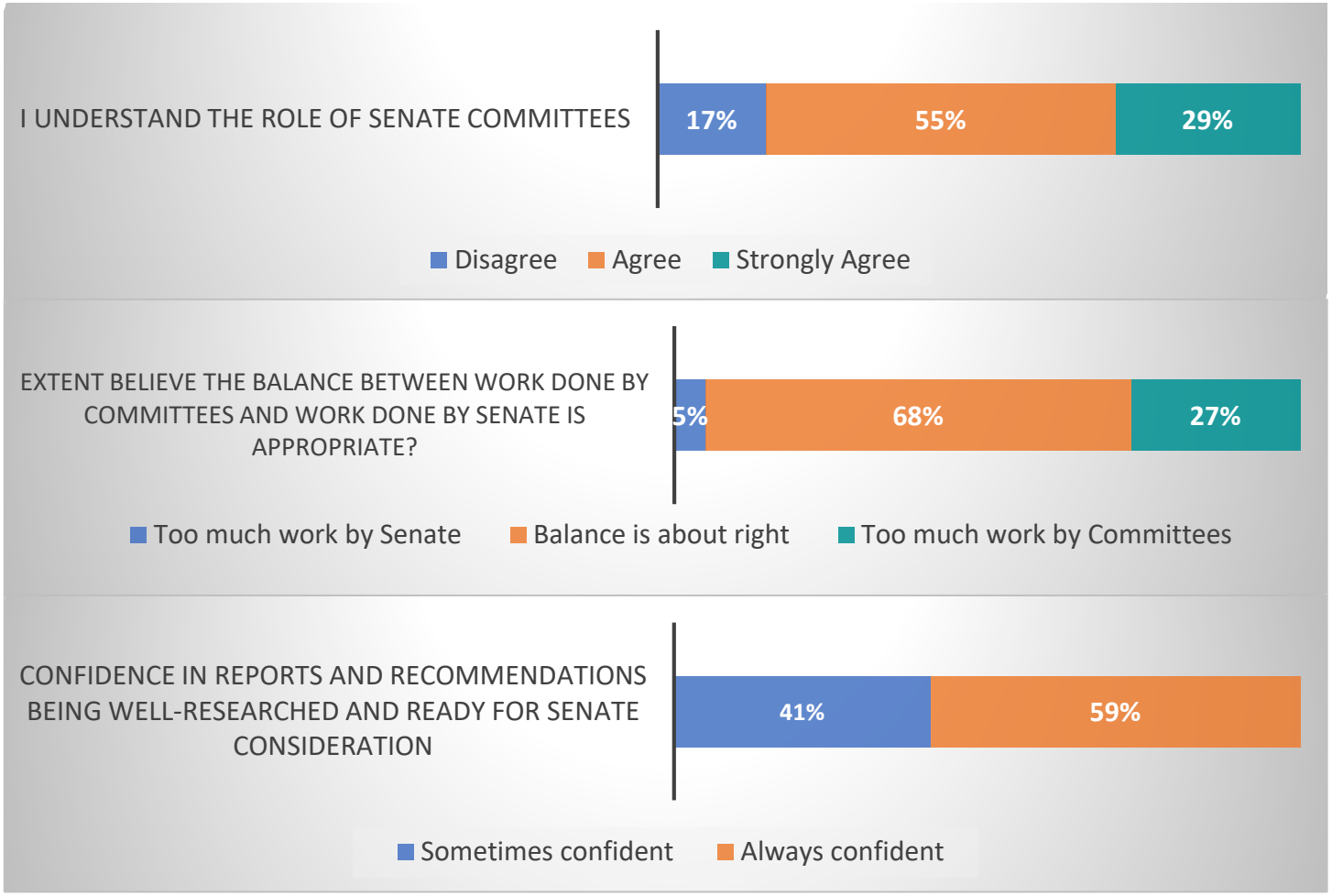


≤2 Years 3-5 Years 6+ Years

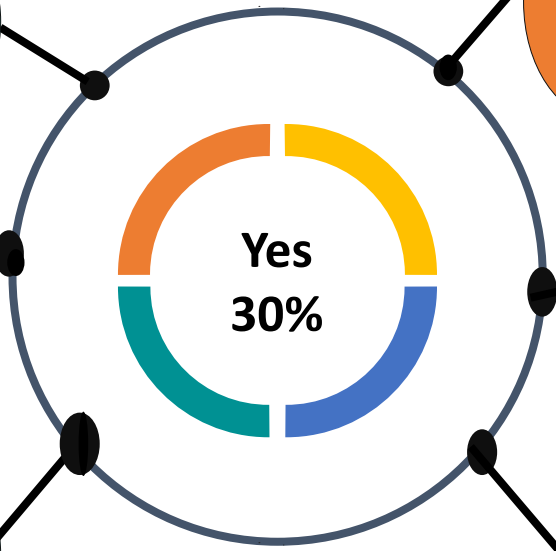
$\chi^2(4,86)=11.68$, p=.02



Top Senate Standing Committees


I UNDERSTAND THE ROLE OF SENATE COMMITTEES
17%
55%
29%
Disagree
Agree
Strongly Agree
EXTENT BELIEVE THE BALANCE BETWEEN WORK DONE BY COMMITTEES AND WORK DONE BY SENATE IS APPROPRIATE?
5%
68%
27%
Too much work by Senate
Balance is about right
Too much work by Committees
CONFIDENCE IN REPORTS AND RECOMMENDATIONS BEING WELL-RESEARCHED AND READY FOR SENATE CONSIDERATION
41%
59%
Sometimes confident
Always confident

Suggest changes to number, type, or composition of Senate Standing Committees?



"There are simply too many Standing Committees some of which rarely meet"

"All members of Senate should be on at least one committee, and there should be positions required on each" committee for new members to Senate"

"… areas of expertise within those committees, the areas being delineated by faculty rather than function"

"[S]hould be a review of committees based on a renewed mandate for Senate"

"A number of the Program/Planning committees have very close mandates and multiple of them review the same proposals. Maybe there could be a process which pools the expertise and enables one review point/report…."

"Don't know the opportunities and have never been offered an opportunity. Work of standing committees -- and the process to participate -- seems very much a closed shop (people who know one another nominate one another)"