DATE: Tuesday 14 May 2019
TIME: 12:00 noon – 2:00 p.m.
PLACE: NH 3318

Please note:
A light lunch will be served.

Open Session

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<td>d. Final Assessment Report – Classical Studies* (reviewers: Leann</td>
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<td>e. Two-Year Report – Mennonite Studies* (reviewer: Clare Mitchell;</td>
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<td>8. Next Meeting: Tuesday 18 June 2019, 12:00 to 2:00 p.m. in NH 3318</td>
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*material attached/to be distributed**
“SEN-C” to be recommended to Senate for approval (consent agenda)
“SEN-R” to be recommended to Senate for approval (regular agenda)
“UGC” to be approved on behalf of Senate & sent to Senate for information

7 May 2019
Rebecca Wickens
Associate University Secretary
## 8. Declarations of conflict of interest

### 8.01
At the beginning of each meeting of Senate or any of Senate’s committees or councils, the chair will call for members to declare any conflicts of interest with regard to any agenda item. For agenda items to be discussed in closed session, the chair will call for declarations of conflict of interest at the beginning of the closed portion of the meeting. Members may nonetheless declare conflicts at any time during a meeting.

### 8.02
A member shall be considered to have an actual, perceived or potential conflict of interest, when the opportunity exists for the member to use confidential information gained as a member of Senate, or any of Senate’s committees or councils, for the personal profit or advantage of any person, or use the authority, knowledge or influence of the Senate, or a committee or council thereof, to further her/his personal, familial or corporate interests or the interests of an employee of the university with whom the member has a marital, familial or sexual relationship.

### 8.03
Members who declare conflicts of interest shall not enter into debate nor vote upon the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).

### 8.04
Where Senate or a committee or council of Senate is of the opinion that a conflict of interest exists that has not been declared, the body may declare by a resolution carried by two-thirds of its members present at the meeting that a conflict of interest exists and a member thus found to be in conflict shall not enter into debate on the specified item upon which they have declared a conflict of interest. The chair will determine whether it is appropriate for said member to remove themselves from the meeting for the duration of debate on the specified item(s).
University of Waterloo  
SENATE UNDERGRADUATE COUNCIL  
Minutes of the 9 April 2019 Meeting  
[in agenda order]

Present: Katherine Acheson, Veronica Austen, Victoria Chu, Mario Coniglio (chair), Thomas Dedinsky, Leeann Ferries, Matthew Gerrits, Deon Hua, Bruce MacVicar, Clare Mitchell, Cathy Newell Kelly, Francis Poulin, Marlee Spafford, Russ Tupling, Rebecca Wickens (secretary), Jeff Wilson

Resources: Mary Lynn Benninger, Blair Clarance, Jennifer Coughlin, Danielle Jeanneault, Amanda McKenzie, Alyssa Voigt

*regrets

Organization of Meeting: Mario Coniglio took the chair, and Rebecca Wickens acted as secretary. The secretary advised that a quorum was present. The agenda was approved without formal motion.

1. DECLARATIONS OF CONFLICTS OF INTEREST
No conflicts of interest were declared.

2. APPROVAL OF THE 12 MARCH 2019 MINUTES AND BUSINESS ARISING
The minutes were approved as presented. Ferries and Austen. Carried.

Wilson spoke to the business arising from Section 3 of the 12 March 2019 minutes under the heading “Renison”, indicating: how the concerns around the spacing in the short titles was handled; the BASE courses will retain a 0.5 credit weight; EFAS courses will be removed from the calendar.

3. CURRICULAR ITEMS FOR APPROVAL & INFORMATION

Arts. Acheson presented the plan changes, noting: the Faculty has researched options for offering a co-op stream to all honours arts students; the availability of this stream will make department-specific offerings unnecessary; re: the French Teaching Specialization, the requirement for non-native French speakers to spend a term at a French university partner is being removed, although the option to do an exchange will remain. Following discussion around the consultation process leading to the development of the co-op stream for honours arts students, there was a motion to recommend the plan changes to Senate for approval. Acheson and Wilson. Carried.

Acheson presented the regulatory change, adding the new subject code, Mohawk, to the breadth requirement under language and culture. There was a motion to recommend the regulatory change to Senate for approval. Acheson and Wilson. Carried.

Acheson withdrew the four THPERF courses on pages 14 and 15 of 62 of the agenda package from consideration, indicating that they will come back for consideration at a later date. Following a brief overview of the remaining course changes, there was a discussion regarding the standardized language around repeatable courses –meaning, rationale, target audience, likelihood anyone will reach the maximum number. There was a motion to approve the course changes, minus the THPERF courses on pages 14 and 15 of 62 of the agenda package, on behalf of Senate. Acheson and Spafford. Carried.

Science. Spafford gave an overview of the submission, highlighting: changes to the prerequisites for the pharmacy clinical rotation courses to require completion of the community service milestone; update to course descriptions in science and business to reflect content; inactivation of pharmacy courses due to the closure of the PharmD bridging program; changes to the schedule for the biology specialization to ensure students have an opportunity to take a biology course in their first term; the inactivation of the regular stream of the honours science and business, earth
sciences specialization following discussion with the China partner. There was a motion to recommend that Senate approve the inactivation of the honours science and business, earth sciences specialization (reg.) and to approve the remainder of the science submission on behalf of Senate. Spafford and Poulin. Carried.

4. REGISTRAR’S OFFICE
Absence from Study. Members heard that the proposed changes reflect discussions among the associate deans re: harmonizing approaches to readmission after a period of absence. Discussion included: the nature of the readmission process; whether there are students impacted and how they will be notified; the benefits of consistency. Following discussion, there was a motion to recommend that Senate approve the regulatory changes as presented. Newell Kelly and Poulin. Carried.

Residency Requirement. Newell Kelly gave an overview of the proposed change and rationale. There was a motion to recommend that Senate approve the regulatory change as presented. Newell Kelly and Acheson. Carried.

5. ACADEMIC PROGRAM REVIEWS
Academic Program Reviews – Status. Members heard: this website shows program reviews in process, as well as which council members have volunteered to participate in a review; members who have not participated in a review to date are encouraged to volunteer.

Handling of Final Assessment Reports & Two-year Program Reviews. This was received for information.

Final Assessment Report – English Language Institute. Council’s reviewers indicated that they support the findings of the report, were happy to learn about the programs and were pleased with the quality. Wilson and Missere-Mihas responded to questions about timelines for addressing findings, including the plan for raising the profile of the program, noting that this is being led by the Student Success Office.

6. OTHER BUSINESS
There was no other business.

7. NEXT MEETING
The next meeting is scheduled for Tuesday 14 May 2019, 12:00 noon to 2:00 p.m. in NH 3318.

3 May 2019
Rebecca Wickens
Associate University Secretary
MEMORANDUM

TO: Rebecca Wickens, Secretary, Senate Undergraduate Council
FROM: Catherine Archibald, Faculty Undergraduate Operations Manager, Applied Health Sciences
cc: Leeann Ferries, Associate Dean, Undergraduate Studies, Applied Health Sciences
DATE: April 29, 2019
SUBJECT: Applied Health Sciences Faculty Undergraduate Studies (FUGS) Report to Senate Undergraduate Council

The attached report was approved by Applied Health Sciences’ Faculty Council on March 29, 2019, and is being submitted for consideration and approval by Senate Undergraduate Council at its meeting of May 14, 2019.
TO SENATE UNDERGRADUATE COUNCIL (May 14, 2019)

FROM APPLIED HEALTH SCIENCES FACULTY COUNCIL (March 29, 2019)

Undergraduate curriculum changes from Applied Health Sciences
for inclusion in the 2020/2021 Undergraduate Calendar

1. ACADEMIC PLAN CHANGES (For Approval)
   1.1. School of Public Health and Health Systems .......................................................... Page 1

2. NEW COURSES (For Approval) – Catalog Report 5, 10 (Page No. 1)
   2.1. School of Public Health and Health Systems .......................................................... Page 5

3. COURSE CHANGES (For Approval) – Catalog Report 5, 10 (Page No. 2, 3)
   3.1. School of Public Health and Health Systems .......................................................... Page 5
   3.2. Department of Kinesiology ................................................................................. Page 5
1. ACADEMIC PLAN CHANGES (For Approval)

1.1. School of Public Health and Health Systems

1.1.1. To revise the Honours Bachelor of Science, Health Studies degree requirements, effective September 2020, as follows:

In the Health Studies academic plan the knowledge from several traditional disciplines is combined and focused on the study of health and prevention of disease. Courses provide students with an understanding of the biological and social determinants of health and causes of disease.

The curriculum has four core areas:

1. Health sciences – the scientific knowledge and principles pertinent to personal and community health. Specific subject areas include:
   - introduction to health sciences,
   - fundamentals of population and public health,
   - determinants and distribution of disease (pathobiology, epidemiology), and
   - environmental and occupational health.

2. Social and behavioural sciences – social factors that affect health, determinants of health behaviour, and health behaviour modification.

3. Life sciences – the basic principles of biology, kinesiology, physiology, and biochemistry.

4. Evaluation and research – the principles of statistics and research design aimed at developing sufficient competencies to enable students to evaluate, interpret, and apply the findings of health-related research.

Students may apply for admission directly into Honours Health Studies, regular or co-operative system of study.

Legend
* Must be approved by the School of Public Health and Health Systems associate director, undergraduate studies.
** Cannot be used for both the methods/application cluster and core content clusters.

In order to receive the Bachelor of Science, Honours Health Studies degree, the student must successfully complete 20.0 units of which at least 10.0 total units are at or above the 200-level and including the following requirements:

1. Required health studies courses (6.0 units):
   - HLTH 101, HLTH 102, HLTH 201, HLTH 202, HLTH 204, HLTH 230, HLTH 245, HLTH 260, HLTH 280, HLTH 320, HLTH 310, HLTH 333, HLTH 370, HLTH 480 (0.25 unit)

2. Required applied health sciences course (0.5 unit):
   - AHS 107

3. Required statistics course (0.5 unit):
   - One of: HLTH 335, STAT 316

4. Methods/application cluster (1.0 unit):
   - One of: HLTH 303, HLTH 344, HLTH 433, HLTH 435, HLTH 442, HLTH 443, HLTH 451, HLTH 453, HLTH 458**, STAT 316

5. Core content clusters (3.0 units):
   - One of: HLTH 401, HLTH 410, HLTH 412, HLTH 373*, or HLTH 473* with an approved topic in health systems and policy
   - One of: HLTH 301, HLTH 304, HLTH 305, HLTH 320, HLTH 352, HLTH 448, HLTH 373*, or HLTH 473* with an approved topic in social behavioural sciences
   - One of: HLTH 350, HLTH 355, HLTH 442, HLTH 443, HLTH 373*, or HLTH 473* with an approved topic in Population Health
   - Three Two of: HLTH 310, HLTH 340, HLTH 341, HLTH 407, HLTH 421, HLTH 458**, HLTH 461, HLTH 471, HLTH 373*, HLTH 472*, or HLTH 473* with an approved topic in biohealth

6. Required courses from other departments (3.5 units):
   - BIOL 130/BIOL 130L, BIOL 239, BIOL 273
   - CHEM 120/CHEM 120L, CHEM 123/CHEM 123L
   - KIN 217
   - PSYCH 101

7. Restricted elective course (0.5 unit):
   - One of: ENGL 109 or ENGL 140R (recommended for Year One) or any ENGL 210 (recommended for Year Two)

8. Free elective courses: 5.5 units
The Bachelor of Science, Honours Health Studies degree students would benefit from having an applied biostatistics course HLTH 335 or STAT 316, that builds upon HLTH 204 in order to be successful in fourth-year methods courses and to gain skills for the workplace and research. The addition of CHEM 123/CHEM 123L as a requirement allows students more choices for upper year chemistry courses as well as provides better preparation for KIN 217 (Human Biochemistry) and HLTH 340 (Environmental Toxicology and Public Health). Permission to include CHEM 123/CHEM 123L as a requirement has been granted by the Department of Chemistry. The core content cluster requirements needed to be streamlined to remove the population health cluster as the courses listed do not belong together, and HLTH 442 and HLTH 443 are more appropriate as methods courses. Both HLTH 310 and HLTH 320 cover lifespan development. HLTH 310 emphasizes physical/physiological changes and should be a requirement for the Health Studies students, whereas HLTH 320 emphasizes the psycho-social domain and is appropriate as one of the choices in the social behavioural sciences core content cluster list. The addition of a new course requirement, HLTH 480 will allow students to integrate what they have learned in the undergraduate curriculum and develop skills needed for future careers in health, and aligns with the accreditation requirements for the Council on Education for Public Health (CEPH).

1.1.2. To revise the Minor in Gerontology requirements, effective September 2020, as follows:

The Minor in Gerontology Minor is open to University of Waterloo students who wish to obtain some specialization in gerontology.

Requirements
1. Students must be in an honours or four-year general program at Waterloo.
2. An overall minimum average of 67% is required for courses presented for the Minor.
3. Normally, a maximum of two courses (1.0 unit) obtained on Letter of Permission Form or in transfer credit may be applied toward fulfilment of the Minor in Gerontology Minor course requirements. These courses must be equivalent to courses listed in the course requirements as assessed by the school/department offering the replaced course.
4. Successful completion of 5.0 units from the following requirements:
   o Required courses (1.0 unit):
     GERON 201/HLTH 201 (it is recommended that students begin their studies with GERON 201/HLTH 201)
     GERON 400/HLTH 400
   o Restricted elective courses (4.0 units):
     GERON 218/HLTH 218/PSYCH 218
     GERON 245/HLTH 245
     GERON 310/HLTH 310/KIN 310
     GERON 320/HLTH 320
     GERON 352/HLTH 352/KIN 352/REC 362/SOC 352
     GERON 355/Biol 355
     GERON 401A/GERON 401B
     HLTH 253/SOC 253
     HLTH 280
     HLTH 407/KIN 407
     HLTH 420/GEOG 432/PLAN 432
     HLTH 451
     HLTH 473 (course topic must be approved by the associate director, undergraduate studies)
     KIN 342
     KIN 343
     KIN 406
     KIN 418
     KIN 422
     KIN 429
     KIN 456
     PHIL 226
     PHIL 319J
     PSYCH 398
     REC 361
     SOC 248
     SOCWK 240R
     SOCWK 367R
     SDS 367R
     An approved course in statistics (a list of approved courses is available from the School of Public Health and Health Systems Undergraduate Office).
Rationale: The name change reflects the criteria of the new common language definition of a minor, and has been updated in the 2019/2020 Undergraduate Calendar. The School of Social Work at Renison University College owns SOCWK 367R which was inactivated effective September 2019 (Senate Undergraduate Council, June 2018), and also removed from the 2019/2020 Undergraduate Calendar. Another newly approved course, SDS 367R (Aging and Social Development) has substantial overlap and was suggested as a replacement course. The course syllabus for SDS 367R was provided for consideration and the course was deemed appropriate as a replacement in the list of restricted electives for the Gerontology Minor.

1.1.3. To revise the Option in Aging Studies requirements, effective September 2020, as follows:

The Option in Aging Studies Option is open to Applied Health Sciences University of Waterloo students who wish to obtain some interdisciplinary knowledge in issues related to aging, but do not wish to complete the Gerontology Minor.

Requirements
1. A minimum overall average of 67% is required for the courses presented for the Option.
2. Normally all courses must be taken at Waterloo; there is no allowance for transfer of credit from other institutions.
3. Successful completion of 3.0 units from the following requirements:
   - Required courses (0.5 unit):
     - GERON 201/HLTH 201 (it is recommended that students begin their studies with GERON 201/HLTH 201)
   - Restricted elective courses (2.5 units):
     - GERON 218/HLTH 218/PSYCH 218
     - GERON 245/HLTH 245
     - GERON 310/HLTH 310/KIN 310
     - GERON 320/HLTH 320
     - GERON 352/HLTH 352/KIN 352/REC 362/SOC 352
     - GERON 355/Biol 355
     - GERON 401A/GERON 401B
     - HLTH 253/SOC 253
     - HLTH 280
     - HLTH 407/KIN 407
     - HLTH 420/GEOG 432/PLAN 432
     - HLTH 451
     - HLTH 473 (course topic must be approved by the associate director, undergraduate studies)
     - KIN 342
     - KIN 343
     - KIN 406
     - KIN 418
     - KIN 422
     - KIN 429
     - KIN 456
     - PHIL 226
     - PHIL 319J
     - PSYCH 398
     - REC 361
     - SOC 248
     - SOCWK 240R
     - SOCWK 367R
     - SDS 367R
   - An approved course in statistics (a list of approved courses is available from the School of Public Health and Health Systems Undergraduate Office).

Rationale: The name change reflects the criteria of the new common language definition of an option, and has been updated in the 2019/2020 Undergraduate Calendar. Options are available to students within their own faculties only; therefore, the reference to the option being open to all University of Waterloo students was removed. The School of Social Work at Renison University College owns SOCWK 367R which was inactivated effective September 2019 (Senate Undergraduate Council, June 2018), and also removed from the 2019/2020 Undergraduate Calendar. Another newly approved course, SDS 367R (Aging and Social Development) has substantial overlap and was suggested as a replacement course. The course syllabus for SDS 367R was provided for consideration and the course was deemed appropriate as a replacement in the list of restricted electives for the Aging Studies Option.
To revise the Diploma in Gerontology requirements, effective September 2020, as follows:

The Diploma in Gerontology program is available to students who would like some training in gerontology but are not able to complete all the requirements of a School of Public Health and Health Systems undergraduate degree.

Admission Requirements
The following are considered minimum admission requirements. Students will be considered on an individual basis to determine admissibility to the program.
1. Completion of a minimum of two years (four semesters totalling 10.0 units) or equivalent of post-secondary study prior to beginning the diploma program.
2. BIOL 130 or equivalent, or HLTH 103 or equivalent, within the past five years.

Diploma Requirements
1. A cumulative overall average of 67% in the course requirements.
2. Successful completion of all course requirements.
3. A maximum of five years to successfully complete the program from the time the student first enters the program.
4. Successful completion of 5.0 units from the following requirements:
   - Required courses (1.0 unit)
     GERON 201/HLTH 201 (it is recommended that students begin their studies with GERON 201/HLTH 201)
     GERON 400/HLTH 400
   - Restricted elective courses (4.0 units):
     GERON 218/HLTH 218/PSYCH 218
     GERON 245/HLTH 245
     GERON 310/HLTH 310/KIN 310
     GERON 320/HLTH 320
     GERON 352/HLTH 352/KIN 352/REC 362/SOC 352
     GERON 355/BIOL 355
     GERON 401A/GERON 401B
     HLTH 253/SOC 253
     HLTH 280
     HLTH 407/KIN 407
     HLTH 420/GEOG 432/PLAN 432
     HLTH 451
     HLTH 473 (course topic must be approved by the associate director, undergraduate studies)
     KIN 342
     KIN 343
     KIN 406
     KIN 418
     KIN 422
     KIN 429
     KIN 456
     PHIL 226
     PHIL 319J
     PSYCH 398
     REC 361
     SOC 248
     SOCWK 240R
     SDS 367R
     An approved course in statistics (a list of approved courses is available from the School of Public Health and Health Systems Undergraduate Office).

Notes
1. GERON 201/HLTH 201 should normally be taken before or concurrently with restricted electives.
2. The Diploma in Gerontology is not open to students currently enrolled in a degree program at the University of Waterloo. Current students will enroll in the Minor in Gerontology.

Rationale: The School of Social Work at Renison University College owns SOCWK 367R which was inactivated effective September 2019 (Senate Undergraduate Council, June 2018), and removed from the 2019/2020 Undergraduate Calendar. Another newly approved course, SDS 367R (Aging and Social Development) has substantial overlap and was suggested as a replacement course. The course syllabus for SDS 367R was provided for consideration and the course was deemed appropriate as a replacement in the list of restricted electives for the Diploma in Gerontology.
2. **NEW COURSES** (For Approval) – Catalog Report 5, 10 (Page No. 1)

2.1. School of Public Health and Health Systems

2.1.1. To add HLTH 335 to the curriculum as a new undergraduate course offering.

2.1.2. To add HLTH 480 to the curriculum as a new undergraduate course offering.

3. **COURSE CHANGES** (For Approval) – Catalog Report 5, 10 (Page No. 2, 3)

3.1. School of Public Health and Health Systems

3.1.1. To revise the components and description for HLTH 344.

3.1.2. To revise the components for HLTH 401 (cross-listed with GSJ 401).

3.1.3. To revise the components for HLTH 412.

3.2. Department of Kinesiology

3.2.1. To revise the components and prerequisites for KIN 414.
NEW COURSES  (for approval)

Public Health and Health Systems - School of

Effective  01-SEP-2020
HLTH  335 ( 0.50 )  LAB, LEC  Introduction to Statistical Analytics in Health

The course builds upon fundamental concepts of statistics for their application in health research through the use of statistical software. This course will (i) cover topics of data management, organization, and processing; (ii) emphasize the role of statistical concepts (such as sampling, exploratory data analysis, hypothesis testing, linear models, ANOVA, etc.) in statistical computation/coding for application in data analysis; and (iii) teach methods of reporting and interpreting statistical results.

Requisites:
Prereq: HLTH 204; Level at least 3A School of Public Health and Health Systems students
Antireq: STAT 316, REC 371

Rationale:
After review of the School of Public Health and Health Systems (SPHHS) curriculum at an undergraduate program retreat in May 2018, several changes were proposed to give students more opportunities to gain applied skills. Skills in applied statistics and the use of statistical software have been identified as essential by practitioners in public health as well as researchers in health sciences. SPHHS students would also benefit from having an applied statistics course that builds upon HLTH 204 in order to be successful in fourth-year methods courses, to gain skills for the workplace, and in research.

Effective  01-SEP-2020
HLTH  480 ( 0.25 )  LEC  Competencies in Health

This capstone course provides an opportunity for students to reflect on the competencies they have developed throughout their undergraduate degree, identify and articulate transferrable skills, and showcase their achievements from their coursework. Students will create a cumulative project that highlights their development of core competencies within health sciences and public health.

Requisites:
Prereq: Level at least 4A Health Studies students

Rationale:
This capstone course will fill an existing gap within the health studies curriculum by providing an opportunity for Bachelor of Science students to apply knowledge, demonstrate achievements, and communicate skills acquired throughout their undergraduate degree. Since the Bachelor of Public Health students already have a capstone requirement for their degree, this proposed course would only be for Health Studies students, and would help provide equity amongst the two degree programs. Finally, by providing this cumulative capstone experience for all Health Studies students, our Bachelor of Science program will be aligned with the accreditation
requirements for the Council on Education for Public Health (CEPH).

COURSE CHANGES  (for approval)

Current Catalog Information
HLTH 344  (0.50)  LEC  Qualitative Methods for Health Research
This course introduces students to the basic qualitative methods, tools, and research
designs that are widely used in health research and program evaluation.
No Special Consent Required
Requisites : Prereq: Level at least 3A School of Public Health and Health Systems
students or Level at least 3A Mathematics Health Informatics Option
students.

Effective 01-SEP-2020
Component Change: LAB, LEC
Description Change: This course introduces students to the basic qualitative methods, tools,
and research designs that are widely used in health research and program
evaluation. Students will analyze qualitative data using software.
Rationale : The addition of a lab component will provide students with applied skills
using qualitative analysis software, such as NVIVO.

Current Catalog Information
HLTH 401  (0.50)  LEC  Global Health
We are becoming a global community; increasingly, health concerns are international
in nature and impact. The student will build upon core content concerning population
and public health theories, international health care systems, and cultural
sensitivity to address emerging global health concerns on the perspective of public
and population health.
No Special Consent Required
Requisites : Prereq: HLTH 202, 245. Level at least 4A School of Public Health and Health
Systems students only
Cross-listed as: GSJ 401

Effective 01-SEP-2020
Component Change: LEC, TUT
Rationale : The addition of a tutorial component to HLTH 401 will provide students with
the opportunity to apply their knowledge learned from the lecture in
smaller group discussions in tutorials. The Faculty of Arts has been
informed of the addition of a tutorial component to GSJ 401, and both
Faculties will present this item at the May 2019 Senate Undergraduate
Council meeting.

Current Catalog Information
HLTH 412  (0.50)  LEC  Comparative Health Systems
This course addresses the history and development of health systems, and comparison
of the social ethics, organization, and financing of different national health
systems. Topics include: the design of health systems; strengths and weaknesses of alternative systems for public health and health care delivery; current strategies for health system reform in resource-rich and resource-constrained nations; and ethical issues associated with health system reform. This course uses a case-study, problem-based approach.

No Special Consent Required

Requisites:

Effective 01-SEP-2020

Component Change:

LEC, TUT

Rationale:
The use of case studies and a problem based-approach requires students to have the opportunity to work in small groups. The addition of a tutorial component to HLTH 412 will provide students the opportunity for these smaller group discussions.

Kinesiology

Current Catalog Information

KIN 414 (0.50) LEC Cases in Clinical Exercise Physiology

Using cases, assignments, guest lecturers and reading to guide discussion and learning, students will learn how impairments or secondary complications associated with chronic conditions influence decision-making in clinical exercise physiology.

No Special Consent Required

Requisites:

Effective 01-SEP-2020

Component Change:

LAB, LEC

Requisite Change:

Prereq: KIN 204, KIN 204L or KIN 405

Rationale:
The addition of the lab component will provide students with applied skills. The update to the prerequisites is a result of KIN 204 and KIN 204L being made co-requisites effective September 2019.
Memorandum
Faculty of Arts

TO: Senate Undergraduate Council

FROM: Katherine Acheson, Associate Dean of Arts, Undergraduate Programs

DATE: April 29, 2019

RE: Curriculum Change – For Approval

GSJ 401/HLTH 401
Effective 01 September 2020

This item was approved at the Undergraduate Affairs Group meeting of 07 March 2019. It is being sent to the May meeting of Senate Undergraduate Council for approval to coincide with the submission of the cross-listed course HLTH 401 from Applied Health Sciences.
COURSE CHANGES (for approval)

Philosophy

Current Catalog Information

GSJ 401 (0.50) LEC Global Health

We are becoming a global community; increasingly, health concerns are international in nature and impact. The student will build upon core content concerning population and public health theories, international health care systems, and cultural sensitivity to address emerging global health concerns on the perspective of public and population health.

No Special Consent Required

Requisites:

Prereq: HLTH 101, 102, or GSJ/HLTH 260; and Level at least 4A GSJ major or Minor

Cross-listed as:

HLTH 401

Effective 01-SEP-2020

Component Change: LEC, TUT

The addition of a tutorial component to HLTH 401 will provide students with the opportunity to apply their knowledge learned from the lecture in smaller group discussions in tutorials. The Faculty of Arts has been informed of the addition of a tutorial component to GSJ 401, and both Faculties will present this item at the May 2019 Senate Undergraduate Council meeting.
Memorandum
Faculty of Arts

TO: Senate Undergraduate Council
FROM: Katherine Acheson, Associate Dean of Arts, Undergraduate Programs
DATE: April 12, 2019
RE: Curriculum Change – For Information

At the June 19 and October 9, 2018 SUC meetings, the following course changes (along with titles, descriptions, and requisites) were approved, effective September 1, 2019:

- ECON 344/ARBUS 302 became MGMT 244/ARBUS 302
- ECON 345/ARBUS 303 became MGMT 345/ARBUS 303

The two existing ARBUS courses, cross-listed with ECON courses, are listed in the Arts and Business plan requirements. A significant number (approximately 80 identified) of students were planning to use the ARBUS courses towards the Arts and Business plan requirements and an Economics Minor. With the removal of the ECON portion of the course, this “double count” won’t be possible.

To accommodate these students, we would like to extend the ECON 344 and ECON 345 cross-listing for one additional year (all other changes will remain as is).

- September 2019: ARBUS 302/MGMT 244/ECON 344 and ARBUS 303/MGMT 345/ECON 345.
- September 2020: ARBUS 302/MGMT 244 and ARBUS 303/MGMT 345.

For the 2019-20 Calendar, the Arts and Business plan requirements will remain as ARBUS 302/MGMT 244 and ARBUS 303/MGMT 345, without the additional ECON cross-lists. This ensures the ECON versions of the course will not be allowed to count towards the Arts and Business plan requirements for 2019 or later.
Memorandum
Faculty of Arts

TO: Senate Undergraduate Council

FROM: Katherine Acheson, Associate Dean of Arts, Undergraduate Programs

DATE: April 29, 2019

RE: Curriculum Change – For Information

The following changes are of a housekeeping nature and are being put forward for information.

1. International Studies Minor
   http://ugradcalendar.uwaterloo.ca/page/ARTS-International-Studies-Minor
   Amendment to 2019-2020 Calendar

   To correct the text in the International Studies Minor plan as shown below. These courses were added to the plan incorrectly. Approval has been granted by the Registrar’s Office to make this change to the 2019-2020 calendar.

   […]
   Gender and Social Justice: GSJ 261/RS 284, GSJ 326/SOC 425/LS 425, GSJ 331/PACS 321, GSJ 463/ENGL 463
   […]
   […]
   Sociology: SOC 270, SOC 425/LS 425/GSJ 326, SOC 451, SOC 461/LS 461
   […]

2. Computing and Financial Management
   http://ugradcalendar.uwaterloo.ca/page/ARTS-BCFM-Overview-and-Degree-Requirements
   Effective 01 September 2020

   The Faculty of Mathematics has changed their options to specializations. This item is to adjust note 1 in the Computing and Financial Management plan to reflect the change in terminology.

   […]
   The Computing and Financial Management program's academic curriculum is a combination of the curricula in Computer Science and Accounting and Financial
Management, and therefore, cannot be combined with any plan, minor, or specialization option offered by the David R. Cheriton School of Computer Science or the School of Accounting and Finance. Other plan combinations, minors, or specializations options may be possible, but may require more than 40 courses (20.0 units) and/or more than the customary eight study terms to satisfy all of the various requirements. Plan combinations, minors, or specializations options should not be considered without careful consultation with a Bachelor of Computing and Financial Management (BCFM) advisor.

Rationale: Changing the note above is a housekeeping change to reflect the standardization change of options to specializations in computer science. Since this change is considered housekeeping, Arts has been notified of the change and there was no need to send it through the Arts approval process.
MATHEMATICS FACULTY COUNCIL
REPORT TO SENATE UNDERGRADUATE COUNCIL
FACULTY OF MATHEMATICS SUBMISSION - April 30, 2019

For approval and inclusion in the 2020-2021 Undergraduate Calendar

Content

A. COURSE CHANGES (see report)
   i. New Courses
      a) CS
   ii. Changes to Existing Courses
      a) AMATH
      b) CS
      c) MATH
   iii. Inactivated Courses – None (if applicable)

B. NEW PROGRAMS/PLANS – None (if applicable)

C. CHANGES TO PROGRAMS/PLANS
   i. Mathematics/Chartered Professional Accountancy (Math/CPA)
   ii. Computer Science (CS)

D. INACTIVATED PROGRAMS/PLANS – None (if applicable)

E. NEW REGULATIONS AND PROCEDURES – None (if applicable)

F. CHANGES TO REGULATIONS AND PROCEDURES – None (if applicable)

G. INACTIVATIONS OF REGULATIONS AND PROCEDURES – None (if applicable)
A. COURSE CHANGES (see report)
   i. New Courses
      a) CS
         CS 251E
   ii. Changes to Existing Courses
      a) AMATH
         AMATH 250, 251, 473/(PHYS 454), 475/(PHYS 476)
      b) CS
         CS 241E
      c) MATH
         MATH 146, 148
   iii. Inactivated Courses – None (if applicable)

B. NEW PROGRAMS/PLANS – None (if applicable)

C. CHANGES TO PROGRAMS/PLANS
   i. Mathematics/Chartered Professional Accountancy (Math/CPA)
      Effective September 1, 2020.
      To change the Mathematics/Chartered Professional Accountancy/Finance Option plan to a Plan 10 (CPA) and a Plan 20
      (Finance Specialization). The plan changes are as follows:

      | Old Structure                      | New Structure – Plan 10               | New Structure – Plan 20               |
      |------------------------------------|---------------------------------------|---------------------------------------|
      | Mathematics/Chartered Professional Accountancy-Finance Option | Mathematics/Chartered Professional Accountancy | Finance Specialization |

      This plan has the same course requirements as Honours Mathematics/Chartered Professional Accountancy (Math/CPA) plan with the following additional requirements:

      Students in this option must fulfill all the requirements in Table I. This must include at least 18 math courses, and the following specific requirements:

      One of
      CS 115 Introduction to Computer Science 1
      CS 135 Designing Functional Programs
      CS 145 Designing Functional Programs (Advanced Level)

      One of
      CS 116 Introduction to Computer Science 2
      CS 136 Elementary Algorithm Design and Data Abstraction
      CS 146 Elementary Algorithm Design and Data Abstraction (Advanced Level)

      One of
      MATH 127 Calculus 1 for the Sciences
      MATH 137 Calculus 1 for Honours Mathematics
      MATH 147 Calculus 1 (Advanced Level)

      One of
      MATH 128 Calculus 2 for the Sciences
      MATH 138 Calculus 2 for Honours Mathematics
      MATH 148 Calculus 2 (Advanced Level)
One of
MATH 135 Algebra for Honours Mathematics
MATH 145 Algebra (Advanced Level)

One of
MATH 136 Linear Algebra 1 for Honours Mathematics
MATH 146 Linear Algebra 1 (Advanced Level)

One of
MATH 237 Calculus 3 for Honours Mathematics
MATH 247 Calculus 3 (Advanced Level)

One of
STAT 230 Probability
STAT 240 Probability (Advanced Level)

One of
STAT 231 Statistics
STAT 241 Statistics (Advanced Level)

All of
ACTSC 231 Introductory Financial Mathematics
AFM 272/ACTSC 291 Corporate Finance 1
AFM 372/ACTSC 391 Corporate Finance 2
AFM 476/ACTSC 471 Advanced Corporate Finance
STAT 373 Regression and Forecasting Models in Finance
AFM 205 Introduction to Financial Services

One of
AFM 231/LS 283 Business Law
COMM 231 Commercial and Business Law for Mathematics Students

All of
AFM 101 Introduction to Financial Accounting
AFM 102 Introduction to Managerial Accounting
AFM 132 Introduction to Business Stages*
AFM 205 Introduction to Financial Services
AFM 212 Financial Analysis and Planning
AFM 291 Intermediate Financial Accounting 1
AFM 311 Connections to Ethical Context
AFM 341 Accounting Information Systems
AFM 351 Audit Strategy
AFM 362 Taxation 1 - Foundations
AFM 363 Taxation 2 - Integration
AFM 381 Intermediate Financial Accounting 2
AFM 401 Accounting Theory
AFM 433 Business Strategy
AFM 462 Taxation 3 - Tax Planning Topics
AFM 479 Cases and Applications in Finance II
AFM 481 Cost Management Systems
AFM 482 Performance Measurement and Organization Control
AFM 491 Advanced Financial Accounting
COMM 103/ECON 100 Principles of Economics or (ECON 101 Introduction to Microeconomics and ECON 102 Introduction to Macroeconomics)
SPCOM 111 Leadership, Communication, and Collaboration

One of
AFM 206 Introduction to Tax
AFM 207 Introduction to Analytics
AFM 208 Introduction to Assurance

Two of
ACTSC 371 Introduction to Investments
CS 335 Computational Methods in Business and Finance
MATBUS 471 Fixed Income Securities
MATBUS 472 Risk Management
STAT 334 Probability Models for Business and Accounting

Two of
AFM 321 Personal Financial Planning
AFM 322 Derivative Securities
AFM 328 and AFM 329, or AFM 328 and AFM 428, or AFM 329 and AFM 429 Investment Management (0.25 unit each)
AFM 415 Special Topics or AFM 416 Special Topics in Finance
AFM 423 Topics in Financial Econometrics
AFM 434 Governance and Enterprise Risk Management for Global Organizations
AFM 477 Mergers and Acquisitions
AFM 478 International Financial Management
AFM 492 Financial Statement Analysis

Two additional math courses (1.0 unit).

Notes
1. AFM 363, AFM 401, AFM 462, AFM 482, AFM 491 may be substituted with an acceptable 300-/400-level AFM elective, with the understanding that any such substitution would forfeit MAcc admission eligibility and will impact the path to a CPA designation pursued through CPA Ontario.

2. Students in this option specialization may take AFM 322 and AFM 424 to replace the AFM 479 degree CPA requirement. If so, students need only take one of the remaining AFM courses in the above "Two of" list of AFM courses.

3. There is very little flexibility for altering the academic/work term sequence prescribed for the Mathematics/Chartered Professional Accountancy (Math/CPA) - Finance option (see Study/Work Sequence) because of limited term offerings and structured prerequisites for most AFM courses. Since deviations from this sequence can cause a delay in graduation of as much as one calendar year, alterations should not be considered without careful consultation with the CPA academic advisor.

4. The order in which required non-math courses in this plan are taken is very important, and there is little room for flexibility (for the same reasons in Note 3 above). During the class enrolment period each term, students should be sure to consult with their academic advisor.

5. Students may not repeat an AFM course in which they have obtained a grade of 60% or higher. AFM courses completed with a grade in the range 50 - 59% may be repeated, but only once, and then only with approval from the School of Accounting and Finance.

6. Students who have attempted, to the satisfaction of the Standings and Promotions (S&P) Committee and Co-operative Education and Career Action, to gain employment for all four available work terms, but are successful in so doing for only three work terms, will be eligible for a co-op degree, provided they have received credit for all three of their work terms and all three of their work reports, and they have successfully completed all academic graduation requirements. (Students who are successful in gaining acceptable employment for four work terms will be required to have credit for all four work terms and all four work reports in order to qualify for a co-op degree.)

7. Students who meet all the academic graduation requirements for this option, but who do not meet the minimum requirements for a co-op degree (see preceding Note 4) may, in exceptional circumstances and at the discretion of the S&P Committee, be awarded a regular Honours Mathematics/Chartered Professional Accountancy degree.

8. In order to meet the requirements of both the Faculty of Mathematics and the School of Accounting and Finance, the Math/CPA - Finance option Specialization requires the successful completion of 42 courses.

Tuition
This is a high-free plan. As such, tuition higher than the normal University of Waterloo tuition is required.

Eligibility for Waterloo's Master of Accounting (MAcc) Academic Plan
The Math/CPA plan is designed to lead to the University of Waterloo Master in Accounting (MAcc) degree. Students should consult the MAcc website to ascertain specific MAcc admission criteria for Math/CPA graduates.

Rationale: Changing Math CPA/Finance Option to a Plan 10 (Math CPA) and a Plan 20 (Finance Specialization) to reflect the standardization of the common language for plans in the Faculty.

ii. Computer Science (CS)

a) Rename CS options to specializations

Effective September 1, 2020
To rename the options to specializations. The new structure in the calendar is as follows:

Options Specializations

Artificial Intelligence Option Specialization
Bioinformatics Option Specialization
Business Option Specialization
Computational Fine Arts Option Specialization
Computing Option
Digital Hardware Option Specialization
Human-Computer Interaction Option Specialization
Software Engineering Option Specialization

Rationale: This change is a result of the standardization of the common language for plans. The options that are turning into specializations focus students’ work largely in CS-specific areas, and are not available to non-CS students. Students can choose which calendar they would like to follow. Since CS has their options set up already as plan 20, this is a renaming only. Note that the Computing Option is being removed because of the next motion.
b) **Rename Computing Option to Computing Minor**

Effective September 1, 2020
To rename the Computing Option to the Computing Minor. The new text is as follows:

A Computing option Minor is available to all students, except those enrolled in Software Engineering, Computing and Financial Management, and other plans involving Computer Science. Certain plans already including substantial computer science content may also be excluded. See the Bachelor of Computer Science and Bachelor of Mathematics Academic Plan Combinations page for more details about excluded plans.

**Notes**
1. Most courses in the range CS 240-CS 299, CS 340-CS 398, CS 440-CS 498 are only available to CS majors, so upper-year CS courses taken toward this option minor will usually be in the range CS 200-CS 239, CS 300-CS 339, CS 400-CS 439.
2. A common route into upper-year CS courses is to take all of CS 115, CS 116, and CS 136. All three of these courses may count toward this Option minor.
3. Students cannot obtain both the Computer Science (CS) Minor and the Computing option Minor.

**Rationale:** This change is a result of the standardization of the common language for plans. The Computing Minor is open to all students but many of the CS courses required are only available to CS students and therefore this minor will mainly be for students who have left CS.

c) **To adjust note 1 in CFM plan to reflect the change of name from option to specialization**

Effective September 1, 2020
To adjust note 1 in Computing and Financial Management plan to reflect the change of name from option to specialization

The Computing and Financial Management program's academic curriculum is a combination of the curricula in Computer Science and Accounting and Financial Management, and therefore, cannot be combined with any plan, minor, or option specialization offered by the David R. Cheriton School of Computer Science or the School of Accounting and Finance. Other plan combinations, minors, or specializations may be possible, but may require more than 40 courses (20.0 units) and/or more than the customary eight study terms to satisfy all of the various requirements. Plan combinations, minors, or specializations should not be considered without careful consultation with a Bachelor of Computing and Financial Management (BCFM) advisor.

**Rationale:** Changing the note above is a housekeeping change to reflect the standardization of the common language for plans in computer science. Since this change is considered housekeeping, Arts has been notified of the change and there was no need to send it through the Arts approval process.

d) **To adjust text for Computer Science Minor to reflect renaming from option to minor**

Effective September 1, 2020
To adjust the text to the Computer Science Minor to reflect the renaming of the Computing Option to the Computing Minor.

A Computer Science Minor is available to all Honours students except in combination with Computer Science plans. Excluded plans include Software Engineering, Computing and Financial Management, and joint plans involving Computer Science.

The Computer Science Minor is generally not available to students outside the Faculty of Mathematics because it includes several restricted courses. Students inside the Faculty of Mathematics may need to register as a Computer Science major for one or more terms to complete the Computer Science Minor.

Students are encouraged to consider the Computing Option Minor as an alternative to the Computer Science Minor. Students may not complete both the Computer Science Minor and the Computing Minor option.

**Rationale:** This change is a result of the standardization of the common language for plans.

e) **To add the Computer Science Minor to the list of plans available to students outside the Math Faculty**

Effective September 1, 2020
To add the Computer Science Minor to the list of plans available to students outside the Math Faculty.

The new structure is as follows:

- Plans for Students outside the Mathematics Faculty
f) **To allow SE students to complete the Computer Science – Artificial Intelligence (AI) specialization**

Effective September 1, 2020

To allow SE students to complete the Computer Science - Artificial Intelligence (AI) Specialization. The new text is as follows.

- A change will have to go through SE since they have a section in their calendar which lets SE students know what they can pursue in other faculties
- New text is in italics below:

The **AI Option Specialization** is available for both the Bachelor of Computer Science (BCS) and the Bachelor of Mathematics (BMath) Computer Science plans. **Students in the Bachelor of Software Engineering (BSE) program are also eligible for this specialization.** Students in BCS Data Science are not eligible for this option specialization. The requirements are the same as for the BCS and BMath Computer Science (CS) plans with the following constraints on upper-year CS courses:

*Rationale: Students in SE can take the AI specialization through careful selection of electives. The SE program already spans the Engineering/Math divide very successfully.*

g) **To change the CS course note 3 to allow B. Math Data Science students to have access to CS courses required for their plan**

Effective September 1, 2020.

To change the CS course note 3 for as follows:

3. Upper-year CS courses are divided into two streams.
   - Courses with middle digits 4 to 9, e.g., 350 are designed specifically for Computer Science students. Some courses are open to all Math faculty students, but most are restricted to Computer Science students only. **BMath (Data Science) students are eligible to take all CS courses listed as required or elective for their plan, as detailed in individual course descriptions below.**
   - Courses with middle digits 0 to 3, e.g., 230 are designed for a broader audience, including students pursuing the Computing option Minor. These courses are not available to Computer Science students.

*Rationale: The calendar note change is to be more welcoming for BMath (Data Science) students in CS courses.*

h) **Update Admissions section for B. CS (Data Science)**

Effective September 1, 2020

To change the ‘Admission’ section for CS as follows:

Admission to Computer Science major plans will normally occur when a student first applies to the Faculty of Mathematics. **Admission to the BCS (Data Science) plan, which is a Computer Science major plan, normally happens in second year.**

*Rationale: Changing the note above will resolve small clerical errors from when the Data Science plan was first created.*
NEW COURSES  (for approval)

Computer Science - David R. Cheriton School of

Effective  01-SEP-2020
CS  251E ( 0.50 )  LAB, LEC, TST, TUT  Computer Organization and Design (Enriched)
Enriched version of CS 251. [Note: Students enrolled in Digital Hardware specialization should enrol in ECE 222. See notes 1 and 9 above. CS 251E may be substituted for CS 251 wherever the latter is a requirement. Enrolment is restricted. Lab is not scheduled and students are expected to find time in open hours to complete their work. Offered: As permitted by demand and available resources.]

Requisites :  Prereq: A grade of 85% or higher in one of CS 136 or 146; Computer Science and BMath (Data Science) students only. Antireq: BME 292, ECE 222, ME 262, MTE 262, SYDE 192

Rationale :  The E level courses are our enriched courses, and CS251 is the only second year course that does not have an E version available to our students. These enriched courses have appealed to many students.

COURSE CHANGES  (for approval)

Applied Mathematics

Current Catalog Information
AMATH  250 ( 0.50 )  LEC, TST, TUT  Introduction to Differential Equations
No Special Consent Required

Requisites :  Prereq: (One of MATH 106, 114, 115, 136, 146, NE 112) and (One of MATH 128, 138, 148). Antireq: AMATH 251, 350, MATH 218, 228

Effective  01-SEP-2020
Requisite Change :  Prereq: (One of MATH 106, 114, 115, 136, 146, NE 112) and (One of MATH 118, 119, 128, 138, 148). Antireq: AMATH 251, 350, MATH 218, 228

Rationale :  This will allow engineering students to take the course. Engineering students have MATH 118 and MATH 119, which are an anti-requisite for MATH 128 and MATH 148.

Current Catalog Information
AMATH  251 ( 0.50 )  LEC, TUT  Introduction to Differential Equations (Advanced level)
AMATH 251 is an advanced-level version of AMATH 250. This course offers a more theoretical treatment of differential equations and solution methods. In addition, emphasis will be placed on computational analysis of differential equations and on applications in science and engineering. [Note: AMATH 251 may be substituted for AMATH 250 whenever the latter is a requirement in an Honours plan. Offered: F] No Special Consent Required

Requisites: Prereq: (One of MATH 106, 114, 115, 136, 146, NE 112) and (One of MATH 128, 138, 148). Antireq: AMATH 250, 251, 350, MATH 218, 228

Effective 01-SEP-2020

Requisite Change: Prereq: (One of MATH 106, 114, 115, 136, 146, NE 112) and (One of MATH 118, 119, 128, 138, 148). Antireq: AMATH 250, 251, 350, MATH 218, 228

Rationale: This will allow engineering students to take the course. Engineering students have MATH 118 and MATH 119, which are an anti-requisite for MATH 128 and MATH 148.

Current Catalog Information
AMATH 473 (0.50) LEC Quantum Theory 2

Requisites: Prereq: AMATH 373 or PHYS 334
Cross-listed as: PHYS 454

Effective 01-SEP-2020

Component Change: LEC, TUT
Rationale: To add a tutorial. This course covers advanced topics in mathematical physics (advanced quantum theory) and the number of students taking those courses keeps increasing. The students come from different plans, not only Mathematical Physics and Applied Mathematics, but also several plans run by the Physics and Astronomy Department (Honours Physics, Mathematical Physics (Science), Astrophysics, etc), Pure Mathematics, and Engineering. Due to the diversity of students and backgrounds of the students taking this course, the course can greatly benefit from a tutorial session. The existence of this tutorial session helps bridge the diverse backgrounds of the students and homogenize their basic knowledge about the mathematical methods used during the course. Physics and Astronomy has been consulted.

Current Catalog Information
AMATH 475 (0.50) LEC Introduction to General Relativity
Requisites : Prereq: (AMATH 231 or MATH 227) and (AMATH 271 or PHYS 263); Level at least 4A Honours Mathematics or Science students

Cross-listed as: PHYS 476

Effective 01-SEP-2020
Component Change: LEC, TUT
Rationale: To add a tutorial. This course covers advanced topics in mathematical physics (general relativity) advanced quantum theory) and the number of students taking those courses keeps increasing. The students come from different plans, not only Mathematical Physics and Applied Mathematics, but also several plans run by the Physics and Astronomy Department (Honours Physics, Mathematical Physics (Science), Astrophysics, etc), Pure Mathematics, and Engineering. Due to the diversity of students and backgrounds of the students taking this course, the course can greatly benefit from a tutorial session. The existence of this tutorial session helps bridge the diverse backgrounds of the students and homogenize their basic knowledge about the mathematical methods used during the course. Physics and Astronomy has been consulted.

Computer Science - David R. Cheriton School of

Current Catalog Information
CS 241E (0.50) LAB, LEC, TST, TUT Foundations of Sequential Programs (Enriched)

Enriched version of CS 241. [Note: See notes 2 and 9 above. CS 241E may be substituted for CS 241 wherever the latter is a requirement. Enrolment is restricted.

Lab is not scheduled and students are expected to find time in open hours to complete their work. CS 251 is a recommended corequisite. Offered: As permitted by demand and available resources]
No Special Consent Required
Requisites : Prereq: A grade of 85% or higher in one of CS 136, 138, or 146; Computer Science students only. Antireq: CS 230, GENE 344

Effective 01-SEP-2020
Requisite Change : Prereq: A grade of 85% or higher in one of CS 136, 138, or 146; Computer Science and BMath (Data Science) students only. Antireq: CS 230, GENE 344

Rationale : To include B.Math (Data Science) students.

Dean of Mathematics

Current Catalog Information
MATH 146 (0.50) LAB, LEC, TST, TUT Linear Algebra 1 (Advanced level)

MATH 146 is an advanced-level version of MATH 136. [Note: Students who receive a good grade in MATH 135 may contact the instructor of MATH 146 to seek admission without the formal prerequisites. Offered: W]
No Special Consent Required
Requisites : Prereq: MATH 145 or instructor consent; Honours Mathematics students only. Antireq: MATH 106, 114, 115, 136, NE 112
Effective 01-SEP-2020

**Description Change:**
MATH 146 is an advanced-level version of MATH 136. [Note: Students who receive a minimum grade of 90% in MATH 135 may contact the instructor of MATH 146 to seek admission without the formal prerequisites. Offered: W]

**Requisite Change:**
Prereq: MATH 145; Honours Mathematics students only. Antireq: MATH 106, 114, 115, 136, NE 112

**Rationale:**
To change prerequisite and add note. Housekeeping changes. Instructor consent is redundant in the prerequisite. Adding the note aligns this advanced math course with the advanced computer science courses.

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**Current Catalog Information**

MATH 148 (0.50) LEC, TST, TUT Calculus 2 (Advanced Level)

MATH 148 is an advanced-level version of MATH 138. [Note: Students who receive a good grade in MATH 137 may contact the instructor of MATH 148 to seek admission without the formal prerequisites. Offered: W]

No Special Consent Required

**Requisites:**
Prereq: MATH 147 or instructor consent; Honours Mathematics students only. Antireq: MATH 118, 119, 128, 138

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Effective 01-SEP-2020

**Description Change:**
MATH 148 is an advanced-level version of MATH 138. [Note: Students who receive a minimum grade of 90% in MATH 137 may contact the instructor of MATH 148 to seek admission without the formal prerequisites. Offered: W]

**Requisite Change:**
Prereq: MATH 147; Honours Mathematics students only. Antireq: MATH 118, 119, 128, 138

**Rationale:**
To change prerequisite and add note. Housekeeping changes. Instructor consent is redundant in the prerequisite. Adding the note aligns this advanced math course with the advanced computer science courses.

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End of Report
SCIENCE FACULTY COUNCIL

REPORT TO SENATE UNDERGRADUATE COUNCIL

FACULTY OF SCIENCE SUBMISSION- for May 2019 SUC

For approval and inclusion in the 2020-2021 Undergraduate Calendar

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       a) Earth Sciences .................................................................................... 2

B. NEW PROGRAMS/PLANS - None .............................................................. 2

C. CHANGES TO PROGRAMS/PLANS .......................................................... 2
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E. NEW REGULATIONS AND PROCEDURES - None .................................... 10

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A. COURSE CHANGES (see report 5)

i. New Courses - None

ii. Changes to Existing Courses

a) Chemistry
   CHEM 233L, 370

b) Earth Sciences
   EARTH 321*, 436A, and 436B
   *for information only

c) Materials and Nanosciences
   MNS 322

iii. Inactivated Courses

a) Earth Sciences
    EARTH 499

B. NEW PROGRAMS/PLANS - None

C. CHANGES TO PROGRAMS/PLANS

i. Honours Earth Sciences, Geology Specialization (Reg. & Co-op)

   Successful completion of this program requires:

   21.5 units that include:
   - 9.0 EARTH units: EARTH 121, EARTH 121L, EARTH 122, EARTH 122L, EARTH 123, EARTH 221, EARTH 223, EARTH 231, EARTH 232, EARTH 235, EARTH 238, EARTH 260, EARTH 331, EARTH 332, EARTH 333, EARTH 342, EARTH 358, EARTH 390, and EARTH 471
   - 1.0 EARTH unit: EARTH 436A and either EARTH 436B or EARTH 499 and one EARTH elective at 300-level or higher
   - 3.0 EARTH elective units with the following conditions:
     - 0.5 unit must be 200-level or higher
     - 2.5 unit must be 300-level or higher
   - 1.5 CHEM units: CHEM 120, CHEM 120L, CHEM 123, and CHEM 123L
• 1.5 PHYS units: PHYS 111 and PHYS 111L or PHYS 121 and PHYS 121L; PHYS 112 and PHYS 112L or PHYS 122 and PHYS 122L
• 1.5 MATH units: MATH 106 or MATH 114; MATH 127 and MATH 128
• 0.5 STAT unit: STAT 202
• 1.0 program elective unit chosen from any 200-level or higher BIOL, CHEM, CS, PHYS, MATH, AMATH course, or chosen from BIOL 120, BIOL 130, BIOL 150, CHEM 140, CS 115, or CS 116, or PHYS 175
• 0.5 ENGL unit: ENGL 193/SPCOM 193
• 2.0 elective units; must be 0.5 unit lecture courses

Year Four

Fall
EARTH 436A Thesis Proposal Honours Thesis  
or EARTH 499 Research Project
Three EARTH electives 300-level or higher (1.5 units)
One elective (0.5 unit)

Winter
EARTH 332 Metamorphic Petrology
EARTH 436B Honours Thesis
or one EARTH elective 300-level or higher (0.5 unit)
EARTH 471 Mineral Deposits
One EARTH elective 200-level or higher (0.5 unit)

Rationale: Changes reflect the new structure of the Earth Sciences Honours Thesis course whereby students wishing to carry out a formal thesis will have the opportunity to do so by completing both EARTH 436A and EARTH 436B. EARTH 499 will no longer be active. Additional program elective options are also added to the requirements to include CS courses, CHEM 140 and PHYS 175. The Math, Chemistry and Physics departments are aware of and approve these additions.

ii. Honours Earth Sciences, Geophysics Specialization (Reg. & Co-op)

Successful completion of this program requires:

21.75 units that include:
• 9.25 EARTH units: EARTH 121, EARTH 121L, EARTH 122, EARTH 122L, EARTH 123, EARTH 221, EARTH 223, EARTH 231, EARTH 232, EARTH 235, EARTH 238, EARTH 260, EARTH 333, EARTH 358, EARTH 390, EARTH 458, EARTH 458L, EARTH 460, EARTH 461, and EARTH 471
• 1.0 EARTH unit: EARTH 436A and either EARTH 436B, or EARTH 499 and one EARTH elective at 300-level or higher
• 2.5 EARTH elective units with the following conditions:
o 0.5 unit must be 200-level or higher
o 2.0 units must be 300-level or higher
- 1.5 CHEM units: CHEM 120, CHEM 120L, CHEM 123, and CHEM 123L
- 1.5 PHYS units: PHYS 121, PHYS 121L, PHYS 122 and PHYS 122L
- 2.5 MATH units: MATH 106 or MATH 114; MATH 127 and MATH 128; MATH 227 or CIVE 221; MATH 228 or CIVE 222 or ENVE 223
- 0.5 STAT unit: STAT 202
- 2.0 program elective units chosen from any 200-level or higher BIOL, CHEM, CS, PHYS, MATH, AMATH course or chosen from BIOL 120, BIOL 130, BIOL 150, CHEM 140, CS 115, or CS 116, or PHYS 175
- 0.5 ENGL unit: ENGL 193/SPCOM 193
- 0.5 elective unit chosen from any 0.5 unit lecture course

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**Year One**

**Fall**

CHEM 120/CHEM 120L Physical and Chemical Properties of Matter/Chemical Reaction Laboratory 1
EARTH 121/EARTH 121L Introductory Earth Sciences/Introductory Earth Sciences Laboratory
MATH 127 Calculus 1 for the Sciences
PHYS 121/PHYS 121L Mechanics/Mechanics Laboratory
One of ENGL 193/SPCOM 193 Communication in the Sciences

**Winter**

CHEM 123/CHEM 123L Chemical Reactions, Equilibria and Kinetics/Chemical Reaction Laboratory 2
EARTH 122/EARTH 122L Introductory Environmental Sciences/Introductory Environmental Sciences Laboratory
MATH 106 Applied Linear Algebra 1
or MATH 114 Linear Algebra for Science
MATH 128 Calculus 2 for the Sciences
PHYS 122/PHYS 122L Waves, Electricity and Magnetism/Waves, Electricity and Magnetism Laboratory

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**Year Four**

**Fall**

EARTH 436A Thesis Proposal Honours Thesis
or EARTH 499 Research Project
EARTH 458/EARTH 458L Physical Hydrogeology/Field Methods in Hydrogeology
EARTH 461 Applied Geophysics 3
Two EARTH electives 300-level or higher (1.0 unit)
Winter
EARTH 436B Honours Thesis
or one EARTH elective 300-level or higher (0.5 unit)
EARTH 471 Mineral Deposits
One EARTH elective 200-level or higher (0.5 unit)
One EARTH elective 300-level or higher (0.5 unit)

Rationale: Changes reflect the new structure of the Earth Sciences Honours Thesis course whereby students wishing to carry out a formal thesis will have the opportunity to do so by completing both EARTH 436A and EARTH 436B. EARTH 499 will no longer be active. Additional program elective options are also added to the requirements to include CS courses, CHEM 140 and PHYS 175. MATH 106 is added as an alternate option to the MATH 114 requirement. The Math, Chemistry and Physics departments are aware of and approve these additions.

iii. Honours Earth Sciences, Hydrogeology Specialization (Reg. & Co-op)

Successful completion of this program requires:

21.75 units that include:

- 1.0 EARTH unit: EARTH 436A and either EARTH 436B; or EARTH 499 and one EARTH elective at 300-level or higher
- 2.0 EARTH elective units with the following conditions:
  - 0.5 unit must be 200-level or higher
  - 1.5 units must be 300-level or higher
- 1.5 CHEM units: CHEM 120, CHEM 120L, CHEM 123, and CHEM 123L
- 1.5 PHYS units: PHYS 111 and PHYS 111L or PHYS 121 and PHYS 121L; PHYS 112 and PHYS 112L or PHYS 122 and PHYS 122L
- 2.0 MATH units: MATH 106 or MATH 114; MATH 127 and MATH 128; MATH 218 MATH 228 or ENVE 223 or CIVE 222
- 0.5 STAT unit: STAT 202
- 0.5 CIVE unit: CIVE 353
- 1.0 program elective unit chosen from any 200-level or higher BIOL, CHEM, CS, PHYS, MATH, AMATH course or chosen from BIOL 120, BIOL 130, BIOL 150, CHEM 140, CS 115, or CS 116, or PHYS 175
- 0.5 ENGL unit: ENGL 193/SPCOM 193
- 1.5 elective units; must be 0.5 unit lecture courses
**Year Two (Co-op)**

**Fall**
- EARTH 223 Field Methods in Hydrology
- EARTH 231 Mineralogy
- EARTH 235 Stratigraphic Approaches to Understanding Earth's History
- EARTH 260 Applied Geophysics 1
- MATH 106 Applied Linear Algebra 1
  or MATH 114 Linear Algebra for Science

**Spring**
- EARTH 221 Geochemistry 1
- EARTH 232 Petrography
- MATH 218 Differential Equations for Engineers
  or CIVE 222 Differential Equations
- One program elective (0.5 unit)
- One elective (0.5 unit)

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**Year Two (Regular)**

**Fall**
- EARTH 223 Field Methods in Hydrology
- EARTH 231 Mineralogy
- EARTH 235 Stratigraphic Approaches to Understanding Earth's History
- EARTH 260 Applied Geophysics 1
- MATH 106 Applied Linear Algebra 1
  or MATH 114 Linear Algebra for Science

**Winter**
- EARTH 221 Geochemistry 1
- EARTH 232 Petrography
- EARTH 238 Introductory Structural Geology
- ENVE 223 Differential Equations and Balance Laws
  or MATH 228 Differential Equations for Physics and Chemistry
- One elective (0.5 unit)

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**Year Four**

**Fall**
- EARTH 436A Thesis Proposal Honours Thesis
  or EARTH 499 Research Project
- EARTH 440 Quaternary Geology
- Two EARTH electives 300-level or higher (1.0 unit)
- One elective (0.5 unit)
Winter
EARTH 436B Honours Thesis
or one EARTH elective 300-level or higher (0.5 unit)
EARTH 456 Numerical Methods in Hydrogeology
EARTH 459 Chemical Hydrogeology
One EARTH elective 300-level or higher (0.5 unit)

Rationale:
Changes reflect the new structure of the Earth Sciences Honours Thesis course whereby students wishing to carry out a formal thesis will have the opportunity to do so by completing both EARTH 436A and EARTH 436B. EARTH 499 will no longer be active. Additional program elective options are also added to the requirements to include CS courses, CHEM 140 and PHYS 175. MATH 228 replaces the MATH 218 option for the mathematics requirements. Students in the regular stream can sequence the CIVE 222 mathematics requirement while those in the cooperative stream can sequence either the ENVE 223 or MATH 228 mathematic requirement.

iv. Honours Environmental Science, Geoscience Specialization (Reg. & Co-op)

Successful completion of this program requires:

21.25 units that include:
- 8.0 EARTH units: EARTH 121, EARTH 121L, EARTH 122, EARTH 122L, EARTH 123, EARTH 221, EARTH 223, EARTH 231, EARTH 232, EARTH 235, EARTH 238, EARTH 333, EARTH 342, EARTH 358, EARTH 390, EARTH 440, and EARTH 444
- 1.0 EARTH unit: EARTH 436A and either EARTH 436B; or EARTH 499 and one EARTH elective at 300-level or higher
- 2.0 EARTH elective units with the following conditions:
  o 0.5 unit must be 200-level or higher
  o 1.5 units must be 300-level or higher
- 1.75 BIOL units: BIOL 150, BIOL 165, BIOL 240, and BIOL 240L
- 1.5 CHEM units: CHEM 120, CHEM 120L, CHEM 123, and CHEM 123L
- 0.5 PHYS unit: PHYS 111
- 0.5 MATH unit: MATH 127
- 0.5 STAT unit: STAT 202
- 0.5 ERS unit: ERS 215
- 2.5 program elective units chosen from any 200-level or higher BIOL, CHEM, CS, PHYS, MATH, AMATH course or chosen from BIOL 130, CHEM 140, CS 115, or CS 116, or PHYS 175
- 0.5 ENGL unit: ENGL 193/SPCOM 193
- 2.0 elective units; must be 0.5 unit lecture courses

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Year Four

Fall
EARTH 436A Thesis Proposal Honours Thesis or EARTH 499 Research Project
EARTH 440 Quaternary Geology
EARTH 444 Applied Wetland Science
One program elective (0.5 unit)
One elective (0.5 unit)

Winter
EARTH 436B Honours Thesis
or one EARTH elective 300-level or higher
One EARTH elective 300-level or higher (0.5 unit)
One program elective (0.5 unit)
One elective (0.5 unit)

Rationale: Changes reflect the new structure of the Earth Sciences Honours Thesis course whereby students wishing to carry out a formal thesis will have the opportunity to do so by completing both EARTH 436A and EARTH 436B. EARTH 499 will no longer be active. Additional program elective options are also added to the requirements to include CS courses, CHEM 140 and PHYS 175. The Math, Chemistry and Physics departments are aware of and approve these additions.

v. Honours Geochemistry (Reg. & Co-op)

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Successful completion of this program requires:

21.25 total units that include:
- 5.25 CHEM units: CHEM 100, CHEM 120, CHEM 120L, CHEM 123, CHEM 123L, CHEM 212, CHEM 220, CHEM 220L, CHEM 221, CHEM 224L, CHEM 254, CHEM 264, and CHEM 323
- 7.0 EARTH units: EARTH 121, EARTH 121L, EARTH 122, EARTH 122L, EARTH 123, EARTH 221, EARTH 223, EARTH 231, EARTH 232, EARTH 235, EARTH 238, EARTH 321, EARTH 390, EARTH 421, and EARTH 458
- 0.5 EARTH elective unit: EARTH 281 or EARTH 358
- 1.0 EARTH unit: EARTH 436A and either EARTH 436B; or EARTH 499 and one EARTH elective at 300-level or higher
- 1.0 MATH unit: MATH 127 and MATH 128
- 1.0 PHYS units: PHYS 111 or PHYS 121; and PHYS 112 or PHYS 122
- 0.5 STAT unit: STAT 202
- 0.5 ENGL unit: ENGL 193/SPCOM 193
4.5 electives units distributed as follows:
  - 1.5 units of CHEM electives chosen from: CHEM 265, CHEM 310, CHEM 313, CHEM 350, CHEM 360, CHEM 400, and CHEM 404
  - 1.5 units of EARTH electives chosen from: EARTH 322, EARTH 331, EARTH 332, EARTH 439, EARTH 456, EARTH 459, and EARTH 471
  - 1.5 units chosen from any 0.5 unit courses

Year Three

Fall
CHEM 323 Analytical Instrumentation
EARTH 223 Field Methods in Hydrology
EARTH 321 Introduction to Geomicrobiology
EARTH 458 Physical Hydrogeology
STAT 202 Introductory Statistics for Scientists
One elective (0.5 unit)

Winter
CHEM 212 Structure and Bonding
EARTH 232 Petrography
EARTH 238 Introductory Structural Geology
EARTH 321 Introduction to Geomicrobiology
EARTH 358 Earth System Science
  or EARTH 281 Geological Impacts on Human Health
EARTH 390 Methods in Geological Mapping
One elective (0.5 unit)

Year Four

Fall
EARTH 436A Thesis Proposal Honours Thesis
  or EARTH 499 Research Project
EARTH 421 Geochemistry 2
Three program electives (1.5 units)

Winter
EARTH 436B Honours Thesis
  or one 300-level or 400-level EARTH course
Three program electives (1.5 units)

Rationale: Changes reflect the new structure of the Earth Sciences Honours Thesis course whereby students wishing to carry out a formal thesis will have the opportunity to do so by completing both EARTH 436A and EARTH 436B. EARTH 499 will no longer be active. In addition, EARTH 322 is added to the list of EARTH elective options and EARTH 321 is now sequenced in the fall for Year three, switching places with an elective.
D. INACTIVATED PROGRAMS/PLANS - None

E. NEW REGULATIONS AND PROCEDURES - None

F. CHANGES TO REGULATIONS AND PROCEDURES- None

G. INACTIVATIONS OF REGULATIONS AND PROCEDURES- None
Appendix A - Course Changes for Information Only

Effective September 1, 2019, the term of offering for EARTH 321 will change to fall versus winter.

EARTH 321 LEC 0.50
Introduction to Geomicrobiology

This course will provide an overview of how microbial life has affected Earth's environment through time. Emphasis will be on geomicrobial processes in the lithosphere and hydrosphere. Geomicrobial interactions with key elements will be discussed. [Instructor consent required for students lacking EARTH 221 prerequisite; Offered: FW]

Prereq: EARTH 221
COURSE CHANGES  (for approval)

Chemistry

Current Catalog Information
CHEM  233L ( 0.25 ) LAB  Fundamentals of Biochemistry Laboratory
Selected experiments for students taking CHEM 233 or CHEM 239. [Offered: W, S]
No Special Consent Required
Requisites :  Prereq: Honours Chemistry or Honours Biochemistry. Coreq: CHEM 233 or CHEM 239. Antireq: CHEM 237L

Effective  01-SEP-2020
Requisite Change :  Prereq: CHEM 123L; Honours Chemistry or Honours Biochemistry. Coreq: CHEM 233 or CHEM 239. Antireq: CHEM 237L
Rationale :  CHEM 123L is added as a prerequisite, as it provides fundamental laboratory skills needed for success in this introductory laboratory course.

Current Catalog Information
CHEM  370 ( 0.50 ) LEC, TUT  Introduction to Polymer Science
Basic definitions and polymer nomenclature, molecular weight averages and distributions, constitutional and configurational isomerism, rubber elasticity, step-growth and free radical chain growth polymerizations, emulsion polymerization.
[Offered: F]
No Special Consent Required
Requisites :  Prereq: CHEM 254, (CHEM 265 or 267). Antireq: CHEM 370, NE 333

Effective  01-SEP-2020
Description Change:  Basic definitions and polymer nomenclature, molecular weight distributions and averages, molecular weight measurements, step-growth and free radical chain-growth polymerization reactions, chain conformations, glass transition, crystallization, and mechanical properties of polymers.
[Offered: F]
Rationale :  The description is updated to better reflect the course content.

Current Catalog Information
MNS  322 ( 0.50 ) LEC  Polymer Materials
Basic definitions and polymer nomenclature, chain conformations, phase behaviour of polymer systems, mechanical properties, polymerization, self-assembly, morphologies.
[Offered W]
No Special Consent Required
Requisites :  Prereq: CHEM 254 or PHYS 358/ECE 403. Antireq: CHEM 370, NE 333

Effective  01-SEP-2020
Description Change:  Basic definitions and polymer nomenclature, molecular weight distributions and averages, molecular weight measurements, step-growth and radical chain
polymerization reactions, chain conformations, glass transition, crystallization, mechanical properties of polymers, phase behaviour and morphologies, and self-assembly. [Offered: W]

Rationale: The description is updated to better reflect the course content.

Earth and Environmental Sciences

Current Catalog Information

EARTH 436A (0.50) PRJ, TUT Honours Thesis
The first term of a two-term supervised research project in which students plan and conduct research. Students learn to gather and interpret data and present their findings in a formal seminar and written thesis. [Note: Students outside the Honours Earth Sciences, Environmental Science (Geoscience Specialization) and Geoscience programs, require department consent and program advisor permission to enroll]
Department Consent Required
Requisites: Prereq: Level at least 4A; Honours Earth Sciences, Environmental Science (Geoscience Specialization) and Geochemistry students. Antireq: EARTH 499

Effective 01-SEP-2020
Title Change: Thesis Proposal
Description Change: The first term of a potential two-term supervised research project in which students prepare a research proposal and conduct research. Students will present their research proposal in an oral presentation and written report. [Note: In order to progress to a two-term project via EARTH 436B, a grade of 75% must be achieved in this course; Offered: F, S]
Requisite Change: Prereq: Level at least 4A; Honours Earth Sciences, Environmental Science - Geoscience Specialization, and Geochemistry students.
Rationale: The description is updated to reflect the new structure of the thesis course. EARTH 499, which covered the same material in a one-term course, will become inactive and removed as the antirequisite for EARTH 436A. The title is also changed to reflect the content since students no longer have to complete both EARTH 436A and 436B.

Current Catalog Information

EARTH 436B (0.50) PRJ, TUT Honours Thesis
The second term of a two-term supervised research project in which students plan and conduct research. Students learn to gather and interpret data, and present their findings in a formal seminar and written thesis. [Note: Students outside the Honours Earth Sciences, Environmental Science (Geoscience Specialization) and Geoscience programs, require department consent and program advisor permission to enroll]
Department Consent Required
Requisites: Prereq: EARTH 436A

Effective 01-SEP-2020
Description Change: An optional second term of a two-term supervised research project in which students learn to gather and interpret data. Students will present their findings in a formal presentation and written thesis. [Offered: W]
Requisite Change: Prereq: EARTH 436A with a grade of at least 75%
Rationale: The description is updated to exclude planning and research, already conducted in the first term of this two-term research project, and to note that students can elect to continue with EARTH 436B. The prerequisite is updated to include a grade requirement for EARTH 436A.

COURSE INACTIVATIONS (for approval)

Effective 01-SEP-2020

EARTH 499 (0.50) Research Project

Rationale: EARTH 436A will teach students how to prepare a research proposal and conduct research. Students wishing to complete a formal thesis will have the opportunity to do so by continuing in EARTH 436B. Therefore, a second course which covers this same material in a more condensed manner, is no longer required.
Memorandum

To: Senate Undergraduate Council
From: University Registrar
Date: April 29, 2019
Re: “consent” in requisites or notes

Effective date: September 1, 2020

Motion and rationale: In the list of requisites (or notes) attached to a course in the catalog, some Faculties are listing “or by permission of the instructor”. This usage of this text is inconsistent and faculties report that students currently make requests for courses that don’t have this reference.

The motion is to standardize catalog text entry by removing the majority of references to permission/consent in requisites/notes only (when all students in a course need to obtain consent, course consent will still be noted when appropriate), and have an overarching statement.

Proposed text:
Page: http://ugradcalendar.uwaterloo.ca/page/Course-Descriptions-Index

Many departments are open to the possibility for students outside the department and/or faculty to take their courses. If students are interested in taking a course that has a prerequisite they do not meet, they should discuss the possibility of taking the course with the instructor or the department offering the course.

List of impacted courses:

With the above statement, the following courses will have their requisites or notes modified as follows, effective Sept 1, 2020:

- ANTH 330: [Note: Instructor consent required for non-Arts students.]
- ANTH 355: [Note: Instructor consent required for non-Arts students.]
- ARCH 120: [Note: Instructor consent required for non-Architecture students. Offered: F]
- BIOL 383: Prereq: BIOL 150/250 or ENVS 200 or ERS 218 or consent of instructor
- EARTH 321: [Instructor consent required for students lacking EARTH 221 prerequisite; Offered: W]
- ENBUS 308: Prereq: ENBUS 202, 204 or instructor consent
- ERS 383: Prereq: ENVS 200 or Instructor Consent
- ERS 484/GEOG 404: Prereq: ENVS 200 or Instructor Consent
- FINE 332: Prereq: Level at least 3A Fine Arts or History or by permission of instructor
- INTEG 230: Prereq: Knowledge Integration Honours students only or Department Consent
- INTEG 420A: Prereq: Level at least 4A Knowledge Integration or instructor consent
- INTEG 441: Prereq: Level at least 3A or instructor consent
- PSYCH 420: Prereq: Level at least 3A Honours Psychology or permission of instructor; Psychology average at least 74%
- SYDE 384: Prereq: (Level at least 3B Engineering) or (Level at least 3B Honours Life Physics (Biophysics specialization) and permission of instructor)
- SYDE 544: Prereq: BIOL 273 or BME 284 or SYDE 384; Level at least 3A Biomedical Engineering or Level at least 3B Systems Design Engineering or Level at least 3B Honours Life Physics (Biophysics Specialization) and permission of the instructor
Memorandum

To: Senate Undergraduate Council
From: University Registrar
Date: April 29, 2019
Re: Double counting of courses

Effective date: September 1, 2020

Motion and rationale: To update the harmonized text and remove related faculty-specific text. Clarity to the existing rule is being added to address the following:

- All faculties have agreed to a harmonized interpretation of the rules
- The definition of “credential” was expanded to include all types of plans appearing on a diploma.
- A specialization is deemed part of the major, so a course used for both isn’t a “double count”.

Current text:
Section of Calendar: University Policies, Guidelines, and Academic Regulations
Page: Double Counting of Courses (http://ugradcalendar.uwaterloo.ca/page/Acad-Regs-Double-Counting-of-Courses)

In all faculties, a course can be used to satisfy requirements for a maximum of two credentials (degrees, diplomas, or certificates). The requirements specified for a degree, diploma, or certificate may stipulate the number of courses which can be double counted. See faculty sections of this Calendar for double-counting rules (if the faculty has such rules) for options, minors, and specializations.

Proposed text:
Section of Calendar: University Policies, Guidelines, and Academic Regulations
New page title: Counting of Courses

Courses counted toward an academic plan’s requirements (i.e., major, minor, option, specialization, and diploma) can only be used to satisfy a maximum of two credentials. However, when a course(s) is listed as a requirement in both the major and its associated specialization, it is considered a single use of the course.
Double Counting of Courses
The practice of counting a course towards two different academic plans is known as "double counting". There is no limit on the number of courses that may be double counted unless otherwise stated.

Double counting of courses applies as follows: once for the plan (e.g., major or minor) and once for a second honours major or concurrent degree, option, minor, certificate, or diploma. Specializations, such as the Finance Specialization in Economics, are regarded as being housed within the main academic plan (i.e., major), and so are not subject to concerns about double counting between them since a specialization is not considered an actual plan but, rather, a sub-plan of the major. Courses used towards fulfilling the Bachelor of Arts' Breadth Requirements are not subject to the double-counting rule.

Under no circumstances are students allowed to "triple count" (i.e., count one course towards three separate academic plans, except for when one of the three plans is a specialization).

Engineering: https://ugradcalendar.uwaterloo.ca/page/ENG-BASc-and-BSE-Options-Electives-Engineering1

5. Any given course can only be counted for two credentials. For example; the basic degree and one option, or the basic degree and one specialization, or one option and one specialization.

Environment: http://ugradcalendar.uwaterloo.ca/page/ENV-Plan-Modifications

Counting Courses
Students may count a course towards a maximum of two academic credentials. Normally, the first would be towards the bachelor degree being granted, as either a core or elective course, and then again towards a second academic credential (joint honours, concurrent degree, diploma, minor, or option).

The School of Planning considers a specialization to be a second academic credential, to which the double count rule applies.

Mathematics: http://ugradcalendar.uwaterloo.ca/page/MATH-Math-Faculty-Policies

Double Counting of Courses
With the exception of specially approved double-degree plans (e.g., BBA/BMath Double Degree plan with Wilfrid Laurier University), the Faculty of Mathematics does not allow students to have more than 50% of the course units that they are counting for Mathematics Faculty degree credit be ones that have previously been used, or that are being used simultaneously, to obtain a second degree from another University of Waterloo faculty or from another university.

Science: http://ugradcalendar.uwaterloo.ca/page/SCI-Double-Counting-Rules
**Double-Counting Rules**

Students should familiarize themselves with the following terms, as described in the *Glossary of Terms*, to better understand the double-counting rules:

- Academic Plan
- Academic Program
- Credential
- Major
- Minor
- Option
- Joint degree
- Concurrent degree

Academic plans are subject to double counting. When completing more than one credential, students should consult their academic advisor to ensure that a course satisfies a maximum of two credentials. **A course cannot be counted towards three credentials.**

Some minors and options have additional restrictions; consult the plan description for details. Students transferring into Science need to consider transfers rules. Plans within the School of Pharmacy and the School of Optometry and Vision Science may deviate from the regulations outlined above.
Memorandum

To: Senate Undergraduate Council
From: University Registrar
Date: May 8, 2019
Re: Scheduled Pauses in the Academic Term

Effective date: September 1, 2020

Motion and rationale: To amend Calendar text to recognize public holidays/statutory holidays are and should be considered as a scheduled pause. Also clarifying text around the duration of a “reading week”, including the weekends on both ends. Note: Yellow highlighting indicates text that was reorganized within the page (no changes to it).

Page: Scheduled Pauses in the Academic Term (http://ugradcalendar.uwaterloo.ca/page/Acad-Regs-Scheduled-Pauses)

Current 2019-20 Calendar Text (mark up):
Study Days and Reading Weeks
Scheduled Pauses

Scheduled pauses are study days, reading weeks, and public holidays recognized by the University.

Instructors are not permitted to administer, and students are not required to sit for examinations, tests, or lectures during a scheduled pause. There are to be no compulsory academic events (e.g., classes, labs, tutorials, seminars, exams). Deadlines for assignments are not permitted during a scheduled pause.

While exceptions may exist (e.g., clinical rotations, Year Four Optometry and Pharmacy courses) the scheduled pauses apply to both undergraduate and graduate students.

Study Days and Reading Weeks

Study days and reading weeks are designated periods where normal class schedules and academic requirements are suspended for a specified period of time. The dates are published in the Calendar of Events and Academic Deadlines.

Student services such as student advising support, Health Services, Counselling Services, the library, and residences continue to provide service.
Instructors are not permitted to administer, and students are not required to sit for examinations, tests, or lectures during a scheduled pause. There are to be no compulsory academic events (e.g., classes, labs, tutorials, seminars, exams). Deadlines for assignments are not permitted during a scheduled pause.

While exceptions may exist (e.g., clinical rotations, Year Four Optometry and Pharmacy courses) the scheduled pauses apply to both undergraduate and graduate students.

Study Days
There are one or two study days each term, between the end of the Formal Lecture Period and the beginning of the Final Examination Period. No classes are to be held during study days, except where classes are rescheduled as the result of a campus-wide emergency closure.

Reading Week
Reading Weeks occur in the fall and winter terms; they start with the Saturday before the statutory public holidays of Thanksgiving Day and Family Day and end on the following Sunday.

Proposed text (clean):

Scheduled Pauses

Scheduled pauses are study days, reading weeks, and public holidays recognized by the University.

Instructors are not permitted to administer, and students are not required to sit for examinations, tests, or lectures during a scheduled pause. There are to be no compulsory academic events (e.g., classes, labs, tutorials, seminars, exams). Deadlines for assignments are not permitted during a scheduled pause.

While exceptions may exist (e.g., clinical rotations, Year Four Optometry and Pharmacy courses) the scheduled pauses apply to both undergraduate and graduate students.

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Reading Week
Reading Weeks occur in the fall and winter terms; they start with the Saturday before the public holidays of Thanksgiving Day and Family Day and end on the following Sunday.
## Senate Undergraduate Council - Effective Dates Chart

### Meetings: 2019 - 2020

<table>
<thead>
<tr>
<th>SUC meeting dates</th>
<th>Non-core courses: New, changes, inactivations</th>
<th>Core courses: New, changes, inactivations</th>
<th>Plans/programs, regulations: New, changes, inactivations</th>
<th>New entry programs (enrol in 1A)</th>
<th>SENATE meeting dates</th>
</tr>
</thead>
</table>

**Notes:**
1. Dates listed above are the earliest effective date possible for any given motion; option to use later dates exists.
2. If an earlier effective date is desired, consultation with the Office of the Registrar is advised; a rationale for the exception is required.
3. Courses appearing in **ANY** plan pages of the Undergraduate Calendar are considered "core" (whether "required" or part of an electives list).
4. For changes to courses not requiring SUC approval: the earliest effective date is September 1 that matches SUC meeting (of when the change is requested).
5. Motions for courses do not require Senate approval.

### Last opportunity to Make changes

<table>
<thead>
<tr>
<th>Last opportunity to</th>
<th>SUC meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make changes to 2020-2021 Calendar (plans/regulations)</td>
<td>October 2019</td>
</tr>
<tr>
<td>Make changes to 2020-2021 Calendar (core courses)</td>
<td>October 2019</td>
</tr>
<tr>
<td>Make changes to 2020-2021 Calendar (non-core courses)</td>
<td>February 2020</td>
</tr>
<tr>
<td>Create new entry program for fall 2021</td>
<td>April 2020</td>
</tr>
<tr>
<td>Make changes to 2021-2022 Calendar (plans/regulations)</td>
<td>October 2020</td>
</tr>
<tr>
<td>Make changes to 2021-2022 Calendar (core courses)</td>
<td>October 2020</td>
</tr>
<tr>
<td>Make changes to 2021-2022 Calendar (non-core courses)</td>
<td>February 2021</td>
</tr>
</tbody>
</table>
NEW UNDERGRADUATE SCHOLARSHIPS, AWARDS, and BURSARIES

to be added to the Undergraduate Awards Database

- submitted for May 14, 2019 meeting of Senate Undergraduate Council -

ENTRANCE AWARDS

Ronald George, Florence Elizabeth and Ronald Thomas Bolce Undergraduate Scholarship
A scholarship, valued at up to $3,000, will be awarded annually to a full-time undergraduate student enrolled in Year One in the Faculty of Applied Health Sciences. Selection will be based on academic excellence (minimum 85% admission average) and extracurricular involvement as assessed through the Admission Information Form. This award is made in loving memory of Ronald George and Florence Elizabeth Bolce and in honour of Ronald Thomas Bolce.

Method of Financing: endowment

Stephen Burns-BMROSS Scholarship
A scholarship, valued at $3,000, will be awarded annually to an outstanding undergraduate student enrolled in Year One of Civil Engineering. This fund is made possible by a donation from B.M. Ross & Associates Limited and Stephen Burns.

Method of Financing: annual donation (five-year pledge)

Class of 1970 Chemical Engineering Scholarship
One scholarship, valued at $1,000, will be provided annually to an outstanding full-time undergraduate student enrolling in Year One of the Chemical Engineering program. This fund is made possible by a group donation from the Class of 1970 Chemical Engineering who, in gratitude for the educational foundation received from Waterloo Engineering, would like to invest in future engineers.

Method of Financing: one-time donation (to cover scholarships for 11 years)

Faculty of Environment Student Engagement Award
This award is available for up to 25 incoming Environment students. Candidates must submit an online application in which they describe their previous volunteer, leadership, and/or sustainability-related activities in their communities.

Method of Financing: Faculty funds

H.K. Kesavan Legacy Scholarship
A scholarship, valued at up to $1,200, will be awarded annually to a full-time undergraduate student enrolled in Year One of Systems Design Engineering. Selection is based on academic achievement combined with extracurricular and leadership involvement as assessed through the Admission Information Form (AIF). This fund is made possible by donations from family and friends in memory of Professor H.K. Kesavan.

Method of Financing: endowment

Knowledge Integration Cornerstone Entrance Scholarship
Several scholarships, valued at $2,500 each, will be awarded annually to full-time undergraduate students enrolled in Year One of the Bachelor of Knowledge Integration program. Selection is based on academic achievement and extracurricular involvement as assessed through the Admission Information Form (AIF). The Cornerstone award is given to students who best exemplify Knowledge Integration’s foundational values of community, creativity, interdisciplinarity, and engagement. This fund is made possible by donation to support the Knowledge Integration program.

Method of Financing: Department and donor funds (ongoing)
Raaflaub Family Entrance Scholarship for Women in STEM
One scholarship, valued at $2,000, will be awarded to an outstanding undergraduate female student admitted to Year One of a science, technology, engineering, or mathematics (STEM) degree program in which women are underrepresented on the basis of academic achievement. This fund is made possible by a donation from the Raaflaub family to inspire young women to pursue studies in STEM disciplines.

Method of Financing: annual donation (five-year pledge)

SNC-Lavalin Scholarship in Civil Engineering
A scholarship, valued at $5,000, will be awarded annually to a full-time undergraduate student enrolled in Year One of the Civil Engineering program. Selection is based on academic excellence (minimum 85% admission average) combined with extracurricular involvement and participation in volunteer activities. This fund is made possible by a donation from SNC-Lavalin.

Method of Financing: annual donation (ten-year pledge)

Donald R. Snider Memorial Entrance Scholarship
A scholarship, valued at up to $1,500, will be awarded annually to an outstanding undergraduate student from the Region of Waterloo who is entering Year One of Architectural, Civil or Mechanical Engineering. This fund is made possible by a donation from James Snider in honour of his father, Donald Snider.

Method of Financing: endowment

Professor Donna Strickland - AMTD Entrance Scholarship
One or more scholarships, valued at up to $3,000 each, will be awarded annually to outstanding full-time undergraduate students entering Year One of any program in the Department of Physics and Astronomy in the Faculty of Science. Selection will be based on academic excellence (minimum admission average of 90%). This fund is made possible by a donation from AMTD Foundation in honour of the awarding of the Nobel Prize in Physics to Professor Donna Strickland.

Method of Financing: endowment

John Tattersall Memorial Scholarship
A scholarship, valued at $2,000, will be awarded annually to an outstanding undergraduate student entering Year One of any program in the Faculty of Engineering from the Prairie Provinces or Northern Territories (AB, MB, SK, NT, YT, or NU). This fund is made possible by a donation from The Tattersall Family.

Method of Financing: annual donation (five-year pledge)
NEW UNDERGRADUATE SCHOLARSHIPS, AWARDS, and BURSARIES  
to be added to the Undergraduate Awards Database  
- submitted for May 14, 2019 meeting of Senate Undergraduate Council -

UPPER-YEAR AWARDS

Class of 1977 Systems Design Engineering Award  
One award, valued at $1,000, may be given annually to a fourth-year undergraduate student enrolled in Biomedical or Systems Design Engineering. Selection will be based on accomplishments and demonstrated creativity in any field or combination of fields, including sports, politics, academics, work terms, philanthropy, business, the arts, or community service. Students may apply on their own behalf or be nominated by other student(s) currently enrolled in the Department of Systems Design Engineering or by a faculty member in the Department. Applications/ nominations are due by October 1. This award is made possible by donations from graduates of the Class of 1977 Systems Design Engineering who believe that if ever an engineering class embodied “think different”, it was the Class of 1977.

Method of Financing: endowment

Knowledge Integration Experience Awards  
One or two awards, valued at up to $1,000 each, will be provided annually to full-time undergraduate students enrolled in Year Two, Three, or Four of the Bachelor of Knowledge Integration (KI) program to help support an activity which will enhance their learning experience such as an international exchange, an entrepreneurial venture, or other worthy project (excluding the museum field trip). The experience must be undertaken during the current academic year (Fall, Winter, or Spring). Selection will be based on academic merit as well as a statement from the candidate describing how the experience will enhance their educational goals and a budget of estimated expenses along with other potential sources of funding. Following the experience, recipients will be asked to provide a brief report in which they reflect on their learning. They will also be encouraged to work with KI to share their experiences with current and future KI students. This fund is made possible by donations in support of the Knowledge Integration program. Interested students may submit their application to the Department of Knowledge Integration by October 1 or February 1.

Method of Financing: Department and donor funds (ongoing)

Knowledge Integration Museum Field Trip Bursaries  
Up to three bursaries, valued at $500 each, are available annually for full-time undergraduate students enrolled in Year Two of the Bachelor of Knowledge Integration (KI) program who require financial assistance to cover the required costs associated with the KI museum field trip (INTEG 230). Candidates must be Canadian citizens or permanent residents. An application is required by October 1. This fund is made possible by donations in support of the Knowledge Integration program.

Method of Financing: Department and donor funds (ongoing)

La Esperanza Undergraduate Bursary  
A bursary, valued at $2,000, will be provided annually to a full-time undergraduate student enrolled in second-, third-, or fourth-year in the Faculty of Arts (excluding students in School of Accounting and Finance) who has a demonstrated financial need. Candidates must have a minimum 70% cumulative average. Interested students should submit a Full-time Bursary application by October 15. This bursary is made possible by generous donors who wish to remain anonymous. The donors named the Award “La Esperanza” which is Spanish for hope.

Method of Financing: one-time donation (to cover bursaries for five years)
Norm Li Visualization Award
Multiple awards will be presented annually to full-time undergraduate students in the School of Architecture who are enrolled in an advanced visualization course. Selection will be based on a strong understanding and passion for design, as evidenced by architectural visualizations completed in any elective or core advanced visualization course (e.g., ARCH 313), demonstrating outstanding storytelling, artistic composition, and technical skill in the field. This fund is made possible by a donation from Norm Li.

*Method of Financing: annual donation (five-year pledge)*

Dr. David McKenna Memorial Scholarship
A scholarship, valued at $1,500, is awarded annually to a full-time undergraduate student enrolled in Year One in the School of Optometry & Vision Science from the East Coast of Canada. Selection will be based on demonstrated leadership skills, community involvement, and academic excellence (minimum admission average of 80%). Preference will be given to students from Prince Edward Island (PEI). Interested students should submit an application by October 1. This fund is made possible by the Canadian Optometric Education Trust Fund (COETF) in memory of David McKenna, OD '82. Dr. McKenna practiced optometry in PEI and was a leader in the profession.

*Method of Financing: annual donation (ongoing)*

Not-for-Profit Undergraduate Award
An award, valued at $2,000, will be provided annually to a full-time undergraduate student enrolled in second-, third-, or fourth-year in the Faculty of Arts (excluding the School of Accounting and Finance), who is participating in a co-op or other work experience, or a field placement with a not-for-profit or NGO organization locally, nationally, or abroad with little or no remuneration. The experience must be for a minimum of 12 weeks in length. Selection is based on academic achievement (minimum 75% overall average) and the nature of the experience. Interested students should apply prior to the work term, by March 15 for Spring or Fall experiences. This award is made possible by generous donors who wish to remain anonymous.

*Method of Financing: one-time donation (to cover awards for five years)*

President’s Award of Excellence
Each year, the University awards three Governor General’s Academic Silver Medals to the undergraduate students who achieve the highest academic standing upon graduation from a Bachelor’s program, with equitable distribution between Faculties. In years in which the medal is not awarded in a given Faculty, the President's Award of Excellence will be awarded to the Faculty's student with the top graduating average. The award consists of a framed certificate.

*Method of Financing: University funds*
NEW UNDERGRADUATE SCHOLARSHIPS, AWARDS, and BURSARIES
to be added to the Undergraduate Awards Database
- submitted for May 14, 2019 meeting of Senate Undergraduate Council -

ATHLETIC AWARDS

Hudda Musa Athletics and Community Excellence Award
One award, valued at $2,000 or two awards valued at $1,000, are given to student-athletes on the varsity football or men's basketball teams. Preference will be given to students who are involved in community service and/or volunteer activities outside of the University of Waterloo. This fund is supported by Waterloo alumnus Sadig Sadig, in honour of his mother, who lives her life with a smile on her face and a dedication to helping others.

Method of Financing: annual donations and matching funds (five-year pledge)

Maura Purdon Athletics Excellence Award
One or more awards, valued at up to $4,000, are given to student-athletes on any women's varsity team. Preference will be given to members of the women's varsity volleyball team. These awards recognize leadership, athletic talent and contribution to Warriors Athletics and Recreation, their team, the school and their community. This fund is supported by Warriors women's volleyball alumna Maura Purdon (BA, '80, Recreation and Leisure Studies).

Method of Financing: annual donations and matching funds (three-year pledge)

INTERNATIONAL EXPERIENCE AWARDS

Marga I. Weigel German Study Abroad Award
Up to five awards, valued at $1,000 each, will be provided annually to full-time undergraduate students in any program who are participating in the Waterloo Summer Language School in Germany. Selection is based on academic achievement (minimum 75% cumulative average) and an application explaining how knowledge of German language and culture will assist the applicant in realizing their career and professional goals. Interested students should submit their one-page letter to the Waterloo Center for German Studies by March 1. This fund is made possible by a donation from Dr. Marga I. Weigel, a proud UWaterloo alumna, to encourage Waterloo students to learn German in order to increase transcultural interactions between Canada and the German-speaking world.

Method of Financing: annual donation (five-year pledge)
Framework for the Assessment of Unauthorized Collaboration Involving Undergraduate Students

Established: 12 October 2018
Revised: […]
Supersedes: N/A
Responsible/Originating Department: Vice-President, Academic & Provost
Executive Contact: Associate Vice-President, Academic

Related Policies, Guidelines & Procedures:
Policy 71 – Student Discipline
Policy 73 – Intellectual Property Rights

1. General

Policy 71’s glossary defines unauthorized co-operation or collaboration, as “co-operation or collaboration with another student/other students in the completion of an academic assignment, in whole or in part, beyond what the instructor has indicated is acceptable; failure to follow the instructor’s directions regarding the level of group work that is permissible for a particular assignment.”

However, the University of Waterloo recognizes that collaboration is also a beneficial practice, both for students’ ability to learn within a course and as a practical skill for their later careers. This framework articulates guiding principles and criteria for distinguishing legitimate from unauthorized collaboration and, in the latter case, for assigning a penalty. For simplicity, we equate “co-operation” with “collaboration” in the remainder of this document.

2. Definitions and Examples

i. Legitimate collaboration is defined as collaboration that is consistent with instructor guidelines. In the absence of explicit instructions, it is reasonable for students to discuss course concepts together, even if those concepts are directly related to a current assignment. However, unless specified by an instructor, students are not generally allowed to complete an assignment together (e.g., write a paper or develop code together).

ii. Collaboration outside the parameters indicated by the instructor is referred to as unauthorized collaboration. The boundary between legitimate and unauthorized collaboration will depend on context, including the nature of the course, the assigned task, and the instructions given regarding the task (see Appendix A for examples). It is critical for instructors to be explicit – both in writing and verbally – about whether collaboration is allowed in their course, and if so, the extent to which it is allowed. It is also critical for students to understand the distinction between legitimate and unauthorized collaboration (Appendix B) and to be sure they understand what is allowed in a given course. Unless
specified explicitly, the general principle is that collaboration which results in submitted content that is the same or similar may be deemed inappropriate. Typically, the results of unauthorized collaboration will bear a similarity to plagiarism, with the essential difference being that in the former case the submissions are prepared by students working together whereas in the latter they have been obtained from an external source (or from their prior work in the case of self-plagiarism). In practice, it is not necessary for an Associate Dean (AD) to distinguish them given that the penalties here align with the framework of penalties for plagiarism.

iii. In some instances, a student may give one of their assignments from a course to a student taking the same course in a later term. The latter student’s submission of that assignment is an instance of unauthorized collaboration and both students will accordingly be subject to disciplinary action.

iv. Unauthorized collaboration may incur penalties even if it is unintentional (e.g., students believe the degree of collaboration to have been appropriate, they have made no attempt at deception, and yet have produced work with shared content which could only have resulted from collaboration). However, if there is evidence that students have an intent to deceive their instructor to obtain credit for the same work, this should lead to an enhanced penalty for collusion.

3. Principles for the Assignment of Penalties

i. Under Policy 71, the student’s AD has the authority to assess instances of unauthorized collaboration in student submissions1 and to assign the resultant penalties, based on the Suggested Penalties for Unauthorized Collaboration (see Appendix C). An instructor may propose a grade penalty to the AD when seeking an informal resolution; the AD shall determine whether or not it is appropriate.

ii. If students have submitted original work yet there is evidence that they inappropriately collaborated, the students will be directed to campus resources that uphold the principles of proper scholarship (see Appendix B). Repeated offences may incur stiffer penalties.

iii. The presence of shared content may not be the result of collaboration. Depending on the nature of the course element, there may be features that could realistically occur in more than one submission coincidentally (e.g., from a common experience with a tutor).

iv. The severity of the penalty for unauthorized collaboration depends on the level of collaboration and the quantity of shared content submitted. Example 1: Students who collaborate during the writing of an essay, yet submit

1 “Submissions” refers to any work provided by a student in order to obtain credit in a course and includes (but is not limited to) essays, assignments, reports, proposals, lab reports, and presentations.
mostly original work, may receive a significantly lighter penalty than students who submit identical essays. Example 2: Students who submit an identical section of a report may receive a lighter penalty than students who submit identical reports.

v. In some instances, however, students may unduly collaborate (where explicitly prohibited) in the development of a strategy for approaching a problem, in the structure of a paper, or in the sharing of a reference list. In these instances, given that the content of the assignments differs, the Associate Dean may not be able to refer to the penalties in Appendix C because they focus on the amount of shared content. The Associate Dean will thus determine a penalty based on the extent to which the assignment is considered to be a collaborative result.

vi. The impact of an academic integrity violation on a student’s mark depends on the value of the submission. As such, imposed penalties can vary from the recommendations in Appendix C in an effort to ensure that their impact is consistent with their objectives. Example 1: A penalty of a 100% reduction on an assignment worth 2% of a student’s final course grade is not particularly impactful, so there may be an additional 5% reduction from the final course grade. Example 2: A penalty of a 50% reduction in the earned grade on an assignment worth 40% of the student’s final course grade may result in a course failure, so the disciplinary decision may specify that the student’s final mark on the assignment should not produce a failure in the course. Example 3: Appendix C suggests that an additional 5 mark deduction may be assessed for low value elements. However, it may still be appropriate to apply it to high value elements if the quantity of shared content approaches 100%.

vii. There may be instances where unauthorized collaboration is confined to a single section within a submission that includes multiple components (such as lab reports). If the marking rubric allows, the imposed penalty may be limited to that section of the submission; in such cases, the section penalty will normally be 100%.

viii. It may be difficult to assess the origin of unauthorized collaboration within group submissions. Instructors are encouraged to ask students to identify the portions of an assignment for which they are responsible. In the absence of this identification, all students may be held equally responsible for violations of academic integrity in the group submission.

ix. Associate Deans may consider extenuating circumstances in levying penalties that are less severe than the guidelines provided in Appendix C.

x. Consistent with University policy, repeat offenders shall receive more severe penalties.
# Appendix A

## Examples of Acceptable and Unauthorized Collaboration

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Acceptable</th>
<th>Unauthorized Collaboration (unless authorized)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>The instructor tells students that they are not permitted to collaborate on a research assignment. A student is having trouble finding references.</td>
<td>The student consults their instructor or the Librarian for help.</td>
<td>The student copies a friend’s reference list to write the research assignment.</td>
</tr>
<tr>
<td>The instructor tells students that they are not permitted to collaborate on a lab report.</td>
<td>The students do not work together at any point and submit original reports.</td>
<td>The students meet in the library and write sections of the lab report together, or collaborate through a social media site (e.g. a course Facebook group).</td>
</tr>
<tr>
<td>The instructor tells the students they are permitted to discuss course themes and concepts, but they must apply these concepts to the essay topic on their own.</td>
<td>The students meet to discuss challenging concepts, but write their essays independently using original ideas. If a student is having trouble applying concepts, they meet individually with their instructor for guidance.</td>
<td>The students meet to discuss challenging concepts, and as a group they brainstorm ways to apply these concepts to their essays.</td>
</tr>
<tr>
<td>A student forgets that a coding assignment is due until the evening before it is due.</td>
<td>The student cancels their plans that evening to complete the assignment, or takes a late submission penalty.</td>
<td>The student works with a friend to complete the coding assignment more quickly.</td>
</tr>
<tr>
<td>A student is having trouble with an assignment because they do not understand some of the course concepts.</td>
<td>They meet with a peer tutor for help understanding the concepts they find challenging.</td>
<td>The student asks someone who has taken the course in the past to use all or part of their assignment, or finds a previous report online.</td>
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</table>

² Note that these examples may not represent unauthorized collaboration; as described above, they are unauthorized only if they have been stipulated as such.

Commented [MOU3]: In response to feedback from Donna and Cathy, the modified title and asterisk clarify that these actions are only problematic if unauthorized (rather than as a general principle).
Appendix B

Achieving Academic Success

Students are strongly encouraged to consider the root cause(s) of unauthorized collaboration and to use one or more of the following resources, workshops and/or courses to learn how to avoid academic misconduct under Policy 71 – Student Discipline.

Note: The distinction between unauthorized collaboration and plagiarism is not always clear, so resources targeted at avoiding plagiarism have been included in this list.

<table>
<thead>
<tr>
<th>HELP NEEDED:</th>
<th>HELP PROVIDED:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course-specific expectations</strong>&lt;br&gt;Each instructor may have different expectations to define acceptable and unacceptable behaviours for collaborating on course work</td>
<td>• Consult your course outline to understand what is allowable in a specific course&lt;br&gt;• Ask your course instructor to clarify what is allowable.&lt;br&gt;• Your course instructor or librarian may also be able to suggest alternative resources.</td>
</tr>
<tr>
<td><strong>Course-specific help</strong>&lt;br&gt;Struggling with course concepts or content</td>
<td>• Talk or collaborate with a classmate, though be sure that you are working within the constraints set by your course instructor.&lt;br&gt;• Connect with your TA or find a tutor who can help you better understand the course content on your own&lt;br&gt;• See the list of campus-wide Course Specific Help or Tutor Connect&lt;br&gt;• Your course instructor may also be able to suggest alternative resources to help build course-specific skills</td>
</tr>
<tr>
<td><strong>Writing skills</strong>&lt;br&gt;Unsure how to write in own words or organize ideas</td>
<td>• Attend a Writing and Communication Centre (WCC) workshop – e.g., “Turbo Charge Your Term Paper”&lt;br&gt;• Review WCC writing resources&lt;br&gt;• Use WriteOnline resources for writing case studies, reflective essays, literature reviews, and lab reports&lt;br&gt;• Meet with a WCC writing specialist by booking an appointment or attending a drop-in session at the Library</td>
</tr>
<tr>
<td><strong>Stress and time management skills</strong>&lt;br&gt;Struggling with workload stress, sufficient time for course work and/or how to approach large assignments</td>
<td>• Attend Student Success Office workshops – e.g., “Get this term started” and “Organizing Your Time”&lt;br&gt;• Review Student Success Office time management resources – e.g., “Backwards Planning”&lt;br&gt;• Book Peer Success Coach appointment&lt;br&gt;• Contact Counselling Services for individual appointments, workshops, or UW MATES peer support</td>
</tr>
</tbody>
</table>
| Referencing and research skills | • Use Library Find and Use Resources, subject guides, and Quick Start Guide  
• Review Citing Sources and use citation management software, like RefWorks, to track and format citations  
• Attend Library workshops – e.g., “Citing Properly with RefWorks”  
• Review Avoiding Plagiarism or How to Successfully Use the Works of Others |
| Motivation and interest | • Meet with an academic advisor  
• Attend a Centre for Career Action appointment drop-in time or workshop to understand relevance of course work  
• Consider connecting with upper year peers or your program’s student society to discuss your program and related future opportunities, courses, etc. |
| Understanding unauthorized collaboration consequences | • Review Office of Academic Integrity resources:  
  o Introduction to Policy  
  o Academic integrity tutorial  
  o 10 tips to avoid academic misconduct  
  o Academic integrity fact sheet for students |
| Writing courses | • Take a writing-intensive course:  
  o ENGL 101B: Introduction to Rhetorical Studies  
  o ENGL 109: Introduction to Academic Writing  
  o EMLS 129/ENGL 129R: Written Academic English  
  o ENGL 140R: The use of English I  
• Consider taking a course on effective collaboration  
  o INTEG 210: Making Collaboration Work |
### Appendix C

**Suggested Penalties for Unauthorized Collaboration**

<table>
<thead>
<tr>
<th>Level 1 Penalties (^1)</th>
<th>Unauthorized collaboration resulting in shared or similar content.</th>
</tr>
</thead>
</table>
| **1a.** 1-2 lines or sentences of shared content | • 25% of earned grade deduction  
• Probation |
| **1b.** Up to <25% of course element | • 50% of earned grade deduction  
• Probation |
| **1c.** More than 25% of course element | • 100% of earned grade deduction  
• Probation |

An additional penalty up to 5% of the final grade may be implemented, in particular for offences occurring on low-valued course elements (i.e., elements worth less than 10% of a student’s grade).

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\(^1\) Although there is only one level in these guidelines, this framework has been designed to parallel the one for plagiarism where there are additional levels.
Handling of Final Assessment Reports & Two-Year Progress Reports
related to academic program reviews

Introduction
Waterloo’s Senate Undergraduate Council (SUC) and Senate Graduate and Research Council (SGRC) have a duty to consider all aspects relating to the academic quality of undergraduate studies and graduate studies within the University. As described in Waterloo’s Institutional Quality Assurance Process (IQAP), documentation emerging from the cyclical program review process includes:

- **Final Assessment Report**, which summarizes the self-study, external reviewers’ report, program response, and implementation plan, and
- **Two-Year Progress Report**, which reports on progress related to the implementation plan.

Final Assessment Reports (FARs), require two SUC or SGRC members to review the report, whereas, Two-Year Progress Reports only require one SUC or SGRC member, although at the SUC/SGRC Chair’s discretion, a second reviewer may be sought. In order to ensure that student representatives have the opportunity to review each report, the FEDS VP, Academic and GSA, President receive these documents in advance for information. Any questions or concerns they might have can be raised and addressed, if needed, prior to the report being approved at SUC/SGRC. This review process is coordinated by the Quality Assurance (QA) Office.

To promote transparency and foster integrity in the review process, reviewers should not be members of the Faculty or Affiliated and Federated Institutions of Waterloo (AFIW) from which the report originates.

Assessment
Reviewers will consider a series of guiding questions (see below) in arriving at their recommendation for revision or approval to SUC or SGRC. Before reporting to SUC or SGRC, reviewers will ask questions and share their observations, as well as any concerns they have identified with the report, to the Quality Assurance Office, who will then connect with the Chair or Director of the program. The FEDS and GSA representative will also receive these reports for information prior to submission to SUC/SGRC.

The Quality Assurance Office will ensure that any revisions to the reports are completed by the Chair or Director of the program, prior to the QA Office submitting the report for approval at a SUC or SGRC.

### Does the Final Assessment Report:

1) Include a credible implementation plan that not only addresses the substantive issues identified from the program review process but also identifies clearly:
   - What actions will follow from specific recommendations?
   - Who will be responsible for acting on those recommendations?
   - Who will be responsible for providing resources?
   - Priorities for implementation and realistic timelines for initiating and monitoring actions?

2) Provide a rationale as to why a recommendation(s) will not be pursued?
**Does the Two-Year Progress Report:**

1) Clearly describe progress achieved on the various action items in the implementation plan?

2) Explain convincingly any circumstances that would have altered the original implementation plan?

3) For items that are behind schedule, propose an amended implementation schedule that is reasonable and credible?

4) Address significant developments or initiatives that have arisen since the program review process, or that were not contemplated by the program review process?

The program Chair or Director (or their chosen delegate) will attend the SUC or SGRC meeting to address any questions or concerns that might arise during SUC/SGRC.

SUC’s and SGRC’s responsibility will be to focus on the overall credibility and feasibility of the report and the proposed plan of action – seeking to uncover, for example, unexplained disjunctions between the reviewers’ recommendations and the program’s response – as opposed to the minutiae of course content and curriculum structure.

A Final Assessment Report or Two-Year Progress Report that is approved by a majority vote of SUC/SGRC will be submitted to Senate for information. Should the discussion at SUC or SGRC reveal issues of concern that require revision, the Quality Assurance Office will work with the program Chair or Director to address the concern(s). If minor revisions are needed, the report will be edited and then it will proceed to Senate for information without re-approval from SUC/SGRC; however, any major revisions will require SUC/SGRC review and approval.

**Status of Reports under Review**

A summary of the status of all reports under review, including reports for which the QA Office is seeking reviewers, can be found at the following link:

https://uwaterloo.ca/academic-program-reviews/status-reports-under-review
Final Assessment Report
Architectural Studies (BAS), Master of Architecture (MArch, MArch Co-op, MArch Water)
November 2018

Summary of the Program Review:
In accordance with the University Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of an external evaluation and the internal response of the Honours Bachelor of Architectural Studies (BAS), and Master of Architecture (MArch), Master of Architecture (MArch Co-op), and Master of Architecture (MArch Water), programs delivered by the School of Architecture. A self-study (Volume I, II, III) was submitted to the Associate Vice-President, Academic and the Associate Vice-President, Graduate Studies and Postdoctoral Affairs on September 21, 2016. The self-study (Volume I) presented the program descriptions and learning outcomes, and an analytical assessment of these four programs, including the data collected from student and alumni surveys, along with the standard data package prepared by the Office of Institutional Analysis & Planning (IAP). The CVs for each faculty member with a key role in the delivery of the programs were included in Volume II of the self-study.

The external review as per our IQAP requirements was combined with the accreditation visit by the Canadian Architectural Certification Board (CACB). Given that the University would receive the Visiting Team Report (VTR) from the CACB, only one additional arm’s-length external reviewer was selected to represent our institutional interests and provide a report. Dr. Terri Fuglem from the University of Winnipeg accompanied the CACB Visiting Team, which included five voting members and one non-voting observer. Dr. Fuglem’s independent report, combined with the CACB report, met the requirements of Waterloo’s IQAP.

The site visit to the University took place over four days from February 12-15, 2017. The visit included extensive interviews and tours, including meetings with the President, Vice-President, Academic & Provost; Associate Vice-President, Academic and Associate Vice-President, Graduate Studies and Postdoctoral Affairs; Dean of the Faculty of Engineering; the Faculty Associate Dean of Graduate Studies; Director of the School of Architecture, and Architecture faculty members, staff and current students (undergraduate and graduate). The review team also had an opportunity to visit student workshops, a fabrication lab, library, and exhibit space.
This final assessment report is based on information extracted, in many cases verbatim, from the self-study, Dr. Fuglem’s report, and the program’s response.

Program characteristics:

Honours Bachelor of Architectural Studies (BAS)
The Honours Bachelor of Architectural Studies program admitted its first students in 2001. (Prior to that year, the Architecture education at the University of Waterloo consisted of a BES followed by a BArch). One of the particularities of the Waterloo BAS program is that it meets an important accreditation requirement: comprehensive building design. In all other undergraduate Canadian programs, and in most international programs, the ability to work through all aspects of the design of the building and produce technical drawings and reports that cover design, structural, environmental, as well as heating and cooling aspects is typically covered in the graduate portion of the professional degree.
The Honours Bachelor of Architectural Studies degree provides the foundation of skills, knowledge, judgment and practical experience required for subsequent professional studies in architecture. Students acquire an understanding of the workings of society and culture, of the principles of physics, of materials and techniques of construction, of the human interaction with the natural and built environment, of historical process, of critical thought and of the diverse forms of creative expression.

Master of Architecture (MArch)
The Master of Architecture program admitted its first students in 2000, and had its first graduates by 2001. The professional Master of Architecture degree prepares graduate students for entry into the profession of architecture. Combining elements of a professional Master's program and a research-oriented Master's program, the MArch supports students as they engage in self-directed research. Over the course of a minimum three terms, students develop an independent research and design thesis while completing the required coursework for professional preparation. Introducing students to the ethical, legal, administrative and practical aspects of the profession, the program builds upon a firm commitment toward architecture as a cultural act and supports the development of critical thinking in architecture.

Master of Architecture (MArch Co-op)
The Master of Architecture co-operative program (MArch Co-op) was first offered in the Fall 2016, and had its first graduate in 2018. It is a two-year degree program that makes it possible for students entering Waterloo at the graduate level to experience a Waterloo co-operative education. The University of Waterloo offers students coming into the first year of the program the opportunity to take advantage of Waterloo’s well-established co-op program.
Master of Architecture (MArch Water)

Ten departments jointly offer the collaborative program in Water, engaging with 130 faculty members involved in water research at the University of Waterloo, across the Faculties of Arts, Engineering, Environment, Mathematics and Science. Connecting to this large network, the Master of Architecture co-operative program (MArch Water) was first offered in the Fall 2015 to promote multidisciplinary as well as interdisciplinary perspectives related to water. The program had its first graduate in January 2019. The goal of the program is to supplement disciplinary (specialist) training offered in individual departments with perspectives from a variety of water-related disciplines. Students graduating from the collaborative program will be better equipped to work in multidisciplinary teams to solve increasingly complex water issues.

Summary of strengths, challenges and weaknesses based on self-study:
As the professional education in Architecture at Waterloo overlaps both the undergraduate and graduate programs, it is challenging to independently consider their individual strengths. The rigorous structure and professional character of the undergraduate program allows for the necessary freedom at the graduate level to carry on independent research and advance students’ critical thinking skills, which in turn augments knowledge developed during the undergraduate degree. For those students joining solely at the graduate level, the School determines based on a review of their education whether they can join directly in the Thesis year or if they are to be admitted in the two-year Masters’ program and have an opportunity to engage in a cooperative work term.

Undergraduate Program

Strengths:

Curriculum, cultural history and the Rome program
The curriculum incorporates cultural history, which is a feature that is unique to Architecture at Waterloo. It inspires an affection for a broad range of critical study and creative endeavor within the School. It explains why Waterloo Architecture has produced plays, has a wonderful library, a spectacular collection of rare books, and has operated a program in Rome for more than 30 years.

Cooperative education and the relation to the profession
The School’s cooperative system offers a program in which there is no barrier between education and practice. By the time a Waterloo student reaches the graduate program, they will have on average 2 to 3 years of professional experience, some of it international. Last year, nearly 45% of the co-op work placements were outside Canada. The level of practical experience afforded in the undergraduate program has a positive impact on the graduate
program, enabling Waterloo Architecture MArch students to reach a level of independence normally associated with post-professional research degrees.

**Internationally recognized faculty**
Faculty members work in computation, responsive architecture, urban theory, Renaissance history, Waterloo region architecture, landscape infrastructure, Holocaust history, political installations, building and environmental sciences, artistic and architectural design, intersections between art and urbanism, psychology, contemporary theory, landscape, structural steel and building performance. Waterloo Architecture is characterized by the intensity and diversity of a group of faculty, many recognized internationally and through awards, publications and exhibitions.

**Collegiality and the project of education**
Students are drawn from across the country and beyond its borders. Around 1350 applicants apply for 75 places. The entire School community is involved in admitting students with artistic talent, capacity in abstract thought, critical ability, social imagination, maturity, self-confidence, and interest in making.

**Community: Cambridge, Engineering Faculty, Waterloo and beyond**
The School’s identity derives from the fact that it is a community in which all members regard each other as equals. The main aim of Waterloo Architecture is to act and to lead, not to set itself apart as an educational institution somehow separate from the rest of the world, but to be a vivid and motivating force for ideas and actions that engage the world outside and the local Cambridge community. Waterloo Architecture is weaving itself in the community to produce a rare learning environment for which Waterloo Architecture has come to be known.

**Weaknesses:**  
**Isolation — Physical and Academic**
While the strong community engagement of the School with the city of Cambridge represents both a strength and an opportunity, students are, at the same time, often isolated by the location. Students are generally limited to using the facilities available on the Architecture campus, which are in most cases more modest than those available on Waterloo’s main campus. Students are also isolated in the sense they are removed from larger urban environments that could have the potential to contribute to their architectural education. Though co-op provides opportunities for students to live in other urban environments, this physical isolation presents challenges to the School’s ability to expand learning networks and broaden the audience for student work.

**Density and rigidity of the undergraduate curriculum**
Though the rigorous course requirements at the undergraduate level provide students with an excellent foundation for professional practice, it can also restrict students’ abilities to begin specializing within their areas of interest. In certain cases, the amount and intensity of courses can have an impact on the quality of work produced, as well as having implications on student health. The School is looking for ways to alleviate this, both by reviewing the mode and number of assessments within each course, as well as by considering a reduction in the number of courses and credits per term.

**Challenges:**

**Human and physical resources to better integrate digital technology**
Digital technology is advancing at a slower pace at Waterloo than at some other architecture schools, reflected in the modest resources the Architecture School currently has available for digital design and fabrication. The School has just completed the hire of a new faculty member to improve the integration of digital design and fabrication within the curriculum, and help make the digital resources more robust. Still, one of the program’s challenges in the coming years will be to continue to integrate digital technology in a manner that is coherent with the School’s core values and vision.

**Maintaining the quality of student experience**
The School currently finds itself in the middle of a transition in the curriculum, in attempts to address previously-identified inadequacies. While it has been agreed the courses could be improved and streamlined, the transition includes the risk of making an already rigorous curriculum more dense. Furthermore, it will be a challenge to ensure that the School can continue to be committed to all streams (Design Studio, Cultural History and Theory, Landscape and Urbanism, Environment and Technology, and Visual and Digital Media) so that they all remain an integral part of students’ education.

**Adjusting to the New Resource Allocation Model**
The University has moved towards a new budget model, involving revision of the ways in which funds are allocated, in an effort to promote transparency and efficiency. Reduced resources represent an acute challenge to the School, given conditions that are unlike most programs: the success and strength of the program are largely based on the emphasis on design, the accreditation body requires a faculty to student ratio of 1:15, and there is a constant need for practitioners in the capacity of adjuncts, reviewers or examiners. The School will have to ensure it has the resources needed to deliver the curriculum, maintain a culture that promotes research and continue activities that are crucial to the School.

**Graduate Program**
November 2018
Strengths:

*Strength of Faculty and diversity of their research and practices*

The School is home to many strong faculty, whose diverse research interests benefit the program at both the undergraduate and graduate level. These faculty members foster an openness to diverse research topics for students to pursue in their own independent research work.

*High level of Autonomy*

The MArch program is extremely open and flexible, with its promotion of student autonomy in research and learning. General consensus amongst faculty and students in the School is that the self-directed, self-initiated character of the MArch is one of the program’s greatest strengths.

*Critical thinking*

While most students enter the program with skills that stem from rigorous curriculum and professional work of their previous program, the MArch specifically allows students to augment these skills with a focus on developing their critical thinking abilities. The graduate program promotes a level of critical thinking not developed through more structured curriculum, allowing students to set the pace and scope of their research.

*Community connections – local and global*

The strong culture of student initiatives and connection to the Cambridge community allows students to build stronger relationships with specific communities, both locally and globally. The flexibility of the program is such that if students secure funds to travel abroad or undertake field research, they can take up to a term to do so. Many students avail themselves of this opportunity with research trips that vary from a few days to up to four months.

Weaknesses:

*Time to completion*

While the autonomy of the graduate program is considered one of the program’s greatest strengths, it can also be perceived as a weakness since the lack of structure affects some students’ times to completion. The main concerns with longer times to completion are the delays for students entering the profession and the demands on resources for supervision.

*Increase of Faculty Supervisory Loads*

Combined, the effect of an increasing cohort and an average of a two-year completion time means that some 100 to 130 graduate students require to be supervised at any given time. With the equivalent of 21 full-time faculty, this translates to the supervision of an average of
5 to 7 students per faculty member. This adds stress for faculty availability for supervision and other teaching assignments.

**Level of preparation to the Graduate Program**

Given that the graduate program is a primarily independent research degree, the level of research preparedness needs to be high. There have been traditionally few opportunities for students to learn skills relating to extended research, and the craft of communicating research through writing. Restructuring undergraduate streams to emphasize critical thinking and research will help better prepare students for the MArch.

**Challenges:**

*Promoting research by design*

The School has always valued giving students the freedom to choose and pursue their own unique research interests within the broader discipline, which has resulted in an increasing number of theses that are primarily written, rather than design work. The challenge is to encourage more students to pursue design work at the graduate level. Furthermore, this form of research must be communicated as a legitimate form of not only architectural research, but also academic, and ‘fundable’ research.

*Continuing to attract the best students*

One of the greatest challenges facing the graduate program is to continue to attract high-quality students. To attract new students to Waterloo, the two-year MArch was created but designed as a delayed entry, requiring a year of undergraduate study. Promoting the First Year MArch as a genuine graduate-level program will hopefully continue to increase applications to Waterloo MArch, and allow the school to admit competitive students. On the other hand, the School is concerned that since the undergraduate program is so widely regarded across North America and many places in Europe, we often lose our most successful undergraduate students as they choose to pursue graduate studies in other competitive schools, mostly those in the United States.

*Maintaining the vitality of the program*

Since students are free to choose their topic and will often work independently and in fields seemingly unrelated to their peers, it is a challenge to provide a single structure to support what is a broad academic culture. The students have developed their own approach to this potential isolation, creating research clusters and community events. Each of these groups operate with varying levels of faculty involvement (informal conversations to formal lectures), are self-sustaining and motivating, and require minimal institutional support. The
approach reflects a program that values independence, experimentation, student initiative, peer learning, knowledge transfer, professionalism and entrepreneurship – attributes that need to be constantly cultivated.

**Summary of key findings from the external reviewers:** The School of Architecture at the University of Waterloo offers robust architectural education, at both the undergraduate and graduate levels. Its reputation, both nationally and internationally, remains strong. The cultural history component, the co-op curriculum, the Rome program and the self-directed MArch thesis continue to attract high quality students. More recently, the considerable successes of some faculty have become well known (the Venice Biennale exhibitions, prominent publications, the work of alumni, etc.). The students have also shown a capacity for vital community initiatives (such as the Bridge project, On Empathy, Treaty Land, Global Stories, etc.). The high desirability and employability of graduates from both the BAS and MArch programs are well known.

The current and ongoing concerns for maintaining this high level of expectation and for further growth include: the operating deficit, the spatial and resource requirements for new programs, the relationship of the main University campus to the satellite campus, the need for equity across faculty in teaching and administrative loads, time-to-completion in the MArch program and the enhancement and growth in research initiatives.

**Program response to external reviewer recommendations:**

1. **Detailed auditing of faculty loads (teaching and administrative) over five year spans**

   **Response**
   The Director, with the assistance of the Administrative Academic Manager has already begun a more formal tracking of teaching assignments over the past year. Given the diversity of teaching (studio, seminar, courses) within the School of Architecture, teaching tasks are calibrated in time (days/week) to amount to the 40% teaching requirement that is typical of most faculty appointments. This assessment, which is ongoing, is tracked annually and an average is computed over three years.

   The administrative load, though tracked, is less formally categorized. Over the next year, Architecture plans to create two tailored documents, the first for the annual and bi-annual Performance Evaluation, and the second for Tenure and Promotion. These could include provision on how service load might be fulfilled.

2. **Limiting the MArch Thesis to one or two terms with set deadlines and prominent external examiners**
Response
While the reviewer recommended limiting the MArch Thesis to one to two terms, it would in fact be detrimental to the program both financially and in relation to the dynamism of the student body. It would also be in contradiction with the current model. The Waterloo Architecture Thesis is set to be flexible and take between a minimum of three terms to a maximum of six terms. The School intends to maintain this flexibility, which enables their students to yield very strong work and engage in field research both in Canada and abroad.

However, in response to concerns raised in the review and voiced within the School, the School is working on improving the structure of the graduate degree, establishing additional benchmarks (interim reviews or presentation) to ensure that the majority of students can take less than 6 terms to complete their thesis. They are also considering an option within the Master’s degree that would better support students who wish to complete within three to four terms. This more structured path would likely be desirable for a number of students engaged in Design Theses. The ambition is to run a pilot of this model in 2017-2018. As of Fall 2018, the program has implemented new processes (including compulsory end-of-term reviews for students in their 3rd and 4th term of thesis), and updated the graduate handbook to clarify expectations.

3. Limiting the number of Thesis students supervised by one Faculty member (e.g. three students)

Response
Architecture is currently working towards the creation of a balloting system that will enable them to distribute the supervisory load more evenly while still maintaining good fit between students and faculty members. The system provides an opportunity for both students and faculty to meet and submit a ranking of three to five students/professors from which supervisors are assigned. This system was tested in Fall 2017 and resulted in a balanced distribution of students amongst faculty for 2017-2018, and again for the year 2018-2019. The intention is to continue with the balloting system, refining it as needed.

4. Setting minimum enrolments in graduate electives

Response
Architecture aims for enrolments of an average of 12 to 15 students in graduate elective courses. As of Winter 2017, graduate electives which do not meet an enrolment of 10 students within two weeks of the beginning of the term are either not offered, or not counted as part of a faculty’s teaching load. If, under exceptional circumstances, a course
with lower enrolment is offered, the average enrolment in graduate electives during that term should remain above 10 overall.

5. **Auditing and re-distributing credit load for cultural history and technology courses in the undergraduate program to better reflect course demands**

   **Response**

   Over the next year, the Undergraduate Committee will continue to evaluate the curriculum and offer solutions if the perceived imbalances are real. In addition to the review of credit load for the cultural history courses and technical courses, the Committee will seek to reduce the total amount of course and class times in the denser years (and 1A in particular). The ambition is to create more openness in the schedule and more flexibility in course selections. In May 2018, the School of Architecture faculty voted to reduce the total credit count from 29.5 credits to 28 credits, eliminating one course in the 1A term and 2 courses in upper years, while integrating a greater proportion of elective courses. This will be implemented as of September 2019.

6. **Achieving greater alignment with the University’s strategic direction toward transformative research and entrepreneurship; encouraging and emphasis on architectural innovation that stems from interdisciplinary research; supporting new ideas and initiatives with informal and formal events that cross communities; offering structured mentoring and grant-writing support**

   **Response**

   Building on the importance and recognition of many of Architecture faculty’s work, the School must promote the awareness of current interdisciplinary research as well as its growth. The School will work to better support funding applications, motivate additional publications and ensure greater dissemination. The ambition is to increase funded research over the next five years, supporting this goal by the creation of a position of Associate Director, Research. This project goes hand in hand with improving procedures for faculty development that caters to the disciplinary and inter-disciplinary potentials of architecture research within the University, as well as the creation of programs and facilities that foster transformative interdisciplinary research.

   Architecture celebrated its 50th anniversary in 2017-2018, and it will continue to seek additional support for events, lecture series and the dissemination of research. To support new initiatives (design-build collaboration with First Nations, new interdisciplinary research), the School will pursue the approval for a financially viable Integrated Design program and/or new research facilities to support new research and collaborations.
7. Careful auditing resources (human, equipment, space) when implementing new programs and initiatives in light of the new budget model

Response
The School is currently carefully reviewing a proposed new undergraduate program in Integrated Design. The review will consider facilities, human resources and equipment. In consideration of the implementation of the Waterloo Budget Model, the School is planning carefully so as to measure the impact of any changes and growth on the current budget of the School of Architecture. This new program would be in additional to Architectural Engineering, a collaborative program between the School of Architecture and the Department of Civil and Environmental Engineering that enrolled its first students in September 2018. Significant demand exists for such a program, and its addition would improve the financial viability of the School, while also enriching the academic diversity on the Cambridge Campus.

While growth of the Cambridge student population with Architectural Engineering and Integrated Design will certainly make the programs in Cambridge more viable financially, it is clear that this growth will need to be supported by renewed efforts in outreach and fundraising. In collaboration with Engineering Advancement, a fundraising plan has been drafted. While this plan indicates the need for support by a fundraising professional over the next six months, and a development officer within the next year, there are currently no resources to fund support specifically for Architecture. At the same time, it is recognized that fundraising is undertaken by a small team who oversees Faculty focused activities, and there are no professionals assigned to any specific unit or department. University and Engineering Advancement will however continue to support Architecture on any leads the School can provide.

8. Revisiting the name and vision statement of the Faculty of Engineering to be more inclusive of the School of Architecture. The main vision statement “to become a truly world-class school of engineering,” does not accommodate the aims of the School of Architecture, the only non-engineering unit in the Faculty

Response
The Faculty of Engineering has announced its intention to initiate conversations around the next strategic plan. Together with the Faculty, the School of Architecture will continue to work on a more inclusive vision for architecture in the Faculty of Engineering’s strategic planning exercise.
### Implementation Plan:

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Proposed Actions</th>
<th>Responsibility for Leading and Resourcing (if applicable) the Actions</th>
<th>Timeline for addressing Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Detailed auditing of faculty loads (teaching and administrative) over five-year spans;</td>
<td>Continue to track teaching load.</td>
<td>Director, with the assistance of Administrative Academic Manager (no resource)</td>
<td>Immediate and for the next 5 years (as suggested), with 3-year assessment for teaching, and 2 year for service.</td>
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<tr>
<td>2. Limiting the MArch Thesis to one or two terms with set deadlines and prominent external examiners;</td>
<td>The MArch Thesis is set to be flexible and take between a minimum of three terms to a maximum of six terms. This flexibility is an integral part of the School’s graduate degree. To respond to the comments, while maintaining integrity of the Waterloo Architecture MArch thesis model: 1) Architecture will work to ensure that the majority of students take less than 6 terms to complete their thesis. It will do this by (1.1) strengthening the structure of TRD1 and TRD2, possibly establishing additional benchmarks and deadlines, and monitoring the impact of the changes; and (1.2) clarifying expectations both for completion and supervisory loads. 2) To better support shorter-term design theses, the School will explore the</td>
<td>Director, Graduate Officer and Graduate Committee (no resource required)</td>
<td>Regularize time to completion by 2019.</td>
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<td>possibility of a parallel thesis path. If deemed desirable, it will run a pilot structure that could support students pursuing a design thesis who intend to complete within three to four terms.</td>
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<td>3.</td>
<td>Limiting the number of thesis students supervised by one faculty member (e.g., three students);</td>
<td>Require each faculty member to take a minimum of 3 to 4 students annually, and a maximum of 10 overall. This takes into account our faculty complement and limiting the length of studies to a maximum of 6 terms.</td>
<td>Director, Graduate Officer and Graduate Committee (no resource required)</td>
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<td>4.</td>
<td>Setting minimum enrolments in graduate electives;</td>
<td>Unless exceptional circumstances dictate otherwise, the minimum enrolment should be 10 in any graduate elective.</td>
<td>Director (no resource required)</td>
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<td>5.</td>
<td>Auditing and re-distributing credit load for cultural history and technology courses in the undergraduate program to better reflect course demands</td>
<td>Assess the actual cause of the perceived imbalance (i.e. course content, single course load or semester course load). Recalibrate if necessary.</td>
<td>Director, Undergraduate officer and Undergraduate Committee (no resource required)</td>
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<td>6.</td>
<td>Achieving greater alignment with the University’s strategic direction toward transformative research and entrepreneurship; encouraging and emphasis on architectural innovation that stems from interdisciplinary research; supporting new ideas and initiatives with informal and formal events that cross communities; offering structured mentoring and grant-writing support;</td>
<td>Establish a mechanism to better support multidisciplinary and architecture research; Reconnect to alumni through celebrations of the 50th anniversary in 2017-2018; Pursue the approval for a financially viable Integrated Design program and initiate fundraising; Seek additional support for events and the lecture series.</td>
<td>Director, Associate Directors with various committees (Integrated Design, 50th and fundraising committees)</td>
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<td>Careful auditing resources (human, equipment, space) when implementing new programs and initiatives in light of the new budget model;</td>
<td>Ongoing</td>
<td>Director, Administrative Officer, Architecture Financial Officer, and Faculty Financial Officer. (no resource required to conduct the audit)</td>
<td>Approval of Integrated Design on hold until clarity on growth income flow is obtained; Set up process for ongoing review by the end of 2019.</td>
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<td>8.</td>
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<td>Revisiting the name and vision statement of the Faculty of Engineering to be more inclusive of the School of Architecture. The main vision statement “to become a truly world-class school of engineering,” does not accommodate the aims of the School of Architecture, the only non-engineering unit in the Faculty.</td>
<td>Address the issue of a more inclusive vision in the upcoming Engineering strategic planning sessions.</td>
<td>Dean, Directors and Chairs. (no resource required)</td>
<td>Integrate a more inclusive vision in the Faculty of Engineering’s next Strategic Plan, due to be completed by May 2020.</td>
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</tbody>
</table>

The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for monitoring the Implementation Plan.
Date of next program review: 2023/24

Signatures of Approval:

Chair/Director

AFIW Administrative Dean/Head (For AFIW programs only)

Faculty Dean

Associate Vice-President, Academic
(For undergraduate and augmented programs)

Associate Vice-President, Graduate Studies and Postdoctoral Affairs
(For graduate and augmented programs)
Final Assessment Report
Classical Studies (BA, minor), Classics (BA), Greek (minor) and Latin (minor)
April 2019

Summary of the Program Review:
In accordance with the University’s Institutional Quality Assurance Process (IQAP), this final assessment report provides a synthesis of the external evaluation and the internal response and assessments of the Classical Studies (BA), Classics (BA), Greek (minor) and Latin (minor) programs delivered by the Department of Classical Studies. A self-study (Volume I) was submitted to the Associate Vice-President, Academic on August 21, 2017. The self-study presented the program descriptions and learning outcomes, an analytical assessment of these programs, including the data collected from a student survey along with the standard data package prepared by the Office of Institutional Analysis & Planning (IAP). Appended to Volume I were the course outlines for all courses in the program. The CVs for each full-time faculty member in the Department were included in Volume II of the self-study.

Two arm’s-length external reviewers were selected from Volume III of the self-study. Dr. Rebecca Nagel, Associate Professor of History and Classics, University of Alberta, and Dr. Victoria Wohl, Professor in the Department of Classics, University of Toronto were ranked and selected by the Associate Vice-President, Academic, as well as one internal reviewer (Dr. Vivian Dayeh, Department of Biology).

Reviewers appraised the self-study documentation and conducted a site visit to the University on November 6-7, 2017. The visit included interviews with the Associate Vice-President, Academic; Dean of Arts; Chair of Classical Studies; library representatives; and, Classical Studies faculty members, staff, and current students.

This final assessment report is based on information extracted, in many cases verbatim, from the self-study, the external reviewers’ report and the program response.
Program characteristics:

Classical Studies (Three-Year General BA, Four-Year General BA, Honours BA)
The Three-Year General Classical Studies major provides students with a strong knowledge of ancient Mediterranean civilizations (especially Greek and Roman), and provides them with a background in the study of history, literature, art, and other material culture. Students with a Three-Year General can go on to further study outside the discipline of Classical Studies. Two examples of such are pursuing a Bachelor of Education or various managerial certifications.

The Four-Year General Classical Studies major, like the Three-Year General but in more profundity, provides students with a foundational knowledge of Ancient Mediterranean civilizations (especially Greco-Roman), and provides them with a background in the study of history, literature, art, and other material culture. Students with a Four-Year General can go on to further post-graduate study outside the discipline of Classical Studies. As with the Three-Year General BA graduate, Teacher’s College is a popular option for Four-Year General graduates. They also seek out professional designations in managerial or administrative positions in both the private and public sector, often in a creative or heritage-related setting.

The Honours Classical Studies plan is very similar to the Classics plan, but without Greek and Latin language requirements. The creation of this new plan was motivated by the recognition that in many disciplines, most majors do not go on to graduate school, but have other life plans that do not necessarily include working in the area of their major. Students can major in Classical Studies as a part of the Honours Arts and Business program; this pairing is, designed for students who want a degree designation marking their market readiness, and who wish, to pursue their major of choice. Before 2016, Classical Studies did not offer an option for students to be in an Honours plan without the languages; this barred students who would otherwise choose to study in this discipline from being in the Arts and Business program, or from pursuing a Joint Honours. The Honours Classical Studies plan allows students to pursue an Honours plan – whether a single Honours, Joint Honours, or Honours Arts and Business – without the barrier of language training.

Classics (Honours BA)
The Honours Classics degree, whether a single Honours, Joint Honours, or Honours Arts and Business, provides students with a detailed and complex knowledge of ancient Greek and Roman history, literature, art, and other material culture, as well as a foundational knowledge of both the Greek and Latin languages. Honours students must complete eight courses in Greek and Latin. This degree gives students the necessary skills to go on to more advanced post-graduate study in the area of Classics, for which knowledge of these languages is required. Honours graduates
have a wide variety of post-graduate study open to them. Among others, choices include doctoral studies in Classics, Anthropology, Archaeology, or English, and Master’s degrees in Library Sciences, Archival Management, Museum Studies, or Business Management. A Law degree is likewise an option.

Minors
Minors may be taken in Classical Studies, Greek, and Latin. The latter two minors are rarely awarded, but the Classical Studies Minor is quite popular. For the approximately thirty students who choose this plan every year, the minor – which consists of a package of eight courses (chosen by the student) – is intended to provide a secondary area of concentration for students who are majoring in other disciplines. However, students seem to experience more breadth than depth in the minor as they most often take 200-level courses rather than 300- or 400-level courses.

Summary of strengths, challenges and weaknesses based on self-study:
Strengths
- Committed and enthusiastic faculty and students
- Diverse examination of the breadth of material in the field and its many sub-disciplines
- Well-Rounded and Well-Grounded Humanities Education: Classical Studies is a naturally well-rounded education in the humanities and offers courses in history, language, literature, and material culture at every level from the first year to graduate study. The individual courses that are offered are also often interdisciplinary.
- Rigorous Language Training: Students are well prepared for graduate studies. The language programs provide strong training in Latin and Greek. The progression of language study is rigorous in its expectations of students and prepares them well for graduate study in Classics, which requires reading proficiency in both languages. The success of undergraduate students in graduate programs elsewhere attests to the strong language training provided.
- Methodologies and Research Intensity: The outcomes on course outlines show purposeful attention is given to both various methodological approaches and to research activities. Undergraduate students are involved in Departmental research projects as undergraduate RA’s, in conferences, and have exposure to visiting professors with different ideas. The Department of Classical Studies produces strong research, both qualitatively and quantitatively, grounded in a broad range of methodologies.

Challenges
- It is difficult for the Department of Classical Studies to instruct undergraduate and
graduate courses with seven tenured faculty members, even with the support of sessional help. This funding of these sessionals is also not guaranteed.

- Communicating to the general public, including students, the value of a liberal arts education, as well as its value in preparation for employment
- Attracting and retaining students in a competitive environment, both externally and internally
- Declining enrollments in languages, not just at Waterloo, but elsewhere.
- Pressure to discontinue classes with low enrolment (minimum limit of 15 for undergraduate, 6 for graduate)
- Space: faculty offices are quite small, but at least functional; student space (lounge, library, graduate offices) is very constricted
- The external face and internal culture of the university, which is chiefly known as a technology-oriented institution

Weaknesses

- Currently there is only one faculty member who is a specialist in material cultural studies. Although the Department can sometimes mitigate this challenge through collaboration with other departments, it can limit opportunities for students interested in pursuing studies in this area.
- Lack of consistent and sufficient financial support for experiential learning opportunities

Summary of key findings from the external reviewers:
Over the past ten years, Classical Studies has placed a new emphasis on research, with the establishment of the Waterloo Institute for Hellenistic Studies, the introduction of the MA in Classical Studies, and the reduction of faculty teaching loads. These initiatives are already bearing fruit in the faculty’s increased research activity and visibility, both nationally and internationally. The faculty are working actively and creatively to ensure that the benefits of this enhanced research profile are shared by their students, and their efforts have already succeeded in enhancing both the intellectual quality and the student experience of their undergraduate programs. The most important issue now will be maintaining that forward momentum.

Program response to external reviewer recommendations:

Recommendations
1. The Department should make every effort to ensure that Ron Kroeker’s position is converted from a Definite-Term to a Continuing Lecturer Appointment. His continued
teaching contribution is indispensable to sustaining the courses and programs the Department offers.

Response
This recommendation has been completed. The Dean of Arts, Douglas Peers, gave permission to convert Dr. Kroeker’s position to a Continuing Lecturer Appointment in Summer 2017. This was approved by the Faculty of Arts Faculty Tenure and Promotion Committee in December 2017, following approval by the Classical Studies Department Tenure and Promotion Committee, and approved by the Provost in January 2018.

2. The Chair should coordinate with other chairs in the Faculty of Arts who have concerns about meeting teaching demands in order to make a case to the Dean for a more flexible model of calculating enrolment. Calculating enrolment per instructor, rather than on a course-by-course basis, for example, would help the Department to meet the demands of its diverse constituencies and to preserve the core intellectual commitment to the ancient languages while servicing a broad spectrum of non-specialists.

Response
The study of the ancient languages Greek and Latin remains central to the discipline of Classical Studies and is a requirement for graduate level study, including the Classical Studies MA program at Waterloo. Classical Studies remains committed to teaching these languages, which in some instances requires offering smaller classes with enrolment less than fifteen students. The program tried to reduce the number of small language courses by combining upper-division courses where possible. They are also committed to offsetting smaller enrolment language courses by continuing to offer large lecture courses that serve the entire university community, including Classical Mythology (CLAS 104), which regularly fills to a maximum capacity of 675 students. This counterbalancing within annual departmental offerings is already done with the full awareness of the Dean of Arts. As this is current practice, there is no reason to coordinate with other chairs in the Faculty of Arts.

3. The Department should solicit further financial support for study abroad, the Canadian Institute in Greece (CIG) internship program, and student attendance at conferences. In addition to external funding, it should continue to seek funding from the Faculty of Arts and the University for these activities.

Response
In line with the University of Waterloo Strategic Plan, Classical Studies considers experiential learning and study abroad programs to be important educational opportunities for students and the program is committed to expanding the funding available to support students who take our study abroad CLAS 390 course, participate in the Canadian Institute in Greece (CIG) internship program, or pursue other study abroad or experiential learning options. In the past five years, fundraisers in the Faculty of Arts and the Waterloo Institute for Hellenistic Studies have helped to secure funding for such student opportunities and this will be continued moving forward. Experiential learning and international study are priority fundraising areas for the Faculty of Arts (https://uwaterloo.ca/arts/alumni-friends/support-arts) and the Department will continue to work closely with the Faculty to engage alumni and other donors to support these opportunities.

4. The Department should request Faculty of Arts funding for a year-round work-study Research Assistant to help with conference and events organization and to maintain the Department’s social media presence.

Response
Classical Studies has in past often been able to hire a student to assist in the organization of conferences or other departmental events, which has contributed to the ability to offer a large number of international conferences, workshops, and research events, which have greatly increased the visibility and reputation of the University of Waterloo within our field. For students in the program, these opportunities have advanced their experiential training and work experience. The Department consistently applies for – and usually is granted - RA funding through the budgeting process and programs such as work-study and co-op. Whenever upcoming conferences, workshops, and special events are planned, individual faculty will continue to pursue external funding opportunities to support RA support for these research events.

5. The Department should request a new tenure-track faculty hire in ancient material culture. This new colleague would enrich the Department’s contribution to experiential learning and would meet student demand for courses in material culture. She would also, ideally, help to redress the gender imbalance in the existing faculty.

Response
A new tenure-track hire in the field of ancient archaeology would greatly enhance the research and teaching strength of Classical Studies. The Chair will consult and work
together with colleagues in other units to make a strong case for an interdisciplinary hire in material culture, who will advance broader university research priorities while also providing disciplinary expertise for the Classical Studies. In consultation with the Dean, the Department intends to submit a proposal for a new hire to the Dean in 2019. Should any new position be approved, Classical Studies is committed to making every effort to redress the gender imbalance in the program.
### Implementation Plan:

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Proposed Actions</th>
<th>Responsibility for Leading and Resourcing (if applicable) the Actions</th>
<th>Timeline for addressing Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Convert Dr. Ronald Kroeker’s Definite Term position to a Continuing Lecturer appointment.</td>
<td>Completed</td>
<td>Departmental Chair</td>
<td>Complete as of January 2018.</td>
</tr>
<tr>
<td>2. Make a case to the Dean of Arts for a model in which small enrolment courses taught by faculty are counterbalanced by larger lecturer courses (note: counterbalancing of enrolments across annual departmental offerings already current practice)</td>
<td>Continuation of current practice.</td>
<td>Departmental Chair</td>
<td>Continuation of current practice.</td>
</tr>
<tr>
<td>3. Solicit further funding for study abroad and international student opportunities.</td>
<td>Continuation of current fundraising efforts include: engaging emeriti through newsletters, alumni through online graduate profiles, and a “support Arts” webpage.</td>
<td>Departmental Chair</td>
<td>Ongoing</td>
</tr>
<tr>
<td>4. Request funding for a year-long student RA for departmental activities.</td>
<td>Continuation of current budget, including application to work-study programs and external research bodies.</td>
<td>Departmental Chair</td>
<td>Ongoing</td>
</tr>
<tr>
<td>5.</td>
<td>Request a new tenure-track line in material culture, a hire that would ideally address the Department’s gender imbalance.</td>
<td>Pursue an interdisciplinary and cross-departmental/faculty appointment in this area. There is a strong case for an interdisciplinary hire in material culture, who will advance broader university research priorities while also providing disciplinary expertise for Classical Studies.</td>
<td>Departmental Chair</td>
</tr>
</tbody>
</table>

The Department Chair/Director, in consultation with the Dean of the Faculty shall be responsible for monitoring the Implementation Plan.
Date of next program review: 2024-2025

Signatures of Approval:

[Signature]
Chair/Director

[Signature]
AFIW Administrative Dean/Head (For AFIW programs only)

[Signature]
Faculty Dean

April 18, 2019
Associate Vice-President, Academic
(For undergraduate and augmented programs)

[Signature]
Associate Vice-President, Graduate Studies and Postdoctoral Affairs
(For graduate and augmented programs)
Two-Year Progress Report
Mennonite Studies (Minor)
November 2018

Background:
The last program review was conducted in 2016-17. The self-study was written by the Director of the Mennonite Studies (MS) Minor (and currently Dean) Dr. Marlene Epp, with administrative support from the Dean’s assistant and the College’s registration and scheduling officer. Current students and alumni were consulted via a brief survey. Faculty who teach core courses in the Minor provided input and the Conrad Grebel Archivist-Librarian completed the section on library resources. The Institute of Anabaptist and Mennonite Studies Advisory Group (IAMS), which oversees the Minor, met several times to offer input for the review. Institutional Analysis and Planning provided statistical support as requested.

A site visit was held in November 2016, hosting UWaterloo reviewers Steven Bednarski (St. Jerome’s University) and Stefan Idziak (Physics and Astronomy). The reviewers submitted their recommendations within the required timeline and the IAMS group met several times to discuss the recommendations and an implementation plan. The Director of Mennonite Studies submitted a response to the recommendations and proceeded to oversee the implementation plan.

The Final Assessment Report was approved by Senate Undergraduate Council on June 19, 2018, and presented to Senate for information.

Progress on Implementation Plan:
Recommendations:

1. Identify a set of degree level expectations and learning outcomes, and make them visible online and in print advertising.

   Status: completed
   Details: The Institute of Anabaptist and Mennonite Studies Advisory Group (which oversees the Minor) developed the following set of degree level expectations and learning outcomes. These have been posted on the program webpage.
   https://uwaterloo.ca/grebel/academics/undergraduate-studies/mennonite-studies
Graduates with a Mennonite Studies Minor will:

1. Demonstrate an understanding of the history of Anabaptist-Mennonite origins within 16th century European religious reformations.
2. Articulate the basic religious beliefs of Anabaptist-Mennonites.
3. Demonstrate knowledge of Mennonites from a variety of disciplinary, contextual, and experiential perspectives.
4. Demonstrate an understanding of the diverse groups of Mennonites globally and locally.
5. Articulate the present-day role of Mennonites in the organizational and institutional life of Waterloo Region.
6. Demonstrate an understanding of the place of ethnic and religious minorities in Canada and their contribution to the creation of multicultural identities.
7. Show basic competency in working with primary source material.
8. Demonstrate understanding of the role of archives in Mennonite Studies research.
9. Have experienced local Mennonite culture and religion through field trips and volunteer activity.
10. Demonstrate critical research and writing skills.

2. Have IAMS take a greater leadership role to help guide and shape the program, particularly in light of upcoming retirements.

Status: completed
Details: IAMS does have leadership in guiding and shaping the program. The group meets regularly to plan the research and teaching activity of the Mennonite Studies program. Conrad Grebel University College hired a new Music Department faculty member in July 2019 who will maintain the church music and worship components of the course offerings. The College will not likely be hiring in the area of English Literature and thus the course on Mennonite Literature will probably need to be de-activated. This topic represented particular expertise of a retired faculty member; because Conrad Grebel does not have teaching equity in English, we do not normally hire in this discipline.

3. Establish an independent MS rubric and cross-list, where appropriate and possible, courses offered by other units.

Status: completed
Details: A Mennonite Studies course indicator – MENN – was approved in Spring 2018 and takes effect January 2019. At this time we don’t see the value in cross-listing existing courses.
4. Cross-list ARTS 125 with MS 125 and HIST and / or RS courses to improve visibility and enrolment.

   Status: completed
   Details: The Religious Studies Department declined the invitation to cross-listed ARTS 125 (Who are the Mennonites?) because they do not want more 100-level courses. We already have several History cross-lists with Mennonite Studies courses and decided this was not appropriate. Instead, and in keeping with recommendation 3, we renumbered Arts 125 as MENN 125. The counsel given to us was not to cross-list this course.

5. Create a Special Topics or Directed Readings course within the MS rubric if the enrolment in MS grows significantly.

   Status: completed
   Details: Two new courses were approved in Spring 2018 and will be effective January 2019: MENN 390, Special Topics in Mennonite Studies; and MENN 397, Directed Readings in Mennonite Studies. We hope to offer a special topics course in the 2019-20 academic year.

6. Expand upon the experiential learning / primary research project conducted in HIST 247 to allow for greater library and archive internship work elsewhere in the curriculum.

   Status: ongoing
   Details: A library-archives assignment, resulting in a museum-ready exhibit, has been developed as an ongoing component of HIST 247 (Mennonite History). We continue to explore options for similar assignments in other Mennonite Studies courses. In 2018, we offered the first not-for-credit Archives Internship, incorporated into an existing academic award. This allows students to explore and develop their skills in historical research and archives work, and to assist the Archives itself in processing collections and developing exhibits. We hope to create a for-credit option in the future.

7. Make explicit in print and online other experiential learning components of the MS Minor, such as opportunities to interact with local members of the Mennonite community. Standardize and promote the experiential learning components on the program.

   Status: ongoing
   Details: We continue to work at making the experiential components of the MS Minor more explicit in our course descriptions, syllabi, and advertising. We are not sure that standardization of these is possible or practical, as new opportunities arise each year that demand flexibility in the program.
8. Advertise at other AFIW and Waterloo locations.

   **Status: ongoing**
   
   Details: We developed a new poster and other print materials in 2017-18. These were circulated to appropriate units at UWaterloo and in the AFIW. We have worked at greater clarity and visibility in the program’s online presence.

Explain any circumstances that have altered the original implementation plan:

We have followed through with the implementation plan originally presented. The Mennonite Studies Minor continues to face the challenge of working program development with very few resources of time; the Director receives no time release for overseeing the program and there are no dedicated staff for the program.
### Implementation Plan: Recommendations for Mennonite Studies Minor, in response to program review, March 2017  
**Updated November 2018**

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Proposed Follow-up</th>
<th>Responsibility for Leading and Resourcing (if applicable) Follow-up</th>
<th>Timeline for addressing Recommendation</th>
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</thead>
<tbody>
<tr>
<td>1. Identify a set of degree level expectations and learning outcomes, and make</td>
<td>We will draw on the objectives now listed in the core required courses and also</td>
<td>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite</td>
<td>Completed Fall 2018 and posted on website.</td>
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<td>them visible online and in print advertising;</td>
<td>generalize them to suit the whole Minor.</td>
<td>Studies (IAMS) Advisory Group and Conrad Grebel Dean.</td>
<td></td>
</tr>
<tr>
<td>2. Have IAMS take a greater leadership role to help guide and shape the program,</td>
<td>IAMS does have leadership in guiding and shaping the program and will make its</td>
<td>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite</td>
<td>Complete. New faculty in Music hired July 2018 with specialties in church, music,</td>
</tr>
<tr>
<td>particularly in light of upcoming retirements;</td>
<td>program needs known to the College Dean in light of upcoming retirements.</td>
<td>Studies (IAMS) Advisory Group.</td>
<td>and worship, thus maintaining those components of the course offerings.</td>
</tr>
<tr>
<td>3. Establish an independent MS rubric and cross-list, where appropriate and</td>
<td>We have already inquired about the process for creating a new course code and, if</td>
<td>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite</td>
<td>Complete. New course rubric, MENN, was approved in spring 2018, effective</td>
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<td>possible, courses offered by other units;</td>
<td>approved, hope to have this in place for 2018-19.</td>
<td>Studies (IAMS) Advisory Group and Conrad Grebel Dean.</td>
<td>January 2019.</td>
</tr>
<tr>
<td>4. Cross-list ARTS 125 with MS 125 and HIST and / or RS courses to improve</td>
<td>We have already put in a request to the Religious Studies Department for a cross-listing.</td>
<td>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite</td>
<td>Complete. ARTS 125 was renumbered as MENN 125. We decided not to cross list</td>
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<tr>
<td>visibility and enrolment;</td>
<td>Declined.</td>
<td>Studies (IAMS) Advisory Group,</td>
<td>this course since RS declined and other</td>
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November 2018
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<tr>
<th></th>
<th>Create a Special Topics or Directed Readings course within the MS rubric if the enrolment in MS grows significantly;</th>
<th>We will give some thought to this after the MS course rubric is created; this is contingent on faculty resources to offer a special topics course, as well as student demand.</th>
<th>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite Studies (IAMS) Advisory Group and Conrad Grebel Dean.</th>
<th>Complete. Two new courses were approved in Spring 2018 and will be effective January 2019: MENN 390, Special Topics in Mennonite Studies; and MENN 397, Directed Readings in Mennonite Studies. We hope to offer a MENN 390 soon.</th>
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<tr>
<td>5.</td>
<td>Expand upon the experiential learning / primary research project conducted in HIST 247 to allow for greater library and archive internship work elsewhere in the curriculum;</td>
<td>We will incorporate library-archives assignments as an ongoing component of History 247 and will explore options for similar assignments in other MS courses. As well, we will develop an Archives Internship that will allow students to explore and develop their skills in historical research and archives work, and also assist the Archives itself in processing collections and developing exhibits.</td>
<td>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite Studies (IAMS) Advisory Group, Archivist, and Conrad Grebel Dean.</td>
<td>Ongoing. A library-archives assignment, resulting in a museum-ready exhibit, has been developed as an ongoing component of HIST 247 (Mennonite History). We continue to explore options for similar assignments in other Mennonite Studies courses. In 2018, we offered the first not-for-credit archives internship, incorporated into an existing academic award. This allows students to explore and develop...</td>
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<td></td>
<td>their skills in historical research and archives work, and also assist the Archives itself in processing collections and developing exhibits. We hope to create a for-credit option in the future.</td>
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<td>7</td>
<td>Make explicit in print and online other experiential learning components of the MS Minor, such as opportunities to interact with local members of the Mennonite community. Standardize and promote the experiential learning components on the program;</td>
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<td></td>
<td>We will make the experiential components of the MS Minor more explicit in our course descriptions, syllabi, and advertising. We will discuss whether standardization of these is possible or practical.</td>
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<td></td>
<td>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite Studies (IAMS) Advisory Group, Instructors of MS courses, and Conrad Grebel Dean.</td>
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<td></td>
<td>Ongoing. We continue to work at making the experiential components of the MS Minor more explicit in our course descriptions, syllabi, and advertising. In particular, at least 3 courses (MENN 125, SOC 275, and HIST 247) include one or more field trips. We advertise these each term as a feature of the course offering. We are not sure that standardization of these is possible or practical, as new opportunities arise each year that demand flexibility in the program.</td>
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<td></td>
<td>Advertise at other AFIW and Waterloo locations.</td>
<td>We will develop more online and print materials to advertise the Plan at UWWaterloo, focusing on academic units where we think there might be most interest.</td>
<td>Director of Mennonite Studies Minor, working with Institute of Anabaptist and Mennonite Studies (IAMS) Advisory Group, Conrad Grebel Communications staff, and relevant academic units at UWWaterloo.</td>
<td>Ongoing. We developed a new poster and other print materials in 2017-18. These were circulated to appropriate units at UWWaterloo and in the AFIW. We have worked at greater clarity and visibility in the program’s online presence.</td>
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Report on anything else you believe is appropriate to bring to Senate concerning this program:
N/A
Date of next program review: 2023/24

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<th>Signatures of Approval:</th>
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<tr>
<td>Chair/Director</td>
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<td>November 2018</td>
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<tr>
<th>AFIW Administrative Dean/Head (For AFIW programs only)</th>
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<tr>
<td>Nov 27/2018</td>
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<th>Faculty Dean</th>
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<td>Feb 19, 2019</td>
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<tr>
<th>Associate Vice-President, Academic</th>
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<tr>
<th>Associate Vice-President, Graduate Studies and Postdoctoral Affairs</th>
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<tr>
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