

The following Motions and Documents were considered by the GFC Programs Committee at its Thursday, December 09, 2021 meeting:

Agenda Title: **Course and Minor Program Changes**

- Arts
- Engineering
- Medicine and Dentistry
- Saint-Jean
- Science

CARRIED MOTION:

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the attached course and minor program change submissions from the Faculties of Arts, Engineering, Medicine and Dentistry, Saint-Jean, and Science.

FINAL Item 4

Agenda Title: **Items Deemed Minor/Editorial**

- A. Proposed Changes to Entrance Requirements for Graduate Programs in Laboratory Medicine and Pathology
- B. Proposed Changes to Admission and Program Requirements for Graduate Programs in Neuroscience
- C. Proposed Changes to Clinical Requirements for Graduate Programs in Nursing

CARRIED MOTIONS:

THAT the GFC Programs Committee, with delegated authority from General Faculties Council, approve the proposed changes to entrance requirements for graduate programs in Laboratory Medicine and Pathology as set forth in attachment A.

THAT the GFC Programs Committee, with delegated authority from General Faculties Council, approve the proposed changes to admission and program requirements for graduate programs in Neuroscience as set forth in attachment B.

THAT the GFC Programs Committee, with delegated authority from General Faculties Council, approve the proposed changes to clinical requirements for graduate programs in Nursing as set forth in attachment C.

FINAL Item 5

Agenda Title: **Proposed New Course Designator, DEVDU (Développement durable), and Associated Courses, Faculté Saint-Jean**

CARRIED MOTION:

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, a new course designator Développement durable, DEVDU, and associated courses, as submitted by Faculté Saint-Jean.

FINAL Item 6

Agenda Title: **Proposed Change to AGPA Calculation for Internal Undergraduate Students**

CARRIED MOTION:

That GFC Programs Committee recommend General Faculties Council approve the proposed change to the

admissions regulation to allow repeated courses to be used in the calculation of admission grade point average (AGPA) for internal undergraduate students.

FINAL Item 7

Agenda Title: **Proposed Embedded Certificate in Innovation and Entrepreneurship, Faculty of Business**

CARRIED MOTION:

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the Embedded Certificate in Innovation and Entrepreneurship as submitted by the Faculty of Business and as set forth in Attachments 1 and 2 to be published in the 2022-2023 University Calendar.

FINAL Item 8

Agenda Title: **Proposed Graduate Embedded Certificate in Climate Change and Health, School of Public Health and Faculty of Graduate Studies and Research**

CARRIED MOTION:

THAT GFC Programs Committee approve, with delegated authority from General Faculties Council, the new Graduate Embedded Certificate in Climate Change and Health as presented in the included documents by the School of Public Health, for implementation in Fall 2023.

FINAL Item 9

Agenda Title: **Proposed Name Change for the Graduate Degree Specialization in Educational Administration and Leadership, Faculty of Education and Faculty of Graduate Studies and Research**

CARRIED MOTION:

THAT GFC Programs Committee approve, with delegated authority from General Faculties Council, the name change of the second level specialization of Educational Administration and Leadership, to the specialization of Studies in Educational Leadership, and the related calendar changes, for the Educational Policy Studies credentials, for implementation upon approval and inclusion in the 22-23 calendar.

FINAL Item 10

Agenda Title: **Proposed Specializations in Food Safety and Quality, and Meat Quality for the Course-Based Master of Science Agricultural, Food and Nutritional Science, Faculty of Agricultural, Life, and Environmental Sciences, and Faculty of Graduate Studies and Research**

CARRIED MOTION:

THAT GFC Programs Committee approve, with delegated authority from General Faculties council, the Food Safety and Quality (FSQ) Specialization for the MSc in Agricultural, Food and Nutritional Science, to be published in the 2022-2023 University Calendar.

CARRIED MOTION:

THAT GFC Programs Committee approve, with delegated authority from General Faculties council, the Meat Quality (MQ) Specialization for the MSc in Agricultural, Food and Nutritional Science, to be published in the 2022-2023 University Calendar.

FINAL Item 11

FINAL Item No. 4

Governance Executive Summary
Action Item

Agenda Title	Course and Minor Program Changes <ul style="list-style-type: none"> - Arts - Engineering - Medicine and Dentistry - Saint-Jean - Science
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Item

Action Requested	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Recommendation
Proposed by	Faculty Councils
Presenter(s)	Janice Causgrove Dunn, Vice-Provost (Programs) and Chair, GFC PC

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is <i>(please be specific)</i>	To approve course and minor program changes.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>All routine course and minor program changes that do not involve or affect other Faculties or units and do not form part of a proposal for a new program or a substantive program change are approved regularly by the GFC Programs Committee in an omnibus motion.</p> <p>See individual item for Faculty Council approval information.</p>
Supplementary Notes and context	<This section is for use by University Governance only to outline governance process.>

Engagement and Routing (Include meeting dates)

Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity) <For information on the protocol see the Governance Resources section Student Participation Protocol >	<u>Those who are actively participating:</u> <ul style="list-style-type: none"> • Vice-Provost (Programs) and Chair, GFC Programs Committee • Faculty Councils • Representatives of the Office of the Registrar
	<u>Those who have been consulted:</u> <ul style="list-style-type: none"> • Undergraduate Program Support Team • Graduate Program Support Team
	<u>Those who have been informed:</u> <ul style="list-style-type: none"> • Items have been posted on the University Governance website for information
Approval Route (Governance) (including meeting dates)	See individual item for Faculty approval information GFC PC December 9, 2021

Strategic Alignment

Alignment with <i>For the Public Good</i>	Objective 21
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Item No. 4

Legislative Compliance and jurisdiction	<i>Post-Secondary Learning Act (PSLA)</i> GFC Programs Committee (PC) Terms of Reference
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Attachments

1. Arts
2. Engineering
3. Medicine and Dentistry
4. Saint-Jean
5. Science

Prepared by: Heather Richholt, Assistant Secretary to GFC, heather.richholt@ualberta.ca

This package contains: [Graduate - Courses](#)

Faculty approval path and dates:

AAC Date: October 5, 2021		
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Page	Department or Unit	What is Changing
2	History, Classics and Religion	HIST 609
3	History, Classics and Religion	HIST 679

Submission Deadlines: – 09.21.21, 10.05.21, 10.21.21, 02.01.22, 03.29.22

Department: **History, Classics and Religion**

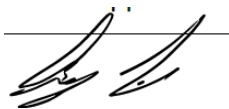
Change: **Graduate Course**

Rationale: The change in description is intended to clarify for instructors and students the purpose and expectations of this course.

https://calendar.ualberta.ca/preview_course_nopop.php?catoid=34&coid=374733

Calendar Copy:

Current: Strike through and highlight deletions	Proposed: <u>Underline and highlight</u> additions
<p>HIST 609 - Directed Study</p> <p>★ 3 (fi 6) (either term, 0-3s-0) This is a credit/fail course. Not open to students in the non-thesis program.</p>	<p>HIST 609 - Directed Study</p> <p>★ 3 (fi 6) (either term, 0-3s-0) <u>This credit/fail course is required for students in the thesis-based M.A. program. Students are introduced to scholarship relevant to their research and supported in developing a research proposal.</u></p>

Department Contact: Shannon Stunden Bower	Department Council Approval Date: 17 June 2021
Chair or Designate: Jaymie Heilman	Signature: 

Submission Deadlines: – 09.21.21, 10.05.21, 10.21.21, 02.01.22, 03.29.22

Department: **History, Classics and Religion**

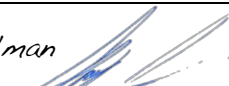
Change: **Graduate Course**

Rationale: This new course will accommodate the teaching interests of multiple continuing faculty members, including two new Indigenous faculty members, and will provide flexibility at the grad level for visiting professors or contract instructors.

https://calendar.ualberta.ca/search_advanced.php?cur_cat_oid=33&ecpage=1&cpage=1&ppage=1&pcpage=1&spage=1&tpage=1&search_database=Search&filter%5Bkeyword%5D=HIST&filter%5Bexact_match%5D=1&filter%5B3%5D=1&filter%5B31%5D=1&filter%5B1%5D=1&filter%5B28%5D=1&filter%5B30%5D=1

Calendar Copy:

Current: Strike through and highlight deletions	Proposed: <u>Underline and highlight</u> additions
	<p><u>HIST 679: Topics in Indigenous Histories – Global and Local</u> <u>★ 3 (fi 6) (either term, 0-3s-0)</u> <u>Addresses select themes in the histories of Indigenous peoples in global, comparative, and/or local contexts. Can be repeated when course content varies.</u></p>

Department Contact: Shannon Stunden Bower	Department Council Approval Date: Sept 10, 2021
Chair or Designate: Jaymie Heilman	Signature: <i>Jaymie Heilman</i> 

Submission Deadlines: – 09.21.21, 10.05.21, 10.21.21, 02.01.22, 03.29.22

Department: **Philosophy**

Change: **Graduate Course**

Rationale: This new course will allow us to offer graduate seminars in Philosophy of Religion, a subject in which student demand has greatly increased in recent years. Having the possibility of offering a graduate seminar on a specific topic in the area will add to the diversity of our graduate programming. We have a continuing faculty member interested in teaching in this area as well as two adjunct professors from St. Joseph’s College.

The return of student interest in this subject area is welcome (we had previously had a course numbered PHIL 557, but it was last offered in 1989.) Offering the seminar as a variable content course will allow us to maintain interest by allowing instructors to explore different topics in different semesters and to advertise those topics to students. We have several instructors available who are interested in teaching this course so anticipate no difficulties in staffing it.


This course will be scheduled (in combination with PHIL 457) in Winter 2023.

We have consulted the future instructors and the Undergrad Studies and Teaching Committee in the Department of Philosophy.

https://calendar.ualberta.ca/content.php?filter%5B27%5D=PHIL&filter%5B29%5D=&filter%5Bcourse_type%5D=1&filter%5Bkeyword%5D=&filter%5B32%5D=1&filter%5Bcpage%5D=1&cur_cat_oid=34&expand=&navoid=10323&search_database=Filter&filter%5Bexact_match%5D=1#acalog_template_course_filter

Calendar Copy:

Current: Strike through and highlight deletions	Proposed: <u>Underline and highlight</u> additions
	<p><u>PHIL 557 – Topics in Philosophy of Religion</u></p> <p><u>★ 3 (fi 6) (either term, 3-0-0)</u></p>

Department Contact: Christine Whelan	Department Council Approval Date: Oct. 19, 2021
Chair or Designate: Marie-Eve Morin	Signature: 

This package contains: **Graduate - Minor Program Changes**

Faculty approval path and dates:

AAC Date: October 5, 2021		
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Page	Department or Unit	What is Changing
2	Economics	PHD - Admission clarity
3	History, Classics and Religion	MA History

Submission Deadlines: – 09.21.21, 10.05.21, 10.21.21, 02.01.22, 03.29.22

Department: **Economics**

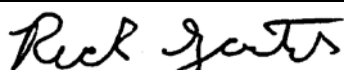
Change: **Graduate Minor Program Change**

Rationale: Clarifying that basic coursework (calculus, algebra, micro/macro/econometrics) applies to all three programs. Clarifying admission GPA calculation for PhD that is already used in practice. Simplifying language about GRE.

https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38387&returnto=10333

Calendar Copy:



Current: Strike through and highlight deletions	Proposed: Underline and highlight additions
<p>Economics [Graduate] [...] Entrance Requirements For the MA Program... [...]</p> <p>For the PhD program, the Department's minimum admission requirements are an MA in Economics with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. In addition, applicants must have a minimum grade point average of 3.2 on all MA coursework.</p> <p>All applicants must have completed coursework in calculus and linear algebra, as well as advanced coursework in microeconomics, macroeconomics, and econometrics. [move up]</p> <p>[...] Applicants whose most recent degree is from a non-Canadian university are required to write the Graduate Record Examinations (verbal, quantitative, and analytical sections) administered by the Educational Testing Service (Princeton, NJ). The examinations should be written early enough for scores to be available at the same time as the applicant's other supporting documents. No minimum cutoff score is specified, because GRE results are used only in conjunction with other indicators of potential academic success</p>	<p>Economics [Graduate] [...] Entrance Requirements All applicants must have completed coursework in calculus and linear algebra, as well as advanced coursework in microeconomics, macroeconomics, and econometrics. For the MA program....</p> <p>[...] For the PhD program, the Department's minimum admission requirements are a Master's Degree in Economics or equivalent with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. In addition, applicants must have a minimum cumulative grade point average of 3.2 on all Masters level Economics coursework.</p> <p>[...] Applicants whose most recent degree is from a non-Canadian university are required to write the Graduate Record Examinations (verbal, quantitative, and analytical sections) administered by the Educational Testing Service (Princeton, NJ). The examinations should be written early enough for scores to be available at the same time as the applicant's other supporting documents. There is no minimum required GRE score. GRE results are used in conjunction with other indicators of potential academic success.</p>

Department Contact: Chelsi Hudson	Department Council Approval Date: May 5, 2021
Chair or Designate: Rick Szostak	Signature: 

Department: History, Classics and Religion

Change: Graduate Minor Program Change

Rationale: These changes are designed to improve MA student progress by closer integration of their coursework with subsequent research. Removing one of the two required methodology courses allows the addition of one required research course. In HIST 700 (taught in winter term each year), MA students will develop their research project (for both MA tracks, thesis and course-based), benefitting from faculty supervision and seminar discussion with peers. HIST 700 will start MA students in their research as part of a community, offering greater opportunities for intellectual development and earlier progress in their research.


https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38470&returnto=10333


Calendar Copy:

Current: <u>Strike through and highlight</u> deletions	Proposed: <u>Underline and highlight</u> additions
<p>The Degree of MA in History (History and Classics) [Graduate]</p> <hr/> <p>Program Requirements</p> <p>The MA in History can be taken as a thesis-based or a course-based program. Both may be subsequently used as a qualification for application to the PhD program. Students must declare at the beginning of their graduate studies which program they intend to follow. Students wishing to change their program category must seek the approval of the Department. Successful completion of the MA program does not guarantee admission to the doctoral program. Students wishing to go on to a PhD must make a formal application according to standard procedures.</p> <p>Thesis-based Program</p> <p>Students are required to complete a minimum of ★19 in coursework and a thesis.</p> <p>Coursework (★19)</p> <p>Required courses (★10)</p> <ul style="list-style-type: none"> • HIST 602 (★1) • Any two of: <ul style="list-style-type: none"> ○ HIST 603 (★3) ○ HIST 604 (★3) ○ HIST 605 (★3) ○ HIST 606 (★3) • HIST 609 (★3) <p>Elective Courses (★9):</p> <ul style="list-style-type: none"> • An additional three ★3 graduate courses. Up to two of these may be graduate classes other than HIST, with approval of 	<p>The Degree of MA in History (History and Classics) [Graduate]</p> <hr/> <p>Program Requirements</p> <p>The MA in History can be taken as a thesis-based or a course-based program. Both may be subsequently used as a qualification for application to the PhD program. Students must declare at the beginning of their graduate studies which program they intend to follow. Students wishing to change their program category must seek the approval of the Department. Successful completion of the MA program does not guarantee admission to the doctoral program. Students wishing to go on to a PhD must make a formal application according to standard procedures.</p> <p>Thesis-based Program</p> <p>Students are required to complete a minimum of ★19 in coursework and a thesis.</p> <p>Coursework (★19)</p> <p>Required courses (★10)</p> <ul style="list-style-type: none"> • HIST 602 (★1) • Any one of: <ul style="list-style-type: none"> ○ HIST 603 (★3) ○ HIST 604 (★3) ○ HIST 605 (★3) ○ HIST 606 (★3) • HIST 609 (★3) • HIST 700 (★3) <p>Elective Courses (★9):</p> <ul style="list-style-type: none"> • An additional three ★3 graduate courses. Up to two of these may be graduate classes

Department. No more than one of these may be HIST 699 except with approval of Department.

Thesis

- Registration in 900-level THES. Students are required to write and orally defend a thesis based on original research. The thesis should normally be not more than 100 pages in length.

Course-based Program

Students are required to complete a minimum of ★25 including both coursework and a Directed Research Project.

Coursework (★19)

Required courses (★7)

- [HIST 602](#) (★1)
- Any **two** of:
 - [HIST 603](#) (★3)
 - [HIST 604](#) (★3)
 - [HIST 605](#) (★3)
 - [HIST 606](#) (★3)

Elective Courses (★12):

- An additional four ★3 graduate courses. Up to two of these may be graduate classes other than HIST, with approval of Department. No more than two of these may be [HIST 699](#) except with approval of Department.

Directed Research Project (★6):

- Students must successfully complete **two consecutive** registrations of ★3 in [HIST 900](#), which requires a research paper of 40-50 pages which should reflect a significant use of primary materials and research.

Ethics Requirement

Students fulfill three hours of the [FGSR Ethics Training Requirement](#) through HIST 602. Students must also complete the FGSR Graduate Ethics Training course.

Professional Development Requirement

Students fulfill four hours of the [FGSR Professional Development Requirement](#) through HIST 602. See the [Department website](#) for a guideline of Department resources to fulfill the remaining PD hours.

Language Requirement

Students must demonstrate competence in a language other than English according to the procedures specified in the [Departmental Language Requirement](#).

Residence Requirement

The minimum period of residence for both the course-based and thesis-based programs is two

other than HIST, with approval of Department. No more than one of these may be HIST 699 except with approval of Department.

Thesis

- Registration in 900-level THES. Students are required to write and orally defend a thesis based on original research. The thesis should normally be not more than 100 pages in length.

Course-based Program

Students are required to complete a minimum of ★25 including both coursework and a Directed Research Project.

Coursework (★19)

Required courses (★7)

- [HIST 602](#) (★1)
- Any **one** of:
 - [HIST 603](#) (★3)
 - [HIST 604](#) (★3)
 - [HIST 605](#) (★3)
 - [HIST 606](#) (★3)
- [HIST 700](#) (★3)

Elective Courses (★12):

- An additional four ★3 graduate courses. Up to two of these may be graduate classes other than HIST, with approval of Department. No more than two of these may be [HIST 699](#) except with approval of Department.

Directed Research Project (★6):

- Students must successfully complete **two consecutive** registrations of ★3 in [HIST 900](#), which requires a research paper of 40-50 pages which should reflect a significant use of primary materials and research.

Ethics Requirement

Students fulfill three hours of the [FGSR Ethics Training Requirement](#) through HIST 602. Students must also complete the FGSR Graduate Ethics Training course.

Professional Development Requirement

Students fulfill four hours of the [FGSR Professional Development Requirement](#) through HIST 602. See the [Department website](#) for a guideline of Department resources to fulfill the remaining PD hours.

Language Requirement

Students must demonstrate competence in a language other than English according to the procedures specified in the [Departmental Language Requirement](#).

Residence Requirement

four-month terms of full-time attendance at the University of Alberta.

Length of Program

The time required to complete the MA will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of 12 months is normally required. The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years. The maximum time to complete the course-based MA program as set by the Faculty of Graduate Studies and Research is six years.

The minimum period of residence for both the course-based and thesis-based programs is two four-month terms of full-time attendance at the University of Alberta.

Length of Program

The time required to complete the MA will vary according to the previous training of the applicant and the nature of the research undertaken; however, a minimum of 12 months is normally required. The maximum time to complete the thesis-based MA program as set by the Faculty of Graduate Studies and Research is four years. The maximum time to complete the course-based MA program as set by the Faculty of Graduate Studies and Research is six years.

Department Contact: Shannon Stunden Bower	Department Council Approval Date: 17 June 2021
Chair or Designate: Jaymie Heilman	Signature: Jaymie Heilman

This package contains: [Graduate - Minor Program Changes](#)

Faculty approval path and dates:

AAC Date: November 2, 2021		
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Page	Department or Unit	What is Changing
2	Political Science	Normal length of program note

Submission Deadlines: – 09.21.21, 10.05.21, 10.21.21, 02.01.22, 03.29.22


Department: **Political Science**
Change: **Graduate Major Program Change**

Rationale: Based on advice received during the program’s journey through university governance, we over-estimated the amount of time our students would require to complete the MA in Policy Studies Program. Since the program was approved, we have found ways of streamlining the work experience (practicum) and capstone components. This saves students a full semester in their program while adding value to their learning experience. Every student in our initial cohort is on track to complete within 16 months. This brings our program in line with comparable programs in other Canadian universities, and makes us a more attractive option for students seeking an efficient time to completion.

◀ (Edits to 2022-23 Draft) ▶

Calendar Copy:

Current: <u>Strike through and highlight</u> deletions	Proposed: <u>Underline and highlight</u> additions
<p>The Degree of MA in Policy Studies (Political Science) [Graduate]] [...] Length of Program The time required to complete the program will vary with the program and candidate. Full-time students in the program will normally complete the program within <u>20</u> months.</p>	<p>The Degree of MA in Policy Studies (Political Science) [Graduate] [...] Length of Program The time required to complete the program will vary with the program and candidate. Full-time students in the program will normally complete the program within <u>16</u> months.</p>

Department Contact: Caroline Kinyua	Department Council Approval Date: October 21, 2021
Chair or Designate: Catherine Kellogg	Signature: 

Faculty of Medicine & Dentistry
 Proposed University Calendar Changes for 2022/2023
****For Consideration of Early Implementation – Spring 2022**

CURRENT	PROPOSED
NEW COURSE	<p>PHYSL 512 – Physiology in History & Popular Culture *3 (fi 6) (Spring term, 3-0-0) Key historical scientific/medical discoveries as well as modern socio-cultural phenomena serve as a catalyst for discussion of fundamental concepts in Physiology spanning all body systems. Historical case presentation contrasts ideological, technological and scientific approaches with modern views and advances. Popular culture references initiate in-depth investigation of the physiological basis of modern social phenomena. Highlighted case presentations facilitate application of physiology knowledge through discovery learning approaches to study historical foundations and modern marvels by evoking vivid imagery, curiosity and relatability. Suitable for preparation for careers in medicine, biomedical research and health-related fields; relevant for fields involving knowledge dissemination such as public health promotion and education. Prerequisites: PHYSL 212 and 214 (or 210) or equivalent and consent of Department. Note: This course may not be taken for credit if credit has already been obtained in PHYSL 412.</p>

Rationale:

A gap in the practical application of core integrative physiology concepts has emerged in recent decades due to emphasis on other integration levels in physiology such as cellular and molecular biology.

As a result, students face significant challenges in understanding the relevance of physiology concepts in “real world” situations and are not adequately prepared to apply physiological knowledge to the understanding of health-related phenomena they encounter in daily life, in the media and in popular culture. With advancing technology and the rapid expansion of scientific knowledge, an appreciation of the historical roots of well-established concepts and experimental/clinical techniques is also at risk of being lost. This would be to the detriment of physiology education because we undoubtedly have a better understanding of present knowledge and gaps to be addressed in the future if we understand the historical background.

This course aims to address this gap in physiology education by facilitating an intellectual link between “real-world” phenomena, fundamental physiology concepts and the underlying history of related themes, concepts and experimental/clinical techniques.

Throughout presentation of course material, a solid comprehension of physiology and pathophysiology will be emphasized and harnessed to derive correct conclusions drawn from case presentations. Students will be guided in an understanding of the underlying integrative physiology concepts.

This course is designed to be complementary to the existing Physiology curriculum at the University of Alberta. Historical and contemporary case presentations and discussion of physiology concepts are intended to reinforce and extend concepts presented in 300 and 400- level physiology courses. Incorporation of historical literature and pop culture phenomena in the context of traditionally presented physiology concepts will engage students and enhance retention of course material. The problem-based learning approach featuring “real-world” scenarios aims to improve knowledge consolidation and ability of students to apply physiological principles.

Approved/Reviewed by:

FoMD Faculty Learning Committee (Faculty Council Delegated Approver): September 29, 2021

FoMD Faculty Council (Review): October 13, 2021



CALENDAR CHANGE REQUEST FORM

Submission Deadlines:

Two weeks before APC or GPC, subject to faculty approval pathway. Program changes are subject to governance deadlines found [here](#). Full Governance (not internal to ENGG) calendar changes process are [here](#).

Department:	Civil and Environmental Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL:</p> <p>https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38298</p>	
<p>The MBA/MEng Joint Program (Civil and Environmental Engineering) [Graduate]</p>	



Current	Proposed
<p>Program Requirements</p> <p>The MBA/MEng Joint program requires 20 first-year ★1.5 MBA courses, ORG A 641, three second-year ★3 elective MBA courses, and seven ★3 graduate engineering courses, as approved by the Department, plus ENGG 600. In addition, one engineering project, equivalent to two ★3 courses and having a significant business related component, will be required. The project will be co-supervised by a professor from the Faculty of Business and a professor from the Department of Civil and Environmental Engineering.</p>	<p>Program Requirements</p> <p>The MBA/MEng Joint program requires 20 first-year ★1.5 MBA courses, ORG A 641, three second-year ★3 elective MBA courses, and seven ★3 graduate engineering courses, as approved by the Department. In addition, one engineering project, equivalent to two ★3 courses and having a significant business related component, will be required. The project will be co-supervised by a professor from the Faculty of Business and a professor from the Department of Civil and Environmental Engineering.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • 20 first-year ★1.5 MBA courses • ORG A 641 • Three second-year ★3 elective MBA courses • Seven ★3 graduate-level courses or equivalent • ENGG 600 (★0.5) Engineering Ethics and Integrity • One engineering project, equivalent to two ★3 courses and having a significant business related component 	<p>Coursework</p> <ul style="list-style-type: none"> • 20 first-year ★1.5 MBA courses • ORG A 641 • Three second-year ★3 elective MBA courses • Seven ★3 graduate-level courses or equivalent • One engineering project, equivalent to two ★3 courses and having a significant business related component
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p>



through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

1. complete FGSR's professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan;
2. complete professional development requirements specific to the Faculty of Engineering:
 - a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or,
 - b. students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed in a previous graduate degree ENGG 600 and/or ENGG Grad PD 01 are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.

In which academic year is this change required? 2022-2023	
Department Contact	Associate Chair Graduate Program
Name:	Selma E. Guigard
Email:	selma.guigard@ualberta.ca
Department Chair or Designate	
Name:	Ania Ulrich



Date approved by Department Council:	9/29/2021	Date submitted:	10/4/2021
Consultation process and dates <ul style="list-style-type: none">• Faculty of Engineering Academic lead• Program Support Team committee			
Approval pathway and dates <ul style="list-style-type: none">• Department (APC, GPC, Council)• Faculty GPC (if appropriate): October 6, 2021• Faculty APC: October 15, 2021• Faculty ECC: October 26, 2021			

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CALENDAR CHANGE REQUEST FORM

Submission Deadlines:

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Department:	Civil and Environmental Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL:</p> <p>https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38298</p>	
<p>The Degree of MEng (Civil and Environmental Engineering) [Graduate]</p>	



Current	Proposed
<p>Program Requirements</p> <p>Students are required to complete a minimum of ★27.5 in coursework including a ★3 capstone project.</p> <p>The Master of Engineering is a course-based degree program that requires a minimum of ★24 (eight single-term graduate courses or equivalent), of which ★15 (five single-term courses or equivalent) should be in the candidate's major field of interest, ENGG 600 plus a project that is equivalent to ★3. In some areas of specialization, an additional ★6 (two single-term courses or equivalent) more than the minimum are required. The Department will require more ★3 courses in cases where the undergraduate degree does not provide a superior background for the chosen area of specialization. There is no second language requirement other than English for the degree of MEng.</p>	<p>Program Requirements</p> <p>Students are required to complete a minimum of ★27.0 in coursework including a ★3 capstone project.</p> <p>The Master of Engineering is a course-based degree program that requires a minimum of ★24 (eight single-term graduate courses or equivalent), of which ★15 (five single-term courses or equivalent) should be in the candidate's major field of interest, plus a project that is equivalent to ★3. In some areas of specialization, an additional ★6 (two single-term courses or equivalent) more than the minimum are required. The Department will require more ★3 courses in cases where the undergraduate degree does not provide a superior background for the chosen area of specialization. There is no second language requirement other than English for the degree of MEng.</p>
<p>Coursework</p> <ul style="list-style-type: none"> ● Eight ★3 graduate-level courses or equivalent <ul style="list-style-type: none"> ○ five must be in the candidate's major field ● ENGG 600 (★0.5) Engineering Ethics and Integrity ● One ★3 capstone project ● Additional coursework may be required. 	<p>Coursework</p> <ul style="list-style-type: none"> ● Eight ★3 graduate-level courses or equivalent <ul style="list-style-type: none"> ○ five must be in the candidate's major field ● One ★3 capstone project ● Additional coursework may be required.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the</p>	<p>Ethics Requirement</p>



<p>FGSR Graduate Ethics Training (GET) course.</p>	<p>Engineering students must complete <u>FGSR ethics requirements</u> based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. <u>complete FGSR's professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan;</u> 2. <u>complete professional development requirements specific to the Faculty of Engineering:</u> <ol style="list-style-type: none"> a. <u>students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module;</u> <u>or,</u> b. <u>students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed in a previous graduate degree ENGG 600 and/or ENGG Grad PD 01 are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.</u>
<p>In which academic year is this change required? 2022-2023</p>	
<p>Department Contact</p>	<p>Associate Chair Graduate Program</p>



Name:		Selma E. Guigard	
Email:		selma.guigard@ualberta.ca	
Department Chair or Designate			
Name:		Ania Ulrich	
Date approved by Department Council:	9/29/2021	Date submitted:	10/4/2021
Consultation process and dates <ul style="list-style-type: none">● Faculty of Engineering Academic lead● Program Support Team committee			
Approval pathway and dates <ul style="list-style-type: none">● Department (APC, GPC, Council)● Faculty GPC (if appropriate): October 6, 2021● Faculty APC: October 15, 2021● Faculty ECC: October 26, 2021			

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CALENDAR CHANGE REQUEST FORM

Submission Deadlines:

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Department:	Civil and Environmental Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL:</p> <p>https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38298</p>	
<p>The Degree of MSc (Civil and Environmental Engineering) [Graduate]</p>	



Current	Proposed
<p>Program Requirements</p> <p>The Master of Science program requires a minimum of ★18 (six single-term graduate courses or equivalent), of which ★12 (four single-term courses or equivalent) should be in the candidate's major fields of interest, ENGG 600, plus a research thesis. In some areas of specialization, an additional ★6 (two single-term courses or equivalent) more than the minimum are required. The Department will require more ★3 courses in cases where the undergraduate degree does not provide a superior background for the chosen area of specialization or in cases where the course preparation needs to be augmented to enhance the execution of the research topic.</p>	<p>Program Requirements</p> <p>The Master of Science program requires a minimum of ★18 (six single-term graduate courses or equivalent), of which ★12 (four single-term courses or equivalent) should be in the candidate's major fields of interest, plus a research thesis. In some areas of specialization, an additional ★6 (two single-term courses or equivalent) more than the minimum are required. The Department will require more ★3 courses in cases where the undergraduate degree does not provide a superior background for the chosen area of specialization or in cases where the course preparation needs to be augmented to enhance the execution of the research topic.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • Six ★3 graduate-level courses or equivalent <ul style="list-style-type: none"> ◦ four must be in the candidate's major field • ENGG 600 (★0.5) Engineering Ethics and Integrity • Additional coursework may be required. 	<p>Coursework</p> <ul style="list-style-type: none"> • Six ★3 graduate-level courses or equivalent <ul style="list-style-type: none"> ◦ four must be in the candidate's major field • Additional coursework may be required.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p>



through the completion of two courses, registration for which is through eClass. Contact the Department for further information.

1. complete FGSR's professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan;
2. complete professional development requirements specific to the Faculty of Engineering:
 - a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or,
 - b. students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed in a previous graduate degree ENGG 600 and/or ENGG Grad PD 01 are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.

In which academic year is this change required? 2022-2023	
Department Contact	Associate Chair Graduate Program
Name:	Selma E. Guigard
Email:	selma.guigard@ualberta.ca
Department Chair or Designate	
Name:	Ania Ulrich



Date approved by Department Council:	9/29/2021	Date submitted:	10/4/2021
Consultation process and dates <ul style="list-style-type: none">• Faculty of Engineering Academic lead• Program Support Team committee			
Approval pathway and dates <ul style="list-style-type: none">• Department (APC, GPC, Council)• Faculty GPC (if appropriate): October 6, 2021• Faculty APC: October 15, 2021• Faculty ECC: October 26, 2021			

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Department:	Civil and Environmental Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL:</p> <p>https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38298</p>	
<p>The Degree of PhD (Civil and Environmental Engineering) [Graduate]</p>	



Current	Proposed
<p>Program Requirements</p> <p>The PhD degree is a research degree. Courses in a doctoral program are assigned by the supervisor and supervisory committee, in consultation with the student. They are designed to enhance the depth and breadth of understanding in the field of study. The course requirements are determined on a case-by-case basis depending on the student's background. Students are required to have completed ENGG 600. Students in the doctoral program are expected to maintain a course average of 3.0 or higher before proceeding to their candidacy examination.</p> <p>All doctoral candidates must prepare and defend a thesis of high calibre on an approved topic.</p> <p>There is no second language requirement other than English for the degree of PhD.</p> <p>The minimum period of residence is two academic terms of full-time attendance at the University of Alberta. The two terms need not be consecutive.</p>	<p>Program Requirements</p> <p>The PhD degree is a research degree. Courses in a doctoral program are assigned by the supervisor and supervisory committee, in consultation with the student. They are designed to enhance the depth and breadth of understanding in the field of study. The course requirements are determined on a case-by-case basis depending on the student's background. Students in the doctoral program are expected to maintain a course average of 3.0 or higher before proceeding to their candidacy examination.</p> <p>All doctoral candidates must prepare and defend a thesis of high calibre on an approved topic.</p> <p>There is no second language requirement other than English for the degree of PhD.</p> <p>The minimum period of residence is two academic terms of full-time attendance at the University of Alberta. The two terms need not be consecutive.</p>
<p>Coursework</p> <ul style="list-style-type: none"> The course requirements are determined on a case-by-case basis depending on the student's background ENGG 600 (★0.5) Engineering Ethics and Integrity 	<p>Coursework</p> <ul style="list-style-type: none"> The course requirements are determined on a case-by-case basis depending on the student's background
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
<p>Professional Development Requirement</p>	<p>Professional Development Requirement</p>



<p>Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.</p>	<p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete FGSR's professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan; 2. complete professional development requirements specific to the Faculty of Engineering: <ol style="list-style-type: none"> a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or, b. students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed in a previous graduate degree ENGG 600 and/or ENGG Grad PD 01 are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.
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<p>In which academic year is this change required? 2022-2023</p>	
<p>Department Contact</p>	<p>Associate Chair Graduate Program</p>
<p>Name:</p>	<p>Selma E. Guigard</p>
<p>Email:</p>	<p>selma.guigard@ualberta.ca</p>
<p>Department Chair or Designate</p>	<p></p>



Name:		Ania Ulrich	
Date approved by Department Council:	9/29/2021	Date submitted:	10/4/2021
Consultation process and dates <ul style="list-style-type: none">• Faculty of Engineering Academic lead• Program Support Team committee			
Approval pathway and dates <ul style="list-style-type: none">• Department (APC, GPC, Council)• Faculty GPC (if appropriate): October 6, 2021• Faculty APC: October 15, 2021• Faculty ECC: October 26, 2021			

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CALENDAR CHANGE REQUEST FORM

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Department:	Chemical and Materials Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. "Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master's and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses". (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>MAT E 640 - Advanced Materials Thermodynamics is a mandatory CME 600 level course for both MSc and PhD programs. It covers advanced topics in core fundamentals of materials thermodynamics, including thermodynamic laws, statistical thermodynamics, phase diagrams, solutions, changing standard states, etc, which are fundamentals for students specialized in Materials Engineering. Therefore, we propose to also include the MAT E 640 as a mandatory course for MEng students specialized in Materials Engineering.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	



Current Calendar URL:

https://calendar.ualberta.ca/preview_program.php?catoid=34&pooid=38274&hl=%22ENG+600%22&returnto=search

The Degree of MEng (Chemical and Materials Engineering) [Graduate]

Current	Proposed
<p>Program Requirements</p> <p>Students must complete ten courses (★27.5), including a ★3 project course.</p>	<p>Program Requirements</p> <p>Students must complete nine courses (★27.0), including a ★3 project course.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • Eight ★3 graduate-level courses. The courses are of the same type and calibre as those taken by the MSc and PhD candidates, and must be approved by the Associate Chair (Graduate). <ul style="list-style-type: none"> ○ At least four courses must be taken from the Department of Chemical and Materials Engineering ○ At least three of the CME courses must be at the 600-level or higher. The following courses are considered to be equivalent to 600-level CME courses: <ul style="list-style-type: none"> ▪ ECE 540 ▪ ECE 560 ▪ ECE 561 ▪ ECE 760 ▪ ECE 662 ▪ ECE 664 ▪ ECE 665 ▪ ENG M 646 ▪ MEC E 615 ○ The balance of the courses must be at the 500-level or higher in the Faculty of Engineering. • ENGG 600 (★0.5) Engineering Ethics and Integrity 	<p>Coursework</p> <ul style="list-style-type: none"> • Eight ★3 graduate-level courses. The courses are of the same type and calibre as those taken by the MSc and PhD candidates, and must be approved by the Associate Chair (Graduate). <ul style="list-style-type: none"> ○ At least four courses must be taken from the Department of Chemical and Materials Engineering ○ At least three of the CME courses must be at the 600-level or higher. The following courses are considered to be equivalent to 600-level CME courses: <ul style="list-style-type: none"> ▪ ECE 540 ▪ ECE 560 ▪ ECE 561 ▪ ECE 760 ▪ ECE 662 ▪ ECE 664 ▪ ECE 665 ▪ ENG M 646 ▪ MEC E 615 ○ The balance of the courses must be at the 500-level or higher in the Faculty of Engineering. ○ Students specializing in Materials Engineering must take MAT E 640 - Advanced Materials Thermodynamics as



	<p>one of their three 600-level courses.</p>
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through <u>ENGG 600</u>.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete <u>FGSR ethics requirements</u> based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students are required to meet their Professional Development requirement through the completion of two virtual courses available through eClass.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete <u>FGSR's professional development requirement</u>, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan; 2. complete professional development requirements specific to the Faculty of Engineering: <ol style="list-style-type: none"> a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or, b. students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.
<p>In which academic year is this change required? 2022-2023</p>	
<p>Department Contact</p>	<p>Associate Chair for Graduate Studies</p>



Name:	Hao Zhang		
Email:	hao.zhang@ualberta.ca		
Department Chair or Designate			
Name:	Vinay Prasad		
Date approved by Department Council:	9/23/2021	Date submitted:	9/27/2021
Consultation process and dates <ul style="list-style-type: none">● Faculty of Engineering Academic lead● Program Support Team committee			
Approval pathway and dates <ul style="list-style-type: none">● Department (APC, GPC, Council)● Faculty GPC (if appropriate): October 6, 2021● Faculty APC: October 15, 2021● Faculty ECC: October 26, 2021			

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Department:	Chemical and Materials Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. "Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master's and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses". (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL: https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38271&hl=%22ENGG+600%22&returnto=search</p>	
<p>The Degree of MSc (Chemical and Materials Engineering) [Graduate]</p>	
Current	Proposed



Program Requirements	Program Requirements
Students must successfully complete five courses (★12.5) and a thesis	Students must successfully complete four courses (★12.0) and a thesis
Coursework	Coursework
<ul style="list-style-type: none">• Four ★3 courses which must be approved by the Associate Chair (Graduate).<ul style="list-style-type: none">○ At least two must be 600-level or higher courses in the Department of Chemical and Materials Engineering. The following courses are considered to be equivalent to 600-level CME courses:<ul style="list-style-type: none">▪ ECE 540▪ ECE 560▪ ECE 561▪ ECE 760▪ ECE 662▪ ECE 664▪ ECE 665▪ ENG M 646▪ MEC E 615○ The remaining two courses must be at the 500-level or higher in the Faculty of Engineering, or be at the 400-level or higher in a Science department. Science courses at the 400-level must be approved by the Associate Chair (Graduate). The following courses are considered to be equivalent to 500-level Engineering courses:<ul style="list-style-type: none">▪ ECE 450▪ ECE 457○ Students specializing in Materials Engineering or Welding Engineering must take MAT E 640 (★3)- Advanced Materials Thermodynamics as one of their two 600-level courses○ Reading or independent study courses will not count towards the total course requirements.	<ul style="list-style-type: none">• Four ★3 courses which must be approved by the Associate Chair (Graduate).<ul style="list-style-type: none">○ At least two must be 600-level or higher courses in the Department of Chemical and Materials Engineering. The following courses are considered to be equivalent to 600-level CME courses:<ul style="list-style-type: none">▪ ECE 540▪ ECE 560▪ ECE 561▪ ECE 760▪ ECE 662▪ ECE 664▪ ECE 665▪ ENG M 646▪ MEC E 615○ The remaining two courses must be at the 500-level or higher in the Faculty of Engineering, or be at the 400-level or higher in a Science department. Science courses at the 400-level must be approved by the Associate Chair (Graduate). The following courses are considered to be equivalent to 500-level Engineering courses:<ul style="list-style-type: none">▪ ECE 450▪ ECE 457○ Students specializing in Materials Engineering or Welding Engineering must take MAT E 640 (★3)- Advanced Materials Thermodynamics as one of their two 600-level courses



<ul style="list-style-type: none"> • <u>ENGG 600</u> (★0.5) – Engineering Ethics and Integrity 	<ul style="list-style-type: none"> ○ Reading or independent study courses will not count towards the total course requirements.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through <u>ENGG 600</u>.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete <u>FGSR ethics requirements</u> based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement through the completion of two virtual courses available through e-class.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete <u>FGSR's professional development requirement</u>, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan; 2. complete professional development requirements specific to the Faculty of Engineering: <ol style="list-style-type: none"> a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an <u>ENGG Grad PD 01 module</u>; or, b. students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed <u>ENGG 600 and/or ENGG Grad PD 01</u> in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.



In which academic year is this change required? 2022-2023			
Department Contact		Associate Chair for Graduate Studies	
Name:		Hao Zhang	
Email:		hao.zhang@ualberta.ca	
Department Chair or Designate			
Name:		Vinay Prasad	
Date approved by Department Council:	9/23/2021	Date submitted:	9/27/2021
Consultation process and dates <ul style="list-style-type: none">● Faculty of Engineering Academic lead● Program Support Team committee			
Approval pathway and dates <ul style="list-style-type: none">● Department (APC, GPC, Council)● Faculty GPC (if appropriate): October 6, 2021● Faculty APC: October 15, 2021● Faculty ECC: October 26, 2021			

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CALENDAR CHANGE REQUEST FORM

Submission Deadlines:

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Department:	Chemical and Materials Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. "Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master's and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses". (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL: https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38275&hl=%22ENGG+600%22&returnto=search</p>	
<p>The Degree of PhD (Chemical and Materials Engineering) [Graduate]</p>	
Current	Proposed



<p>Program Requirements</p> <p>Students must successfully complete eight courses (★20.5) and a thesis.</p>	<p>Program Requirements</p> <p>Students must successfully complete seven courses (★20.0) and a thesis.</p>
<p>Coursework</p> <ul style="list-style-type: none">• Six ★3 courses which must be approved by the Associate Chair (Graduate).<ul style="list-style-type: none">○ At least three courses must be 600-level or higher courses in the Department of Chemical and Materials Engineering. The following courses are considered to be equivalent to 600-level CME courses:<ul style="list-style-type: none">▪ ECE 540▪ ECE 560▪ ECE 561▪ ECE 760▪ ECE 662▪ ECE 664▪ ECE 665▪ ENG M 646▪ MEC E 615○ The remaining three courses must be at the 500-level or higher in the Faculty of Engineering, or be at the 400-level or higher in a Science department. Science courses at the 400-level must be approved by the Associate Chair (Graduate). The following courses are considered to be equivalent to 500-level Engineering courses:<ul style="list-style-type: none">▪ ECE 450▪ ECE 457○ Students specializing in Materials Engineering must take MAT E 640 - Advanced Materials Thermodynamics	<p>Coursework</p> <ul style="list-style-type: none">• Six ★3 courses which must be approved by the Associate Chair (Graduate).<ul style="list-style-type: none">○ At least three courses must be 600-level or higher courses in the Department of Chemical and Materials Engineering. The following courses are considered to be equivalent to 600-level CME courses:<ul style="list-style-type: none">▪ ECE 540▪ ECE 560▪ ECE 561▪ ECE 760▪ ECE 662▪ ECE 664▪ ECE 665▪ ENG M 646▪ MEC E 615○ The remaining three courses must be at the 500-level or higher in the Faculty of Engineering, or be at the 400-level or higher in a Science department. Science courses at the 400-level must be approved by the Associate Chair (Graduate). The following courses are considered to be equivalent to 500-level Engineering courses:<ul style="list-style-type: none">▪ ECE 450▪ ECE 457○ Students specializing in Materials Engineering must take MAT E 640 - Advanced Materials Thermodynamics as one of their three 600-level courses○ Reading courses will not count towards the total course requirements.○ Students may be eligible for a Department course exemption if



<p>as one of their three 600-level courses</p> <ul style="list-style-type: none"> ○ Reading courses will not count towards the total course requirements. ○ Students may be eligible for a Department course exemption if they have previously completed a recognized graduate degree program at an accredited university <ul style="list-style-type: none"> ● <u>ENGG 600</u> (★0.5) Engineering Ethics and Integrity ● <u>CME 600</u> (★2) – Introduction to Research Methods. This course must be completed in the first year in the doctoral program. 	<p>they have previously completed a recognized graduate degree program at an accredited university</p> <ul style="list-style-type: none"> ● <u>CME 600</u> (★2) – Introduction to Research Methods. This course must be completed in the first year in the doctoral program.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through <u>ENGG 600</u>.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete <u>FGSR ethics requirements</u> based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students are required to meet their Professional Development requirement through the completion of two virtual courses available through eClass.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete <u>FGSR's professional development requirement</u>, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan; 2. complete professional development requirements specific to the Faculty of Engineering: <ol style="list-style-type: none"> a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or, b. students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree



		<p>are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.</p>	
In which academic year is this change required?		2022-2023	
Department Contact		Associate Chair for Graduate Studies	
Name:		Hao Zhang	
Email:		hao.zhang@ualberta.ca	
Department Chair or Designate			
Name:		Vinay Prasad	
Date approved by Department Council:	9/23/2021	Date submitted:	9/27/2021
Consultation process and dates			
<ul style="list-style-type: none"> • Faculty of Engineering Academic lead • Program Support Team committee 			
Approval pathway and dates			
<ul style="list-style-type: none"> • Department (APC, GPC, Council) • Faculty GPC (if appropriate): October 6, 2021 • Faculty APC: October 15, 2021 • Faculty ECC: October 26, 2021 			

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CALENDAR CHANGE REQUEST FORM

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Department:	Electrical and Computer Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL: https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38418&returnto=10333</p>	
<p>The Degree of MEng in Electrical and Computer Engineering [Graduate]</p>	
Current	Proposed



<p>Program Requirements</p> <p>Students are required to complete a minimum of ★27.5 in coursework including a ★3 capstone project.</p>	<p>Program Requirements</p> <p>Students are required to complete a minimum of ★27.0 in coursework including a ★3 capstone project.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • Eight ★3 graduate-level courses which must be approved by the Associate Chair – Graduate Program • ENGG 600 (★0.5) Engineering Ethics and Integrity • Additional coursework may be required. 	<p>Coursework</p> <ul style="list-style-type: none"> • Eight ★3 graduate-level courses which must be approved by the Associate Chair – Graduate Program • Additional coursework may be required.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete FGSR's professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan; 2. complete professional development requirements specific to the Faculty of Engineering: <ol style="list-style-type: none"> a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or.



		<p>b. <u>students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.</u></p>	
<p>In which academic year is this change required? 2022-2023</p>			
Department Contact		Associate Chair Graduate Program	
Name:		Mahdi Tavakoli	
Email:		mahdi.tavakoli@ualberta.ca	
Department Chair or Designate			
Name:		Yunwei (Ryan) Li	
Date approved by Department Council:	9/21/2021	Date submitted:	9/22/2021
<p>Consultation process and dates</p> <ul style="list-style-type: none"> • Faculty of Engineering Academic lead • Program Support Team committee 			
<p>Approval pathway and dates</p> <ul style="list-style-type: none"> • Department (APC, GPC, Council) • Faculty GPC (if appropriate): October 6, 2021 • Faculty APC: October 15, 2021 • Faculty ECC: October 26, 2021 			

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Department:	Electrical and Computer Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL: https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38418&returnto=10333</p>	
<p>The Degree of MSc in Electrical and Computer Engineering [Graduate]</p>	
Current	Proposed



<p>Program Requirements</p> <p>Students are required to complete a minimum of ★15.5 in coursework and a thesis.</p>	<p>Program Requirements</p> <p>Students are required to complete a minimum of ★15.0 in coursework and a thesis.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • Five ★3 graduate-level courses which must be recommended by the thesis supervisor and approved by the Associate Chair - Graduate Program • ENGG 600 (★0.5) Engineering Ethics and Integrity • Additional coursework may be required. 	<p>Coursework</p> <ul style="list-style-type: none"> • Five ★3 graduate-level courses which must be recommended by the thesis supervisor and approved by the Associate Chair - Graduate Program • Additional coursework may be required.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete FGSR's professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan; 2. complete professional development requirements specific to the Faculty of Engineering: <ol style="list-style-type: none"> a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or,



		<p>b. <u>students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.</u></p>	
<p>In which academic year is this change required? 2022-2023</p>			
Department Contact		Associate Chair Graduate Program	
Name:		Mahdi Tavakoli	
Email:		mahdi.tavakoli@ualberta.ca	
Department Chair or Designate			
Name:		Yunwei (Ryan) Li	
Date approved by Department Council:	9/21/2021	Date submitted:	9/22/2021
<p>Consultation process and dates</p> <ul style="list-style-type: none"> • Faculty of Engineering Academic lead • Program Support Team committee 			
<p>Approval pathway and dates</p> <ul style="list-style-type: none"> • Department (APC, GPC, Council) • Faculty GPC (if appropriate): October 6, 2021 • Faculty APC: October 15, 2021 • Faculty ECC: October 26, 2021 			

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Department:	Electrical and Computer Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL: https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38418&returnto=10333</p>	
<p>The Degree of PhD in Electrical and Computer Engineering [Graduate]</p>	
Current	Proposed



<p>Program Requirements</p> <p>Students are required to complete a minimum of ★18.5 in coursework and a thesis.</p>	<p>Program Requirements</p> <p>Students are required to complete a minimum of ★18.0 in coursework and a thesis.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • Six ★3 graduate-level courses <ul style="list-style-type: none"> ○ Course requirements depend upon individual circumstances and must be approved by the Associate Chair – Graduate Program. ○ Emphasis is on research leading to a thesis of high calibre. ○ The student’s supervisory committee will recommend courses to be taken by the student to make up for course deficiencies and to support thesis research. • ENGG 600 (★0.5) Engineering Ethics and Integrity • Additional coursework may be required. 	<p>Coursework</p> <ul style="list-style-type: none"> • Six ★3 graduate-level courses <ul style="list-style-type: none"> ○ Course requirements depend upon individual circumstances and must be approved by the Associate Chair – Graduate Program. ○ Emphasis is on research leading to a thesis of high calibre. ○ The student’s supervisory committee will recommend courses to be taken by the student to make up for course deficiencies and to support thesis research. • Additional coursework may be required.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete FGSR’s professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan;

	<p>2. <u>complete professional development requirements specific to the Faculty of Engineering:</u></p> <p>a. <u>students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or,</u></p> <p>b. <u>students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.</u></p>
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In which academic year is this change required? 2022-2023			
Department Contact		Associate Chair Graduate Program	
Name:		Mahdi Tavakoli	
Email:		mahdi.tavakoli@ualberta.ca	
Department Chair or Designate			
Name:		Yunwei (Ryan) Li	
Date approved by Department Council:	9/21/2021	Date submitted:	9/22/2021
Consultation process and dates			
<ul style="list-style-type: none"> ● Faculty of Engineering Academic lead ● Program Support Team committee 			



Approval pathway and dates

- Department (APC, GPC, Council)
- Faculty GPC (if appropriate): October 6, 2021
- Faculty APC: October 15, 2021
- Faculty ECC: October 26, 2021

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CALENDAR CHANGE REQUEST FORM

Submission Deadlines:

Two weeks before APC or GPC, subject to faculty approval pathway. Program changes are subject to governance deadlines found [here](#). Full Governance (not internal to ENGG) calendar changes process are [here](#).

Department:	Mechanical Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>Change 1: The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p> <p>Change 2: To harmonize the MEng in Mechanical Engineering with MEng degrees in the other Departments in the Faculty of Engineering, it is proposed to reduce the total number of required graduate level courses from nine to eight. Eight courses comprise the course requirement in all Engineering Departments, with the exception of Mechanical Engineering. Mechanical Engineering wishes to standardize their course requirements with the other Departments in Engineering. Supporting documentation has been supplied by an Associate Chair in Electrical</p>	

Engineering that support the claim that eight courses are meeting the needs of Engineering graduate students pursuing the MEng. Changes are proposed to both the MEng in Mechanical Engineering and MEng in Engineering Management. The text below details the program changes to the MEng in Engineering Management. A separate document will be advanced through governance for the MEng in Mechanical Engineering. Department GPC voted 6:1 in favor of the proposed change. Department APC is also in favor of the proposed program change.

Current Calendar URL:

https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38544&hl=%22ENGG+600%22&returnto=search

The Degree of MEng in Engineering Management [Graduate]

Current	Proposed
<p>Program Requirements</p> <p>Students are required to complete a minimum of ★30.5 in coursework including a ★3 capstone project.</p>	<p>Program Requirements</p> <p>Students are required to complete a minimum of ★27.0 in coursework including a ★3 capstone project.</p>
<p>Coursework</p> <ul style="list-style-type: none"> ● Nine ★3 graduate-level courses which must be approved by the Graduate Coordinator <ul style="list-style-type: none"> ○ five must be in the candidate's major field (i.e., ENG M courses) ○ A maximum of three courses in any combination of MEC E 500- and MEC E 700-level courses can be credited towards the minimum course requirements ○ No reading courses can be credited towards the minimum course requirements. ● ENGG 600 (★0.5) Engineering Ethics and Integrity 	<p>Coursework</p> <ul style="list-style-type: none"> ● Eight ★3 graduate-level courses which must be approved by the Graduate Coordinator <ul style="list-style-type: none"> ○ five must be in the candidate's major field (i.e., ENG M courses) ○ A maximum of three courses in any combination of MEC E 500- and MEC E 700-level courses can be credited towards the minimum course requirements ○ No reading courses can be credited towards the minimum course requirements. ● Additional coursework may be required

<ul style="list-style-type: none"> Additional coursework may be required 	
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
<p>Professional Development Requirement</p> <p>Engineering students must meet their Professional Development requirement through the completion of two courses, registration for which is through eClass. Contact the Department for further information.</p>	<p>Professional Development Requirement</p> <p>Engineering students are required to</p> <ol style="list-style-type: none"> 1. complete FGSR's professional development requirement, which includes an individualized career plan document called an Individual Development Plan (IDP) and eight hours of professional development activities inspired by their career plan; 2. complete professional development requirements specific to the Faculty of Engineering: <ol style="list-style-type: none"> a. students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or, b. students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.
<p>In which academic year is this change required? 2022-2023</p>	



Department Contact		Associate Chair Graduate Program	
Name:		Alexandra Komrakova	
Email:		komrakov@ualberta.ca	
Department Chair or Designate			
Name:		John Doucette	
Date approved by Department Council:	9/23/20 21	Date submitted:	9/27/2021
Consultation process and dates <ul style="list-style-type: none">• Faculty of Engineering Academic lead• Program Support Team committee			
Approval pathway and dates <ul style="list-style-type: none">• Department (APC, GPC, Council)• Faculty GPC (if appropriate): October 6, 2021• Faculty APC: October 15, 2021• Faculty ECC: October 26, 2021			

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CALENDAR CHANGE REQUEST FORM

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Department:	Mechanical Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL: https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38537&hl=%22ENGG+600%22&returnto=search</p>	
<p>The Degree of MSc in Engineering Management [Graduate]</p>	



Current	Proposed
<p>Program Requirements</p> <p>Students are required to complete a minimum of ★15.5 in coursework and a thesis</p>	<p>Program Requirements</p> <p>Students are required to complete a minimum of ★15.0 in coursework and a thesis</p>
<p>Coursework</p> <ul style="list-style-type: none"> • Five ★3 graduate-level courses which must be approved by the Graduate Coordinator and/or Thesis Supervisor(s) <ul style="list-style-type: none"> ○ At least three courses must be ENG M courses ○ No reading courses can be credited towards the minimum course requirement • ENGG 600 (★0.5) – Engineering Ethics and Integrity • Additional coursework may be required. 	<p>Coursework</p> <ul style="list-style-type: none"> • Five ★3 graduate-level courses which must be approved by the Graduate Coordinator and/or Thesis Supervisor(s) <ul style="list-style-type: none"> ○ At least three courses must be ENG M courses ○ No reading courses can be credited towards the minimum course requirement • Additional coursework may be required.
<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENGG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
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		<p>a. <u>students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or,</u></p> <p>b. <u>students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.</u></p>	
<p>In which academic year is this change required? 2022-2023</p>			
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Department:	Mechanical Engineering
Change Request:	Course Change
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<p>Current Calendar URL:</p> <p>https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38549&hl=%22ENGG+600%22&returnto=search</p>	
<p>The Degree of PhD in Engineering Management [Graduate]</p>	



Current	Proposed
<p>Program Requirements</p> <p>Students entering the PhD program after a master's degree are required to complete a minimum of ★12.5 in coursework and a thesis.</p> <p>Students entering the PhD program after a bachelor's degree are required to complete a minimum of ★27.5 in coursework and a thesis.</p>	<p>Program Requirements</p> <p>Students entering the PhD program after a master's degree are required to complete a minimum of ★12.0 in coursework and a thesis.</p> <p>Students entering the PhD program after a bachelor's degree are required to complete a minimum of ★27.0 in coursework and a thesis.</p>
<p>Coursework</p> <ul style="list-style-type: none"> ● For students entering after a master's degree: <ul style="list-style-type: none"> ○ four ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee. At least two courses must be in the major field (i.e., ENG M courses). <ul style="list-style-type: none"> ▪ No reading courses can be credited towards the minimum course requirement ● For students entering after a bachelor's degree: <ul style="list-style-type: none"> ○ nine ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee. At least five courses must be in the major field (i.e., ENG M courses). <ul style="list-style-type: none"> ▪ In exceptional cases students may petition the Graduate Coordinator to 	<p>Coursework</p> <ul style="list-style-type: none"> ● For students entering after a master's degree: <ul style="list-style-type: none"> ○ four ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee. At least two courses must be in the major field (i.e., ENG M courses). <ul style="list-style-type: none"> ▪ No reading courses can be credited towards the minimum course requirement ● For students entering after a bachelor's degree: <ul style="list-style-type: none"> ○ nine ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee. At least five courses must be in the major field (i.e., ENG M courses). <ul style="list-style-type: none"> ▪ In exceptional cases students may petition the Graduate Coordinator to reduce the course requirements ▪ No reading courses can be credited towards the minimum course requirement ● Additional coursework may be required



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<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through ENG 600 and the FGSR Graduate Ethics Training (GET) course.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete FGSR ethics requirements based on their programs.</p>
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		These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.	
In which academic year is this change required? 2022-2023			
Department Contact		Associate Chair Graduate Program	
Name:		Alexandra Komrakova	
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Department Chair or Designate			
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Department:	Mechanical Engineering
Change Request:	Course Change
<p>Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?</p> <p>The change of Ethics and Professional Development requirements is initiated due to the introduction of two new courses by the FGSR. “Beginning in Fall 2022, the NEW Ethics and Academic Citizenship Requirement will replace the current Academic Integrity and Ethics Training Requirement. The new Ethics and Academic Citizenship Requirement will consist of two zero-credit, self-paced online courses: INT D 710: Ethics and Academic Citizenship (for both master’s and doctoral students) and INT D 720: Advanced Ethics and Academic Citizenship (for doctoral students). There are no instructional fees associated with these courses”. (source)</p> <p>The FGSR Graduate Ethics Training (GET) course which was part of ENGG 600 will no longer be offered and will be replaced with INT D 710. To maintain a reasonable workload for students, the Faculty of Engineering decided to discontinue offering the ENGG 600 course. Instead, the students will be required to complete 4 hours of engineering professional development specific to engineering ethics. To fulfill this requirement, the students will have to complete an ENGG Grad PD 01 course available on eClass.</p> <p>Consultations:</p> <p>Faculty of Engineering</p> <p>Associate Chairs Graduate Program</p> <p>Department GPC</p> <p>Department APC</p>	
<p>Current Calendar URL:</p> <p>https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38533&hl=%22ENGG+600%22&returnto=search</p>	
<p>The Degree of MSc in Mechanical Engineering [Graduate]</p>	



Current	Proposed
<p>Program Requirements</p> <p>Students are required to complete a minimum of ★15.5 in coursework and a thesis.</p>	<p>Program Requirements</p> <p>Students are required to complete a minimum of ★15.0 in coursework and a thesis.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • Five ★3 graduate-level courses which must be approved by the Graduate Coordinator and/or Thesis Supervisor(s) <ul style="list-style-type: none"> ○ One course must be in a foundational area of mechanical engineering chosen from the following: <ul style="list-style-type: none"> ▪ MEC E 615 ▪ MEC E 620 ▪ MEC E 630 ▪ MEC E 639 ▪ MEC E 640 ▪ MEC E 650 ▪ MEC E 663 ▪ MEC E 671 ▪ MEC E 673 ▪ MEC E 680 ▪ MEC E 681 ▪ MEC E 683 ▪ MEC E 690 ○ A maximum of one MEC E 700-level course and one MEC E 500-level course, OR a maximum of two MEC E 700-level courses and no MEC E 500-level courses can be credited towards the minimum course requirements ○ No reading courses can be credited towards the minimum course requirement • ENGG 600 (★0.5) Engineering Ethics and Integrity • Additional coursework may be required 	<p>Coursework</p> <ul style="list-style-type: none"> • Five ★3 graduate-level courses which must be approved by the Graduate Coordinator and/or Thesis Supervisor(s) <ul style="list-style-type: none"> ○ One course must be in a foundational area of mechanical engineering chosen from the following: <ul style="list-style-type: none"> ▪ MEC E 615 ▪ MEC E 620 ▪ MEC E 630 ▪ MEC E 639 ▪ MEC E 640 ▪ MEC E 650 ▪ MEC E 663 ▪ MEC E 671 ▪ MEC E 673 ▪ MEC E 680 ▪ MEC E 681 ▪ MEC E 683 ▪ MEC E 690 ○ A maximum of one MEC E 700-level course and one MEC E 500-level course, OR a maximum of two MEC E 700-level courses and no MEC E 500-level courses can be credited towards the minimum course requirements ○ No reading courses can be credited towards the minimum course requirement • Additional coursework may be required



<p>Ethics Requirement</p> <p>Engineering students meet their ethics requirement through <u>ENGG 600</u> and the Graduate Ethics Training (GET) course offered by FGSR.</p>	<p>Ethics Requirement</p> <p>Engineering students must complete <u>FGSR ethics requirements</u> based on their programs.</p>
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<p>In which academic year is this change required? 2022-2023</p>	
<p>Department Contact</p>	<p>Associate Chair Graduate Program</p>



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Department:	Mechanical Engineering
Change Request:	Course Change

Why is this change being proposed and who was consulted (include dates of faculty and PST reviews below)?

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Consultations:

Faculty of Engineering

Associate Chairs Graduate Program

Department GPC

Department APC

Current Calendar URL:

https://calendar.ualberta.ca/preview_program.php?catoid=34&poid=38546&hl=%22ENGG+600%22&returnto=search

The Degree of PhD in Mechanical Engineering [Graduate]



Current	Proposed
<p>Program Requirements</p> <p>Students entering the PhD program after a master's degree are required to complete a minimum of ★12.5 in coursework and a thesis.</p> <p>Students entering the PhD program after a bachelor's degree are required to complete a minimum of ★27.5 in coursework and a thesis.</p>	<p>Program Requirements</p> <p>Students entering the PhD program after a master's degree are required to complete a minimum of ★12.0 in coursework and a thesis.</p> <p>Students entering the PhD program after a bachelor's degree are required to complete a minimum of ★27.0 in coursework and a thesis.</p>
<p>Coursework</p> <ul style="list-style-type: none"> • MEC E 680 • For students entering after a master's degree: <ul style="list-style-type: none"> ○ three ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee. At least two courses must be in the major field (i.e., MEC E courses). <ul style="list-style-type: none"> ▪ A maximum of one MEC E 700- level course and no 500-level Mechanical Engineering courses can be credited towards the minimum course requirements ▪ No reading courses can be credited towards the minimum course requirement • For students entering after a bachelor's degree: <ul style="list-style-type: none"> ○ Eight ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis 	<p>Coursework</p> <ul style="list-style-type: none"> • MEC E 680 • For students entering after a master's degree: <ul style="list-style-type: none"> ○ three ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee. At least two courses must be in the major field (i.e., MEC E courses). <ul style="list-style-type: none"> ▪ A maximum of one MEC E 700- level course and no 500-level Mechanical Engineering courses can be credited towards the minimum course requirements ▪ No reading courses can be credited towards the minimum course requirement • For students entering after a bachelor's degree: <ul style="list-style-type: none"> ○ Eight ★3 graduate-level courses which must be approved by the Graduate Coordinator, Thesis Supervisor(s) and/or Thesis Supervisory Committee. At least five courses must be in the major field (i.e., MEC E courses) <ul style="list-style-type: none"> ▪ A maximum of two MEC E 700- level and one MEC E



<p>Supervisor(s) and/or Thesis Supervisory Committee. At least five courses must be in the major field (i.e., MEC E courses)</p> <ul style="list-style-type: none"> ▪ A maximum of two MEC E 700- level and one MEC E 500-level courses, OR a maximum of three MEC E 700-level and no MEC E 500-level courses can be credited toward the minimum course requirements ▪ In exceptional cases students may petition the Graduate Coordinator to reduce the course requirements ▪ No reading courses can be credited towards the minimum course requirement <ul style="list-style-type: none"> • ENGG 600 (★0.5) Engineering Ethics and Integrity • Additional coursework may be required 	<p>500-level courses, OR a maximum of three MEC E 700-level and no MEC E 500-level courses can be credited toward the minimum course requirements</p> <ul style="list-style-type: none"> ▪ In exceptional cases students may petition the Graduate Coordinator to reduce the course requirements ▪ No reading courses can be credited towards the minimum course requirement <ul style="list-style-type: none"> • Additional coursework may be required
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	<p>2. <u>complete professional development requirements specific to the Faculty of Engineering:</u></p> <p>a. <u>students doing their first graduate degree in the Faculty of Engineering at the University of Alberta are required to complete an ENGG Grad PD 01 module; or,</u></p> <p>b. <u>students doing their subsequent graduate degree in the Faculty of Engineering at the University of Alberta who have completed ENGG 600 and/or ENGG Grad PD 01 in a previous graduate degree are required to complete four hours of professional development in the areas of communication, networking, EDI, university teaching, and career development. These hours must be included in the student's IDP and approved by their supervisor/advisor and the department graduate coordinator.</u></p>
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In which academic year is this change required? 2022-2023

Department Contact	Associate Chair Graduate Program
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Name:	Alexandra Komrakova
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Email:	komrakov@ualberta.ca
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Department Chair or Designate	
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Name:	John Doucette
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Date approved by Department Council:	9/23/2021	Date submitted:	9/27/2021
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Consultation process and dates

- Faculty of Engineering Academic lead
- Program Support Team committee

Approval pathway and dates

- Department (APC, GPC, Council)
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Faculty of Medicine & Dentistry
 Proposed University Calendar Changes for 2022/2023
****For Consideration of Early Implementation – Spring 2022**

CURRENT	PROPOSED
NEW COURSE	<p>PHYSL 512 – Physiology in History & Popular Culture *3 (fi 6) (Spring term, 3-0-0) Key historical scientific/medical discoveries as well as modern socio-cultural phenomena serve as a catalyst for discussion of fundamental concepts in Physiology spanning all body systems. Historical case presentation contrasts ideological, technological and scientific approaches with modern views and advances. Popular culture references initiate in-depth investigation of the physiological basis of modern social phenomena. Highlighted case presentations facilitate application of physiology knowledge through discovery learning approaches to study historical foundations and modern marvels by evoking vivid imagery, curiosity and relatability. Suitable for preparation for careers in medicine, biomedical research and health-related fields; relevant for fields involving knowledge dissemination such as public health promotion and education. Prerequisites: PHYSL 212 and 214 (or 210) or equivalent and consent of Department. Note: This course may not be taken for credit if credit has already been obtained in PHYSL 412.</p>

Rationale:

A gap in the practical application of core integrative physiology concepts has emerged in recent decades due to emphasis on other integration levels in physiology such as cellular and molecular biology.

As a result, students face significant challenges in understanding the relevance of physiology concepts in “real world” situations and are not adequately prepared to apply physiological knowledge to the understanding of health-related phenomena they encounter in daily life, in the media and in popular culture. With advancing technology and the rapid expansion of scientific knowledge, an appreciation of the historical roots of well-established concepts and experimental/clinical techniques is also at risk of being lost. This would be to the detriment of physiology education because we undoubtedly have a better understanding of present knowledge and gaps to be addressed in the future if we understand the historical background.

This course aims to address this gap in physiology education by facilitating an intellectual link between “real-world” phenomena, fundamental physiology concepts and the underlying history of related themes, concepts and experimental/clinical techniques.

Throughout presentation of course material, a solid comprehension of physiology and pathophysiology will be emphasized and harnessed to derive correct conclusions drawn from case presentations. Students will be guided in an understanding of the underlying integrative physiology concepts.

This course is designed to be complementary to the existing Physiology curriculum at the University of Alberta. Historical and contemporary case presentations and discussion of physiology concepts are intended to reinforce and extend concepts presented in 300 and 400- level physiology courses. Incorporation of historical literature and pop culture phenomena in the context of traditionally presented physiology concepts will engage students and enhance retention of course material. The problem-based learning approach featuring “real-world” scenarios aims to improve knowledge consolidation and ability of students to apply physiological principles.

Approved/Reviewed by:

FoMD Faculty Learning Committee (Faculty Council Delegated Approver): September 29, 2021

FoMD Faculty Council (Review): October 13, 2021

Faculté Saint-Jean
CALENDAR CHANGE REQUEST
Calendar 2022-2023

CURRENT	PROPOSED
<p>CEDUL 501 L'administration de l'éducation * 3 (fi 6) (l'un ou l'autre semestre, 3-0-0) Étude approfondie de concepts d'administration. Les rôles du gestionnaire de l'éducation. Gestion des ressources humaines et financières en éducation. Examen des problèmes en milieu d'éducation et analyse de solutions administratives pertinentes.</p>	<p>CEDUL 501 L'administration de l'éducation * 3 (fi 6) (l'un ou l'autre semestre, 3-0-0) Étude approfondie des concepts liés au leadership scolaire. Le cours se base sur les principes et les pratiques du leadership scolaire et sur l'application des théories et des pratiques au milieu de l'éducation en Alberta. L'étude de la norme de qualité pour le leadership scolaire en tant que cadre pour le développement des relations interpersonnelles, de l'esprit d'équipe, de la résolution de conflit, à gérer un budget et à intégrer les perspectives autochtones permettront aux participants de se préparer pour le rôle de leader scolaire. Note: Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour MEDU 560.</p>
<p>M EDU 560 - L'administration de l'éducation ★ 3 (fi 6) (l'un ou l'autre semestre, 3-0-0) Étude approfondie de concepts d'administration. Les rôles du gestionnaire de l'éducation. Gestion des ressources humaines et financières en éducation. Examen des problèmes en milieu d'éducation et analyse de solutions administratives pertinentes. Peut comprendre des sections Alternative Delivery veuillez consulter le Fees Payment Guide dans la section University Regulations and Information for Students de l'annuaire.</p>	<p>M EDU 560 - L'administration de l'éducation ★ 3 (fi 6) (l'un ou l'autre semestre, 3-0-0) Étude approfondie des concepts liés au leadership scolaire. Le cours se base sur les principes et les pratiques du leadership scolaire et sur l'application des théories et des pratiques au milieu de l'éducation en Alberta. L'étude de la norme de qualité pour le leadership scolaire en tant que cadre pour le développement des relations interpersonnelles, de l'esprit d'équipe, de la résolution de conflit, à gérer un budget et à intégrer les perspectives autochtones permettront aux participants de se préparer pour le rôle de leader scolaire. Note: Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour CEDUL 501.</p>
<p>CEDUL 505 Leadership et norme de qualité professionnelle</p>	<p>CEDUL 505 Leadership et norme de qualité professionnelle</p>

<p>*3 (fi 6) (l'un ou l'autre semestre, 3-0-0). Étude approfondie de concepts d'administration dans les directions des conseils scolaires. Application des normes de qualité professionnelles dans la gestion des directions scolaires. Critique et analyses des problèmes en milieu d'éducation et analyse de solutions administratives pertinentes.</p>	<p>*3 (fi 6) (l'un ou l'autre semestre, 3-0-0). Étude approfondie du concept d'administration. <u>Les rôles du gestionnaire de l'éducation seront abordés en lien avec la gestion des ressources humaines et financières. Examen des</u> problèmes de gestion en milieu d'éducation et analyse de solutions administratives pertinentes. <u>Note: Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour MEDU 563.</u></p>
<p>NEW</p>	<p><u>M EDU 563 Leadership et norme de qualité professionnelle</u> *3 (fi 6) (l'un ou l'autre semestre, 3-0-0). Étude approfondie du concept d'administration. <u>Les rôles du gestionnaire de l'éducation seront abordés en lien avec la gestion des ressources humaines et financières. Examen des problèmes de gestion en milieu d'éducation et analyse de solutions administratives pertinentes.</u> <u>Note: Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour CEDUL 505.</u></p>

Submitted by: Dr. S. ElAtia

Date: October 19, 2021

Approved by: Faculté Saint-Jean Council Committee

Date: October 15, 2021

Current	Proposed
New Course	<p>MATH 514 - Measure Theory I</p> <p>★ 3 (fi 6) (either term, 3-0-0) Brief review of set operations and countable sets. Measure theory, integration theory, Lebesgue measure and integrals on \mathbb{R}^n, product measure, Tonelli-Fubini theorem. Functions of bounded variation, absolutely continuous functions. Prerequisites : Math 317.</p>

Rationale: Graduate level core course cross-listed with MATH 417.

- approved by the Department Council of Mathematical & Statistical Sciences on October 5, 2021
- approved by the Science Associate Dean Graduate and the Science Associate Chairs Graduate on October 21, 2021 under delegated authority of the Science Faculty Council

Current	Proposed
<p>MATH 543 - Measure Theory</p> <p>★ 3 (fi 6) (either term, 3-0-0) Review of basic measure and integration theory. Signed and complex measures. Hahn and Jordan decompositions. The Radon-Nikodym theorem. Lebesgue decomposition. The Lebesgue-Stieltjes</p>	<p>MATH 543 - Measure Theory II</p> <p>★ 3 (fi 6) (either term, 3-0-0) Review of basic measure and integration theory. Signed and complex measures. Hahn and Jordan decompositions. The Radon-Nikodym theorem. Lebesgue decomposition. The Lebesgue-Stieltjes</p>

<p>integral. Measure theory over locally compact Hausdorff spaces, in particular, Riesz' representation theorem and Haar measures. Hausdorff measure. Introduction to martingales. Prerequisite: MATH 417 and MATH 447 or equivalent.</p>	<p>integral. Measure theory over locally compact Hausdorff spaces, in particular, Riesz' representation theorem and Haar measures. Hausdorff measure. Introduction to martingales. Prerequisite: One of MATH 417 or MATH 514 and MATH 447 or equivalent.</p>
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Rationale: Renaming of MATH 543 to take into account the introduction of MATH 514.

**Department of Mathematical & Statistical Sciences
Suggested Changes to the University Calendar (Graduate Programs)**

October 5, 2021

- approved by the Department Council of Mathematical & Statistical Sciences on October 5, 2021
- approved by the Science Associate Dean Graduate and the Science Associate Chairs Graduate on October 21, 2021 under delegated authority of the Science Faculty Council

Current	Proposed
<p>General Information</p> <p>The Department of Mathematical and Statistical Sciences offers graduate programs leading to the degree of Master of Science and Doctor of Philosophy in Mathematics, Applied Mathematics, Mathematical Finance, Mathematical Physics, Statistics, Biostatistics, Data Science, Statistical Machine Learning, and Modelling, Data, and Predictions.</p> <p>Currently there is no course-based MSc program in Statistical Machine Learning, no thesis-based MSc or PhD programs in Modelling, Data, and Predictions, and no PhD program in Biostatistics.</p> <p>Prospective graduate students should consult the Department about facilities available and the background required for the field in which they are interested.</p> <p>The Regulations and Guidelines for Graduate Programs in the Department of Mathematical and Statistical Sciences (referred to in the following as the "MSS Regulations and Guidelines") provide detailed information about the graduate programs offered at the Department.</p>	<p>General Information</p> <p>The Department of Mathematical and Statistical Sciences offers graduate programs leading to the degree of Master of Science and Doctor of Philosophy in Mathematics, Applied Mathematics, Mathematical Finance, Mathematical Physics, Statistics, Biostatistics, Data Science, Statistical Machine Learning, and Modelling, Data, and Predictions.</p> <p>Currently there is no course-based MSc program in Statistical Machine Learning, no thesis-based MSc or PhD programs in Modelling, Data, and Predictions, and no PhD program in Biostatistics.</p> <p>Prospective graduate students should consult the Department about facilities available and the background required for the field in which they are interested.</p>
<p>Financial Information</p> <p>For most students in a thesis-based program, the Department provides funding through graduate teaching and research assistantships, as well as scholarships and awards, subject to conditions and limitations set by the Faculty of Science and the MSS Regulations and Guidelines. Detailed funding information will be included in the Departmental Offer Letter, if applicable.</p>	<p>Financial Information</p> <p>For most students in a thesis-based program, the Department provides funding through graduate teaching and research assistantships, as well as scholarships and awards, subject to conditions and limitations set by the Faculty of Science and the Department. Detailed funding information will be included in the Departmental Offer Letter, if applicable.</p>

Department of Mathematical & Statistical Sciences
Suggested Changes to the University Calendar (Graduate Programs)
October 5, 2021

<p>The Degree of PhD with a specialization in Mathematics (Mathematical and Statistical Sciences) [Graduate]</p> <p>...</p> <p>Optional courses</p> <ul style="list-style-type: none">• All coursework must be chosen in consultation with the supervisor• Graduate courses offered by the School of Business may be used as deemed appropriate• All coursework to be counted towards the program requirements must be approved by the Associate Chair (Graduate Studies).• Additional coursework may be required.	<p>The Degree of PhD with a specialization in Mathematics (Mathematical and Statistical Sciences) [Graduate]</p> <p>...</p> <p>Optional courses</p> <ul style="list-style-type: none">• All coursework must be chosen in consultation with the supervisor• All coursework to be counted towards the program requirements must be approved by the Associate Chair (Graduate Studies).• Additional coursework may be required.
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Rationale:

1. It is suggested to get rid of the "[Regulations and Guidelines for Graduate Programs in MSS](#)" and adjust the entry in the [University Calendar](#). The reasons are as follows:
 - All the important regulations are stated in the University Calendar.
 - Consequently, the Regulations and Guidelines for Graduate Programs in MSS duplicate many other regulations and it is difficult to keep them up-to-date.
 - Differences between the University Calendar and the Regulations and Guidelines for Graduate Programs in MSS are an often source of confusion.
 - To provide a more user-friendly experience compared to the Regulations and Guidelines for Graduate Programs in MSS, a new version of the Graduate Intranet has been introduced.
2. The sentence "Graduate courses offered by the School of Business may be used as deemed appropriate" does not seem to make sense in the entry of the PhD program in (pure) mathematics. Presumably, this sentence resulted from copying the information on the PhD program in mathematical finance, where it makes sense. To avoid confusion, it is suggested to remove the sentence in the entry of the PhD program in (pure) mathematics.

Department of Mathematical & Statistical Sciences

Suggested Change to Section 2.10 (MSc in Mathematical Finance) of the Graduate Guidelines

May 11, 2021

- approved by the Department Council of Mathematical & Statistical Sciences on May 11, 2021

- approved by the Science Associate Dean Graduate and the Science Associate Chairs Graduate on October 21, 2021 under delegated authority of the Science Faculty Council

Current	Proposed
<p>Section 2.10 (MSc in Mathematical Finance) of the Graduate Guidelines</p> <p>If available, Math Finance MSc Graduate Students are required to take</p> <ul style="list-style-type: none"> • MATH 505 Stochastic Analysis I • MATH 508 Computational Finance • MATH 510 Stochastic Analysis II • MATH 515 Mathematical Finance I • MATH 520 Mathematical Finance II • FIN 501 Managerial Finance or, both, FIN 502 and FIN 503 <p>It is recommended that Students take also</p> <ul style="list-style-type: none"> • FIN 654 Risk Management 	<p>Section 2.10 (MSc in Mathematical Finance) of the Graduate Guidelines</p> <p>If available, Math Finance MSc Graduate Students are required to take</p> <ul style="list-style-type: none"> • MATH 505 Stochastic Analysis I • MATH 508 Computational Finance • MATH 510 Stochastic Analysis II • MATH 515 Mathematical Finance I • MATH 520 Mathematical Finance II • FIN 501 Managerial Finance or a 600-level FIN course; it is recommended that Students take FIN 654 Risk Management
<p>University Calendar</p> <p>The Degree of MSc with a specialization in Mathematical Finance</p> <p>Thesis-based MSc Coursework (★18)</p> <ul style="list-style-type: none"> • MATH 505 • MATH 508 • MATH 510 • MATH 515 • MATH 520 • FIN 501 OR FIN 502 AND FIN 503 	<p>University Calendar</p> <p>The Degree of MSc with a specialization in Mathematical Finance</p> <p>Thesis-based MSc Coursework (★18)</p> <ul style="list-style-type: none"> • MATH 505 • MATH 508 • MATH 510 • MATH 515 • MATH 520 • FIN 501 OR a 600-level FIN course (FIN 654 recommended)
<p>University Calendar</p> <p>The Degree of MSc with a specialization in Mathematical Finance</p> <p>Course-based MSc Coursework (★24)</p> <ul style="list-style-type: none"> • MATH 505 • MATH 508 • MATH 510 	<p>University Calendar</p> <p>The Degree of MSc with a specialization in Mathematical Finance</p> <p>Course-based MSc Coursework (★24)</p> <ul style="list-style-type: none"> • MATH 505 • MATH 508 • MATH 510

Department of Mathematical & Statistical Sciences
Suggested Change to Section 2.10 (MSc in Mathematical Finance) of the Graduate Guidelines
May 11, 2021

<ul style="list-style-type: none">• MATH 515• MATH 520• FIN 501 OR FIN 502 AND FIN 503 • Two additional ★3 approved graduate-level courses chosen in consultation with the advisor.	<ul style="list-style-type: none">• MATH 515• MATH 520• FIN 501 OR a 600-level FIN course (FIN 654 recommended) • Two additional ★3 approved graduate-level courses chosen in consultation with the advisor.
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Rationale:

1. FIN 502 and FIN 503 are no longer offered.
2. It makes sense to allow Mathematical Finance MSc Students to take directly a more advanced FIN course, rather than FIN 501, for the following reasons:
 - Many students entering the MSc Mathematical Finance program have already taken courses that cover most of the material of FIN 501.
 - The tuition for FIN courses and other Business courses is planned to be increased significantly (<https://www.ualberta.ca/business/programs/tuition-increases.html>).
 - On a case-by-case basis, the School of Business waives the FIN 501 prerequisite of 600-level FIN courses for Mathematical Finance MSc Students.
3. The recommendation that Mathematical Finance MSc Students take FIN 654 is unchanged. FIN 654 is not required because:
 - Depending on their background, some students may still first need to take FIN 501, and there should not be more than 6 required courses for the MSc program.
 - FIN 654 is offered only in either fall or winter term; a requirement of FIN 654, along with the 5 other required courses, could lead to a 2-4 or 4-2 course load for first-year Mathematical Finance MSc Students.

- approved by the Department Council of Mathematical & Statistical Sciences on May 11, 2021
 - approved by the Science Associate Dean Graduate and the Science Associate Chairs Graduate on October 21, 2021 under delegated authority of the Science Faculty Council

Current	Proposed
<p>The Degree of PhD with a specialization in Mathematics Program requirements</p> <p>...</p> <p>Students entering the program with no MSc or with an MSc from this Department must complete a minimum of ★32 in coursework, including a ★2 colloquium requirement, and a thesis. Courses taken during the MSc in this department may be included in this total.</p> <p>Students entering the program with an MSc from outside the Department must complete a minimum of ★20 in coursework, including a ★2 colloquium requirement, and a thesis.</p> <p>Core Courses (★12) Core courses must be completed in the Entrance Year of the doctoral program</p> <p>At least one of:</p> <ul style="list-style-type: none"> ● MATH 581 ● MATH 582 <p>At least one of</p> <ul style="list-style-type: none"> ● MATH 516 ● MATH 542 <p>At least two of the following if required:</p> <ul style="list-style-type: none"> ● MATH 506 ● MATH 521 ● MATH 530 ● MATH 524 ● MATH 527 	<p>The Degree of PhD with a specialization in Mathematics Program requirements</p> <p>...</p> <p>Students entering the program with no MSc or with an MSc from this Department must complete a minimum of ★32 in coursework, including a ★2 colloquium requirement, and a thesis. Courses taken during the MSc in this department may be included in this total.</p> <p>Students entering the program with an MSc from outside the Department must complete a minimum of ★20 in coursework, including a ★2 colloquium requirement, and a thesis.</p> <p>Core Courses (★12) Core courses must be completed in the Entrance Year of the doctoral program</p> <p>At least one of:</p> <ul style="list-style-type: none"> ● MATH 581 ● MATH 582 <p>At least one of</p> <ul style="list-style-type: none"> ● MATH 514 ● MATH 516 ● MATH 542 <p>At least two of the following if required:</p> <ul style="list-style-type: none"> ● MATH 506 ● MATH 521 ● MATH 530 ● MATH 524 ● MATH 527

FINAL Item No. 5

**Governance Executive Summary
Action Item**

Agenda Title	Items Deemed Minor/Editorial A. Proposed Changes to Entrance Requirements for Graduate Programs in Laboratory Medicine and Pathology B. Proposed Changes to Admission and Program Requirements for Graduate Programs in Neuroscience C. Proposed Changes to Clinical Requirements for Graduate Programs in Nursing
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Item

Action Requested	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Recommendation
Proposed by	Brooke Milne, Vice-Provost and Dean, FGSR Brenda Hemmelgarn, Dean, Faculty of Medicine and Dentistry Diane Kunyk, Acting Dean, Faculty of Nursing
Presenter(s)	Janice Causgrove Dunn, Vice-Provost (Programs) and Chair, GFC PC

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is <i>(please be specific)</i>	See individual item for detail on proposed changes submitted by Faculties and the Office of the Registrar.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	The Office of the Provost and Vice-President (Academic) has determined that the proposed changes are routine or editorial in nature. PC's Terms of Reference provide that "‘Routine and/or Editorial’ - refers to proposals which do not involve or affect other Faculties or units and do not form part of a proposal for a new program. Editorial or routine changes include any and all changes to the wording of faculty or program specific admissions or academic standing regulations."
Supplementary Notes and context	<This section is for use by University Governance only to outline governance process.>

Engagement and Routing

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u>Those who are actively participating:</u></p> <ul style="list-style-type: none"> • Vice-Provost (Programs) and Chair, GFC Programs Committee • Faculty Councils • Representatives of the Office of the Registrar
Approval Route (Governance)	See individual item for Faculty approval information

Item No. 5

(including meeting dates)	GFC PC December 9, 2021
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Strategic Alignment

Alignment with <i>For the Public Good</i>	Objective 21	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	<input checked="" type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success
Legislative Compliance and jurisdiction	<i>Post-Secondary Learning Act (PSLA)</i> UAPPOL Admissions Policy GFC Programs Committee (PC) Terms of Reference	

Attachments

- A. Lab Med Path Grad Admissions
- B. Neuro Grad Admissions and Program
- C. Nursing Grad NP Clinical Requirements

Prepared by: Heather Richholt, Assistant Secretary to GFC, heather.richholt@ualberta.ca

**Proposed Changes
2022/23 Calendar
Department of Laboratory Medicine & Pathology**

<p>Laboratory Medicine and Pathology [Graduate]</p> <p>Entrance Requirements</p> <p>For MSc (course based) with specialization in Pathologists' Assistant</p> <p>The Department's minimum admission requirements are a baccalaureate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.</p> <p>Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:</p> <ul style="list-style-type: none"> ● internet-based TOEFL score of 95 with at least 21 per section; or ● IELTS (Academic) score of 7.0 with at least 6 on each band; or ● PTE (Academic) score of 65 with a minimum band score of 60; or ● CAEL score of 70 with at least 70 on each subtest. <p>Applicants must have the following prerequisites: Microbiology (★3), Biology (★6), Physiology (★3), Biochemistry (★6), Human Anatomy (★3), Mathematics (★3), English (★6) and a course in Medical Terminology. It is to the applicant's advantage to have completed all prerequisite courses within the last 10 years.</p> <p>...</p>	<p>Laboratory Medicine and Pathology [Graduate]</p> <p>Entrance Requirements</p> <p>For MSc (course based) with specialization in Pathologists' Assistant</p> <p>The Department's minimum admission requirements are a baccalaureate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.</p> <p><u>Due to competitive selection process, limited uptake capabilities in the competency-based practicum rotation through the clinical sites and high Canadian health-care system needs, admission preference will be given to Canadian citizens or Permanent Residents of Canada.</u></p> <p>Where applicable, applicants must provide proof of English Language Proficiency (refer to English Language Requirement). Any one of the following is acceptable:</p> <ul style="list-style-type: none"> ● internet-based TOEFL score of 95 with at least 21 per section; or ● IELTS (Academic) score of 7.0 with at least 6 on each band; or ● PTE (Academic) score of 65 with a minimum band score of 60; or ● CAEL score of 70 with at least 70 on each subtest. <p>Applicants must have the following prerequisites: Microbiology (★3), Biology (★6), Physiology (★3), Biochemistry (★6), Human Anatomy (★3), Mathematics (★3), English (★6) <u>at the university level</u>, and a course in Medical Terminology. It is to the applicant's advantage to have completed all prerequisite courses within the last 10 years.</p> <p>...</p>
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Rationale:

- One aim of the program to train Pathologists' Assistants who will go on to fill much-needed positions within the Canadian medical system. Giving admission preference to Canadian or Permanent residents of Canada would assist in fulfilling this aim, whereas International students may instead choose to return to their home country.
- Clarification that course prerequisites for all applicants must be at the university level (with the exception of Medical Terminology).

Approved by the Laboratory Medicine and Pathology Graduate Studies Committee June 28, 2021.

Approved by Faculty Learning Committee (FLC), Faculty Council delegated approver – October 8, 2021

Approve by FGSR Council November 24, 2021

Faculty of Medicine & Dentistry

2022-2023 University of Alberta Proposed Calendar Neuroscience Graduate Program Changes:

CURRENT	PROPOSED
<p>Graduate Programs</p> <p>Neuroscience [Graduate] Neuroscience and Mental Health Institute 2-132 Li Ka Shing Centre for Health Research Innovation University of Alberta Edmonton, Alberta T6G 2H5 E-mail: nmhi@ualberta.ca</p> <p>General Information</p> <p>The Neuroscience and Mental Health Institute at the University of Alberta is a group of more than 150 neuroscientists from approximately 27 departments across eight Faculties and two Schools. The Institute offers a graduate program that is designed for students who desire a broad training in various experimental and theoretical aspects of neuroscience while maintaining a research program that may be more specialized. This can be achieved by drawing on the expertise of specialists (members of the Institute) from various departments throughout the University who have research interests in neuroscience. The graduate program in Neuroscience offers both degrees of PhD and MSc through thesis research. Applicants not having a MSc degree will initially be admitted to the MSc program for the first year, after which they may transfer to the PhD program, provided their thesis proposal has been accepted and appropriate courses passed.</p> <p>Entrance Requirements</p> <p>Applicants are expected to have graduated with a four-year undergraduate degree. The minimum grade-point average for students having a degree from the University of Alberta is 3.3, while applicants from other institutions are expected to have equivalent qualifications. Students already possessing a master's degree will be considered for the PhD program provided they meet the minimum requirements for the MSc degree in Neuroscience.</p>	<p>Graduate Programs</p> <p>Neuroscience [Graduate] Neuroscience and Mental Health Institute 2-132 Li Ka Shing Centre for Health Research Innovation University of Alberta Edmonton, Alberta T6G 2H5 E-mail: nmhi@ualberta.ca</p> <p>General Information</p> <p>The Neuroscience and Mental Health Institute at the University of Alberta is a group of more than 150 neuroscientists from approximately 27 departments across eight Faculties and two Schools. The Institute offers a graduate program that is designed for students who desire a broad training in various experimental and theoretical aspects of neuroscience while maintaining a research program that may be more specialized. This can be achieved by drawing on the expertise of specialists (members of the Institute) from various departments throughout the University who have research interests in neuroscience. The graduate program in Neuroscience offers both degrees of PhD and MSc through thesis research. Applicants not having a MSc degree will initially be admitted to the MSc program for the first year, after which they may transfer to the PhD program, provided their thesis proposal has been accepted and appropriate courses passed</p> <p>Entrance Requirements</p> <p>Applicants are expected to have graduated with a four-year undergraduate degree. The minimum grade-point average for students having a degree from the University of Alberta is 3.3, while applicants from other institutions are expected to have equivalent qualifications. Students already possessing a master's degree will be considered for the PhD program provided they meet the minimum requirements for the MSc degree in Neuroscience.</p>

<p>Applicants whose first language is not English must obtain a score of at least 600 (paper-based) or 100 (Internet-based) on the TOEFL examination with at least a score of 20 on each of the individual skill areas or equivalent scores on other language proficiency tests approved by the Faculty of Graduate Studies and Research (see English Language Requirement). Applicants will be expected to arrange for three letters of academic reference for admission evaluation. Applicants must also submit a current and accurate curriculum vitae, along with a personal statement of interests.</p> <p>Together with the above, successful acceptance is ultimately dependent upon an applicant obtaining a supervisory agreement with one of our faculty member mentors, that would include stipend support. Without a supervisory relationship identified, applications will not be successful.</p> <p>Applicants who do not have a sufficient Neuroscience background may be required to take such courses as necessary to ensure said background that will be considered extra-to-degree.</p> <p>Applicants wishing to transfer to the program from other graduate programs within the University of Alberta will be considered upon receipt of a letter from the student outlining the reasons for the transfer, letters of reference, transcripts, and a letter of support from the proposed supervisor. Students who have already completed the PhD candidacy examination in another program will not normally be considered.</p>	<p><u>In exceptional circumstances, a student may be considered for direct entry to the PhD program without a master's degree if there is evidence that the applicant is able to successfully meet the rigor and requirements of the PhD program.</u></p> <p><u>In addition to the minimum admission requirements, the applicant should possess exceptional qualifications in neuroscience or a related discipline at the undergraduate level, as demonstrated by GPA, awards, research experience, publications and/or very strong letters of references. Demonstration of distinguished life achievement and/or work-related life experiences would also be considered.</u></p> <p>Applicants whose first language is not English must obtain a score of at least 600 (paper-based) or 100 (Internet-based) on the TOEFL examination with at least a score of 20 on each of the individual skill areas; <u>7.0 overall with 6.0 in each subtest in IELTS</u> or equivalent scores on other language proficiency tests approved by the Faculty of Graduate Studies and Research (see English Language Requirement). Applicants will be expected to arrange for three letters of academic reference for admission evaluation. Applicants must also submit a current and accurate curriculum vitae, along with a personal statement of interests.</p> <p>Together with the above, successful acceptance is ultimately dependent upon an applicant obtaining a supervisory agreement with one of our faculty member mentors, that would include stipend support. Without a supervisory relationship identified, applications will not be successful.</p> <p>Applicants who do not have a sufficient Neuroscience background may be required to take such courses as necessary to ensure said background that will be considered extra-to-degree.</p> <p>Applicants wishing to transfer to the program from other graduate programs within the University of Alberta will be considered upon receipt of a letter from the student outlining the reasons for the transfer, letters of reference, transcripts, and a letter of support from the proposed supervisor. Students who have already completed the PhD candidacy examination in another program will not normally be considered.</p>
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Rationale: - The statements provide more explicit information of requirement for direct entrance to the PhD program.

Our website indicates the IELTS requirement, but it was not in the calendar entry.

<p>Academic Standing Requirements To remain in the program, students must maintain a minimum GPA of 3.3 in their coursework.</p> <p>Financial Assistance</p> <p>A limited number of graduate research assistantships are available through the Institute. In addition, graduate teaching assistantships and research assistantships may be available through one of the departments participating in the graduate program in Neuroscience or from research grants. Other funding is provided by scholarships awarded to students by various agencies including the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council, and the Provincial Government of Alberta. Students will be expected to apply for such external funding.</p>	<p>Academic Standing Requirements To remain in the program, students must maintain a minimum GPA of 3.3 in their coursework.</p> <p>Financial Assistance</p> <p>A limited number of graduate research assistantships are available through the Institute. In addition, graduate teaching assistantships and research assistantships may be available through one of the departments participating in the graduate program in Neuroscience or from research grants. Other funding is provided by scholarships awarded to students by various agencies including the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council, and the Provincial Government of Alberta. Students will be expected to apply for such external funding.</p>
<p>Graduate Program Requirements</p> <p>The Degree of MSc (Neuroscience) [Graduate]</p>	<p>Graduate Program Requirements</p> <p>The Degree of MSc (Neuroscience) [Graduate]</p>
<p>A total of ★6 and a thesis are required for the MSc degree. The only exception to course requirements for the MSc degree would be for clinical trainees such as medical residents, who, in consultation with and approval of the graduate coordinator, may be exempted. Students are expected to have completed undergraduate courses such as ZOO 342, or PMCOL 371 and/or PHYSL 372 or their equivalents. Students deficient in this area may be expected to take these courses soon after admission.</p> <p>MSc students have the option, in consultation with their program supervisor, to complete a lab rotation course, typically during the first year. Students can choose either NEURO 500 (two terms; ★6) or NEURO 501 (one term; ★3). NEURO 500 involves rotations through three laboratories during the first year. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. Although this course is ★6, an additional lecture-based, graduate-level course will be required to meet the course requirements if students register in NEURO 500. NEURO 501 involves rotation through one</p>	<p>A total of ★6 and a thesis are required for the MSc degree. The only exception to course requirements for the MSc degree would be for clinical trainees such as medical residents, who, in consultation with and approval of the graduate coordinator, may be exempted. Students are expected to have completed undergraduate courses such as ZOO 342, or PMCOL 371 and/or PHYSL 372 or their equivalents. Students deficient in this area may be expected to take these courses soon after admission.</p> <p>MSc students have the option, in consultation with their program supervisor, to complete a lab rotation course, typically during the first year. Students can choose either NEURO 500 (two terms; ★6) or NEURO 501 (one term; ★3). NEURO 500 involves rotations through three laboratories during the first year. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. Although this course is ★6, an additional lecture-based, graduate-level course will be required to meet the course requirements if students register in NEURO 500. NEURO 501 involves rotation through one</p>

<p>laboratory taken outside of the laboratory of the primary supervisor.</p> <p>Students, in consultation with their supervisory committees, may also select courses in other areas important to their research programs. In addition, students will be expected to attend weekly Neuroscience seminars.</p> <p>Residence Requirements No language other than English is required for the MSc. The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.</p> <p>Length of Program The time required to complete the MSc will vary with the individual candidate, but the normal period is about two years to both complete the coursework (1st year) and benefit from the research training (1st and 2nd years). The maximum time limit for the MSc program is four years.</p>	<p>laboratory taken outside of the laboratory of the primary supervisor.</p> <p>Students, in consultation with their supervisory committees, may also select courses in other areas important to their research programs. In addition, students will be expected to attend weekly Neuroscience seminars.</p> <p>Residence Requirements No language other than English is required for the MSc. The minimum period of residence is two four-month terms of full-time attendance at the University of Alberta.</p> <p>Length of Program The time required to complete the MSc will vary with the individual candidate, but the normal period is about two years to both complete the coursework (1st year) and benefit from the research training (1st and 2nd years). The maximum time limit for the MSc program is four years.</p>
<p>The Degree of PhD (Neuroscience) [Graduate]</p>	<p>The Degree of PhD (Neuroscience) [Graduate]</p>
<p>PhD students must complete ★9, a candidacy examination, and a thesis.</p> <p>An important feature of the PhD program is the requirement that students participate in a lab rotation course, typically during the first year. Students must choose either NEURO 500 (two terms; ★ 6) or NEURO 501 (one term; ★3). NEURO 500 involves rotations through three laboratories. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. NEURO 501 involves rotation through one laboratory taken outside of the laboratory of the primary supervisor.</p> <p>Students, in consultation with their supervisory committees, may also select courses in other areas important to their research programs. In addition, students will be expected to attend weekly Neuroscience seminars. No language other than English is required for the degree.</p>	<p>PhD students must complete ★9, a candidacy examination, and a thesis.</p> <p>PhD students have the option, in consultation with their program supervisor, to complete a lab rotation course. Students may choose either NEURO 500 (two terms; ★ 6) or NEURO 501 (one term; ★3). NEURO 500 involves rotations through three laboratories. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. NEURO 501 involves rotation through one laboratory taken outside of the laboratory of the primary supervisor.</p> <p>Students, in consultation with their supervisory committees, may also select courses in other areas important to their research programs. In addition, students will be expected to attend weekly Neuroscience seminars. No language other than English is required for the degree.</p>

Rationale: Making these courses elective and not mandatory will give the student more flexibility to take other courses to build on their conceptual knowledge of the discipline.

Candidacy Exam

The candidacy examination must be scheduled by the end of the second year in the program. As per FGSR rules, this exam is to be completed no later than the end of the third year. For students who transfer from the Master's program to the doctoral program, the candidacy examination must be scheduled by the end of the third year from the beginning of the Master's program and completed by the end of the fourth year.

Residence Requirements

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. However, a minimum of three years is normally required. Course work will generally be completed early in the program. The maximum time limit for the PhD program is six years.

Graduate Courses The courses for the Neuroscience programs are

- BME 510 – Neuroimaging in Neuroscience
- BME 520 – Neuroplasticity
- [CELL 502 - The Birth and Death of a Cell](#)
- [EDPY 500 - Introduction to Data Analysis in Educational Research](#)
- [EDPY 505 - Quantitative Methods I](#)
- [NEURO 500 - Research in Neuroscience](#)
- [NEURO 501 - Graduate Research Project](#)
- [NEURO 510 - Cellular and Molecular Aspects of normal Aging and Neurodegenerative Disorders](#)
- [NEURO 511 - Clinical and Basic Science Aspects of Age-related Neurodegenerative Disorders](#)
- [NEURO 572 - Current Topics in Autonomic Neuroscience](#)
- [NEURO 603 - Graduate Colloquium in Neuroscience](#)
- NEURO 621 – The Art of Grant Writing
- PHYSL 544 – Current topics in Neuroscience
- [PSYCI 511 - Biological Aspects of Psychiatry](#)
- [PSYCO 574 - Advanced Topics in Neuroscience](#)
- [PSYCO 576 - Cognitive Neuroscience](#)
- [PTHER 567 - Neuroscience for Rehabilitation](#)

Candidacy Exam

The candidacy examination must be scheduled by the end of the second year in the program. As per FGSR rules, this exam is to be completed no later than the end of the third year. For students who transfer from the Master's program to the doctoral program, the candidacy examination must be scheduled by the end of the third year from the beginning of the Master's program and completed by the end of the fourth year.

Residence Requirements

The minimum period of residence is two academic years of full-time attendance at the University of Alberta.

Length of Program

The time required to complete the PhD will vary according to the previous training of the applicant and the nature of the research undertaken. However, a minimum of three years is normally required. Course work will generally be completed early in the program. The maximum time limit for the PhD program is six years.

Graduate Courses

The courses for the Neuroscience programs are

- BME 510 – Neuroimaging in Neuroscience
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- [NEURO 501 - Graduate Research Project](#)
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- [PSYCI 511 - Biological Aspects of Psychiatry](#)
- [PSYCO 574 - Advanced Topics in Neuroscience](#)
- [PSYCO 576 - Cognitive Neuroscience](#)
- [PTHER 567 - Neuroscience for Rehabilitation](#)

Course Descriptions	Course Descriptions
<p>Descriptions of these courses can be found in Course Listings, under the relevant subject headings:</p> <p>Biomedical Engineering (BME) Cell Biology (CELL) Educational Psychology (EDPY) Neuroscience (NEURO) Pharmacology (PMCOL) Physical Therapy (PTHER) Physiology (PHYSL) Psychiatry (PSYCI) Psychology (PSYCO)</p> <p>Additional courses offered by other departments that are deemed relevant to the student's research interests may be approved on an individual basis.</p>	<p>Descriptions of these courses can be found in Course Listings, under the relevant subject headings:</p> <p>Biomedical Engineering (BME) Cell Biology (CELL) Educational Psychology (EDPY) Neuroscience (NEURO) Pharmacology (PMCOL) Physical Therapy (PTHER) Physiology (PHYSL) Psychiatry (PSYCI) Psychology (PSYCO)</p> <p>Additional courses offered by other departments that are deemed relevant to the student's research interests may be approved on an individual basis.</p>

RATIONALE:

Neuroscience: Neuroscience Graduate Program Calendar Changes

Entrance Requirements

- Updated information statements added to provide more explicit information of requirements for direct entrance to the PhD program.
- Our website indicates the IELTS requirement that is being added here, but it was not yet included in the calendar entry.

PhD Neuroscience Lab Course

Making the laboratory rotation courses an elective option and not mandatory will give the student more flexibility to take other courses to build on their conceptual knowledge of the discipline.

Approved by:

FoMD Graduate Programs Committee (GPC): Sept 29, 2021

FoMD Faculty Learning Committee (FLC), Faculty Council delegated approver – October 8, 2021

FGSR Council - November 24, 2021

**Calendar Change -
2022-2023 Calendar
For Immediate Implementation**

Current	Proposed
<p>The Degree of MN (Nursing) [Graduate]</p> <p>Clinical Requirements for Advanced Clinical-NP Focus) Nursing Courses</p> <p>Students are responsible for the health and safety requirements for all clinical practice courses in their graduate program. These requirements must be met prior to starting the clinical courses. If there is an associated fee, students are responsible for the costs incurred.</p> <ul style="list-style-type: none"> ● Registration with College and Association of Registered Nurses of Alberta (CARNA); ● Cardiopulmonary Resuscitation Certification (CPR) ● Health Status Form ● Immunization Requirements: See University Infectious Disease Regulation. ● Criminal Record Check (Security Clearance Check) ● Professional Ethics/Code of Student Behaviour <p>Please see the Faculty of Nursing's website for further information regarding clinical requirements</p>	<p>The Degree of MN (Nursing) [Graduate]</p> <p>Clinical Requirements for Advanced Clinical-NP Focus) Nursing Courses</p> <p>Students are responsible for the health and safety requirements for all clinical practice courses in their graduate program. All requirements must be met prior to starting the courses which include clinical hours. If there is an associated fee, students are responsible for the costs incurred.</p> <ul style="list-style-type: none"> ● Must hold licensure as a Registered Nurse with the Canadian provincial or territorial nursing regulatory jurisdiction(s) where clinical placements will occur. ● Basic Cardiac Life Support Certification (BCLS) ● Advanced Cardiac Life Support Certification (ACLS) for Adult and Family All Ages streams of study ● Neonatal Resuscitation Program (NRP) for Neonatal stream of study ● Completion of all required health and safety forms and clinical placement forms ● Immunization Requirements: See University Infectious Disease Regulation ● Criminal Record and Vulnerable Sector Check (Security Clearance Check) ● Professional Ethics/Code of Student Behaviour <p>Please see the Faculty of Nursing's website for further information regarding clinical requirements.</p>

Rationale/Background:

The statement of clinical requirements for clinical NP students reflects the student placement agreements and requirements of clinical agencies that provide practicum placements. The proposed changes address recent program updates, contemporary language usage, and specialty certifications requested by clinical agencies.

- As a result of curriculum changes adopted in Fall 2021, NP students are now able to complete all required clinical courses online, and to complete their clinical hours in their home provincial jurisdiction. Students are required to provide verification of registration within the province where their clinical placements will occur.
- The regulatory nursing college in Alberta (CARNA) will be undergoing a name change in the upcoming year, so wording should reflect generic titles for Alberta and other provincial or territorial regulatory jurisdictions.

- Many students already present with ACLS and NRP certification even though they have not formally been required. NRP certification is required by agencies accepting NP students in Neonatal Intensive Care. Certifications for cardiopulmonary resuscitation include the following in addition to Basic Cardiac Life Support (BCLS) that is required for all nursing students:
 - Advanced Cardiac Life Support (ACLS) for students specializing in Adult and Family All Ages streams of study
 - Neonatal Resuscitation Program (NRP) certification for Neonatal Stream of Study

Change approval pathway:

Nurse Practitioner Faculty Sub-Committee to GEC - Sept 27, 2021

Graduate Education Committee meeting - October 19, 2021

FON Caucus - October 20, 2021 (for information)

FON Council - October 26, 2021

GPST - November 1, 2021

PRC - November 10, 2021

FGSR Council - November 24, 2021

FINAL Item No. 6

Governance Executive Summary
Action Item

Agenda Title	Proposed New Course Designator, DEVDU (Développement durable), and Associated Courses, Faculté Saint-Jean
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Motion

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, a new course designator Développement durable, DEVDU, and associated courses, as submitted by Faculté Saint-Jean.

Item

Action Requested	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Recommendation
Proposed by	Pierre-Yves Mocquais, Dean, Faculté Saint-Jean (FSJ)
Presenter(s)	Donia Mounsef, Principal Vice-Dean, Faculté Saint-Jean (FSJ)

Details

Office of Administrative Responsibility	Provost and Vice-President Academic
The Purpose of the Proposal is <i>(please be specific)</i>	to introduce a new course designator, DEVDU, as an identifier of courses related to the Certificate in Sustainability
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>This new course designator is the French equivalent for the SUST (Sustainability) courses created in the ALES Department of Resource Economics and Environmental Sociology (REES) in 2020. These courses are intended to support the Certificate in Sustainability and a wide range of undergraduate programs at the University of Alberta.</p> <p>Since the Certificate of Sustainability is offered in French at FSJ and that Sustainability is relevant and discussed in many of our French undergraduate programs as well, the French versions of SUST 201 and SUST 202 will be developed in French at FSJ under the DEVDU course designator.</p> <p>The word sustainability translates in French to ‘Développement Durable’, therefore the first 3 and 2 letters were kept to make the DEVDU designator.</p>
Supplementary Notes and context	<i><This section is for use by University Governance only to outline governance process.></i>

Engagement and Routing (Include meeting dates)

Item No. 6

Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity) <For information on the protocol see the Governance Resources section Student Participation Protocol >	<u><i>Those who are actively participating:</i></u> <ul style="list-style-type: none"> • FSJ Admission
	<u><i>Those who have been consulted:</i></u> <ul style="list-style-type: none"> •
	<u><i>Those who have been informed:</i></u> <ul style="list-style-type: none"> • FSJ Dean, Associate Dean, Faculty members and staff • Robert Summers, Academic Director Sustainability, ALES Sustainability Council
Approval Route (Governance) (including meeting dates)	FSJ Academic Planning Committee - June 14, 2021 FSJ Executive Committee – Aug 2, 2021 FSJ Faculty Council - Aug 20, 2021 Undergraduate Program Support Team - September 9, 2021 GFC Programs Committee - December 9, 2021

Strategic Alignment

Alignment with <i>For the Public Good</i>	SUSTAIN Objective 21	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
	<input checked="" type="checkbox"/> Enrolment Management <input checked="" type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input checked="" type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input type="checkbox"/> Student Success
Legislative Compliance and jurisdiction	<i>Post-Secondary Learning Act</i> GFC Programs Committee Terms of Reference	

Attachments (each to be numbered 1 - <>)

1. Attachment 1 : List of proposed new courses with DEVDU designator

Prepared by: Marie Simuong, CSJ Governance Coordinator, msimuong@ualberta.ca

Faculté Saint-Jean

Proposed University Calendar Changes for 2022/2023

CURRENT	PROPOSED
<p>NEW</p>	<p>DEVDU 201 - Introduction au développement durable ★ <i>3fi 6</i> (l'un ou l'autre semestre, 3-0-0) Introduction à l'histoire du développement durable comme concept, aux enjeux contemporains reliés au développement durable et aux diverses perspectives adoptées par les disciplines et professions en matière de développement durable. Note (s): Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour SUST 201.</p>
<p>NEW</p>	<p>DEVDU 202 - Développement durable mondial et objectifs de développement durable ★ <i>3fi 6</i> (l'un ou l'autre semestre, 3-0-0) Introduction au développement durable selon une perspective mondiale et en mettant l'accent sur les objectifs de développement durable (ODD) de l'Organisation des Nations Unies. Préalable(s) : DEVDU 201 ou SUST 201. Note (s): Ce cours n'est pas accessible aux étudiants ayant ou postulant des crédits pour SUST 202.</p>

FINAL Item No. 7

Governance Executive Summary
Action Item

Agenda Title	Proposed Change to AGPA Calculation for Internal Undergraduate Students
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Motion

That GFC Programs Committee recommend General Faculties Council approve the proposed change to the admissions regulation to allow repeated courses to be used in the calculation of admission grade point average (AGPA) for internal undergraduate students.

Item

Action Requested	<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Recommendation
Proposed by	Melissa Padfield, Vice-Provost & University Registrar
Presenter(s)	Jane Lee, Assistant Registrar and Director, Admissions Anna Hughes, Associate Registrar, Enrolment Management

Details

Office of Administrative Responsibility	Office of the Registrar
The Purpose of the Proposal is <i>(please be specific)</i>	The proposal is before the committee to adjust what courses are allowed in the AGPA calculation for internal post-secondary transfer students.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	As part of the SET centralization of transfer admissions initiative approved in February 2021, work is underway to streamline and automate transfer applications with the current focus on internal applicants in the faculties of ALES, Arts, Augustana, Business, Education, Engineering, KSR, Native Studies, Nursing, Saint-Jean, and Science. A modification of the current regulation that restricts the use of repeated courses in the calculation of the admissions grade point average will allow us to continue with this work. There is minimal academic risk assessed as this change is applicable only to internal students and the University of Alberta has a reregistration policy in place that restricts students from repeating courses with a passing grade except with the dean's approval.
Supplementary Notes and context	<This section is for use by University Governance only to outline governance process.>

Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u>Those who are actively participating:</u></p> <ul style="list-style-type: none"> • Office of the Registrar • Faculties: ALES, Arts, Augustana, Business, Education, Engineering, KSR, Native Studies, Nursing, Saint-Jean, Science • SET Transfer Admissions Initiative Project Team (including staff from Education & Science) • SET Transfer Admissions Initiative Steering Committee (including representatives from faculties of Science, Education, Business, Native Studies) • Undergraduate Working Group on Admissions Transformation
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	<p><u><i>Those who have been consulted:</i></u></p> <ul style="list-style-type: none"> • Program Support Team (October 28, 2021) • Programs Committee (November 18, 2021) <p><u><i>Those who have been informed:</i></u></p> <ul style="list-style-type: none"> • Advisory Committee on Enrolment Management (June 18, 2021)
Approval Route (Governance) (including meeting dates)	<ul style="list-style-type: none"> • Programs Committee (November 18, 2021) • Programs Committee (December 9, 2021) • General Faculties Council (January 31, 2022)

Strategic Alignment

Alignment with <i>For the Public Good</i>	<p>Please note the Institutional Strategic Plan objective(s)/strategies the proposal supports.</p> <p>Goal: Build a diverse, inclusive community of exceptional students, faculty, and staff from Alberta, Canada, and the world.</p> <p>Objective 1: Build a diverse, inclusive community of exceptional undergraduate and graduate students from Edmonton, Alberta, Canada, and the world.</p>													
Alignment with Core Risk Area	<p>Please note below the specific institutional risk(s) this proposal is addressing.</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Enrolment Management</td> <td><input type="checkbox"/> Relationship with Stakeholders</td> </tr> <tr> <td><input type="checkbox"/> Faculty and Staff</td> <td><input type="checkbox"/> Reputation</td> </tr> <tr> <td><input type="checkbox"/> Funding and Resource Management</td> <td><input type="checkbox"/> Research Enterprise</td> </tr> <tr> <td><input type="checkbox"/> IT Services, Software and Hardware</td> <td><input type="checkbox"/> Safety</td> </tr> <tr> <td><input type="checkbox"/> Leadership and Change</td> <td><input type="checkbox"/> Student Success</td> </tr> <tr> <td><input type="checkbox"/> Physical Infrastructure</td> <td></td> </tr> </table>		<input checked="" type="checkbox"/> Enrolment Management	<input type="checkbox"/> Relationship with Stakeholders	<input type="checkbox"/> Faculty and Staff	<input type="checkbox"/> Reputation	<input type="checkbox"/> Funding and Resource Management	<input type="checkbox"/> Research Enterprise	<input type="checkbox"/> IT Services, Software and Hardware	<input type="checkbox"/> Safety	<input type="checkbox"/> Leadership and Change	<input type="checkbox"/> Student Success	<input type="checkbox"/> Physical Infrastructure	
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<input type="checkbox"/> Leadership and Change	<input type="checkbox"/> Student Success													
<input type="checkbox"/> Physical Infrastructure														
Legislative Compliance and jurisdiction	<p>Cite reference to relevant legislation, policy, and governance committee(s) [title only is required].</p>													

Attachments

1. Attachment 1: Proposal
2. Attachment 2: Proposed Calendar copy change
3. Attachment 3: Reregistration policy

Prepared by: Jane Lee, Assistant Registrar and Director, Admissions, jane.lee@ualberta.ca>

Item No. 7

Attachment 1: Proposal to allow use of repeated courses in AGPA calculation for internal undergraduate transfer students

Background

The Centralization of Undergraduate Transfer Admissions Initiative is a SET initiative (approved in Feb 2021) is focused on delivering the following:

1. Streamline and automate where possible, through central processes and systems (e.g., Slate, Campus Solutions), transfer admissions functions as they relate to internal and external applicants, with the exception of applicants with academic standing issues or applying to specific programs.
2. Continuous Improvement: Review and simplify admission criteria, pursue systems/technical improvements, and implement process enhancements that will be critical to streamlining admissions.
3. Transfer credit processes are retained by academic units and assessed when a student accepts their offer of admission. Improvements in Campus Solutions, which acts as a single source of truth for transfer credit, should be led centrally. Technical improvements and financial support are needed for this endeavour which supports the entire transfer admission process.

Phase 1 Transfer Admissions Initiative is focused on the internal transfer applications. In the Fall 2020 intake cycle, 7,170 applications were submitted by internal applicants out of 15,607 transfer applications.

There is currently a restriction in the Calendar that states “Note: Where the applicant has more than one passing grade for the same course at any institution, only the first passing grade is used in calculating the grade point average(s) for admission purposes.”

Proposed Change

In order to automate the calculation of the Admission GPA (AGPA) for internal transfer admission in Slate (the application system used for undergraduate programs), the project team has identified that this current restriction of not allowing repeated courses to be used in the calculation needs to be modified.

We are proposing that we allow repeated courses to be used in the calculation of AGPA for internal transfers for the participating faculties in this initiative (ALES, Arts, Augustana, Business, Education, Engineering, KSR, Native Studies, Nursing, Saint-Jean, Science). All impacted faculties have been a part of the decision making process.

Impact

The ability to automate these calculations will open up the opportunity for automation of transfer application decisions. This will enhance the student experience by providing a more streamlined process, admission offers released earlier, and will reduce the amount of manual processing/review required. We may be able to leverage automated AGPA calculation for the 2022 intake cycle as internal applications processing typically begins in December/January. If we are not able to implement this for the 2022 cycle, we will be able to for the 2023 cycle.

This change would mean that if a student is permitted to repeat a course that the second passing attempt would also be included in the AGPA calculation if the first and second attempts are within the most recent 24 credits.

For internal transfer applicants there is minimal academic risk in allowing this change as the University of Alberta prohibits reregistration in courses except by exception by the Dean (or designate) of the Faculty in which they are enrolled.

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Internal applicants are defined as current students who are applying to a different program (within their current or between faculties) or previous students whose most recent attendance is at the University of Alberta. Students who have most recently attended the University of Alberta but also attended an external postsecondary institution in the past and have less than 24 credits would be flagged for review and their AGPA would be manually calculated.

Attachment 2: Proposed Calendar Copy Change

https://calendar.ualberta.ca/content.php?catoid=34&navoid=10115#postsecondary_transfer_applicants

Proposed	Current
<p>Postsecondary Transfer Applicants</p> <p>Admission of postsecondary transfer applicants is generally based on both high school admission requirements and academic performance in postsecondary coursework, transferable to the University of Alberta (See Admissions Chart 3 below for details). However, some Faculties have additional program specific requirements; applicants should also consult specific Faculty and program admission requirements in Admission Requirements by Faculty for further information.</p> <p>This section also applies to applicants transferring from one Faculty or program to another at the University of Alberta.</p> <p>Admission is competitive.</p> <p>Admissions Chart 3 Substitution of High School-Level Course Requirements Admissions Chart 3 sets out the transferable postsecondary credit which will be substituted in cases where applicants do not present, for the programs to which applications are being made, the appropriate High School-level courses based on the Alberta Education curriculum. Prospective students who completed high school education from outside Alberta should review the Provincial Admission Course Equivalents for acceptable high school courses in the three categories on the Undergraduate Admissions & Programs website. Only 5-credit courses will be used for admission purposes.</p> <p><i>[Chart of course substitutions from the Calendar has excluded due to formatting a issue. There are no changes to the chart which can be viewed on the Calendar.]</i></p> <p>Admission Criteria for Transfer Applicants Notwithstanding the following information, admission to the University of Alberta is competitive. Many programs may require a higher minimum admission average than that specified below.</p> <ol style="list-style-type: none"> 1. Admission Grade Point Average (AGPA) Calculation: The AGPA is calculated on all 	<p>Postsecondary Transfer Applicants</p> <p>Admission of postsecondary transfer applicants is generally based on both high school admission requirements and academic performance in postsecondary coursework, transferable to the University of Alberta (See Admissions Chart 3 below for details). However, some Faculties have additional program specific requirements; applicants should also consult specific Faculty and program admission requirements in Admission Requirements by Faculty for further information.</p> <p>This section also applies to applicants transferring from one Faculty or program to another at the University of Alberta.</p> <p>Admission is competitive.</p> <p>Admissions Chart 3 Substitution of High School-Level Course Requirements Admissions Chart 3 sets out the transferable postsecondary credit which will be substituted in cases where applicants do not present, for the programs to which applications are being made, the appropriate High School-level courses based on the Alberta Education curriculum. Prospective students who completed high school education from outside Alberta should review the Provincial Admission Course Equivalents for acceptable high school courses in the three categories on the Undergraduate Admissions & Programs website. Only 5-credit courses will be used for admission purposes.</p> <p><i>[Chart of course substitutions from the Calendar has excluded due to a formatting issue. There are no changes to the chart which can be viewed on the Calendar.]</i></p> <p>Transfer from a Postsecondary Institution Notwithstanding the following information, admission to the University of Alberta is competitive. Many programs may require a higher minimum admission average than that specified below.</p> <ol style="list-style-type: none"> 1. Admission Grade Point Average (AGPA) Calculation: The AGPA is calculated on all

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university transferable coursework completed in the most recent two terms of study if they contain a minimum of ★24. If those two terms contain less than ★24, all work in the next most recent term(s) is included in the calculation until the minimum total of ★24 is reached. Fall/Winter courses are considered Winter courses in these calculations. For applicants who have attempted less than ★24 of transferable postsecondary work, the AGPA is based on all university or university transfer credits attempted.

AGPA calculation for applicants who have repeated courses:

- a. For applicants who have only attended the University of Alberta, all coursework completed in the most recent 24 units will be used in the AGPA calculation.
- b. For applicants who have ever attended another post-secondary institution and who have more than one passing grade for the same course at any institution outside of the University of Alberta, only the first passing grade is used in the AGPA calculation.
- c. For all applicants to undergraduate programs in the faculties of Medicine and Dentistry, Pharmacy and Pharmaceutical Sciences, and Law, only the first passing grade is used in calculating the AGPA when an applicant has more than one passing grade for the same course at any institution.

2. Applicants who have met the appropriate minimum matriculation requirements on first admission to another postsecondary institution will be considered for admission to the University of Alberta, if they
 - a. present an admission grade point average (AGPA) of at least 2.0;
 - b. meet all other admission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).
3. Students seeking admission who had not taken all five required Grade 12 subjects on first admission to another postsecondary program will be considered for admission to the University if they

university transferable coursework completed in the most recent two terms of study if they contain a minimum of ★24. If those two terms contain less than ★24, all work in the next most recent term(s) is included in the calculation until the minimum total of ★24 is reached. Fall/Winter courses are considered Winter courses in these calculations. For applicants who have attempted less than ★24 of transferable postsecondary work, the AGPA is based on all university or university transfer credits attempted.

Note: Where the applicant has more than one passing grade for the same course at any institution, only the first passing grade is used in calculating the grade point average(s) for admission purposes.

2. Applicants who have met the appropriate minimum matriculation requirements on first admission to another postsecondary institution will be considered for admission to the University of Alberta, if they
 - a. present an admission grade point average (AGPA) of at least 2.0;
 - b. meet all other admission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).
3. Students seeking admission who had not taken all five required Grade 12 subjects on first admission to another postsecondary program will be considered for admission to the University if they

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<p>a. have successfully completed, through further high school or university transfer work, the five required matriculation subject areas specified for admission to the particular degree program to which the student has applied;</p> <p>b. present the appropriate minimum application average on all five subjects specified for admission;</p> <p>c. meet all other admission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).</p> <p>4. Students seeking admission who have not met the appropriate minimum application average on first admission to another postsecondary program will be considered for admission to the University of Alberta if they</p> <p>a. have successfully completed at least ★24 transferable to the University of Alberta;</p> <p>b. present an AGPA of at least 2.0;</p> <p>c. meet all other admission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).</p> <p>5. To be considered for readmission, an applicant who has been required to withdraw from the University of Alberta must</p> <p>a. if the student is seeking readmission to the same Faculty, meet all conditions set by the Faculty at the time of the requirement to withdraw; or</p> <p>b. if the student is seeking readmission to another Faculty, in general, present ★18 transferable to the University with an AGPA of at least 2.7 or ★24 transferable to the University with an AGPA of at least 2.0 on work done after being required to withdraw and meet all other admission or readmission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.). Specific Faculty and program admission requirements may vary. Consult Admission</p>	<p>a. have successfully completed, through further high school or university transfer work, the five required matriculation subject areas specified for admission to the particular degree program to which the student has applied;</p> <p>b. present the appropriate minimum application average on all five subjects specified for admission;</p> <p>c. meet all other admission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).</p> <p>4. Students seeking admission who have not met the appropriate minimum application average on first admission to another postsecondary program will be considered for admission to the University of Alberta if they</p> <p>a. have successfully completed at least ★24 transferable to the University of Alberta;</p> <p>b. present an AGPA of at least 2.0;</p> <p>c. meet all other admission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).</p> <p>5. To be considered for readmission, an applicant who has been required to withdraw from the University of Alberta must</p> <p>a. if the student is seeking readmission to the same Faculty, meet all conditions set by the Faculty at the time of the requirement to withdraw; or</p> <p>b. if the student is seeking readmission to another Faculty, in general, present ★18 transferable to the University with an AGPA of at least 2.7 or ★24 transferable to the University with an AGPA of at least 2.0 on work done after being required to withdraw and meet all other admission or readmission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.). Specific Faculty and program admission requirements may vary. Consult Admission</p>
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<p><u>Requirements by Faculty</u> for the Faculty that you are applying to.</p> <p>6. To be considered for admission or readmission, an applicant who has been required to withdraw from another postsecondary institution must</p> <ul style="list-style-type: none">a. have successfully completed, through high school or university transfer coursework, the five required matriculation subject areas specified for admission to the particular degree program to which the student has applied;b. subsequent to having been required to withdraw, have successfully completed at least ★24 transferable to the University;c. present an AGPA of at least 2.0;d. meet all other admission or readmission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).	<p><u>Requirements by Faculty</u> for the Faculty that you are applying to.</p> <p>6. To be considered for admission or readmission, an applicant who has been required to withdraw from another postsecondary institution must</p> <ul style="list-style-type: none">a. have successfully completed, through high school or university transfer coursework, the five required matriculation subject areas specified for admission to the particular degree program to which the student has applied;b. subsequent to having been required to withdraw, have successfully completed at least ★24 transferable to the University;c. present an AGPA of at least 2.0;d. meet all other admission or readmission criteria (i.e., specific program admission requirements, English Language Proficiency, audition, portfolio, questionnaire, references, etc.).
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Attachment 3: Reregistration Policy

<https://calendar.ualberta.ca/content.php?catoid=34&navoid=10146&hl=%22reregistration%22&returnto=search#reregistration-in-courses>

Reregistration in Courses

1. Students may not repeat any University course passed or courses for which they have received transfer credit except for reasons deemed sufficient, and verified in writing, by the Dean (or designate) of the Faculty in which they are enrolled.
2. Students may not reregister for credit or audit more than once in any failed University course, except for reasons deemed sufficient by the Dean (or designate) of the Faculty in which they are enrolled.
3. Students may not reregister for credit or audit more than once in any University course in which they have received a final grade of W, except for reasons deemed sufficient by the Dean (or designate) of the Faculty in which they are enrolled.
4. In cases where a student contravenes regulations 1, 2, or 3 above, the Dean (or designate) may withhold credit or indicate the course as extra to the degree, on the course registration that contravenes the regulation.
5. Students may not register for audit more than once in any University course in which they have received a final grade of AU (Audit) or AW (Audit Withdrawal) except for reasons deemed sufficient by the Dean (or designate) of the Faculty in which they are enrolled.
6. Students may repeat a Fall Term course in the Winter Term if it is offered in the Winter Term as long as the student complies with regulations 1, 2, and 3 above.
7. An undergraduate student who, because of unsatisfactory academic performance, is either required to withdraw, and/or required to repeat a year, and/or put on probation, will retain credit for courses in which grades of D or higher have been attained during the period for which the student's performance was evaluated as unsatisfactory. Notwithstanding this credit, Faculties may require substitution of other courses in programs in which full course loads are required.
8. The Faculties of Engineering, Law, Medicine and Dentistry, and Pharmacy and Pharmaceutical Sciences were granted exemption from (7) above.

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**Governance Executive Summary
Action Item**

Agenda Title	Proposed Embedded Certificate in Innovation and Entrepreneurship, Faculty of Business
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Motion

THAT the GFC Programs Committee approve, with delegated authority from General Faculties Council, the Embedded Certificate in Innovation and Entrepreneurship as submitted by the Faculty of Business and as set forth in Attachments 1 and 2 to be published in the 2022-2023 *University Calendar*.

Item

Action Requested	<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Recommendation
Proposed by	Leo Wong Associate Dean, Undergraduate Programs, Alberta School of Business
Presenter(s)	Leo Wong, Associate Dean, Undergraduate Programs, Alberta School of Business Michael Lounsbury, Academic Director of eHUB (Technology Commercialization Centre), Professor, Department of Strategy, Entrepreneurship & Management

Details

Office of Administrative Responsibility	Provost and Vice-President (Academic)
The Purpose of the Proposal is <i>(please be specific)</i>	The proposal is before the committee because we want to recognize and certify the knowledge about innovation and entrepreneurship that undergraduates receive in the course of their academic career.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>Innovation and entrepreneurship are of utmost strategic importance to the University. This embedded undergraduate certificate in innovation and entrepreneurship is a key component of a suite of initiatives that the University is developing to become a top-ranked entrepreneurial academic institution—a key objective in our U of A for Tomorrow plan. The certificate initiative is supported by President Bill Flanagan, and it has been developed in consultation with an Innovation and Entrepreneurship Committee that has representatives from several faculties and includes Deborah James (Associate Vice-President Innovation and Commercialization) in the VPRI office. We have sought cooperation from each Faculty that has an undergraduate program, and we have consulted broadly with key stakeholders inside and outside the University community. Importantly, we have consulted with students to ensure there is demand for the certificate, and that it is designed to meet the needs of students.</p> <p>We have designed the certificate in a broad way to reach out to students across disciplines, and with University of Alberta’s Strategic Plan for Equity, Diversity, and Inclusion at the forefront of our efforts. By focusing on interdisciplinarity, this certificate supports the efforts of the Colleges to develop bridges between faculties, and it will also facilitate interactions across the Colleges themselves. This cross-faculty and cross-college bridging will be importantly motored by eHUB—the University’s entrepreneurship centre—in concert with the VPRI office to cultivate a more entrepreneurial culture across the University. Given the importance</p>

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of EDI to our efforts, we are developing specialized outreach to various minority groups to ensure our efforts will be as inclusive as possible. This will include efforts to engage Indigenous students, students of color, women, and 2SLGBTQ+ students.

The Certificate is proposed to start this Fall 2022, and is “embedded” because it works within the existing academic framework and draws upon courses that already exist in the University calendar. It is structured to meet the needs of the students from the eight constituent Faculties that are participating in the certificate. The Academic Director of eHUB (Technology Commercialization Centre) will oversee the certificate and will encourage students to take courses outside their Departments and Faculties to foster interdisciplinary learning.

The School of Business Undergraduate office staff will be responsible for the final checklist of core, elective and integrative courses, and will consult with the Academic Director of eHUB (Technology Commercialization Centre) as needed. To be inclusive of the interdisciplinary expertise applied to the course list, the Academic Director of eHUB (Technology Commercialization Centre) will work with faculty representatives in participating faculties to periodically review the course lists, particularly for any additions that may be appropriate. We expect the certificate course list to evolve over time based on course availability, student enrolment and periodic evaluation of the certificate earners’ learning outcomes. The list of courses will be posted on the School of Business and eHUB (Technology Commercialization Centre) websites, and yearly lists will be made available so that students can check the year in which they filled out the “intention to pursue the embedded undergraduate certificate in innovation and entrepreneurship” for courses that qualify.

The certificate will indicate to employers and graduate schools that students have completed two core courses, two elective courses, including a required final “integrative project” course.

Learning outcomes for the recipients of the certificate include:

- Literacy in some substantive area central to innovation and entrepreneurship which may involve developing new venture ideas, designing innovative approaches for product and service delivery, commercializing new inventions, and creating novel social innovations to address grand challenges such as poverty and climate change.
- Basic knowledge of the opportunities as well as systemic challenges that both enable and constrain innovation and entrepreneurship.
- Knowledge of theories, methods, techniques, and experiments associated with innovation and entrepreneurship.
- Ability to apply and implement knowledge about innovation and entrepreneurship at a personal, academic, and professional level. This may include the ability to think critically and creatively about real world problems and their

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	<p>potential solutions, and to communicate these ideas to various audiences.</p> <p>The certificate will be based out of the School of Business, in order to give it a permanent “home,” even though students from all participating Faculties will be able to pursue the certificate. Thus, it is an interdisciplinary certificate.</p> <p>There are no resource implications regarding any new hires or new space required to offer this certificate, as this will be administered within the current supports in the School of Business.</p> <p>All courses involved in the certificate are either existing courses, or are already being planned to be developed</p>
Supplementary Notes and context	<This section is for use by University Governance only to outline governance process.>

Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u>Those who are actively participating:</u></p> <ul style="list-style-type: none"> • Ian Gellatly (Chair, Department of Strategy, Entrepreneurship & Management) has been engaged throughout this process since February 2021. He reached out to the other Chairs within the School of Business, in April 2021, to gain their support for the certificate. • Leo Wong (Associate Dean Undergraduate) was contacted February 17th, 2021 about the potential if creating an embedded certificate in innovation and entrepreneurship. He agreed that that the School of Business should support and house the certificate. • Joseph Doucet (Former Dean, School of Business) and Kyle Murray (Acting Dean, School of Business) were contacted March 13th, 2021 with an update on the certificate’s development and they expressed their support via email response of continuing the development of this certificate. Kyle Murray has provided a strong letter of support. <p><u>Those who have been consulted:</u></p> <ul style="list-style-type: none"> • Given the strategic importance of enhancing the University’s innovation and entrepreneurship initiatives and offerings, eHUB (Technology Commercialization Centre) at the School of Business initiated a collaborative cross-faculty undergraduate Innovation and Entrepreneurship Certificate that is supported by an Innovation and Entrepreneurship Committee that has representatives from several faculties and includes Deborah James (Associate Vice-President Innovation and Commercialization) in the VPRI office. The committee is chaired by professor Michael Lounsbury and has sought cooperation from each Faculty that has an undergraduate program. • Consultation with Florence Glanfield, Vice Provost, Indigenous Programs and Research. Florence was conducted on April 27th, 2021, where it was positively noted that the U of A and the School of Business are partners in the Luminary Program (associated with
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Indigenous Works), that aims to advance Indigenous entrepreneurship. Florence also provided some ideas for courses across the University that may be a good fit with the certificate.

Students:

- A focus group was conducted with 4 student leaders of eClub (an interdisciplinary student group with a purpose to “promote entrepreneurship and innovation, facilitate interdisciplinary collaboration and inspire students to pursue their entrepreneurial drive”), on February 24th, 2021. Among the 4 students, 2 were from Business and 2 were from Science. The notion of a campus-wide certificate was seen to be potentially very popular as a way to engage with students across many different majors.
- A campus-wide survey was circulated in early May to various faculty contacts and student groups, regarding their interest in the Certificate in Innovation and Entrepreneurship. The survey described the certificate conceptually without any course details, and asked “How interested would you be in pursuing this certificate if it was available?”, on a scale of 1 to 5 where “1” meant “not at all interested” and “5” meant “very interested”.
 - There was a total of 110 responses.
 - ALES had the highest response rate (85 responses), with most representing the Nutrition and Food Science program and the Environmental and Conservation Sciences program. There was a good mix of students across all four years of their degrees.
 - There were 15 responses from students in Science, and the remaining responses were students in Arts, Augustana, Business and Engineering.
 - Among those asked, 71 students (equivalent to 65%) responded “4” or “5” to the key question re: interest.
 - Comments from students were enthusiastic about this certificate, including:
 - “I think this certificate would be a great idea for students that, unlike me, still have a lot of free electives and want to be recognized for taking some more business/innovation/entrepreneurship type classes.” – 3rd year ALES student
 - “I have an immense interest in taking the Certificate in Innovation and Entrepreneurship as soon as it will be offered. Throughout my Arts degree, I have attempted to leverage the opportunity for existing interdisciplinary learning means through academic certifications (such as the PLLC Interdisciplinary Leadership Certificate with which I am currently enrolled), as well as co-curricular and extracurricular programming at the University of Alberta. I see the Certificate in Innovation and Entrepreneurship providing an excellent method for students, such as myself, to access key learnings in areas involving social entrepreneurship and innovative change. There is no doubt in my mind that this Certificate will

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provide an impactful asset to students and the UAlberta community.” – 3rd year Arts student

Those who have been informed:

- Participating Faculties
 - ALES: Stanford Blade (Dean) provided a letter of support on April 14th, 2021 confirming their support for the certificate, as well as acknowledging the alignment between the certificate and specific programs in ALES including Agricultural / Food Business Management, Forest Business Management, and Fashion Business Management. Scott Jeffrey (Associate Dean, Academic) was contacted April 11th, 2021 by Michael Lounsbury, and agreed to support the certificate. He also agreed to survey ALES students on their interest in this certificate and provided insights on those responses via email on May 10th, 2021. Scott Jeffrey and Nat Kav (Associate Dean, Academic starting July 1, 2021) provided a final list of core and elective ALES courses to be part of the certificate on June 17, 2021.
 - Arts: Steve Patten (Interim Dean) provided a letter of support on April 18th, 2021 confirming their enthusiastic support for the certificate, as well as acknowledging the active involvement of Aidan Rowe (Chair, Department of Art & Design) and the encouraging support through consultations with Arts Departments which align with various majors in the faculty.
 - Engineering: Fraser Forbes (Dean) provided a letter of support on April 28th, 2021 confirming their support for the certificate, as well as acknowledging the contributions of Michael Lipsett (Professor in Engineering) who has been working closely to align various majors in Engineering with the certificate.
 - Kinesiology, Sport and Recreation: Kerry Mummery (Dean) provided a letter of support on May 17th, 2021 confirming their support for the certificate, and their commitment to identify courses that align various majors with the certificate. Angela Bayduza (Associate Dean, Undergraduate Programs) has provided course information to support the certificate in August 2021.
 - Native Studies: Consultation meeting scheduled with Shalene Jobin (Associate Professor) on June 22nd, 2021. Florence Glanfield encouraged consultation with Shalene to identify how the certificate could articulate with the Faculty of Native Studies. Received letter of support from Dean Chris Anderson on August 1, 2021.
 - Science: Matina Kalcounis-Rueppell (Dean) provided a letter of support on May 15th, 2021 confirming their support for the certificate, as well as acknowledging the contributions of Eleni Stroulia (Professor, Computing Science) who has been working closely to align various majors in Science with the certificate (final course list

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	<p>generated on June 18, 2021). Julie Naylor (Assistant Dean, Programs and Operations) and Janine Wedemeier (Work Experience Coordinator) were contacted April 23rd, 2021 by Michael Lounsbury and agreed to share a survey with students in their Science Innovation Centre Slack channel community, as well as through the Science Mentor students. Responses were collected up until May 7th, 2021.</p> <ul style="list-style-type: none"> ○ Augustana: Consulted (August 5, 2021) with Stacy Lorenz (Academic Programs) who expressed support and generated a list of courses of relevance by end of August, 2021. Letter of support from the Dean (Demetres P. Tryphonopoulos) was received on September 3, 2021. ● Libraries – A library impact statement was received on Nov 4th, 2021, indicating that current resources will be able to support this certificate.
Approval Route (Governance) (including meeting dates)	<p>Discussed at Program Support Team with feedback incorporated – June 3, 2021 Approved at the School of Business Undergraduate Studies Policy Committee – Nov 26, 2021 Approved at the School of Business Faculty Council – Dec 2, 2021 GFC Programs Committee (for approval) December 9, 2021</p>

Strategic Alignment

Alignment with <i>For the Public Good</i>	<p>The certificate is well aligned with and supports key objectives and strategic goals at all levels of the University. For instance, innovation, entrepreneurship and commercialization goals are embedded in the university’s strategic plans and initiatives (For the Public Good objective 11, Innovation Task Force Report, and the Vice-President (Research and Innovation) portfolio’s strategic plan. In addition, innovation and entrepreneurship are key priorities of Alberta’s post-secondary review—to increase postsecondary entrepreneurial activities and outcomes, and future Campus Alberta grants will be tied to these and related performance metrics.</p>			
Alignment with Core Risk Area	<p>Please note below the specific institutional risk(s) this proposal is addressing.</p> <table border="0"> <tr> <td> <input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure </td> <td> <input checked="" type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success </td> </tr> </table>		<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input checked="" type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success
<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input checked="" type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success			
Legislative Compliance and jurisdiction	<p>Post-Secondary Learning Act General Faculties Council GFC Programs Committee</p>			

Attachments:

1. Program Approval Template
2. Courses SEM 330, SEM 331
3. Library Impact Statement
4. Letters of Support

Prepared by: <Leo Wong, Associate Dean, Undergraduate Programs, leo.wong@ualberta.ca>

**Program Approval Template
Embedded Credit Certificates**

This template is to be used for proposals calling for the establishment of new University of Alberta embedded credit certificates. Embedded credit certificates are taken concurrently with a degree program of the University of Alberta. (Certificate in Peace and Post-Conflict Studies offered by the Faculty of Arts; Graduate Certificate in Community-Based Research and Evaluation offered by Faculty of Graduate Studies and Research and Faculty of Extension.)

Development process: As early steps in the embedded certificate development process, proponents of new embedded certificates should first obtain the support of all Faculty Deans involved, after which consultation with the Vice-Provost (Indigenous Programming & Research) should follow. Following consultation with all involved Deans and the Vice-Provost (Indigenous Programming & Research), proponents should forward the draft proposal documents to the Vice-Provost (Programs).

Governance: Embedded credit certificates are approved by the following route: Faculty Council, GFC Programs Committee. In the event that the certificate proposal includes significant resource (space, budget) implications, the certificate will also be sent to GFC APC for approval.

Section A: Basics		
Program Name	Embedded Certificate in Innovation and Entrepreneurship	
Sponsoring Faculty/Faculties/Academic Unit	Alberta School of Business With cooperation from seven faculties which include: <ul style="list-style-type: none"> - ALES - Arts - Augustana - Engineering - Kinesiology, Sport and Recreation - Native Studies - Science 	
Contact information	Name and Title	Dr. Michael Lounsbury Academic Director of eHUB (Technology Commercialization Centre) Professor, Department of Strategy, Entrepreneurship & Management
	Phone	780-492-1684
	Email	ml37@ualberta.ca
Institution(s) If multiple institutions are involved, specify the nature of the collaboration. Identify which institution(s) will award the credential.	n/a	
Units of Course Weight	12	
Program Synopsis Describe the program. Include curriculum content, target student group, target	The Certificate will recognize and certify the knowledge about innovation and entrepreneurship that undergraduates receive in the course of their academic career. The Certificate is “embedded” because it works within the existing academic framework and draws upon courses that already exist in the University calendar. It is structured to meet the needs of the students from the eight constituent Faculties that	

<p>employment, further education options, etc.</p>	<p>are participating in the certificate. The Academic Director of eHUB (Technology Commercialization Centre) will oversee the certificate and will encourage students to take courses outside their Departments and Faculties to foster interdisciplinary learning.</p> <p>The School of Business Undergraduate office staff will be responsible for the final checklist of core, elective and integrative courses, and will consult with the Academic Director of eHUB (Technology Commercialization Centre) as needed. To be inclusive of the interdisciplinary expertise applied to the course list, the Academic Director of eHUB (Technology Commercialization Centre) will work with faculty representatives in participating faculties to periodically review the course lists, particularly for any additions that may be appropriate. We expect the certificate course list to evolve over time based on course availability, student enrolment and periodic evaluation of the certificate earners' learning outcomes. The list of courses will be posted on the School of Business and eHUB (Technology Commercialization Centre) websites, and yearly lists will be made available so that students can check the year in which they filled out the "intention to pursue the embedded undergraduate certificate in innovation and entrepreneurship" for courses that qualify.</p> <p>The certificate will indicate to employers and graduate schools that students have completed two core courses, two elective courses, including a required final "integrative project" course which is discussed below.</p> <p>Learning outcomes for the recipients of the certificate include:</p> <ul style="list-style-type: none"> • Literacy in some substantive area central to innovation and entrepreneurship which may involve developing new venture ideas, designing innovative approaches for product and service delivery, commercializing new inventions, and creating novel social innovations to address grand challenges such as poverty and climate change. • Basic knowledge of the opportunities as well as systemic challenges that both enable and constrain innovation and entrepreneurship. • Knowledge of theories, methods, techniques, and experiments associated with innovation and entrepreneurship. • Ability to apply and implement knowledge about innovation and entrepreneurship at a personal, academic, and professional level. This may include the ability to think critically and creatively about real world problems and their potential solutions, and to communicate these ideas to various audiences. <p>The certificate will be based out of the School of Business, in order to give it a permanent "home," even though students from all participating Faculties will be able to pursue the certificate. Thus, it is an interdisciplinary certificate.</p> <p>Curriculum Content</p> <p>Students will be required to complete 12 course credits by acquiring a grounding in core aspects of innovation and entrepreneurship (1 core course in any faculty), taking two innovation and entrepreneurship courses as electives that are relevant to their</p>
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field of study, and complete the certificate with a final “integrative project” for-credit course.

- 1) Three (3) credits from designated Core Courses. Core courses are those that substantively deal with innovation or entrepreneurship processes, either generally or within a field of study. Thus, these courses should have a main focus on general principles of innovation and entrepreneurship that provide students with concepts and tools that can guide the development and implementation of their ideas across domains. There are several that have no prerequisites. Students may take a core course in any faculty that offers one (i.e., it need not be in their home faculty). We are developing one that will be online and easily accessible (SEM 330) to all students.
- 2) Six (6) credits from designated Elective Courses. Elective courses relate to or support innovation or entrepreneurship generally or in a particular field of study, which could include knowledge related to finance, accounting or human resource practices, how to develop computer games or creative artistic initiatives, environmental ethics, or sustainable design. These will be mainly taken from upper-level courses and are available across all faculties.
- 3) Appendix A includes a matrix of the courses and their prerequisites that would be available to those pursuing the certificate. There are many courses in the list that have no prerequisites or just one or two. We expect that, given the fundamental nature of some of these courses to students in their Faculty programs, students will be able to embed the certificate requirements into their regular course plan.
- 4) Three (3) credits from a designated core “integrative project” course (SEM 331), after having completed the 9 required credits. This course, which will be run out of the School of Business, is an important way to facilitate interdisciplinary dialogue and engagement among students across campus that approach innovation and entrepreneurship from different perspectives and disciplines. This course will have a virtual/hybrid component which will make it easily accessible for all students.
 - a. The course will engage students in enhanced learning on innovation and entrepreneurship through a focus on developing their integrated projects.
 - b. The integrative project that can be done individually or in teams and will engage directly with the core features of innovation and entrepreneurship discussed above. It will serve as the de facto “capstone” experience for participating undergraduates. The certificate stresses the importance of projects that involve developing novel ideas or the testing or implementation of concepts learned in the classroom.
 - c. All students will be required to present the findings of their final integrative projects. Presentation opportunities abound at the University including entrepreneurial pitch competitions and innovation showcases organized and supported by our co-curricular innovation and entrepreneurship spaces on campus (e.g., eHUB, eHUB Creative, the Garage, ICE Incubator, CCIS Student Innovation Center). We will aim to be flexible and even consider presentation via a research poster, or even creative forms like a video or podcast. Students will be advised of their opportunities for presentation through the Academic Director of eHUB (Technology

Commercialization Centre), or academic designate. Regardless of the form that the final “integrative project” takes, the idea is that this endeavour will serve as a means of moving out of the classroom to gain first-hand experience with innovation and entrepreneurship. Particular emphasis will be placed on projects that to push forward novel ideas by utilizing academic frameworks or tools encountered in core and elective courses in the certificate.

d. The Academic Director of eHUB (Technology Commercialization Centre), or Faculty designate(s) will approve integrative projects. In cases where a research project is proposed for this component, approval of the research project will depend on these learning outcomes for the proposed work:

- Embark and Clarify: Developing a question that is answerable in a semester timeframe and addresses a key aspect of innovation or entrepreneurship.
- Evaluate and Reflect: Require the student to find and generate needed information/data on innovative or entrepreneurial ideas using appropriate methodology.
- Analyze and Synthesize: Require the student to organize information to reveal patterns and themes, such as in an entrepreneurial opportunity analysis or technology commercialization plan.
- Communicate and Apply: Require the student to write up and present their findings at a formal poster/conference event as described above.

5) Students must be in good academic standing at the time they register for the certificate and maintain good academic standing as they pursue the certificate. Students must maintain the continuation GPA of their own program.

6) Students will be required to register for the certificate no later than September 30 of their third year, or at completion of *60 if studying part-time. No more than half of the course requirements for this certificate may overlap with the requirements of another certificate. This certificate is conceived as an interdisciplinary one, and students will be encouraged to take at least one of the courses (Core or Elective) in the certificate in an outside Faculty. This certificate encourages students to undertake an interdisciplinary approach to education which will be reinforced in the capstone course.

Target Student Group

Students from the participating Faculties are invited to earn the certificate, given that they will have the time to earn the certificate in a four-year period.

Target Employment

The point of this certificate is to mainstream innovation and entrepreneurship across the disciplines, and we believe core skills and ideas related to innovation and entrepreneurship learned through this certificate can be fostered for all types of employment, including business, design, creative arts, research and development, as well as non-profit and public management.

	<p>In reference to the recently released Government of Alberta’s 10-year strategy for post-secondary education (Alberta 2030: Building Skills for Jobs report), this certificate would be an important step towards “unlocking the entrepreneurial and innovative spirit that is at the heart of Alberta’s competitive advantage”. Of the 6 goals identified in the report, this certificate supports Goal 3: Support for Innovation and Commercialization, in developing a pipeline of students across the University of Alberta with an innovation and entrepreneurship knowledge base and skill set.</p>
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Section B: Rationale, Implications and Impact

<p>Rationale for Introduction of Certificate Outline the rationale for the proposed embedded credit certificate and provide supporting data if applicable – eg. Results of student or economic demand analyses; consultation with wider community, etc.</p>	<p>Innovation and entrepreneurship are of utmost strategic importance to the University. This embedded undergraduate certificate in innovation and entrepreneurship is a key component of a suite of initiatives that the University is developing to become a top-ranked entrepreneurial academic institution—a key objective in our U of A for Tomorrow plan. The certificate initiative is supported by President Bill Flanagan, and it has been developed in consultation with an Innovation and Entrepreneurship Committee that has representatives from several faculties and includes Deborah James (Associate Vice-President Innovation and Commercialization) in the VPRI office. We have sought cooperation from each Faculty that has an undergraduate program, and we have consulted broadly with key stakeholders inside and outside the University community. Importantly, we have consulted with students to ensure there is demand for the certificate, and that it is designed to meet the needs of students. We report on some of our consultations with students below.</p> <p>Consultation with students</p> <ul style="list-style-type: none"> - A focus group was conducted with 4 student leaders of eClub (an interdisciplinary student group with a purpose to “promote entrepreneurship and innovation, facilitate interdisciplinary collaboration and inspire students to pursue their entrepreneurial drive”), on February 24th, 2021. Among the 4 students, 2 were from Business and 2 were from Science. The notion of a campus-wide certificate was seen to be potentially very popular as a way to engage with students across many different majors. - A campus-wide survey was circulated in early May to various faculty contacts and student groups, regarding their interest in the Certificate in Innovation and Entrepreneurship. The survey described the certificate conceptually without any course details, and asked “How interested would you be in pursuing this certificate if it was available?”, on a scale of 1 to 5 where “1” meant “not at all interested” and “5” meant “very interested”. <ul style="list-style-type: none"> o There was a total of 110 responses. o ALES had the highest response rate (85 responses), with most representing the Nutrition and Food Science program and the Environmental and Conservation Sciences program. There was a good mix of students across all four years of their degrees. o There were 15 responses from students in Science, and the remaining responses were students in Arts, Augustana, Business and Engineering. o Among those asked, 71 students (equivalent to 65%) responded “4” or “5” to the key question re: interest. o Comments from students were enthusiastic about this certificate, including:
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	<ul style="list-style-type: none"> ▪ “I think this certificate would be a great idea for students that, unlike me, still have a lot of free electives and want to be recognized for taking some more business/innovation/entrepreneurship type classes.” – 3rd year ALES student ▪ “I have an immense interest in taking the Certificate in Innovation and Entrepreneurship as soon as it will be offered. Throughout my Arts degree, I have attempted to leverage the opportunity for existing interdisciplinary learning means through academic certifications (such as the PLLC Interdisciplinary Leadership Certificate with which I am currently enrolled), as well as co-curricular and extracurricular programming at the University of Alberta. I see the Certificate in Innovation and Entrepreneurship providing an excellent method for students, such as myself, to access key learnings in areas involving social entrepreneurship and innovative change. There is no doubt in my mind that this Certificate will provide an impactful asset to students and the UAlberta community.” – 3rd year Arts student
<p>Vision and Academic Plan How does the proposed program align with the strategic goals described in <i>For the Public Good</i> and <i>the University of Alberta’s Strategic Plan for Equity, Diversity, and Inclusion</i>? How does the program further the objectives or align with the other institutional, Faculty, and College strategies?</p>	<p>The certificate is well aligned with and supports key objectives and strategic goals at all levels of the University. For instance, innovation, entrepreneurship and commercialization goals are embedded in the university’s strategic plans and initiatives (For the Public Good objective 11, Innovation Task Force Report, and the Vice-President (Research and Innovation) portfolio’s strategic plan. In addition, innovation and entrepreneurship are key priorities of Alberta’s post-secondary review—to increase postsecondary entrepreneurial activities and outcomes, and future Campus Alberta grants will be tied to these and related performance metrics.</p> <p>We have designed the certificate in a broad way to reach out to students across disciplines, and with University of Alberta’s Strategic Plan for Equity, Diversity, and Inclusion at the forefront of our efforts. By focusing on interdisciplinarity, this certificate supports the efforts of the Colleges to develop bridges between faculties, and it will also facilitate interactions across the Colleges themselves. This cross-faculty and cross-college bridging will be importantly motored by eHUB—the University’s entrepreneurship centre—in concert with the VPRI office to cultivate a more entrepreneurial culture across the University. Given the importance of EDI to our efforts, we are developing specialized outreach to various minority groups to ensure our efforts will be as inclusive as possible. This will include efforts to engage Indigenous students, students of color, women, and 2SLGTBQ+ students.</p>
<p>Resource Implications Identify the resource implications of the proposed embedded credit certificate. Identify if resources are being re-allocated to or from other areas, and outline the implications of this re-allocation.</p>	<p>There are no resource implications regarding any new hires or new space required to offer this certificate, as this will be administered within the current supports in the School of Business.</p> <p>All courses involved in the certificate are either existing courses, or are already being planned to be developed.</p>

<p>Enrolment Outline the expected enrolment for the embedded credit certificate and any potential impacts on course offerings.</p>	<p>We expect this certificate will be well received among students in the participating Faculties. We do not anticipate any negative impacts on existing course offerings given that the embedded certificate is designed to work within the constraints of existing majors. We estimate that in the first year of implementation (2022-23), we will have:</p> <ul style="list-style-type: none"> ○ 30 students enrolled in the certificate ○ Half of them in Year 3 of their program of study ○ The other half will be in Year 4 of their program of study <p>We expect enrolment to increase each year, and stabilize at 100 (total) enrolled students each year by 2026-27.</p> <table border="1"> <thead> <tr> <th>Proposed Enrolment</th> <th>2022-23</th> <th>2023-24</th> <th>2024-25</th> <th>2025-26</th> <th>Annual Ongoing</th> </tr> </thead> <tbody> <tr> <td>• Total Full-Time head count</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>• Full-Time Year 1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Full-Time Year 2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Full-Time Year 3</td> <td>15</td> <td>20</td> <td>30</td> <td>40</td> <td>50</td> </tr> <tr> <td>• Full-Time Year 4</td> <td>15</td> <td>25</td> <td>35</td> <td>50</td> <td>50</td> </tr> <tr> <td>• Full-Time Year 5</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Total Part-Time head count</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>• Part-Time Year 1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Part-Time Year 2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Part-Time Year 3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Part-Time Year 4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Part-Time Year 5</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Total Work Experience hc</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>• Work Experience Year 1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Work Experience Year 2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Work Experience Year 3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Work Experience Year 4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Work Experience Year 5</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>• Anticipated Number of Graduates</td> <td>15</td> <td>25</td> <td>35</td> <td>50</td> <td>50</td> </tr> </tbody> </table>	Proposed Enrolment	2022-23	2023-24	2024-25	2025-26	Annual Ongoing	• Total Full-Time head count	0	0	0	0	0	• Full-Time Year 1						• Full-Time Year 2						• Full-Time Year 3	15	20	30	40	50	• Full-Time Year 4	15	25	35	50	50	• Full-Time Year 5						• Total Part-Time head count	0	0	0	0	0	• Part-Time Year 1						• Part-Time Year 2						• Part-Time Year 3						• Part-Time Year 4						• Part-Time Year 5						• Total Work Experience hc	0	0	0	0	0	• Work Experience Year 1						• Work Experience Year 2						• Work Experience Year 3						• Work Experience Year 4						• Work Experience Year 5						• Anticipated Number of Graduates	15	25	35	50	50
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<p>Implications of Introduction of the Credit Certificate Identify the implications of the proposed embedded credit certificate for the system. For example, will it affect other programs at the U of A, programs at other institutions, etc.?</p>	<p>Since the embedded certificate is designed to work within the constraints of existing majors and programs, we do not anticipate any negative implications for any programs at the UofA or other institutions. In fact, the certificate is designed to enhance the experience and learning of students in their chosen program of study. For instance, the integrated projects capstone course will provide a practical opportunity for students to further develop ideas and opportunities that emerge as part of their student journey at the University of Alberta.</p>																																																																																																																								
<p>Consultation Describe any consultation and/or potential impacts on service units of the</p>	<p>Consultation across Alberta School of Business</p> <ul style="list-style-type: none"> - Ian Gellatly (Chair, Department of Strategy, Entrepreneurship & Management) has been engaged throughout this process since February 2021. He reached out 																																																																																																																								

<p>University, including the RO, Academic Information and Communication Technologies (AICT), Libraries, Facilities and Operations, Student Services, etc.</p>	<p>to the other Chairs within the School of Business, in April 2021, to gain their support for the certificate.</p> <ul style="list-style-type: none"> - Leo Wong (Associate Dean Undergraduate) was contacted February 17th, 2021 about the potential if creating an embedded certificate in innovation and entrepreneurship. He agreed that that the School of Business should support and house the certificate. - Joseph Doucet (Former Dean, School of Business) and Kyle Murray (Acting Dean, School of Business) were contacted March 13th, 2021 with an update on the certificate's development and they expressed their support via email response of continuing the development of this certificate. Kyle Murrany has provided a strong letter of support. <p>Consultation across University of Alberta</p> <ul style="list-style-type: none"> - Given the strategic importance of enhancing the University's innovation and entrepreneurship initiatives and offerings, eHUB (Technology Commercialization Centre) at the School of Business initiated a collaborative cross-faculty undergraduate Innovation and Entrepreneurship Certificate that is supported by an Innovation and Entrepreneurship Committee that has representatives from several faculties and includes Deborah James (Associate Vice-President Innovation and Commercialization) in the VPRI office. The committee is chaired by professor Michael Lounsbury and has sought cooperation from each Faculty that has an undergraduate program. - Consultation with Florence Glanfield, Vice Provost, Indigenous Programs and Research. Florence was conducted on April 27th, 2021, where it was positively noted that the U of A and the School of Business are partners in the Luminary Program (associated with Indigenous Works), that aims to advance Indigenous entrepreneurship. Florence also provided some ideas for courses across the University that may be a good fit with the certificate. - ALES: Stanford Blade (Dean) provided a letter of support on April 14th, 2021 confirming their support for the certificate, as well as acknowledging the alignment between the certificate and specific programs in ALES including Agricultural / Food Business Management, Forest Business Management, and Fashion Business Management. Scott Jeffrey (Associate Dean, Academic) was contacted April 11th, 2021 by Michael Lounsbury, and agreed to support the certificate. He also agreed to survey ALES students on their interest in this certificate and provided insights on those responses via email on May 10th, 2021. Scott Jeffrey and Nat Kav (Associate Dean, Academic starting July 1, 2021) provided a final list of core and elective ALES courses to be part of the certificate on June 17, 2021. - Arts: Steve Patten (Interim Dean) provided a letter of support on April 18th, 2021 confirming their enthusiastic support for the certificate, as well as acknowledging the active involvement of Aidan Rowe (Chair, Department of Art & Design) and the encouraging support through consultations with Arts Departments which align with various majors in the faculty. - Engineering: Fraser Forbes (Dean) provided a letter of support on April 28th, 2021 confirming their support for the certificate, as well as acknowledging the contributions of Michael Lipsett (Professor in Engineering) who has been working closely to align various majors in Engineering with the certificate. - Kinesiology, Sport and Recreation: Kerry Mummery (Dean) provided a letter of support on May 17th, 2021 confirming their support for the certificate, and their commitment to identify courses that align various majors with the
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	<p>certificate. Angela Bayduza (Associate Dean, Undergraduate Programs) has provided course information to support the certificate in August 2021.</p> <ul style="list-style-type: none"> - Native Studies: Consultation meeting scheduled with Shalene Jobin (Associate Professor) on June 22nd, 2021. Florence Glanfield encouraged consultation with Shalene to identify how the certificate could articulate with the Faculty of Native Studies. Received letter of support from Dean Chris Anderson on August 1, 2021. - Science: Matina Kalcounis-Rueppell (Dean) provided a letter of support on May 15th, 2021 confirming their support for the certificate, as well as acknowledging the contributions of Eleni Stroulia (Professor, Computing Science) who has been working closely to align various majors in Science with the certificate (final course list generated on June 18, 2021). Julie Naylor (Assistant Dean, Programs and Operations) and Janine Wedemeier (Work Experience Coordinator) were contacted April 23rd, 2021 by Michael Lounsbury and agreed to share a survey with students in their Science Innovation Centre Slack channel community, as well as through the Science Mentor students. Responses were collected up until May 7th, 2021. - Augustana: Consulted (August 5, 2021) with Stacy Lorenz (Academic Programs) who expressed support and generated a list of courses of relevance by end of August, 2021. Letter of support from the Dean (Demetres P. Tryphonopoulos) was received on September 3, 2021. - Libraries – A library impact statement was received on Nov 4th, 2021, indicating that current resources will be able to support this certificate.
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Appendices															
<p>Appendix A – curriculum and program structure List course names, numbers, and descriptions. Indicate if the courses are new or existing. Include draft content for the University Calendar.</p>	<p>List course names, numbers, and descriptions. Indicate if the courses are new or existing. Include draft content for the University Calendar.</p> <p>Courses</p> <p>Core, Elective and Integrative courses for Embedded Certificate in Innovation and Entrepreneurship (all of these have been recommended by the proper authorities and logical stakeholders in participating Faculties). <i>*Course Calendar Description is attached because it is new, or being revised.</i></p> <p>SCHOOL OF BUSINESS</p> <p>Core Courses (choose at least one)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Course Number</th> <th style="text-align: left;">Course Name</th> </tr> </thead> <tbody> <tr> <td>SEM 330</td> <td>Exploring Innovation and Entrepreneurship*</td> </tr> <tr> <td>SEM 431</td> <td>New Venture Creation</td> </tr> <tr> <td>SEM 345</td> <td>Corporate Social Responsibility and Social Entrepreneurship</td> </tr> <tr> <td>SEM 331</td> <td>Integrative Capstone in Innovation and Entrepreneurship*</td> </tr> </tbody> </table> <p>Elective Courses (choose at least two)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Course Number</th> <th style="text-align: left;">Course Name</th> </tr> </thead> <tbody> <tr> <td>ACCTG 426</td> <td>Management Control Systems</td> </tr> </tbody> </table>	Course Number	Course Name	SEM 330	Exploring Innovation and Entrepreneurship*	SEM 431	New Venture Creation	SEM 345	Corporate Social Responsibility and Social Entrepreneurship	SEM 331	Integrative Capstone in Innovation and Entrepreneurship*	Course Number	Course Name	ACCTG 426	Management Control Systems
Course Number	Course Name														
SEM 330	Exploring Innovation and Entrepreneurship*														
SEM 431	New Venture Creation														
SEM 345	Corporate Social Responsibility and Social Entrepreneurship														
SEM 331	Integrative Capstone in Innovation and Entrepreneurship*														
Course Number	Course Name														
ACCTG 426	Management Control Systems														

ACCTG 463	Accounting for Natural Resources, Energy, and the Environment
BUEC 311	Business Economics, Organizations and Management
BUEC 479	Government and Business in Canada
FIN 422	Capital Investment
MARK 301	Introduction to Marketing
BTM 441	Managing Information Systems: A Senior Management Perspective
OM 468	Quantitative Management Consulting Project
SEM 301	Organizational Behavior
SEM 321	Strategy, Management and Organizational Theory
SEM 402	Leadership Skills
SEM 412	Effective Negotiations
SEM 488	Introduction to Indigenous Business
ALES	
Core Courses (choose at least one)	
<u>Course Number</u>	<u>Course Name</u>
AN SC 479/499	Integrative Project in Animal Science/Animal Health Science
AREC 323	Introduction to Management for Agri-Food, Environmental, and Forestry Businesses
AREC 423	Advanced Management Methods & Applications for Agri-Food, Fashion & Resource Bus.
NUFS 425	Methods and Applications in Nutritional Product Development
NUFS 450	Food Product Development
Elective Courses (choose at least two)	
<u>Course Number</u>	<u>Course Name</u>
AREC 250	Social and Economic Issues of Food Biotechnology
AREC 382	Food Systems, Distribution and Supply Chains
AREC 482	Cooperatives and Alternative Business Institutions
BIOEN 200	Introduction to Bioresource Technology
HECOL 241	Fashion Industries
HECOL 250	Design Studies and Practices
HECOL 300	Policy Development and Evaluation
HECOL 301	Program Planning and Evaluation
HECOL 313	Family Dynamics
HECOL 412	Family Challenges
HECOL 440	Family Policy Issues
HECOL 441	Textiles and Apparel in the Global Economy
NUFS 100	Introduction to Food Science and Technology
NUFS 200	Introduction to Functional Foods and Nutraceuticals
NUFS 201	Physical Principles of Food Structure and Functionality
NUFS 311	Introduction to Food Processing
NUFS 361/363	Food Microbiology
NUFS 401	Undergraduate Research Project
NUFS 402	Brewing, Enology, and Food Fermentations
NUFS 403	Processing of Milk and Dairy Products

NUFS 406	Science and Technology of Cereal and Oilseed Processing
NUFS 427	Food Safety
NUFS 430	Principles of Sensory Evaluation of Foods
NUFS 454	Unit Operations in Food Preservation
NUFS 490	Innovations in Food Science
PL SC 345	Plants for Bioproducts
PL SC 491	Biotechnology for Crop Improvement
ARTS	
Core Courses (choose at least one)	
<u>Course Number</u>	<u>Course Name</u>
HADVC 209	History of Modern Design
DR259	Performer Created Theatre
SOC 363	Sociology of Work and Industry
Elective Courses (choose at least two)	
<u>Course Number</u>	<u>Course Name</u>
ART 438	Practicum
DES586/7	Design Practicum
DES 597	Design Management
HADVC 309	Sustainable Design
DES 483	Design Issues
DR240	Voice for Performance
DR331	Movement and Physical Theatre
DR 427	Topics in Community Based and Applied Theatre
MUS 495	The Business of Music
PHIL 366	Computers and Culture
PHIL 385	Ethics and Artificial Intelligence
PHIL 355	Environmental Ethics
C LIT 210	Literature in the Digital Age
C LIT 228	Literature, Popular Culture and the Visual Arts
C LIT 450	World Literature and the Environment
FREN 254	Introduction to Translation Theory and Practice: French-English-French
FREN 311	Mystery, Myth, and Supernatural
FREN 333	French Cultural Moments
FREN 454	Translation: English into French
FREN 479	Media and Society in France
GERM 443	Advanced Translation: German into English
GERM 444	Exercises in Translation: English into German
HADVC 209	History of Modern Design
LA ST 210	South America
POLSH 407	Business Polish
RUSS 443	Russian-English Translation
SLAV 399	Early Ukrainian Canadian Culture
SPAN 405	Exercises in Translation: Spanish into English
SPAN 406	Exercises in Translation: English into Spanish
SPAN 475	Spanish in Society
UKR 300	Ukrainian through its Living Culture I
UKR 306	Business Ukrainian

UKR 400	Ukrainian through its Living Culture II
WGS 102	Gender and Social Justice
WGS 244	Critical Disability Studies
WGS 250	Gender and Science
WGS 390	Environmental Feminisms and Social Justice
WGS 310	Gender, Development, and Beyond
WGS 360	Race, Class, and Gender
SOC 203	Social Problems
SOC 260	Inequality and Social Stratification
SOC 269	Introductory Sociology of Globalization
SOC 291	Introduction to Environmental Sociology
SOC 302	Topics in Sociology (Anti-racism and Racial Injustice)
SOC 302	Topics in Sociology (Media and Society)
SOC 327	Criminal Justice Administration in Canada
SOC 343	Social Movements
SOC 366	People in Industry
SOC 369	Sociology of Globalization
SOC 370	Racism and Decolonization
SOC 402	Topics in Sociology (Commons and Climate Justice)
SOC 402	Topics in Sociology (Speed, Mobility, and Work)
SOC 415	Applied Research Internship
SOC 445	Cities and Suburbia
SOC 456	Data Analysis and Research
SOC 496	Human Rights in International Perspective
ECON 281	Intermediate Microeconomic Theory I
ECON 373	Industrial Organization
ECON 399	Introductory Econometrics
ECON 384	Intermediate Microeconomic Theory II
ECON 421	International Trade
ECON 471	Strategic Behavior of the Firm
ECON 422	International Payments
ECON 472	Market Power: Theory and Policy
ECON 493	Economic Forecasting
ECON 222	Technology, Institutions and Economic Growth
ECON 451	Indigenous Economic Development
ECON 251	Indigenous Economics
ECON 467	Environmental and Natural Resource Policy
ECON 404	Applied Economics Projects
MLCS 210	Approaches to Cultural Studies
MLCS 410	Capstone Course
MST 350	Understanding Video Games (in person)
MST 351	Understanding Video Games (remote)
MUS 365	Music for Global Human Development
AUGUSTANA	
Core Courses (choose at least one)	
Course Number	Course Name
AUMGT 350	Entrepreneurship
Elective Courses (choose at least two)	

Course Number	Course Name
AUACC 311	Introductory Accounting
AUACC 322	Managerial Accounting
AUART 331	Drawing III: Contemporary Ideas in Drawing
AUART 371	Painting III: Contemporary Ideas in Painting
AUART 411	Interdisciplinary Exploration: Studio
AUCHE 341	Environmental Chemistry
AUCSC 204	Computing Technology in Modern Society
AUCSC 460	Artificial Intelligence
AUDRA 239	Theatre Company
AUDRA 250	Applied Improvisation
AUDRA 350	Introduction to Directing
AUECO 203	Intermediate Microeconomic Analysis I
AUECO 254	India Tour
AUECO 341	Environmental Economics
AUECO 346	Agricultural Economics
AUECO 356	China Tour: Experiencing Development and Change
AUECO 360	International Economics
AUECO 364	Development Economics
AUENG 368	Ecofeminist Theory and Women's Writing
AUENV 220	Applications in Sustainability
AUENV 324	Resource and Environmental Management
AUENV 327	Environmental Education and Heritage Interpretation
AUIDS 230	Introduction to Gender and Women's Studies
AUIDS 302	Exploring Body Issues
AUMGT 310	Corporate Finance
AUMGT 330	Introduction to Marketing
AUMGT 345	Organizational Theory
AUMGT 360	Hockey: Culture and Commerce
AUMGT 370	Organizational Research Methods
AUMUS 226	Music and the Moving Image
AUMUS 235	Introduction to Conducting
AUMUS 236	Introduction to Choral Techniques, Literature, and Interpretation
AUMUS 250	Introduction to Music Education
AUMUS 330	Music for the Theatre
AUMUS 356	Music and Wellness
AUPED 317	Exercise in Special Populations
AUPED 343	Training Methodologies and Athletic Performance
AUPED 469	Sport and Canadian Popular Culture
AUPHI 355	Philosophy and the Environment
AUPHI 390	Indigenous Thought: First Nations Thought and Knowledge
AUPOL 328	Environmental Politics
AUPOL 329	Popular Culture, Law and Politics
AUPOL 355	Gender, Law, and Politics
AUPSY 342	Health Psychology
AUPSY 344	Environmental Psychology
AUPSY 346	Community Psychology
AUREL 263	Spirituality and Globalization
AUREL 345	Religion and Ecology
AUSOC 218	Sociology of Global and Development Issues

AUSOC 222	Canadian Social Issues
AUSOC 275	Sex, Gender, and Society
AUSOC 341	Sociology of Food
AUSOC 358	Environmental Sociology
AUSOC 393	Political Sociology
ENGINEERING	
Core Courses (choose at least one)	
<u>Course Number</u>	<u>Course Name</u>
ENG G 260	Technology Entrepreneurship
ENG M 402	Entrepreneurship and Project Management
Elective Courses (choose at least two)	
<u>Course Number</u>	<u>Course Name</u>
ENG M 310 & 401	Engineering Economics
ENG M 405	Engineering, Business and Society
ENG M 408	Manufacturing Systems and Engineering
ENG M 501	Production and Operations Management
ENG M 508	Energy Auditing and Management
ENG M 514	Reliability Engineering
ENG M 516	Maintenance Management
ENG M 530	Engineering Project Management
ENG M 540	Introduction to Optimization Models and Algorithms
ENGG 420	Engineering Law
ENGG 490	Engineering Leadership Lab
KINESIOLOGY, SPORT AND RECREATION	
Core Courses (choose at least one)	
<u>Course Number</u>	<u>Course Name</u>
Elective Courses (choose at least two)	
<u>Course Number</u>	<u>Course Name</u>
HEED 321	Psychological Dimensions of Health Promotion
KIN 303	Psychology of Sport and Physical Activity
KIN 311	Assessment of Fitness & Health
KIN 335	Advanced Conditioning Methodology
KIN 372	Neuroscience Considerations for Adapted Physical Activity
KIN 403	The Application of Psychological Skills to Sport and Physical Activity (KIN 303 is a prereq)
KIN 440	Advanced Sports Injury Management (KIN 240 Prerequisite)
KIN 444	Communication Skills and Strategies in Sport and Physical Activity
KRLS 411	The Business of Hockey
KRLS 421	Play Leadership
RLS 331	Leisure Education
NATIVE STUDIES	

Core Courses (choose at least one)	
Course Number	Course Name
NS 330	Indigenous Economies
Elective Courses (choose at least two)	
Course Number	Course Name
NS 115	Indigenous Peoples and Technoscience
NS 345	Governance in Indigenous Nations
NS 420	Partnership Strategies
SCIENCE	
Core Courses (choose at least one)	
Course Number	Course Name
PHYS 495/595	Physics Innovation & Entrepreneurship
Elective Courses (choose at least two)	
Course Number	Course Name
BIOL 298	Understanding Biological Research
BIOL 299	Research Opportunity Program
BIOL 398	Research Project
BIOL 399	Research Project
BIOL 498	Research Project
BIOL 499	Research Project
CHEM 299	Research Opportunity Program in Chemistry
CHEM 399	Research Experience in Chemistry
CHEM 401	Introduction to Chemical Research
CHEM 403	Chemical Research
CHEM 425	Separations and Mass Spectrometry
CHEM 451	Chemical Biology
CHEM 454	Bioconjugate Chemistry
CHEM 405	Special Topics in Chemistry
CMPUT 250	Computer and Games
CMPUT 401	Software Process and Project Management
CMPUT 404	Web Applications and Architecture
CMPUT 414	Introduction to Multimedia Technology
CMPUT 495	Honors Seminar
CMPUT 469	Artificial Intelligence Capstone
MATH 356	Introduction to Mathematical Finance I
MATH 357	Introduction to Mathematical Finance II
MATH 371	Mathematical Modelling in the Life Sciences
MATH 372	Mathematical Modelling I
MATH 408	Computational Finance
STAT 371	Probability and Stochastic Processes
STAT 378	Applied Regression Analysis
STAT 479	Time Series Analysis
PHYS 397	Projects in Experimental Physics
Draft content for the University Calendar	
The Certificate in Innovation and Entrepreneurship will provide undergraduate students formal recognition for the innovation and entrepreneurship knowledge that	

they have acquired and demonstrated over the course of their academic career. The certificate will indicate to employers that the student has an understanding of how innovative and entrepreneurial processes can be leveraged to enhance social and economic outcomes, complementing and extending their primary areas of expertise.

The Faculty of Business is the administrative unit for the Certificate in Innovation and Entrepreneurship, although students who earn this certificate can take courses from other participating Faculties offering courses that can be counted toward the certificate (ALES, Arts, Augustana, Engineering, Kinesiology, Sport and Recreation, Native Studies, and Science). Normally the requirements for the Certificate in Innovation and Entrepreneurship can be completed as part of the requirements for a student's degree; however, in some cases, a student may need to take more than the minimum number of courses required for their degree program in order to qualify for both the degree and the certificate. The Certificate in Innovation and Entrepreneurship will be available to undergraduate students who are enrolled in degree programs offered by participating Faculties.

While completing the undergraduate program in their respective Faculties, students will be required to complete a minimum of ★12 from a list of designated courses. These courses will be categorized into two categories: "Core courses" and "Electives." Students will be required to complete at least ★6 in each category. In addition, on the core courses will be a required integrative projects course worth ★3, which will engage directly with key aspects of innovation and entrepreneurship and serve as the de facto "capstone" experience for participating undergraduate students.

Students will be asked to complete an "intention to complete the certificate" form available at the University of Alberta eHUB website: <https://www.ualberta.ca/entrepreneurship-centre> and the Faculty of Business website: <https://www.ualberta.ca/business>

Application for the certificate is made to the Faculty of Business Undergraduate Office: <https://www.ualberta.ca/business/programs/bachelor-of-commerce/index.html> by February 1 for Spring Convocation and September 1 for Fall Convocation. At present, this certificate is not available to students who have already completed their degrees or who are not receiving a degree at the appropriate convocation.

Students may pursue the Certificate in Innovation and Entrepreneurship by fulfilling existing requirements for majors, minor or honors in their respective disciplines and by completing the following:

- ★6 in core courses from the preapproved list of academic courses listed by eHUB and the Faculty of Business.
- ★6 in elective courses from the preapproved list of academic courses by eHUB and the Faculty of Business

Notes:

A maximum of ★3 from any given course can be used for the certificate

	<p>No more than ★3 of the ★12 may be transfer credits from other postsecondary institutions.</p> <p>The certificate will be awarded at the time the students earn their undergraduate degree.</p> <p>Must be enrolled in a major that is part of the participating Faculties.</p> <p>Students must be in good academic standing at the time they register for the certificate and they must maintain good academic standing as they pursue the certificate. Students must maintain the minimum GPA for continuation in their respective programs.</p> <p>Students will be required to register for the certificate no later than September 30 of their third year, or at completion of ★60 if studying part-time. No more than half of the course requirements taken for this certificate may overlap with courses taken for another certificate. This certificate is conceived as an interdisciplinary one, and at least one of the courses in the certificate should be taken from an outside Faculty.</p>
<p>Appendix B – other Include any additional information in support of the proposal including the Library Impact Statement and letters of support.</p>	<p>See Course Descriptions for SEM 330 and SEM 331 attached.</p> <p>See Letters of Support attached.</p>

Department/Program Office: Strategy, Entrepreneurship, and Management

Change: Course Change

In which academic year is this change is this change requested? **2022-2023**

Calendar Copy:

<p>Current: SEM 330 – Introduction to Entrepreneurship</p>	<p>Proposed: SEM 330 – <u>Exploring Innovation and Entrepreneurship</u></p>
<p>★ 3 (fi 6)(EITHER, 3-0-0) <u>This is an interdisciplinary course for students interested in developing an idea for a new product or service into a market reality and an investable story. This course is about developing the analytical and conceptual skills required to assess the potential for a new venture. Working on a team composed of students from across different faculties, students will generate an idea, use business modeling techniques to flesh out that idea and define a venture opportunity, move through the customer research and development process in order to assess how to improve their new venture concept, and pitch their idea. Topics covered in this course will include: idea generation, business model development, market definition, customer discovery, competitive analysis, and resource development. Open to students in any Faculty with the consent of the Department. Not open to students in first year.</u></p>	<p>★ 3 (fi 6)(EITHER, 3-0-0) <u>This is an interdisciplinary, introductory online course for students interested in understanding innovation and entrepreneurial processes. The course focuses on how people, ideas, resources can be brought together to generate economic, social or cultural impact and change. Topics include entrepreneurial processes, barriers to new venture creation, how to navigate entrepreneurial ecosystems, and social and communicative skills required for resource acquisition. Through approaching entrepreneurial practice with multiple lenses, we will enhance the notion that creativity and innovation can be applied across many spheres of life - including in academic research, nonprofits, government, big companies, and small start-ups. Open to students in any Faculty. Not open to students in first year.</u> <u>Prerequisite: None</u></p>

Rationale: A new online course replaces the existing SEM 330 course. The new SEM 330 will be a core course in the University's new embedded *Certificate in Innovation and Entrepreneurship*. Open to business and non-business students across the university. Not open to students in first year.

Submitted by:

Date: November 8th 2021

Ian Gellatly, Department Chair
 Strategy, Entrepreneurship and Management

CALENDAR CHANGE REQUEST FORM

Department/Program Office: Strategy, Entrepreneurship, and Management

Change: New Course

In which academic year is this change is this change requested? 2022-2023

Calendar Copy:

Current: n/a	Proposed: <u>SEM 331 – Integrative Capstone in Innovation and Entrepreneurship</u>
	<u>★ 3 (fi 6)(EITHER, 3-0-0)</u> <u>This course is the integrative, interdisciplinary capstone projects course for the innovation and entrepreneurship certificate. Students will develop, individually or in a team, an innovation and/or an entrepreneurial organization or venture that addresses an economic, social or cultural issue or problem. The course will integrate learnings across each student's innovation and entrepreneurship journey, and will be supported by the University innovation entrepreneurship centers (e.g., eHUB, ICE, the SIC). The course will include experienced innovators and entrepreneurs as guest speakers. Open to students in any Faculty. Not open to students in first year.</u> <u>Prerequisite: Completion of one core and two elective innovation and entrepreneurship courses.</u>

Rationale: New required integrated capstone projects course for embedded certificate in innovation and entrepreneurship. Open to business and non-business students across the university. Not open to students in first year. Given the course is a project-based capstone course, students must have completed one core and two elective innovation and entrepreneurship courses.

Submitted by:

Date: November 8th 2021

Ian Gellatly, Department Chair
Strategy, Entrepreneurship and Management

Library Impact Statement

As per GFC Policy 37.3.7, Faculties seeking changes to existing programs must consider and seek the agreement to any impact of the proposed program changes on the library system and on course enrolments in other academic units. In addition, any new program proposal going forward for approval will require a service impact statement. Where the affected Faculties and/or Library are in agreement this statement will note that fact and details of the arrangement.

Please contact your subject librarian to solicit feedback on your program proposal and request a Library Impact Statement.

Library Contact:

Name: Céline Gareau-Brennan	Date: November 3rd 2021
Library Unit: Faculty Engagement (Sciences, Engineering, and Business)	Email: crg@ualberta.ca

Program Proposal Contact:

Name: Dr. Michael Lounsbury	Dept./School: Academic Director of eHUB (Technology Commercialization Centre) and Professor, Department of Strategy, Entrepreneurship & Management
Faculty: Alberta School of Business	E-mail: ml37@ualberta.ca

Proposed Program Changes:

The Alberta School of Business created a new Embedded Certificate in Innovation and Entrepreneurship. The Certificate will recognize and certify the knowledge about innovation and entrepreneurship that undergraduates receive in the course of their academic career. This embedded undergraduate certificate in innovation and entrepreneurship is a key component of a suite of initiatives that the University is developing to become a top-ranked entrepreneurial academic institution—a key objective in our U of A for Tomorrow plan

The certificate will be based out of the School of Business, in order to give it a permanent “home,” even though students from all participating Faculties (Business, ALES, Arts, Augustana, Engineering, Kinesiology, Sport and Recreation, Native Studies, Science) will be able to pursue the certificate. Thus, it is an interdisciplinary certificate.

*Students will be required to complete 12 course credits by acquiring a grounding in core aspects of innovation and entrepreneurship (1 core course in any faculty), taking two innovation and entrepreneurship courses as electives that are relevant to their field of study, and complete the certificate with a final “integrative project” for-credit course. Students from the participating Faculties are invited to earn the certificate, given that they will have the time to earn the certificate in a four-year period. **All courses involved in the certificate are either existing courses, or are already being planned to be developed and so the impact on the Library would be minimal.***

The Alberta School of Business estimates that in the first year of implementation (2022-23), they will have 30 students enrolled in the certificate and expect enrolment to increase each year, and stabilize at 100 (total) enrolled students each year by 2026-27. The enrollment comes from existing students.

Library Impact Statement

Library Service or Resource	Description of Library Impact
<p>Instruction (e.g., classes with a librarian, tours, online resource guides, online tutorials, etc.)</p>	<p>Business library instruction related to market and industry research would be the most likely for this certificate. However, library instruction related to library resources in ALES, Arts, Augustana, Engineering, Augustana, Kinesiology, Sport and Recreation, Native Studies, and Science, may be needed, depending on the home faculty of the student in question.</p> <p>Since the library experience of the non-business faculties students may vary based on the classes they pick and their background, we recommend that the business librarian work closely with the professors teaching the core classes for this certificate (SEM 330, SEM 431, SEM 445) to ensure that all students can take advantage of the library's resources relevant to entrepreneurship and innovation.</p> <p>Instruction for Robotics, 3D Printing, Patent Searching, as well as for digital projects, such as those from the Digital Scholarship Centre, may be useful for students in the program.</p> <p>The Library offers a range of <u>drop in research workshops</u> throughout the academic year to assist students with their research needs. In addition, <u>online instructional guides</u> and <u>tutorials</u> are accessible via the Library's web site to support the research process. Course/assignment specific instruction may also be useful. Please contact the appropriate <u>subject librarian</u> to discuss.</p> <p>Céline Gareau-Brennan is the subject librarian for Business and has the capacity to support this Certificate. Céline may also relay some requests to the library's newly formed Library Entrepreneurship and Innovation Team.</p>
<p>Reference assistance (e.g., ongoing one-on-one help)</p>	<p>The Business subject librarian will be able to accommodate requests for assistance via email, phone, or online. Over time, the library's Entrepreneurship and Innovation Team may take over these requests. Depending on the home faculty of the student in question, other subject librarians may be consulted.</p> <p>General reference assistance is available at all University of Alberta Library <u>service desk locations</u>. In addition, <u>subject librarians</u> are available for one-to-one consultations for specialized assistance. <u>Ask us services</u> are also available via chat, email and phone.</p>
<p>Collections – reserves, print, electronic [note any impacts on simultaneous users, licensing considerations etc.]</p>	<p>The Library's current subscriptions to print and electronic journals and books should adequately support most of the needs of this program.</p> <p>Journals and electronic resources with particular relevance to this program include:</p> <ul style="list-style-type: none"> ● Industry and Market Databases <ul style="list-style-type: none"> ○ BCC Research

Library Impact Statement

	<ul style="list-style-type: none"> ○ Conference Board of Canada ○ Derwent Innovations Index ○ Economist Intelligence Unit ○ Entrepreneurship Database ○ Fitch Connect ○ FP Advisor (Financial Post) ○ Frost & Sullivan ○ Global Financial Data ○ IBISWorld ○ Insider Intelligence ○ MarketLine Advantage ○ MarketResearch.com Academic ○ Mintel Reports ○ NetAdvantage ○ OECD iLibrary ○ Passport ○ Polaris Intelligence ○ Refinitiv ○ SimplyAnalytics ○ Statista ● News and Article Databases <ul style="list-style-type: none"> ○ Academic Search Complete ○ Business Premium Collection ○ Business Source Complete ○ Canadian Business & Current Affairs Database ○ Canadian Newsstream ○ EconLit ○ Factiva ○ PressReader ○ PsycINFO ○ US Major Daily Newspapers <p>Depending on the home faculty of the student in question, other subject specific databases and resources may be used.</p> <p>The Library's <u>Data Services and Collections</u> and <u>Digital Scholarship Centre</u> will also support this certificate.</p> <p>The Library also supports <u>course reading list and reserve requests</u> online using the <u>Talis platform</u>.</p>
<p>Collaboration with other UAL library units, if interdisciplinary program (consult with the other UAL units affected and include their comments with yours)</p>	<p>Given the interdisciplinary nature of this program, the following library units have been consulted in the preparation of this impact statement:</p> <ul style="list-style-type: none"> ● Collections Strategy Unit ● Entrepreneurship and Innovation Team ● Digital Initiatives (Specifically when it comes to the datahelp team) ● Digital Scholarship Centre ● Faculty Engagement (Sciences, Engineering, and Business) Unit ● Faculty Engagement (Augustana) Unit ● Faculty Engagement (Law, Arts, Campus Saint-Jean, Education) Unit

Library Impact Statement

	<ul style="list-style-type: none"> • Thane Chambers, Research Impact Librarian • Allison Sivak, Librarian with liaison responsibilities for the Faculty of Kinesiology, Sport and Recreation • Sandy Campbell, Librarian with expertise with patent searching • Anne Carr-Wiggin, Librarian with liaison responsibilities for the Faculty of Native studies
<p>Physical facilities (e.g., sufficient room for group work; in-library work, etc.)</p>	<p>Physical facilities are in place to support student research needs. There are bookable group <u>study spaces</u>, as well as collaborative and individual study spaces in all library locations across.</p> <p>The <u>Digital Scholarship Centre</u> is another physical library facility that may be of use to those completing this certificate given their innovative resources, including access to the <u>DSC Makerspace</u>. The Library's 3D <u>printing service</u> out of Cameron Library may also be of use.</p>
<p>Other (specify)</p>	<p>Close communication between the certificate coordinator or instructors and the Library's Entrepreneurship and Innovation Team would be beneficial for all involved. Much of the work of supporting this certificate could be taken on by this Team, given their mandate.</p> <p>The mandate of this Team is to successfully develop key relationships, assess needs, and formalize a sustainable and flexible library model for carrying forward entrepreneurship and innovation work at the UA, contributing to an environment where entrepreneurship and innovation is more fully understood and integrated within the university's teaching and research activities, and enabling UAL to provide the best possible services for library users.</p> <p>As the Business Librarian, and co-chair of the Library's Entrepreneurship and Innovation Team, Céline Gareau-Brennan will be a key contact for this Certificate.</p>

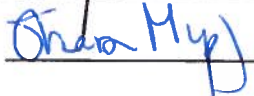
- Proposal has an impact on the Library and can be supported.**
- Proposal can be supported with additional resources; see attached details.
- Proposal has no impact on the Library.

Unit Head Signature:



Date: November 4, 2021

Associate University Librarian Signature:



Date: November 4 / 21

2-06 Agriculture-Forestry Centre
Edmonton, Alberta, Canada T6G 2P5
Tel: 780.492.4933
Fax: 780.492.8524
questions.ales@ualberta.ca
ales.ualberta.ca

April 14, 2021

Dr. Michael Lounsbury
Canada Research Chair in Entrepreneurship & Innovation
Academic Director, Technology Commercialization Centre (eHUB)
Alberta School of Business, 3-30L Business Building

Re: Support for the Certificate in Innovation and Entrepreneurship

Dear Dr. Lounsbury

I am very pleased to provide a letter of support for the creation of a Cross-Faculty Embedded Undergraduate Certificate in Innovation and Entrepreneurship. The Faculty of Agricultural, Life and Environmental Sciences is engaged in research and teaching to support innovation in a number of key sectors including agriculture, food, forestry, energy / environmental sciences, and fashion/textiles. Innovation and entrepreneurship is critical in these sectors and our students will benefit from the certificate being proposed as a complement to their current programs. A certificate in Innovation and Entrepreneurship would also be a popular choice for students in ALES. I believe ALES can also contribute to the Certificate programming with courses in our Agricultural / Food Business Management, Forest Business Management, and Fashion Business Management programs, as well as our innovative "mini-internship" program and study abroad courses that link students with innovators and entrepreneurs in the industry. We would welcome students from across the campus to our Faculty to engage in our courses and interact with ALES students and faculty.

Thank you for leading this important initiative. The Faculty of ALES looks forward to working with you on the development of this certificate program.

Sincerely



Stanford F. Blade, PhD, P.Ag.
Dean

6-33 Humanities Centre
Edmonton, Alberta, Canada T6G 2E5
Tel: 780.492.ARTS
Fax: 780.492.7251
www.arts.ualberta.ca

April 18, 2021

Dr. Michael Lounsbury
Department of Strategy, Entrepreneurship, and Management
School of Business
3-30L Business Building
University of Alberta

Dear Michael,

I am pleased to confirm the Faculty of Arts enthusiastic support for the ongoing work to develop a new cross-Faculty embedded Certificate in Innovation and Entrepreneurship. This Certificate will contribute to the University of Alberta's efforts to enhance our profile in innovation and entrepreneurship, while providing students with opportunities to harness interdisciplinary knowledge in pursuit of innovative and entrepreneurial solutions to pressing societal problems. Students are sure to see great value in a Certificate that recognizes their decision to commit to highly career-relevant learning opportunities.

Aidan Rowe, Chair of the Department of Art & Design, has kept me informed of his ongoing contributions to the design of this Certificate. Consultations with Arts Departments reveal encouraging support and considerable alignment with various majors in the Faculty of Arts.

Please know that I am pleased to assist in any way possible as the embedded Certificate in Innovation and Entrepreneurship moves forward.

Sincerely,



Steve Patten
Interim Dean of Arts

4-40 Business Building
Edmonton, Alberta
Canada T6G 2R6
Tel: 780.492.4083
www.ualberta.ca/business

July 28, 2021

Dr. Michael Lounsbury
Department of Strategy, Entrepreneurship, and Management
School of Business
3-30L Business Building
University of Alberta

RE: Letter of support for a new embedded Certificate in Innovation and Entrepreneurship

Dear Michael,

The Faculty of Business enthusiastically supports the development of a cross-faculty embedded certificate in Innovation and Entrepreneurship. Innovation and Entrepreneurship are important to the University and I am eager to have the School of Business play a leading role to make this happen.

I believe that this will add value to the experience of students at University of Alberta. Whether preparing for a career in accounting, marketing or finance, this certificate will provide our students with critical skills and knowledge that will make them attractive to employers and capable of contributing positively to our local and national economy.

Michael Lounsbury, Professor and Academic Director of eHUB has deep expertise in this area and has been instrumental to the Business School's effort in this domain. He has worked hard to develop this initiative, and to ensure alignment between various majors across various faculties and the embedded certificate.

I am happy to support this certificate and I look forward to its successful introduction at the University of Alberta.

Sincerely,



Kyle B. Murray
Acting Dean & Stanley A Milner Professor
University of Alberta, School of Business



**UNIVERSITY
OF ALBERTA**

Dr. Michael Lounsbury
Professor, Department of Strategy, Entrepreneurship and Management
3-30L Business Building
11203 Saskatchewan Drive NW
Edmonton, AB T6G 2R6
via email: michael.lounsbury@ualberta.ca

September 3, 2021

Dear Dr. Lounsbury,

On behalf of the Augustana Faculty of the University of Alberta, I am writing to offer my full support to the development of a cross-faculty embedded Certificate in Innovation and Entrepreneurship. Moreover, I'd like to commit Augustana to working with you and your group to offer an appropriate number of pertinent courses (and the right resources) at Augustana.

Innovation and Entrepreneurship represents a significant sector with the University and an area that we need to focus on and augment. I am glad to witness the development of this certificate and happy for Augustana to contribute to this development. It goes without saying that such a certificate adds much to the University's current and future investment in experiential study and innovation.

Dr. Stacy Lorenz, Acting Associate Dean-Academic has kept me informed of your work on developing this certificate. Dr. Lorenz has also consulted widely at Augustana and has informed our Academic Council about this ambitious program that should benefit students both at Augustana and across the entire University. As Dr. Lorenz has likely told you himself, consultations across Augustana Faculty have garnered promising support and, in some cases, considerable enthusiasm.

I would like to end this brief letter by repeating my support and wishing you success. I very much look forward to Augustana students being able to benefit from the Certificate in Innovation and Entrepreneurship.

Sincerely,

A handwritten signature in black ink, appearing to read 'Demetres P. Tryphonopoulos'.

Demetres P. Tryphonopoulos
Dean & Executive Officer



9-201 Donadeo Innovation Centre for Engineering · 9211 116 Street NW, Edmonton, Alberta, Canada T6G 1H9
Tel: 780-492-0503 · Fax: 780-492-3973 · uab.ca/engineering

April 28, 2021

Dr. Michael Lounsbury, Professor
Canada Research Chair in Entrepreneurship & Innovation
Academic Director, Technology Commercialization Centre (eHUB)
Alberta School of Business, 3-30L Business Building
Edmonton, Alberta T6G 2E7

Dear Dr. Lounsbury,

The Faculty of Engineering strongly supports the development of a cross-faculty embedded certificate in Innovation and Entrepreneurship. Given the strategic importance of Innovation and Entrepreneurship to the University, this certificate is a crucial step in embodying the principles of creating positive commercial and social impact by applying knowledge and skills gained at the post-secondary level. Not only that, I also believe that this certificate program will add great value to the experience of Engineering students and other students at the University of Alberta.

I note that Professor Mike Lipsett (Engineering) has been working closely with you in the School of Business to ensure alignment between various majors in Engineering and the embedded certificate. We have also received encouraging support across our various departments and external stakeholders with respect to how such a certificate might augment other programming and extra-curricular efforts related to student innovation and entrepreneurship experiences.

I look forward to seeing this certificate initiative moves forward, and helping to ensure its success.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Fraser Forbes'.

J. Fraser Forbes, PhD, PEng
Dean, Faculty of Engineering



July 29, 2021

Dr. Michael Lounsbury
Department of Strategy, Entrepreneurship, and Management
Alberta School of Business
3-30L Business Building
University of Alberta

Re: Certificate in Innovation and Entrepreneurship

Dear Michael,

I am happy to lend the Faculty of Native Studies' support to the new cross-Faculty embedded Certificate in Innovation and Entrepreneurship being developed at the Alberta School of Business. This Certificate will be a useful interdisciplinary opportunity for students across our campuses to deepen their understanding of how to be innovative and entrepreneurial in order to address complex societal issues that demand such creativity and tools for new solutions.

The Native Studies 2018-2023 strategic plan, within the institutional strategic goal of Engage, identifies that "we will collaborate with units and programs across the university to develop new programming that supports the mission of the Faculty. Our Faculty remains committed to research and teaching programs on Indigenization and reconciliation policies that have a meaningful impact on the lives of Indigenous people." As such, this new Certificate is strongly aligned with the Faculty of Native Studies' strategic plan.

Shalene Jobin, Director of the Indigenous Governance and Partnership Program, has provided me with full details on how Native Studies courses will contribute to the programming offered through this Certificate. After consulting with the Associate Dean (Academic) and relevant professors in the Faculty of Native Studies, it is clear that there is support to collaborate with the School of Business on this initiative.

I am pleased to assist in moving the Certificate in Innovation and Entrepreneurship forward and I look forward to us working with you further in the future on this (and other!) matters.

Pishshapmishko,

Dr. Chris Andersen
Professor and Dean
Faculty of Native Studies

3-108 University Hall
8840 - 114 Street
Edmonton, Alberta, Canada T6G 2J9
Tel: 780.492.3364
Fax: 780.492.1008

May 17th, 2021

Dr. Michael Lounsbury
Canada Research Chair in Entrepreneurship & Innovation
Academic Director, Technology Commercialization Centre (eHUB)
Alberta School of Business, 3-30L Business Building

Re: Support for the Certificate in Innovation and Entrepreneurship

Dear Dr. Lounsbury

I am writing to extend my support for your effort in launching an embedded undergraduate certificate in Innovation and Entrepreneurship.

A certificate in this area is appropriate for a wide array of students from every Faculty at the University of Alberta. Almost every student in our Faculty would benefit from some education in innovation and entrepreneurship. An embedded undergraduate certificate, as proposed, would formalize this education in an interdisciplinary, cross-faculty model that will give students a valuable point of differentiation for themselves, in positioning themselves for future success in whichever field they chose to study. This certificate will also be an important point of differentiation for the university in our efforts to attract students and prepare them for future success.

The Faculty is pleased to work with you in developing a selection of courses that will contribute to the certificate. We look forward to the approval of the proposal and the next steps in launching the Certificate in Innovation and Entrepreneurship.

Sincerely,



W. Kerry Mummery, PhD FASMF
Professor and Dean

15 May 2021

Dr. Michael Lounsbury
Canada Research Chair in Entrepreneurship & Innovation
Academic Director, Technology Commercialization Centre (eHUB)
Alberta School of Business, 3-30L Business Building

Dear Dr Lounsbury,

On behalf of the Faculty of Science at the University of Alberta, I give my full support to the development of a cross-faculty embedded Certificate in Innovation and Entrepreneurship. Given the strategic importance of Innovation and Entrepreneurship to the University, I am delighted to see this certificate being developed with broad support. I also believe that this will add great value to the experience of students at University of Alberta and especially in the Faculty of Science where discovery and innovation are core.

It is important to note that Eleni Stroulia in the Faculty of Science has worked closely with you to ensure alignment between with existing majors in the Faculty of Science and the embedded certificate, and we have received encouraging support across our various departments. She will continue to work with you as key departmental contacts work on the details.

Additionally, the proposed Certificate in Innovation and Entrepreneurship compliments the efforts of our Student Innovation Centre, which seeks to inspire, grow, and sustain a culture of student innovators and entrepreneurs. Julie Naylor of the College of Natural and Applied Sciences has also coordinated discussions on how the certificate would further support our vision to provide programming that supplements and enhances the success of ongoing activities, and kick starts new student initiatives.

As you move through the process, we are happy to assist in any way possible. I wish you success and look forward to students being able to benefit from the Certificate in Innovation and Entrepreneurship.

Sincerely,



Matina Kalcounis-Rueppell
Dean of Science

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Governance Executive Summary
Action Item

Agenda Title	Proposed Graduate Embedded Certificate in Climate Change and Health, School of Public Health and Faculty of Graduate Studies and Research
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Motion

THAT GFC Programs Committee approve, with delegated authority from General Faculties Council, the new Graduate Embedded Certificate in Climate Change and Health as presented in the included documents by the School of Public Health, for implementation in Fall 2023.
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Item

Action Requested	X Approval <input type="checkbox"/> Recommendation
Proposed by	Ruth Wolfe, Associate Dean (Professional Programs), SPH
Presenter(s)	Ruth Wolfe, Associate Dean (Professional Programs), SPH Brooke Milne, Vice-Provost and Dean, FGSR

Details

Office of Administrative Responsibility	School of Public Health
The Purpose of the Proposal is <i>(please be specific)</i>	To approve a new *12 Graduate Embedded Certificate in Climate Change and Health for implementation in Fall 2023
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>This Graduate Embedded Certificate in Climate Change and Health responds to global calls for emergency action to limit global temperature increases and protect health. While climate change impacts everyone, the magnitude and severity of impacts are not equitably distributed. Climate change acts as a ‘threat multiplier’, putting pressure on vulnerable systems, populations, and regions – and therefore exacerbating many existing global health challenges and crises.</p> <p>The Graduate Embedded Certificate will complement and build on the education of graduate students with an interest in public health and/or the human dimensions of climate change impacts and responses.</p> <p>The primary target is School of Public Health (SPH) students in any of the degree programs - Master of Public Health in General Public Health, Master of Arts in Community Engagement, and MSc and PhD public health specializations. As a “hot” topic, this GEC will also be of interest to graduate students across campus who are interested in the human dimensions of climate change impacts, adaptation, and mitigation. This GEC is open to all graduate level students.</p> <p>Based on consultation meetings with potential employers (e.g., international agencies, federal government, local public health units, research institutes), this Graduate Embedded Certificate fills an important education and training gap. It will equip graduates with knowledge and skills urgently needed in all levels of government and government agencies (e.g., risk assessors, policy analysts, emergency planners), in non-governmental organizations in local or international settings (e.g., program evaluators, health promoters, climate</p>

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	<p>advocacy), or in the private sector (e.g., environmental consultants, climate change and vulnerability assessments, project managers). The action-oriented focus of the Graduate Embedded Certificate positions graduates to effectively apply their knowledge to consider climate change as central to all health programs, policies, practice, and research. The transdisciplinary nature of the program equips students for employment inside or outside of the health sector.</p> <p>The GEC in Climate Change and Health will be the first of its kind in Canada. Based on a systematic scan of the top universities in Canada, six offer programs in climate change, but none currently offer programs in climate change and health.</p> <p>A GEC in Climate Change and Health will align U of A and the SPH with other leading international post-secondary institutions, such as Yale School of Public Health and John Hopkins Bloomberg School of Public Health</p> <p>Climate change and health was one of the top-ranked areas of interest in surveys that the School completed in 2021. There have been relatively few opportunities for students to engage in climate change and health discussions at U of A. This relative lack of opportunities has resulted in high participation rates in campus climate change-related events such as 1) the 2019 Intergovernmental Panel on Climate Change (IPCC) Student Peer-Review, in which 28 students from faculties across UofA participated, resulting in submission of 616 thoughtful and in-depth comments to the Intergovernmental Panel on Climate Change and 2) the 2021: Conference of the Parties (COP)hack Workshop, which over 70 students attended, representing 10 Faculties.</p> <p>Clearly climate change exemplifies and epitomizes wicked public health challenges, with implications for the health of populations globally, and requiring intersectoral and interjurisdictional action.</p> <p>The SPH has existing partnerships with many international and national governmental and non-governmental organizations and other universities.</p> <p>No reallocation of resources is expected. This GEC fills a niche that the SPH and the U of A is well-positioned to fill with our faculty complement, and addresses strategic curricular and administrative goals.</p>
Supplementary Notes and context	<This section is for use by University Governance only to outline governance process.>

Engagement and Routing (Include meeting dates)

Consultation and Stakeholder Participation	<p><u>Those who are actively participating:</u></p> <ul style="list-style-type: none"> • Dr. Sherilee Harper, Canada Research Chair in Climate Change and Health, GEC in CC-H proponent and architect • All four <i>Environmental Health</i> faculty members
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<p>(parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u>Those who have been consulted:</u></p> <ul style="list-style-type: none"> ● All SPH faculty had the opportunity to discuss and provide input into the GEC priorities and criteria between Fall 2020 and Spring 2021. ● Dr. Sherilee Harper, Canada Research Chair in Climate Change and Health consulted with potential employers (e.g., international agencies, federal government, local public health units, research institutes). ● 2019-2020 & 2020-2021 SPH Student Associations: November 20 2020 & February 19 2021 meetings about MPH program changes and GECs ● Faculty survey on GEC criteria and GEC priorities: Fall 2020 ● Students and Alumni - Discussion & surveys that prioritized possible GEC ideas: March 2021 ● SPH Committee on Educational Policies and Programs, comprising all SPH Program Directors and student reps from all degrees - consideration & adoption of GEC criteria: June 2021 ● SPH Committee on Educational Policy & Programs - Approved proposal: Oct 14, 2021 ● Dr. Florence Glanfield, Vice Provost (Indigenous Programming), whose feedback has been incorporated into proposal documents: Oct 2021 ● FGSR Graduate Program Support team: Nov 1, 2021 ● SPH Faculty Council - Approved proposal: November 5, 2021 ● FGSR Programs Committee: Nov 10, 2021 ● FGSR Council - Approved proposal Nov 24, 2021
<p>Approval Route (Governance) (including meeting dates)</p>	<p><u>Those who have been informed:</u></p> <ul style="list-style-type: none"> ● Information about GEC criteria and potential GECs was presented at the School's Town Hall / Faculty Council meetings, which are open to the entire SPH community – faculty, students, alumni, and stakeholders. ● SPH Student Association representatives attend all SPH committee meetings, and have a vote on the SPH Faculty Council. ● All U of A Deans (across Colleges and independent units) - Consideration & support letters: October 2021 <ul style="list-style-type: none"> ● SPH Committee on Educational Policy & Programs - Oct 14, 2021 ● GPST - November 1, 2021 ● SPH Faculty Council - November 5, 2021 ● PRC - November 10, 2021 ● FGSR Council - November 24, 2021 ● GFC Programs Committee - December 9, 2021

Strategic Alignment

<p>Alignment with <i>For the Public Good</i></p>	<p>Please note the Institutional Strategic Plan objective(s)/strategies the proposal supports.</p> <p>EXPERIENCE diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success. 7.1 The GEC will involve world-class</p>
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	<p>experts in climate science and health and expose students to the researcher-experts and to the field of climate change and health on a global scale.</p> <p>10.1/10.2 This GEC lays the foundation for future continuing education and professional development within the first two years of implementation. EXCEL as individuals, and together, sustain a culture that fosters and champions distinction and distinctiveness in teaching, learning, research, and service.</p> <p>11.1 The GEC recognizes faculty strengths in climate change research and enables them to integrate their research, service and teaching.</p> <p>11.2 The GEC supports students to build the knowledge and skills to contribute creative, innovative solutions to impacts of climate change on health. 11.4 The GEC supports faculty’s translational research by enabling them to engage with and educate students who will become knowledgeable and effective team members and leaders who bring a climate change lens to all efforts - “climate change” in all policies.</p> <p>12.1 The GEC recognizes an emerging area of research by promoting teaching in a distinctive area of critical importance internationally.</p> <p>14.1/14.2 The GEC encourages innovation and experimentation in curriculum, teaching, and learning through a unique competency-oriented curriculum to contribute to sustainable solutions to complex societal problems.</p> <p>ENGAGE communities across our campuses, city and region, province, nation, and the world to create reciprocal, mutually beneficial learning experiences, research projects, partnerships, and collaborations.</p> <p>16.2/16.3 The GEC course will facilitate student interactions with relevant climate change and health experts, analysts and policy makers.</p> <p>17.1/17.2 The School’s GEC criteria hinge on inter and transdisciplinary systems thinking to identify innovative solutions to complex public health and societal challenges. This GEC exemplifies creating synergy across sub-disciplines in public health. As noted above, it encourages cross-disciplinary teaching and enables faculty to integrate their research and teaching missions.</p> <p>SUSTAIN our people, our work, and the environment by attracting and stewarding the resources we need to deliver excellence to the benefit of all. 20.1 The GEC’s primary emphasis is on environmental, planetary and social sustainability using systems thinking to analyze the problem and potential mitigating strategies to address the impacts of climate change on health.</p> <p>This GEC also lays the foundation for future continuing education in the area of climate change and health within the first two years of the program, and future development of a MOOC.</p>							
Alignment with Core Risk Area	<p>Please note below the specific institutional risk(s) this proposal is addressing.</p> <table border="1"> <tr> <td>X Enrolment Management</td> <td>X Relationship with Stakeholders</td> </tr> <tr> <td>X Faculty and Staff</td> <td>X Reputation</td> </tr> <tr> <td>X Funding and Resource Management</td> <td>X Research Enterprise</td> </tr> </table>		X Enrolment Management	X Relationship with Stakeholders	X Faculty and Staff	X Reputation	X Funding and Resource Management	X Research Enterprise
X Enrolment Management	X Relationship with Stakeholders							
X Faculty and Staff	X Reputation							
X Funding and Resource Management	X Research Enterprise							

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	<input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Safety <input type="checkbox"/> Student Success
Legislative Compliance and jurisdiction	<i>Post-Secondary Learning Act</i> UofA Calendar General Faculties Council GFC Programs Committee Faculty of Graduate Studies & Research SPH Faculty Council SPH Committee on Educational Policies and Procedures	

Attachments

1. GEC - CCH - Template
2. Calendar Language Change
3. GEC in CCH Courses - 2021-2022 Calendar Change Package
4. GEC in CCH - Approved Elective Options

Prepared by: Ruth Wolfe, Associate Dean (Professional Programs), SPH
 Email: wolfe@ualberta.ca

**Program Approval Template
Embedded Credit Certificates**

This template is to be used for proposals calling for the establishment of new University of Alberta embedded credit certificates. Embedded credit certificates are taken concurrently with a degree program of the University of Alberta. (Certificate in Peace and Post-Conflict Studies offered by the Faculty of Arts; Graduate Certificate in Community-Based Research and Evaluation offered by Faculty of Graduate Studies and Research and Faculty of Extension.)

Governance: Embedded credit certificates are approved by the following route: Faculty Council, GFC Academic Standards Committee (ASC) Sub-committee on Standards (SOS), GFC ASC. In the event that the certificate proposal includes significant resource implications, the certificate will also be sent to GFC APC for approval.

Section A: Basics		
Program Name	Graduate Embedded Certificate (GEC) in Climate Change and Health	
Sponsoring Faculty/ Academic Unit	School of Public Health	
Contact information	Name and Title	Ruth Wolfe, Associate Dean, Professional Programs Sherilee Harper, GEC Proponent & Coordinator
	Phone	780-492-6476
	Email	wolfe@ualberta.ca / sherilee.harper@ualberta.ca
Institution(s) If multiple institutions are involved, specify the nature of the collaboration. Identify which institution(s) will award the credential.		
Units of Course Weight	*12	
Program Synopsis Describe the program. Include curriculum content, target student group, target employment, further education options, etc.	<p>GEC PROGRAM DESCRIPTION</p> <p>Climate change has already impacted human health globally, and future projections indicate increasingly widespread and devastating impacts this century. While climate change impacts everyone, the magnitude and severity of impacts are not equitably distributed. Climate change acts as a ‘threat multiplier’, putting pressure on vulnerable systems, populations, and regions – and therefore exacerbating many existing global health challenges and crises.</p> <p>This Graduate Embedded Certificate in Climate Change and Health responds to global calls for emergency action to limit global temperature increases and protect health. The Graduate Embedded Certificate aims to complement and expand on the education of graduate students with an interest in public health and/or the human dimensions of climate change impacts and responses. It is ideal for students who want to gain knowledge and understanding about how climate change shapes environmental health inequities and environmental justice, and intersects with Indigenous Peoples’ Rights, and to enhance skills in transdisciplinary approaches, systems thinking, and knowledge-to-action gained in other courses.</p>	

Graduates of this Graduate Embedded Certificate will be prepared for careers in complex environmental health practice or research. The knowledge and skills acquired in the Graduate Embedded Certificate program will be useful in all levels of government and government agencies (e.g., risk assessors, policy analysts, emergency planners), in non-governmental organizations in local or international settings (e.g. program evaluators, health promoters, climate advocacy), or in the private sector (e.g. environmental consultants, climate change and vulnerability assessments, project managers). The action-oriented focus of the Graduate Embedded Certificate positions graduates to effectively apply their knowledge to consider climate change as central to all health programs, policies, practice, and research. The transdisciplinary nature of the program equips students for employment inside or outside of the health sector.

GEC REQUIREMENTS

The Graduate Embedded Certificate (GEC) in Climate Change & Health comprises 12 credits - *7 required and *5 approved elective options

Required Courses *7

SPH 5XX *3 Climate Change and Human Health:

A required course for the GEC, this 3-credit course will introduce concepts of climate change and health. It will also be of interest to students across campus.

Course description: Climate change has severe and wide-sweeping consequences for humanity with important threats to human health and wellness. With health impacts ranging from heat-related deaths to infectious diseases (e.g., waterborne, foodborne, vector borne, and zoonotic diseases) to malnutrition to mental health to health service disruption and beyond, climate change is considered one of the biggest health challenges of the 21st century. This course focuses on how climate change is already impacting our health, and how we can diminish those impacts. Students will examine how past and future climate change hazards, exposures, and vulnerabilities shape health risks. Case studies will demonstrate how health equity, intersectionality, and social determinants of health can mediate or amplify climate change risks. Students will learn about and apply vulnerability assessment tools to identify and prioritize effective and feasible adaptation and mitigation actions. Through discussion, teamwork, and real-world examples, students will apply principles of transdisciplinary, systems thinking, equity and justice, sustainability, complexity, Indigenous Peoples' Rights, and community engagement gained in other courses to understand climate change impacts on health and also move into the solution space.

SPH 5XX *3 Hot Topics in Climate Change and Health:

A required course for the GEC, this 3-credit course is designed to be flexible and responsive to climate change and health topics, opportunities, and events as they emerge. Students will have the opportunity to learn from various guest lecturers, who are experts in the field of climate change, and discuss the pressing climate-health issues. It will also be of interest to students across campus. Prerequisite: SPH 5XX *3 Climate Change and Human Health

Course Description: Climate change and health is a rapidly emerging field with exponentially increasing research outputs and expanding areas of practice.

Climate change topics increasingly demand the public's attention, including news headlines, local to international policies, images of increasing extreme weather events, climate strikes, government election platforms, and increasing international reports on climate change impacts. Climate change is a hot topic! Alongside this rapid pace of climate change developments is the urgency for health action and immediate attention. Therefore, this course explores the health dimensions of hot topics, emerging themes, and current events in climate change as they occur in real time around the world. Through the discussion of current global to local issues at the climate-health nexus, students will deepen their understanding of climate change and health research, policy, and practice. Discussion, teamwork, and projects will enable the application of climate change and health theory to real time climate change events.

SPH 5XX*1 Climate Change & Health Integrative Project:

A required course for the GEC, this 1-credit culminating course of the GEC hinges on the *5 approved elective options. Students will integrate knowledge and skills learned in both required GEC courses and approved elective options through application of a climate change lens. At the end of the term, students will complete a project/presentation that demonstrates their understanding of climate change and health *and* their ability to integrate climate change considerations into addressing public health challenges.

Course Description: Public health needs a climate change action plan now. Human health is intertwined with the stability of our climate, making climate change a threat to any vision of a healthy future. Serving as the culminating and integrative experience of the Climate Change and Health Graduate Embedded Certificate, students will apply and expand knowledge gained throughout their coursework to engage in high-level inquiry focusing on climate change and health. Students will apply a climate change lens to health programs, policy, research, and decision-making, and explore how to integrate climate change dimensions into all health actions. Prerequisites: SPH 5XX *3 Climate Change and Health, SPH 5XX *3 Hot Topics in Climate Change and Health

Approved Elective Options *5

This climate-health GEC has many synergies with existing and anticipated courses in SPH and beyond. Approved elective options include courses that have direct relevance to climate change and health research and practice, such as: studying the impacts of climate change on health, assessing and mitigating health risks, preparing communities and health systems to respond and adapt, and considering the implications for the determinants of health equity.

Target Group

The primary target is School of Public Health students in any of the degree programs - MPH in GPH, MACE degrees, and MSc and PhD public health specializations. As a "hot" topic, this GEC will also be of interest to graduate students across campus who are interested in the human dimensions of climate change impacts, adaptation, and mitigation. This GEC is open to all graduate level students.

Target Employment

The GEC will provide a unique educational opportunity for graduate students at the University of Alberta. Students will gain an understanding of climate-health impacts, adaptation, and mitigation, and learn to apply a climate lens to their growing knowledge base. The GEC will urge students to adopt a complex systems lens to enable them to view climate change and health more holistically. The intersectoral (e.g., health, energy, infrastructure, meteorology, etc.) and transdisciplinary (engineering, biology, social-sciences etc.) nature of climate change and health spans multiple knowledge systems (including Indigenous Knowledge systems), and will attract students from multiple disciplines and backgrounds, and align with SPH strategic development goals.

Graduates of this Graduate Embedded Certificate will be prepared for careers in complex environmental health practice and research. The knowledge and skills will be useful in all levels of government and government agencies (e.g. risk assessors, policy analysts, emergency planners), in non-governmental organizations in local or international settings (e.g. program evaluators, health promoters, climate advocacy), or in the private sector (e.g. environmental consultants, climate change and vulnerability assessments, project managers). The action-oriented focus of the Graduate Embedded Certificate positions graduates to effectively apply their knowledge to centre climate change in health programs, policies, research, and practice. The transdisciplinary nature of the program equips students for employment inside or outside of the health sector. Based on consultation meetings with potential employers (e.g., international agencies, federal government, local public health units, research institutes), this Graduate Embedded Certificate fills an important education and training gap. There has been an increasing number of climate change initiatives, departments, programs, and institutions in Canada and internationally. While these programs are often interdisciplinary in nature, recruiting employees with climate change and health expertise remains challenging due to the climate-health education gap - an education gap that has been documented in the peer-reviewed literature. As such, this Graduate Embedded Certificate would be highly marketable to prospective employers.

The MPH in General Public Health requires an immersive field practice experience. There will be strategic opportunities for students in the GEC in Climate Change & Health to complete field practicum placements in organizations that address climate change and health. Similarly, students completing this GEC will bring a climate change and health lens to other practicum settings.

Section B: Rationale, Implications and Impact

Rationale for Introduction of Certificate

Outline the rationale for the proposed embedded credit certificate and provide supporting data if applicable – eg. Results of student or economic demand analyses; consultation with wider community, etc.

In June 2021, the School of Public Health adopted working criteria for internal consideration of GEC proposals. The proposed GEC meets [these criteria](#), as detailed below:

CANADA: A CLIMATE CHANGE & HEALTH GEC WILL BE THE FIRST OF ITS KIND IN CANADA

Based on a systematic scan of the top universities in Canada, there are no programs or certificates in climate change and health currently offered in Canada.

There are only 6 climate change certificates or other programs offered by post-secondary institutions in Canada – none of these focus on the health dimensions of climate change. These certificate programs primarily focus on policy and human dimensions of climate change. These include:

1. Climate Change Policy and Practice Certificate, University of Toronto
2. Graduate Certificate in Science and Policy of Climate Change, Royal Roads University
3. Human Dimensions of Climate Change Certificate Program, University of Victoria
4. Climate Change Policy Post-Certificate Program, Yukon College
5. Bachelor of Science in Applied Climate Change and Adaptation, University of PEI
6. Graduate Diploma in Climate Risk Management, University of Waterloo

INTERNATIONALLY: OFFERING A CLIMATE CHANGE AND HEALTH CERTIFICATE WILL ALIGN SPH WITH PRESTIGIOUS UNIVERSITIES ABROAD

A certificate in climate change and health will place SPH alongside other leading international institutions who offer similar climate-health certificate programs, such as:

1. Climate Change and Health Certificate, Yale School of Public Health
2. Climate Change and Public Health Certificate Program, John Hopkins Bloomberg School of Public Health.

RECRUITMENT AND ENROLMENT: THERE IS INCREASING STUDENT INTEREST IN CLIMATE CHANGE AND HEALTH TOPICS AT THE UNIVERSITY OF ALBERTA

Despite student interest in climate change topics, there have been relatively few opportunities for students to engage in climate change discussion. This relative lack of opportunities has resulted in high participation rates in campus climate change events. For example, this relative lack of opportunities has resulted in high participation rates in campus climate change events:

- 2019: Intergovernmental Panel on Climate Change (IPCC) Student Peer-Review: Drs. Harper and Yamamoto created a call for applications for students and early career researchers at the University of Alberta to participate in an official review of the UN's IPCC report chapter on climate change and health. They facilitated a mandatory training session for students and early career researchers at the University of Alberta on how to conduct IPCC

reviews and facilitated group work among students and early career researchers to conduct the review. Despite the short time from the announcement to the review (i.e. a couple of weeks notice), the timing of the review (i.e. during final exams), and the time required for students to participate (i.e. a minimum of 40 hours of work), 28 students from faculties across UofA participated, and submitted 616 thoughtful and in-depth comments to IPCC.

- 2021: [Conference of the Parties \(COP\)hack Workshop](#) (Kule Scholars + Future Energy Systems event): Held on May 12th, 2021, the workshop consisted of two formal talks, given by high school student Malaika Collette and Kule Scholar Sourayan Mookerjea, as well as six workshops. The health workshop was oversubscribed and required setting up an additional workshop to accommodate student interest in the topic. Over 70 students attended this event representing 10 Faculties.

Given this interest, the proposed GEC in Climate Change and Health will offer a competitive advantage to students enrolled in the program.

NICHE TOPIC AREAS: SPH HAS AN EXISTING STRENGTH IN CLIMATE CHANGE AND HEALTH RESEARCH

The School of Public Health has two faculty members whose substantive areas of research and expertise are health impacts of climate change, one of the largest contingents of climate-health researchers in Canada. Yet, this recognized research expertise is not currently reflected in the courses offered at UofA or the School of Public Health.

- **Dr Sherilee Harper**'s research investigates associations between weather and Indigenous health in the context of climate change. She collaborates with Indigenous partners to prioritize climate-related health actions, planning, interventions, and research. She is co-lead of the Indigenous Health Adaptation to Climate Change (IHACC) program, an international research initiative that works closely with Indigenous peoples and their organizations in the Canadian Arctic, Ugandan Impenetrable Forest, and the Peruvian Amazon. The program aims to utilize science and Indigenous knowledge to strengthen health systems in light of a rapidly changing climate, within three areas of foci: food security; malaria; and foodborne and waterborne disease. She is a contributor and teaching team member for [a collaborative international course](#) that the School offers as SPH 566 Artic WASH (Water, Sanitation and Hygiene). [D r. Harper holds a Canada research Chair in Climate Change and Health](#) and was awarded the [International Science Council's](#) Early Career Scientist Award.
- **Dr Shelby Yamamoto** is an environmental epidemiologist who explores environmental factors that impact vulnerable populations. Her research primarily focuses on two areas: air pollution and climate change. She is particularly interested in a) investigating the relationship between air pollution, climate change, and chronic diseases, b) assessing the links between air pollution and climate change, and c) exploring approaches to assess these relationships.

	<p>FORWARD THINKING: A CLIMATE CHANGE AND HEALTH GEC RESPONDS TO A GAP IDENTIFIED BY SPH STUDENTS, ALUMNI AND PRECEPTORS</p> <p>In the MPH Education and GEC Planning Survey (2021), SPH students, alumni and preceptors identified climate change as a top emerging health challenge.</p> <p>In addition to preparing health professionals to assess and respond to climate change impacts on health, climate-health education will expand public health professionals’ ability to advocate at a population level for climate change policy and research that will benefit population health outcomes and healthcare system climate resiliency (Leffers et al., 2017; Mantilla et al., 2019; Vogel 2019; Wasco 2019; Maxwell and Blashki, 2016; Shaman and Knowlton, 2018; Adlong and Dietsch, 2015; Yang et al., 2018). Therefore, this GEC will also fill an important gap in education (both nationally and internationally) and provide students with knowledge and key skill sets employers are seeking.</p>
<p>Vision and Academic Plan How does the proposed program align with the strategic goals described in <i>For the Public Good?</i> How does the program further the objectives or align with the strategies in the University’s Institutional Strategic Plan?</p>	<p>EXPERIENCE diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success.</p> <p>7.1 The GEC will involve world-class experts in climate science and health and expose students to the researcher-experts and to the field of climate change and health on a global scale.</p> <p>10.1/10.2 This GEC lays the foundation for future continuing education and professional development within the first two years of implementation.</p> <p>EXCEL as individuals, and together, sustain a culture that fosters and champions distinction and distinctiveness in teaching, learning, research, and service.</p> <p>11.1 The GEC recognizes faculty strengths in climate change research and enables them to integrate their research, service, and teaching.</p> <p>11.2 The GEC supports students to build the knowledge and skills to contribute creative, innovative solutions to impacts of climate change on health.</p> <p>11.4 The GEC supports faculty’s translational research by enabling them to engage with and educate students who will become knowledgeable and effective team members and leaders who bring a climate change lens to all efforts - “climate change” in all policies.</p> <p>12.1 The GEC recognizes an emerging area of research by promoting teaching in a distinctive area of critical importance internationally.</p> <p>14.1/14.2 The GEC encourages innovation and experimentation in curriculum, teaching, and learning through a unique competency-oriented curriculum to contribute to sustainable solutions to complex societal problems.</p> <p>ENGAGE communities across our campuses, city and region, province, nation, and the world to create reciprocal, mutually beneficial learning experiences, research projects, partnerships, and collaborations.</p> <p>16.2/16.3 The GEC course will facilitate student interactions with relevant climate change and health experts, analysts and policy makers.</p> <p>17.1/17.2 The School’s GEC criteria hinge on inter and transdisciplinary systems thinking to identify innovative solutions to complex public health and societal challenges. This GEC exemplifies creating synergy across sub-disciplines in public health. As noted above, it encourages cross-disciplinary teaching and enables</p>

	<p>faculty to integrate their research and teaching missions.</p> <p>SUSTAIN our people, our work, and the environment by attracting and stewarding the resources we need to deliver excellence to the benefit of all.</p> <p>20.1 The GEC's primary emphasis is on environmental, planetary, and social sustainability using systems thinking to analyze the problem and potential mitigating strategies to address the impacts of climate change on health.</p> <p>The GEC also lays the foundation for future continuing education and professional development in the area of climate change and health within the first two years of the program. Faculty are also interested in future development of a MOOC</p>
<p>Resource Implications Identify the resource implications of the proposed embedded credit certificate. Identify if resources are being reallocated to or from other areas and outline the implications of this reallocation.</p>	<p>No reallocation of resources is expected. The GEC will have some impact on teaching assignments to support the gradual realignment and integration of research and teaching.</p>
<p>Enrolment Outline the expected enrolment for the embedded credit certificate and any potential impacts on course offerings.</p>	<p>We anticipate a high degree of interest in this GEC, based on current student interest in the SPH and across the U of A campus, current events, and the increased media attention on climate change and health. The GEC will be open to all U of A graduate students. Our target GEC registration in the first year is 15-20 students. While we will give priority to SPH students who need the GEC courses to complete the GEC, the GEC courses will be designed for remote delivery and able to accommodate larger numbers. We currently have between 60 and 85 students in our MPH core courses. There are no prerequisites for the first course in the GEC, which is a prerequisite for the other two required GEC courses. The GEC will have a faculty coordinator in the substantive area of expertise, responsible for ensuring the coherence of the GEC by approving elective options outside those that are pre-approved and ensuring ongoing currency of the program.</p> <p>The Office of Education will provide administrative support, including managing the paperwork required for registration and program clearance. As for other GECs, students will submit an application/registration form to complete the GEC, in line with the current requirements for other GECs. Once approved by SPH, students will complete courses. When all coursework has been completed, SPH will confirm completion of the certificate with FGSR so it will appear on the student's transcript.</p>
<p>Implications of Introduction of the Credit Certificate Identify the implications of the proposed embedded credit certificate for the system. For example, will it affect other programs at the U of A, programs at other institutions, etc.?</p>	<p>The implementation of this GEC will enhance and extend the comprehensive public health education curriculum at the School of Public Health.</p> <p>There are currently no identifiable climate change and health courses in the UofA Graduate Calendar.</p> <p>It will not affect other programs at the U of A or other institutions except insofar as students in other programs and institutions may be interested in the GEC or in its specific courses.</p>

<p>Consultation Describe any consultation and/or potential impacts on service units of the University, including the Office of the Registrar and Student Awards, Academic Information and Communication Technologies (AICT), Library Administration, Facilities and Operations, Student Services, etc.</p>	<p><u>FACULTY LEVEL:</u> The GEC will have a faculty coordinator, who will approve elective options beyond those that are pre-approved. GEC registration and completion of certificate clearance is handled at the Faculty level and will result in a minimal amount of additional paperwork.</p> <p><u>OFFICE OF THE REGISTRAR:</u> There will be a modest increase in course registrations for the GEC courses. Completed certificates are signed off at the Faculty level in time for convocation, and appear on the student’s transcript and on their parchment.</p> <p><u>LIBRARY IMPACT STATEMENT: (Attached)</u> No impact on the library.</p>
<p>Appendices</p>	
<p>Appendix A – curriculum and program structure List course names, numbers, and descriptions. Indicate if the courses are new or existing. Include draft content for the University Calendar.</p>	<p>Please see attached.</p>
<p>Appendix B – other Include any additional information in support of the proposal including the Library Impact Statement and letters of support.</p>	<p>Please see attached for Library Impact Statement and letters of support.</p>

As per [GFC Policy 37.3.7](#), Faculties seeking changes to existing programs must consider and seek the agreement to any impact of the proposed program changes on the library system and on course enrolments in other academic units. In addition, any new program proposal going forward for approval will require a service impact statement. Where the affected Faculties and/or Library are in agreement this statement will note that fact and details of the arrangement.

Please contact your [subject librarian](#) to solicit feedback on your program proposal and request a Library Impact Statement.

Library Contact:

Name: Connie Winther	Date: 15 October 2021
Library Unit: Health Sciences	Email: cwinther@ualberta.ca

Program Proposal Contact:

Name: Ruth R. Wolfe	Dept./School: School of Public Health
Faculty: School of Public Health	E-mail: wolfe@ualberta.ca

Proposed Program Changes:

<p><i>Insert specific program proposal name here:</i></p> <p><i>Graduate Embedded Certificate in Climate Change & Health</i></p>
--

Library Service or Resource	Description of Library Impact
Instruction (e.g., classes with a librarian, tours, online resource guides, online tutorials, etc.)	<p>Instruction related to public health resources and search techniques may be useful for students in the program. Generic courses covering these topics are already available to MPH students.</p> <p>The Library also offers a range of drop in research workshops throughout the academic year to assist students with their research needs. In addition, online instructional guides and tutorials are accessible via the Library web site to support the research process. Course/assignment specific instruction may also be useful. Please contact the appropriate subject librarian to discuss.</p>
Reference assistance (e.g., ongoing one-on-one help)	<p>General reference assistance is available at all University of Alberta Library service desks. In addition, subject librarians are available for one-to-one consultations for specialized assistance. Ask us services are also available via chat, email and phone.</p>

<p>Collections – reserves, print, electronic [note any impacts on simultaneous users, licensing considerations etc.]</p>	<p>The Library's current subscriptions to print and electronic journals and books should adequately support this program. Any items that are not available and/or accessible through the Library can be requested through Interlibrary Loan.</p> <p>Journals and electronic resources with particular relevance to this program include: Databases:</p> <ul style="list-style-type: none"> ○ Medline ○ Global Health ○ CINAHL ○ EMBASE ○ SciFinder Scholar(Chemical Abstracts) ○ Compendex <p>Journals;</p> <p>The Library holds subscriptions to the major journal collections that support this broadly based program including: Elsevier, Springer, and Wolters Kluwer. Examples of these journals are: Public Health, American Journal of Public Health, and Lancet Planetary Health</p> <p>Submit course materials and reading list requests online. The Libraries will respond within 5 business days with persistent links to online resources on your reading list. Print items will be referred to our Reserve staff and processed within 10 days.</p>
<p>Collaboration with other UAL library units, if interdisciplinary program (consult with the other UAL units affected and include their comments with yours)</p>	<p>N/A</p>
<p>Physical facilities (e.g., sufficient room for group work; in-library work, etc.)</p>	<p>Physical facilities are in place to support student research needs. There are bookable group study spaces, as well as collaborative and individual study spaces in all library locations.</p>
<p>Other (specify)</p>	

- Proposal has an impact on the Libraries and can be supported.
- Proposal can be supported with additional resources; see attached details.
- Proposal has no impact on the Libraries.

Unit Head Signature: 

Date: 15 October 2021

Associate University Librarian Signature:

Sharon Murphy

Date: Oct. 19/21



Information Services & Technology
3-63 General Services Building

T 780.492.0786
cio@ualberta.ca
<https://www.ualberta.ca/information-services-and-technology>

Date: Tuesday, October 19, 2021

To: Assoc. Dean. R. Wolfe

From: M. MacGregor, AVP & CIO

Re: MPH GECs – IST Impact Assessment

Dear Assoc. Dean Wolfe,

IST fully supports the proposal from the School of Public Health for Graduate Embedded Certificates with the Master's of Public Health program. There are no substantial impacts on university IT.

Best wishes,

A handwritten signature in black ink that reads "M. MacGregor".

Mike MacGregor

Shanthi Johnson, PhD, RD, FDC, FACSM, FGSA
Professor and Dean

3-300 Edmonton Clinic Health Academy
11405 - 87 Ave, Edmonton, Alberta, Canada T6G 1C9
Tel: 780.492.9981
Shanthi.johnson@ualberta.ca
www.publichealth.ualberta.ca

October 14, 2021

Dear CEPP, FGSR, and GFC colleagues,

The attached proposal describes the rationale, needs, and benefits associated with the creation of a new Graduate Embedded Certificate (GEC) in Climate Change and Health – as part of the MPH program innovation through the School of Public Health at the University of Alberta.

The overall value of the proposed shift to the MPH in General Public Health and Graduate Embedded Certificates is strongly supported by SPH Student Association consultations and Student and Alumni and Preceptor surveys completed in Winter 2021. Specifically the feedback suggests that it would provide more flexibility, offer a sound grounding for career trajectories that may not be related to specializations, provide employers with cross-cutting competencies and provide a stronger orientation to the determinants of health.

In September 2019 SPH Faculty Council approved an MPH consolidation plan which included the development of a General MPH, and re-designing specialization training by offering Graduate Embedded Certificates instead of second-level specializations. The proposed shift is more student-driven, and offers greater governance and administrative effectiveness. It enhances our competitiveness in public health education, nationally and internationally, by clarifying our uniqueness and ensuring that we remain current.

This proposed Graduate Embedded Certificate in Climate Change and Health responds to the global environmental crisis. The certificate will complement and expand on the education of graduate students with an interest in public health and/or the human dimensions of climate change. It will enable students to gain expertise in climate change and health; environmental health equity; and, environmental justice. Students will also learn skills in transdisciplinary approaches, systems thinking, and knowledge-to-action.

The proposal meets the School's criteria for consideration of Graduate Embedded Certificates, aligns with *For the Public Good*, and will fill a unique niche in the Canadian public health education landscape. The School of Public Health currently has two highly regarded faculty members whose substantive areas of research and expertise are health impacts of climate change. They represent one of the largest contingents of climate-health researchers in Canada. This recognized research expertise is not currently reflected in the courses offered at UofA or the School of Public Health. This, combined with calls for emergency action to curb global temperature increases, restore biodiversity and protect health, makes the proposed GEC particularly timely and potentially impactful.

The proposed GEC along with the MPH in GPH will foster a more integrated and interdisciplinary environment, aligning with what is typically required in public health practice and research. This shift aligns with our focus on innovative interdisciplinary competency and practice-driven MPH common core curriculum. Under the new U of A budget model, we also need to maximize revenue generation which can in part be realized by increasing enrollment and innovative educational programming. This is consistent with our School's strategic and interrelated goals of delivering innovative high quality learning experiences, leading research excellence, and promoting organization effectiveness and resiliency and our mission to advance the public's health by engaging partners in world-leading research, learning and action.

As the dean of SPH, I offer my fullest support for the approval of this GEC. If you have any questions about the proposal please do not hesitate to connect with me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'S. Johnson', with a horizontal line underneath.

Shanthi Johnson, Professor and Dean



2 November 2021

Shanthi Johnson, PhD, RD, FDC, FACSM, FGSA
Professor and Dean
School of Public Health @ University of Alberta

Dear Dr. Johnson,

I am writing the brief letter in order to offer my strong support for the proposed second-level specialization-MPH in General Public Health (MPH in GPH) that your faculty is bringing forward for implementation in Fall 2023.

I am convinced by the rationale that is provided in the draft proposal that this shift has been made necessary by the need for consolidation, especially given the size of your School and faculty complement, but also the necessity of embracing change in the current public health education environment.

I'm also persuaded by the work that has already been done within the School in preparing for this shift and all the thought that has been given to the needs of future students. Equally so, I am persuaded by the new program's innovative core curriculum as well as the development of Graduate Embedded Certificates, something that will enable students to choose a concentration of their choice and allow them as well to be trained with the view of current and anticipated public health challenges. That the new program will be more student-driven is also something that recommends it highly in my estimation.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Tryphonopoulos'.

Demetres P. Tryphonopoulos
Dean & Executive Officer

FACULTIES

Kinesiology, Sport & Recreation
Medicine & Dentistry
Nursing
Pharmacy & Pharmaceutical Sciences
Public Health
Rehabilitation Medicine

November 2, 2021

Dear FGSR and GFC Councils:

The College of Health Sciences, along with the Health Sciences Faculties, strongly endorse and support the School of Public Health's (SPH) proposed new second-level specialization Master of Public Health (MPH) in General Public Health (MPH in GPH) for implementation in Fall 2023. This degree offering is consistent with the SPH's strategic plan, the institutional commitment *For the Public Good*, and the University of Alberta for Tomorrow.

This program will be a welcomed and timely addition to the current academic offerings. The proposal ensures that students would no longer be admitted into the seven second-level specializations currently offered. Those specializations would be terminated when continuing students have completed their degrees with the transition into the new program.

The shift represents the findings from a comprehensive assessment suggesting the need for consolidation given the size of the School of Public Health and faculty complement, currency in the evolving public health education landscape, strategic opportunities and administrative and governance efficiencies. Over the past several years, consolidation of the MPH degree programs has consistently been identified as a top priority.

Specifically, the proposed MPH in GPH will comprise 30 required courses and 15 elective courses for a total of 45. It has been designed to equip students with the knowledge and competencies needed for entry-level public health practice in a wide range of settings. Enrollment is anticipated to be the same as for our current MPH specializations with a target of 75 in Fall 2023.

To complement the MPH in GPH, SPH is developing Graduate Embedded Certificates (GECs) to facilitate students in choosing up to two concentrations. There are currently two GECs – Communicable Diseases and Community-based Research and Evaluation with more under development including a GEC in Climate Change and Health.

We strongly support the MPH in GPH with GECs which meets the SPH's strategic goals of delivering quality learning experiences, increasing transdisciplinary approaches to addressing complex intersectoral public health challenges, and integrating research and education.

Sincerely,



Greta Cummings, PhD, RN, FCAHS, FAAN, FCAN
Interim College Dean, College of Health Sciences



Brenda Hemmelgarn, MD, PhD
Dean, Faculty of Medicine & Dentistry

.../2



Nicholas L. Holt, PhD
Interim Dean and Professor
Faculty of Kinesiology, Sport, and Recreation



Tammy Hopper, PhD, R-SLP, CCC-SLP
Professor and Interim Dean
Faculty of Rehabilitation Medicine



Christine Hughes, BSCPharm, PharmD, FCSHP
Professor and Interim Dean
Faculty of Pharmaceutical Sciences



Diane Kunk, PhD, RN
Interim Dean
Faculty of Nursing



Paul Major, PhD
Professor & Department Chair
Faculty of Medicine & Dentistry

Office of the Dean
3-284 Edmonton Clinic Health Academy
University of Alberta
Edmonton, Alberta T6G 1C9
Telephone: 780.492.0415
www.ualberta.ca/social-sciences-humanities

October 29, 2021

Re: The School of Public Health (SPH) Letter of Support

Dear FGSR and GFC Councils,

I am writing to offer my strong support for the School of Public Health's (SPH) proposed new second-level specialization Master of Public Health (MPH) in General Public Health (MPH in GPH) for implementation in Fall 2023. This degree offering is consistent with the SPH's strategic plan, the institutional commitment *For the Public Good*, and the University of Alberta for Tomorrow.

I can confirm that there is unanimous support from the College's Council of Deans (i.e. the Deans of Arts, Business, Education and Law).

Without going into detail, I note that the proposed program change comes about after a comprehensive assessment and thorough analysis. The need for consolidation, the identification of strategic opportunities and the desire to realize administrative and governance efficiencies are all clearly described. The proposal is well thought out and articulated.

In sum, I strongly support the MPH in GPH with GECs which meets the SPH's strategic goals of delivering quality learning experiences, increasing transdisciplinary approaches to addressing complex intersectoral public health challenges, and integrating research and education.

Sincerely,



Joseph Doucet, PhD, ICD.D
Dean
College of Social Sciences and Humanities
University of Alberta

Cc: Kyle Murray, Dean, Alberta School of Business
Steve Patten, Dean, Faculty of Arts
Jennifer Tupper, Dean, Faculty of Education
Barbara Billingsley, Dean, Faculty of Law



November 2, 2021

Dr. Shanthi Johnson
Professor and Dean
School of Public Health

Dear FGSR and GFC Councils:

Tan'si, Dr. Johnson,

The Faculty of Native Studies strongly supports the School of Public Health's (SPH) proposed new second-level specialization Master of Public Health (MPH) in General Public Health (MPH in GPH) for implementation in Fall 2023. This degree offering is consistent with the SPH's strategic plan, the institutional commitment For the Public Good, and the University of Alberta for Tomorrow. Similarly, it touches on elements relation to the Truth and Reconciliation Commission Final Report's Calls to Action (which SPH has collegially reached out to the Faculty of Native Studies to discuss and partner).

This program will be a welcomed and timely addition to the current academic offerings. The proposal ensures that students would no longer be admitted into the seven second-level specializations currently offered. Those specializations would be terminated when continuing students have completed their degrees with the transition into the new program.

The shift represents the findings from a comprehensive assessment suggesting the need for consolidation given the size of the School of Public Health and faculty complement, currency in the evolving public health education landscape, strategic opportunities and administrative and governance efficiencies. Over the past several years, consolidation of the MPH degree programs has consistently been identified as a top priority.

Specifically, the proposed MPH in GPH will comprise 30 required courses and 15 elective courses for a total of 45. It has been designed to equip students with the knowledge and competencies needed for entry-level public health practice in a wide range of settings. Enrollment is anticipated to be the same as for our current MPH specializations with a target of 75 in Fall 2023.

To complement the MPH in GPH, SPH is developing Graduate Embedded Certificates (GECs) to facilitate students in choosing up to two concentrations. There are currently two GECs - Communicable Diseases and Community-based Research and Evaluation with more under development including a GEC in Climate Change and Health.



We strongly support the MPH in GPH with GECs which meets the SPH's strategic goals of delivering quality learning experiences, increasing transdisciplinary approaches to addressing complex intersectoral public health challenges, and integrating research and education.

Pishshapmishko,

Dr. Chris Andersen
Professor and Dean
Faculty of Native Studies
2-31 Pembina Hall
University of Alberta
Edmonton, AB
T6G 2H8
CANADA
Royal Society of Canada's College of New Scholars, Artists and Scientists (Inaugural Member)

*Pierre-Yves Mocquais, PhD, DPA
Doyen, Professeur / Dean, Professor*

8406 rue Marie-Anne-Gaboury (91 St)
Edmonton, Alberta, Canada T6C 4G9
Tel: 780.465.8705
Fax: 780.465.8760
mocquais@ualberta.ca

Dr. Shanthi Johnson
Professor and Dean
School of Public Health
University of Alberta

November 3, 2021

Dear Dr. Johnson,

Allow me first to apologize for the delay in providing you with this letter of support for the School of Public Health new second-level specialization in the course-based Master of Public Health (MPH), a MPH in General Public Health (MPH in GPH). I have read attentively your email of October 23rd and reviewed (albeit more quickly than I would have liked) the material appended. I am very happy to express my support for this initiative.

The ongoing coronavirus pandemic has amply demonstrated the importance of well and practically trained specialists in Public Health. As the explanatory memo stresses, "The field of public health is constantly evolving both reactively to respond to emerging public health challenges but, and importantly, proactively to anticipate and prepare for future public health challenges." In such a context, an interdisciplinary approach would be an important aspect of the MPH in GPH, which the explanatory memo underscores. As the dean of an interdisciplinary faculty, I can only support such an approach as well as the emphasis on an "innovative interdisciplinary competency and practice-driven" curriculum. As Campus Saint-Jean develops more and more its health and wellbeing programs at the undergraduate level, we are increasingly developing our curricula along interdisciplinary lines.

In addition, I find the proposed Graduate Embedded Certificate in Climate Change and Health particularly pertinent and timely. There is no doubt that climate change is bound to have a greater and greater impact on human health in Canada and the world over. Graduates being able to address such issues as the relationship between climate change and health not only in Canada, but in other parts of the world, are bound to be very much in demand.

I am therefore very pleased to lend my support and that of Campus Saint-Jean to this initiative that answers forcefully to the needs of a changing and evolving humanity facing critical health related tribulations in the years and decades to come. I compliment the School of Public Health for such an initiative.

Allow me to wish you great success in the implementation of this new program.

Sincerely,



Pierre-Yves Mocquais

Cc: Dr. Samira ElAtia, Associate Dean (Graduate Studies), Faculté Saint-Jean

November 4, 2021

Shanthi Johnson
Dean, School of Public Health
University of Alberta

Re: College of Natural and Applied Sciences support for the SPH MPH GPH degree

Dear Shanthi:

Thank you for sending the proposals for the School of Public Health's (SPH) Masters in Public Health (MPH) program revisions to the seven specializations that you currently have in place for the MPH. We agree that moving towards a single MPH in General Public Health (GPH) will be much simpler to navigate for the students and to administer. This will enhance the student experience in the MPH. A consolidation of the 7 specializations is also consistent with streamlining the numbers of program offerings at the institution through the University of Alberta for Tomorrow. **The College of Natural and Applied Sciences Council of Deans supports your proposal.**

We are also in agreement that the availability of the Graduate Embedded Certificates will offer students the opportunity to focus their areas of specialization. As you suggest, Public Health is at the forefront of global challenges and these options, along with the MPH GPH, offer an excellent opportunity for specialized education and research for MPH GPH students to move us towards solutions.

We note the following: The Graduate Embedded Certificate in Public Health and Food Safety intersects with programs offered in ALES (Division of Food Science); The Graduate Embedded Certificate in Public Health and Climate Change intersects with programs offered in ALES (Department of Renewable Resources) and Science (Department of Earth and Atmospheric Sciences and Biological Sciences); The Graduate Embedded Certificate in Epidemiology and Biostatistics intersects with programs offered in Science (Department of Mathematics and Statistical Sciences). Given these intersections, we look forward to further conversations about leveraging existing courses and program offerings, such as seminar series' and workshops, for the Graduate Embedded Certificates. There are many opportunities to cooperate here. I expect that there might



also be important overlap and opportunities within the Colleges of Health Sciences and Social Sciences and Humanities.

Recognizing that the process for approval is internal, we hope this letter is sufficient to show support from the College of Natural and Applied Sciences on behalf of the Faculties of Engineering, ALES, and Science.

Good luck and let us know if we can be of further assistance as you explore internal mapping of courses and other connections to leverage for your MPH in GPH and the Graduate Embedded Certificates.

Sincerely,

A handwritten signature in black ink, appearing to read "Matina Kalcounis-Rueppell".

Matina Kalcounis-Rueppell
Interim Dean, College of Natural and Applied Sciences

cc:
Simaan AbouRizk, Interim Dean, Faculty of Engineering
Stan Blade, Dean, Faculty of ALES
Fred West, Acting Dean, Faculty of Science

Item: GEC in Climate Change and Health (SPH)

Date: November 24, 2021

2022-2023 University of Alberta Proposed Calendar Graduate Program Changes:

CURRENT	PROPOSED
<p><u>Public Health</u> [Graduate]</p> <p>[...]</p> <p>General Information</p> <p>The School of Public Health offers a course-based degree of Master of Public Health (MPH) with several specializations, a thesis-based degree of Master of Science (MSc) with several specializations, a PhD with several specializations and MACE programs.</p> <p>Additional programs offered by the School of Public Health:</p> <ul style="list-style-type: none"> ● Community Engagement [Graduate] ● Community-Based Research and Evaluation (CBRE) [Graduate] ● [NEW Graduate Embedded Certificate] <p>[...]</p> <p>Graduate Program Requirements</p> <p>[NEW Graduate Embedded Certificate]</p>	<p><u>Public Health</u> [Graduate]</p> <p>[...]</p> <p>General Information</p> <p>The School of Public Health offers a course-based degree of Master of Public Health (MPH) with a specialization in General Public Health (GPH), a thesis-based degree of Master of Science (MSc) with several specializations, a PhD with several specializations, and thesis- and course-based degrees of Master of Arts in Community Engagement (MACE).</p> <p>The School of Public Health also offers several Graduate Embedded Certificates, which students can opt to complete concurrently with a graduate degree.</p> <ul style="list-style-type: none"> ● Community Engagement [Graduate] ● Community-Based Research and Evaluation (CBRE) [Graduate] ● <u>Climate Change and Health (CC-H) [Graduate]</u> <p>[...]</p> <p>Graduate Program Requirements</p> <p><u>Graduate Embedded Certificate in Climate Change and Health (Public Health) [Graduate]</u></p> <p><u>General Information</u> <u>The Graduate Embedded Certificate (GEC) in Climate Change and Health complements the education of graduate students with an interest in public health and/or the human dimensions of climate change impacts and responses. The action-oriented focus of the Graduate Embedded Certificate positions graduates to effectively</u></p>

apply their knowledge and skills to consider climate change as central to all health programs, policies, practice, and research. Students pursue the embedded certificate in Climate Change and Health by fulfilling their graduate degree requirements *and* the GEC requirements. The degree and the GEC must be completed concurrently.

Entrance Requirements

The embedded certificate is open to students enrolled in all School of Public Health (SPH) graduate degrees, as well as students enrolled in graduate degrees in other Faculties.

Students must be in good academic standing at the time of application for the embedded certificate.

SPH students are required to register for the embedded certificate no later than September 30 of their second year OR, if studying part-time, no later than completion of 12 units of their degree program.

For information on the application process for the embedded certificate, refer to the School of Public Health at www.ualberta.ca/public-health.

Program Requirements

The Graduate Embedded Certificate in Climate Change & Health comprises 12 units.

Students must complete the following:

Required courses 7 units:

- SPH 5XX *3 Climate Change and Human Health
- SPH 5XX *3 Hot Topics in Climate Change and Health
- SPH 5XX *1 Climate Change and Health Integrative Project

Approved Elective Options *5 units:

Approved elective options include courses that have direct relevance to climate change and health practice and research such as: determinants of health, strategies for addressing climate change & health, climate change impacts on human health, and methods relevant to studying climate change impacts on health:

- SPH 5XX *3 Understanding & Improving the Health of Populations OR SPH 501 *3 Determinants of Health OR equivalent course related to determinants of health
- SPH 514 *3 Introduction to Environmental Health
- SPH 523 *3 Advocacy for Public Health
- SPH 600 *3 Health Policy Development
- SPH 603 *2 Scientific Communication in Public Health
- SPH 527 *3 Food Safety
- SPH 516 *3 One Health OR SPH 561 *1 Topics in Public Health - One Health

	<ul style="list-style-type: none"> ● <u>SPH 561 *1 Topics in Public Health - Vaccine Preventable Diseases OR SPH 561 *1 Topics in Public Health - Malaria</u> ● <u>SPH 566 *3 Special Seminars - WASH in the Arctic</u> ● <u>SPH 640 *3 Introduction to Global Health or equivalent course related to global health</u> ● <u>SPH 512 Environmental Risk Assessment and Management *3 or equivalent course related to environmental risk assessment</u> ● <u>SPH 596 Epidemiology Methods I *3 OR SPH 697 Epidemiology and Control of Infectious Diseases *3 OR SPH 515 Investigation of Foodborne Illness *3 OR SPH 561 Topics in Public Health - Environmental Epidemiology *1</u> ● <u>SPH 623 Qualitative and Community-Based Approaches in Health Research OR MACE 550 Principles of Qualitative Inquiry OR MACE 503 Methods of Community-Based Research OR INT D 500 An Introduction to Community-Based Participatory Research</u> <p><u>Additional elective options must be approved by the GEC coordinator in consultation with the student's supervisor or academic advisor.</u></p> <p>Note: <u>The embedded certificate will be awarded at the time the student earns their degree.</u></p>
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Justification:
 Proposal for a new *12 Graduate Embedded Certificate in Climate Change and Health for implementation in Fall 2023.

The proposals for the GEC in CC-H and related courses were approved by GPST (Nov. 1, 2021), PRC (Nov. 10, 2021) and FGSR Council (Nov. 24, 2021). However, this calendar piece was missing; the content is the same as outlined and approved in the proposals.

Approved by:

2021-2022 Calendar Changes - School of Public Health

GEC in Climate Change and Health Courses

Reviewed by GPST on November 1, 2021
Approved by SPH Faculty Council on November 5, 2021
Approved by FGSR PC on November 10, 2021

2021-2022 Calendar Changes School of Public Health

Current	Proposed
New Course	<p>SPH 5XX - Climate Change and Human Health</p> <p>★ 3 (fi 6) (variable, 3-0-0) Climate change has severe and wide-sweeping consequences for humanity with important threats to human health and wellness. With health impacts ranging from heat-related deaths to infectious diseases (e.g., waterborne, foodborne, vector borne, and zoonotic diseases) to malnutrition to mental health to health service disruption and beyond, climate change is considered one of the biggest health challenges of the 21 st century. This course focuses on how climate change is already impacting our health, and how we can diminish those impacts. Students will examine how past and future climate change hazards, exposures, and vulnerabilities shape health risks. Case studies will demonstrate how health equity, intersectionality, and social determinants of health can mediate or amplify risks. Students will apply vulnerability assessment tools to identify and prioritize effective and feasible adaptation and mitigation actions. Through discussion, teamwork, and real-world examples, students will apply principles of transdisciplinary, systems thinking, equity and justice, sustainability, complexity, Indigenous Peoples’ Rights, and community engagement to not only understand climate change impacts on health but to also move into the solution space.</p>
New Course	<p>SPH 5XX - Hot Topics in Climate Change and Health</p> <p>★ 3 (fi 6) (variable, 3-0-0): Climate change and health is a rapidly emerging field with exponentially increasing research outputs and expanding areas of practice. Climate change topics increasingly demand the public’s attention, including news headlines, local to international policies, images of increasing extreme weather events, climate strikes, government election platforms, and increasing international reports on climate change impacts. Climate change is a hot topic! Alongside this rapid pace of climate change developments is the urgency for health action and immediate attention. Therefore, this course explores the health dimensions of hot topics, emerging themes, and current events in climate change as they occur in real time around the world. Through the discussion of current global to local issues at the climate-health nexus, students will deepen their understanding of climate change and health research, policy, and practice. Discussion, teamwork, and projects will enable the</p>

	<p>application of climate change and health theory to real time climate change events. Prerequisite: SPH 5XX - Climate Change and Human Health</p>
<p>New Course</p>	<p>SPH 5XX - Climate Change & Health Integrative Project</p> <p>★ 1 (fi 2) (variable, 1-0-0): Public health needs a climate change action plan now. Human health is intertwined with the stability of our climate, making climate change a threat to any vision of a healthy future. Serving as the culminating and integrative experience of the Climate Change and Health Graduate Embedded Certificate, students will apply and expand knowledge gained throughout their coursework to engage in high-level inquiry focusing on climate change and health. Students will apply a climate change lens to health programs, policy, research, and decision-making, and explore how to integrate climate change dimensions into all health actions. Prerequisites: SPH 5XX- Climate Change and Health, SPH 5XX - Hot Topics in Climate Change and Health</p>
<p>Justification: The three new Climate Change and Health courses comprise the required *7 of the proposed GEC in Climate Change and Health, an area in which we currently have no courses.</p> <p>Reviewed by GPST : November 1, 2021 Approved by SPH Faculty Council: November 5, 2021 Approved by FGSR PC: November 10, 2021</p>	

GEC in Climate Change & Health - Approved Elective Options

The following courses currently offered by the School of Public Health are approved electives.

Determinants of Health
SPH 5XX Understanding & Improving the Health of Populations *3 OR SPH 501 Determinants of Health *3 or equivalent
SPH 514 Introduction to Environmental Health *3
Public Health Strategies for Addressing Climate Change & Health
SPH 523 Advocacy for Public Health *3
SPH 600 Health Policy Development *3
SPH 603 Scientific Communication in Public Health *2
Climate Change Impacts on Human Health - Topical Areas
SPH 527 Food Safety *3
SPH 516 One Health *3 OR SPH 561 Topics in Public Health - One Health *1
SPH 561 Topics in Public Health - Vaccine Preventable Diseases *1 OR SPH 561 Topics in Public Health - Malaria *1
SPH 566 Special Seminars - WASH in the Arctic *3
SPH 640 Introduction to Global Health *3 or equivalent
Methods Relevant to Studying Climate Change Impacts on Health
SPH 512 Environmental Risk Assessment and Management *3 or equivalent
SPH 596 Epidemiology Methods I *3 OR SPH 697 Epidemiology and Control of Infectious Diseases *3 OR SPH 515 Investigation of Foodborne Illness *3 OR SPH 561 Topics in Public Health - Environmental Epidemiology *1
SPH 623 Qualitative and Community-Based Approaches in Health Research OR MACE 550 Principles of Qualitative Inquiry OR MACE 503 Methods of Community-Based Research OR INT D 500 An Introduction to Community-Based Participatory Research

FINAL Item No. 10

Governance Executive Summary
Action Item

Agenda Title	Proposed Name Change for the Graduate Degree Specialization in Educational Administration and Leadership, Faculty of Education and Faculty of Graduate Studies and Research
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Motion

<p>THAT GFC Programs Committee approve, with delegated authority from General Faculties Council, the name change of the second level specialization of Educational Administration and Leadership, to the specialization of Studies in Educational Leadership, and the related calendar changes, for the Educational Policy Studies credentials, for implementation upon approval and inclusion in the 22-23 calendar.</p>

Item

Action Requested	X Approval <input type="checkbox"/> Recommendation
Proposed by	José da Costa, Professor, Educational Policy Studies Dept
Presenter(s)	José da Costa, Professor, Educational Policy Studies Dept Brooke Milne, Vice-Provost and Dean, FGSR

Details

Office of Administrative Responsibility	Faculty of Education, Educational Policy Studies Department
The Purpose of the Proposal is <i>(please be specific)</i>	The proposal is before the committee because a 2nd Level Specialization Name Change is requested: the specialization in <i>Educational Administration and Leadership</i> becomes a specialization in <i>Studies in Educational Leadership</i>
Executive Summary <i>(outline the specific item – and remember your audience)</i>	<p>The current name is dated and causes confusion as to whom the specialization is intended to serve. We have many student inquiries regarding how the program fits with a business orientation; our proposed name focuses specifically on leadership in the educational context. This also aligns our name with contemporary language being used in the field of educational leadership. Our name also needs to be sufficiently broad as to include educational leadership at the K-12 School level and the Post-Secondary level.</p> <p>Students will benefit as the new specialization name will appear on their parchment and on their transcripts. This will enable employers and other post-secondary institutions to recognize the contemporary understanding focused on in the graduate programs offered.</p> <p>All instances of the specialization name “Educational Administration and Leadership” will be replaced with “Studies in Educational Leadership.” No other changes will be made to the University Calendar entry at this time.</p> <p>Meetings were held with ATA officials, and members of the School Leaders Issues and Concerns Committee (ATA, with representation from School Divisions, College of Alberta School Superintendents, Alberta School Boards Association, Alberta Education, University of Calgary, University of Lethbridge).</p>

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Supplementary Notes and context	<This section is for use by University Governance only to outline governance process.>
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Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u><i>Those who are actively participating:</i></u></p> <ul style="list-style-type: none"> Faculty members in the leadership specialization.
	<p><u><i>Those who have been consulted:</i></u></p> <ul style="list-style-type: none"> Graduate students enrolled in the Educational Administration and Leadership specialization were consulted. Their feedback was extremely supportive of the name change. Students articulated the need to move to a more contemporary notion of our “label”. We focus very little on “administration” while emphasizing leadership in educational contexts. (March 19, 2021)
	<p><u><i>Those who have been informed:</i></u></p> <ul style="list-style-type: none"> This proposed change has been considered and supported by the EPS Graduate Academic Committee (Oct 7, 2020) Considered and approved by EPS Dept Council on Feb. 12, 2021.
<p>Approval Route (Governance) (including meeting dates)</p>	<p>Department Graduate Academic Committee - October 7, 2020 Education Policy Studies Department Council - February 2, 2021 Faculty of Education GAAC (approves on behalf of Faculty Council) - March 1, 2021 GPST - November 1, 2021 PRC - November 10, 2021 FGSR Council - November 24, 2021 GFC Programs Committee - December 9, 2021</p>

Strategic Alignment

<p>Alignment with <i>For the Public Good</i></p>	<p>Please note the Institutional Strategic Plan objective(s)/strategies the proposal supports.</p> <p><i>GOAL: Build a diverse, inclusive community of exceptional students, faculty and staff from Alberta, Canada, and the world.</i></p> <p>Renaming the specialization to Studies in Educational Leadership we will be better situated to strategically recruit and retain outstanding graduate students to the University of Alberta. Thus, we will support building a community of exceptional students, educators, scholars, researchers locally, nationally, and internationally.</p> <p><i>GOAL: Experience diverse and rewarding learning opportunities that inspire us, nurture our talents, expand our knowledge and skills, and enable our success.</i></p> <p>This name change will better communicate our central function and mission as a specialization in Educational Leadership. We will be able to better focus our learning environment to “nurture our talents, expand our knowledge and skills, and enable our success.” Our ability to remain relevant, and to enable our community stakeholders to perceive us as relevant, will be enhanced. In particular we will be better positioned to address “ideas relevant to community organizations, industry, and</p>
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Item No. 10

	governments today.” Enhancing student success will occur through ensuring our program meets the needs of the professional needs of leaders in the basic education sector (i.e., k-12 school systems) as well as the higher education sector. Our faculty expertise in educational leadership will be better understood by our community stakeholder enabling us to develop more opportunities to engage in “expand[ing] access to educational experiences for continuing, professional, and lifelong learners.”	
Alignment with Core Risk Area	Please note below the specific institutional risk(s) this proposal is addressing.	
Legislative Compliance and jurisdiction	<input type="checkbox"/> Enrolment Management <input type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input checked="" type="checkbox"/> Relationship with Stakeholders <input checked="" type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success

Attachments

1. EDAL to SEL - Cover Page
2. EDAL to SEL - Internal Template and Calendar Change
3. SEL Name Change Support Letter

Prepared by: José da Costa, Professor, Educational Policy Studies Dept [jdcosta@ualberta.ca]

UNIVERSITY OF ALBERTA
Faculty of Education – Graduate Academic Affairs Council (GAAC)

CALENDAR CHANGE REQUEST FORM


Department: Educational Policy Studies

Implementation Type: Normal Early **Implementation Calendar Year:** 2022-2023

<p>COURSE & MINOR CHANGES:</p> <p><input type="checkbox"/> Introduce Course (Attach completed <i>New Course Questionnaire</i>)</p> <p><input type="checkbox"/> Delete Course</p> <p><input type="checkbox"/> Modify Course (Includes editorial changes)</p> <p><input type="checkbox"/> Update Contact Info</p>	<p>PROGRAM CHANGES:</p> <p><input checked="" type="checkbox"/> Introduce / Delete / Modify Program (Attach completed <i>Program Approval Template</i>)</p> <p><input type="checkbox"/> Introduce / Delete / Modify Academic Regulations: Admission Requirements, Application Deadlines, Academic Standing Requirements</p> <p><input type="checkbox"/> Introduce / Delete / Modify [Graduate] Sections of Calendar</p>
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CURRENT <small>(Use <u>yellow highlight and strike out</u> for all changes)</small>	PROPOSED <small>(Use <u>yellow highlight and underline</u> all additions)</small>
See attached	See attached

Rationale:
See attached

Department Chair Dr. Larry Prochner	Signature 	Date Feb. 26, 2021
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FACULTY USE ONLY			
Change Request Received: February 26, 2021	Sent for Review: <input type="checkbox"/> Received	Consultation / Notice of Motion: March 1, 2021	Motion Approved:

University of Alberta Internal Program Approval Template

This template is used for the vetting and approval of proposals to create or modify programs when such proposals do not require approval by the Minister of Advanced Education. Proposals using this template should be accompanied by appropriate supporting documentation including draft calendar changes, letters of support, etc.

Faculties and Departments pursuing program proposals must consult with the Portfolio Initiatives Manager in the Office of the Provost and Vice-President (Academic) (apatrick@ualberta.ca) on the appropriate template and process. Graduate proposers must also consult with the Faculty of Graduate Studies and Research (fgsrgov@ualberta.ca).

All program proponents must consult with the Vice-Provost (Indigenous Programming & Research) during the early development stage of a program proposal.

This template is used for the following:

- Creation of a new second-level specialization
- Elimination of an existing second-level specialization
- The addition of an Honours stream to an existing undergraduate program
- Name change of a second-level specialization OR embedded certificate
- Creation of a combined degree program where both degrees have been approved by the Ministry
- Substantive program changes that do not require Ministry approval

Basic Information

1. Title of the Program/Specialization:
Change from Educational Administration and Leadership TO **Studies in Educational Leadership**
2. Proposed effective date: July 1, 2022
3. Length of the program (years): Maximum of 4 years for thesis route M.Ed., 6 years for course-based M.Ed., Ph.D. and Ed.D.
4. Faculty and Department: Faculty of Education, Department of Educational Policy Studies
5. Contact person, with telephone number and e-mail address: Jose da Costa (780-446-3174, jdacosta@ualberta.ca)
6. Details of completed Departmental and/or Faculty approval processes, including dates
This proposed change has been considered and supported by the EPS Graduate Academic Committee (Oct 7, 2020) Considered and approved by EPS Dept Council on Feb. 12, 2021.
7. Details of completed student consultation, including dates
Graduate students enrolled in the Educational Administration and Leadership specialization were consulted. Their feedback was extremely supportive of the name change. Students articulated the need to move to a more contemporary notion of our “label”. We focus very little on “administration” while emphasizing leadership in educational contexts. (March 19, 2021)
8. Attach proposed Calendar changes (note that the Registrar’s Office must be consulted in advance, or FGSR for graduate programs) and/or course changes (approved via circulation – please see the [Governance website](#) for details)
Attached; All instances of the specialization name “Educational Administration and Leadership” will be replaced with “Studies in Educational Leadership.” No other changes will be made to the University Calendar entry at this time.
9. Attach letter of support from the Dean of the Faculty

Program Impact and Rationale

10. What is the rationale for the program proposal?

The current name is dated and causes confusion as to whom the specialization is intended to serve. We have many student inquiries regarding how the program fits with a business orientation; our proposed name focuses specifically on leadership in the educational context. This also aligns our name with contemporary language being used in the field of educational leadership. Our name also needs to be sufficiently broad as to include educational leadership at the K-12 School level and the Post-Secondary level.

Students will benefit as the new specialization name will appear on their parchment and on their transcripts. This will enable employers and other post-secondary institutions to recognize the contemporary understanding focused on in the graduate programs offered.

Meetings were held with ATA officials, and members of the School Leaders Issues and Concerns Committee (ATA, with representation from School Divisions, College of Alberta School Superintendents, Alberta School Boards Association, Alberta Education, University of Calgary, University of Lethbridge).

NOTES:

- Active students would be given the option of switching to the new credential name or remain in the existing credential name. Previous graduates will not be given the option of exchanging their parchment since their programs reflect the specialization at the time they completed their degree.
- The name change will be communicated to existing students through our Department website and through email messages sent to students enrolled in the specialization. Applicants will be aware of the specialization name through promotional materials and the Department website.

11. Provide the expected enrolment (or other) impact on the academic unit(s) offering the program and other affected units if applicable. Include information on the current enrolment (sample enrolment table included on following page).

We anticipate re-invigorating student enrolment at the magistral and doctoral levels beyond current levels. Our enrolments have been dropping slowly, but steadily for the past decade. Currently we have approximately 20 doctoral students and approximately 50 magistral students. We would like to see our graduate enrolments increase, minimally, approximately 25% at the magistral and at the doctoral levels.

We don't expect other programs within the University of Alberta to be impacted. We do expect to impact out-of-province institution offerings. Universities from the United States and some Provinces in Canada have been steadily eroding our enrolments for several decades. We hope to recapture some of these losses.

We have consulted with the Alberta Teachers' Association and with the College of Alberta School Superintendents; both groups are supportive of updating our program specialization name to better reflect contemporary language used in the field of education Provincially.

12. Are there any resource implications (budget, information technology (IT), library (Library Impact Statement), laboratory, space, student services, administrative services (eg, FGSR, Registrar's Office, or IST), as applicable) for the proposed change? If so, please provide detail and evidence of consultation with affected unit(s) and/or appropriate University officers/committees.

There are no budget implications for any unit on or off campus since this is simply a name change for an already existing specialization and we are simply trying to regain a sufficient number of students to allow our programs to continue with enrolments comparable to what we had approximately 5 years ago.

Appendix – Enrolment Table

Proposed Enrolment	2021-22	2022-23	2023-24	2024-25	Annual Ongoing
●Total Full-Time head count	0	0	0	0	0
●Full-Time Year 1					
●Full-Time Year 2					
●Full-Time Year 3					
●Full-Time Year 4					
●Total Part-Time head count	0	0	0	0	0
●Part-Time Year 1					
●Part-Time Year 2					
●Part-Time Year 3					
●Part-Time Year 4					
●Total Work Experience hc	0	0	0	0	0
●Work Experience Year 1					
●Work Experience Year 2					
●Work Experience Year 3					
●Work Experience Year 4					
●Anticipated Number of Graduates	70	76	82	88	88

CALENDAR CHANGE

Item: 2nd Level Specialization Change from EDAL to SEL

2022-2023 University of Alberta Proposed Calendar Graduate Program Changes:

CURRENT	PROPOSED
<p>Educational Policy Studies [Graduate]</p> <p>[...]</p> <p>General Information</p> <p>The Department of Educational Policy Studies offers master's and doctoral programs in the following specialized areas of study: Adult, Community and Higher Education; Educational Administration and Leadership; Indigenous Peoples Education; and Social Justice and International Studies in Education as well as a graduate certificate in Teaching and Learning in Higher Education.</p> <p>The Department of Educational Policy Studies strives to develop critical and creative scholars who have a substantive understanding of the important systemic and contextual factors that bear upon Canadian and international education.</p> <p>Graduate study in the above specializations is supported by a diverse group of full-time faculty, whose active research and publications (listed on the website at www.ualberta.ca/educational-policy-studies) are in the following general areas: aboriginal and indigenous perspectives in education; administration, leadership, and governance; careers and work; cultural, sociological, philosophical, historical, and political analysis of education; educational discourses and systems of thought; educational policy; educational reform; equity, diversity, and inclusivity in education; adult teaching and learning, professional development, and program evaluation; international and global education; and postsecondary education.</p> <p>Entrance Requirements</p> <p>For the MEd degree, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.</p>	<p>Educational Policy Studies [Graduate]</p> <p>[...]</p> <p>General Information</p> <p>The Department of Educational Policy Studies offers master's and doctoral programs in the following specialized areas of study: Adult, Community and Higher Education; Studies in Educational Leadership; Indigenous Peoples Education; and Social Justice and International Studies in Education as well as a graduate certificate in Teaching and Learning in Higher Education.</p> <p>The Department of Educational Policy Studies strives to develop critical and creative scholars who have a substantive understanding of the important systemic and contextual factors that bear upon Canadian and international education.</p> <p>Graduate study in the above specializations is supported by a diverse group of full-time faculty, whose active research and publications (listed on the website at www.ualberta.ca/educational-policy-studies) are in the following general areas: aboriginal and indigenous perspectives in education; administration, leadership, and governance; careers and work; cultural, sociological, philosophical, historical, and political analysis of education; educational discourses and systems of thought; educational policy; educational reform; equity, diversity, and inclusivity in education; adult teaching and learning, professional development, and program evaluation; international and global education; and postsecondary education.</p> <p>Entrance Requirements</p> <p>For the MEd degree, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.</p>

For the EdD and PhD degrees, the Department's minimum admission requirements are a master's degree with an admission GPA of at least 3.5 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. In special circumstances a student with a GPA between 3.0 and 3.5 may be considered for admission.

The **Educational Administration and Leadership** specialization for both the master's and the doctoral programs requires applicants to have a minimum of two years of teaching experience or equivalent.

[...]

Graduate Program Requirements

The Degree of Master of Education with a specialization in Educational Administration and Leadership (Educational Policy Studies) [Graduate]

This specialization provides advanced study for Canadian and International candidates in preparation for a broad range of administrative, supervisory, and leadership positions in public and non-government sectors, and in K-12 and post-secondary education institutions in Canada and world-wide.

Program Requirements

In addition to the department core courses (★6), students must complete specialization core courses and optional courses for a total of ★33 for course-based programs, or ★24 for thesis-based programs.

Department core courses (★6)

- EDPS 580 - Contemporary Issues in Education: Perspectives on Policy and Practice
- EDPS 581 - Introduction to Evaluating Educational Research

Specialization core courses (★6)

- EDPS 511 - Leadership Theories and their Application to Educational Organizations
- EDPS 512 - Organizational Theory and Education

For the EdD and PhD degrees, the Department's minimum admission requirements are a master's degree with an admission GPA of at least 3.5 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework. In special circumstances a student with a GPA between 3.0 and 3.5 may be considered for admission.

The **Studies in Educational Leadership** specialization for both the master's and the doctoral programs requires applicants to have a minimum of two years of teaching experience or equivalent.

[...]

Graduate Program Requirements

The Degree of Master of Education with a specialization in Studies in Educational Leadership (Educational Policy Studies) [Graduate]

This specialization provides advanced study for Canadian and International candidates in preparation for a broad range of administrative, supervisory, and leadership positions in public and non-government sectors, and in K-12 and post-secondary education institutions in Canada and world-wide.

Program Requirements

In addition to the department core courses (★6), students must complete specialization core courses and optional courses for a total of ★33 for course-based programs, or ★24 for thesis-based programs.

Department core courses (★6)

- EDPS 580 - Contemporary Issues in Education: Perspectives on Policy and Practice
- EDPS 581 - Introduction to Evaluating Educational Research

Specialization core courses (★6)

- EDPS 511 - Leadership Theories and their Application to Educational Organizations
- EDPS 512 - Organizational Theory and Education

Specialization electives (Course-based programs require ★9; Thesis-based programs require ★6):

*These courses are to be chosen in consultation with the student's supervisor/advisor or the Graduate Coordinator.

- EDPS 501 - Courses proposed and taught by EDAL faculty (only applicable to 501s offered from Fall 2020 onward)
- EDPS 501 - First Nations, Métis, and Inuit Education for School Leaders
- EDPS 501 - Parent/Caregiver Participation in Schooling
- EDPS 501 - School Leadership and Supporting Diverse Learners
- EDPS 509 - Research Data Collection and Analysis
- EDPS 513 - Educational Policy and Reform
- EDPS 514
- EDPS 531 - Supporting Educator Professional Growth
- EDPS 541 - Change and Innovation in Education
- EDPS 547 - Leadership and Social Justice
- EDPS 548 - Global Governance and Issues in **Educational Administration and Leadership**
- EDPS 553 - Legal Aspects of Educational Administration
- EDPS 595 - The School Principalship: Seminars and Simulations

[...]

Laddering into the course-based MEd with specialization in **Educational Administration and Leadership**

Students who complete the Graduate Certificate in School Leadership or equivalent in good standing may be able to use the courses from the certificate to receive up to ★12 in advanced standing in this program. Completion of the certificate does not guarantee admission to a master's degree program. The certificate may be used for both the basis of admission and laddered into the course-based master degree. Details on **laddering** can be found in the Calendar under **Regulations of the Faculty of Graduate Studies and Research** .

Ethics Requirement

Students in both the course-based and thesis-based Master of Education with a specialization in **Educational Administration and Leadership** fulfill the FGSR Academic Integrity and Ethics Training Requirement through successful

Specialization electives (Course-based programs require ★9; Thesis-based programs require ★6):

*These courses are to be chosen in consultation with the student's supervisor/advisor or the Graduate Coordinator.

- EDPS 501 - Courses proposed and taught by EDAL faculty (only applicable to 501s offered from Fall 2020 onward)
- EDPS 501 - First Nations, Métis, and Inuit Education for School Leaders
- EDPS 501 - Parent/Caregiver Participation in Schooling
- EDPS 501 - School Leadership and Supporting Diverse Learners
- EDPS 509 - Research Data Collection and Analysis
- EDPS 513 - Educational Policy and Reform
- EDPS 514
- EDPS 531 - Supporting Educator Professional Growth
- EDPS 541 - Change and Innovation in Education
- EDPS 547 - Leadership and Social Justice
- EDPS 548 - Global Governance and Issues in **Studies in Educational Leadership**
- EDPS 553 - Legal Aspects of Educational Administration
- EDPS 595 - The School Principalship: Seminars and Simulations

[...]

Laddering into the course-based MEd with specialization in **Studies in Educational Leadership**

Students who complete the Graduate Certificate in School Leadership or equivalent in good standing may be able to use the courses from the certificate to receive up to ★12 in advanced standing in this program. Completion of the certificate does not guarantee admission to a master's degree program. The certificate may be used for both the basis of admission and laddered into the course-based master degree. Details on **laddering** can be found in the Calendar under **Regulations of the Faculty of Graduate Studies and Research** .

Ethics Requirement

Students in both the course-based and thesis-based Master of Education with a specialization in **Studies in Educational Leadership** fulfill the FGSR Academic Integrity and Ethics Training

completion of **EDPS 581** and of the FGSR Graduate Ethics Training course.

Professional Development Requirement

Students in both the course-based and thesis-based Master of Education with a specialization in **Educational Administration and Leadership** fulfill the **FGSR Professional Development Requirement** through their program

[...]

The Degrees of EdD and PhD (Educational Policy Studies) [Graduate]

The Degrees of EdD and PhD with a specialization in **Educational Administration and Leadership** (Educational Policy Studies) [Graduate]

This specialization provides advanced study for Canadian and International candidates in preparation for a broad range of administrative, supervisory, and leadership positions in public and non-government sectors, and in K-12 and post-secondary education institutions in Canada and world-wide.

[...]

Requirement through successful completion of **EDPS 581** and of the FGSR Graduate Ethics Training course.

Professional Development Requirement

Students in both the course-based and thesis-based Master of Education with a specialization in **Studies in Educational Leadership** fulfill the **FGSR Professional Development Requirement** through their program

[...]

The Degrees of EdD and PhD (Educational Policy Studies) [Graduate]

The Degrees of EdD and PhD with a specialization in **Studies in Educational Leadership** (Educational Policy Studies) [Graduate]

This specialization provides advanced study for Canadian and International candidates in preparation for a broad range of administrative, supervisory, and leadership positions in public and non-government sectors, and in K-12 and post-secondary education institutions in Canada and world-wide.

[...]

Justification:

Approved by:



November 4, 2021

To: Members of the Policy Review Committee (PRC)

Re: Specialization Name Change

Dear Members of PRC,

The Faculty of Education is in full support of the proposed name change within the Department of Education Policy Studies from a specialization in *Educational Administration and Leadership* to a specialization in *Studies in Educational Leadership*.

The change accommodates contemporary developments and progress in the field which includes educational leaders at both K-12 schools and the post-secondary level. The decision to make the name change was based on extensive consultations with stakeholders including the Alberta Teachers' Association and the College of Alberta School Superintendents.

As per the Faculty of Education governance policies, the change was proposed and approved first by the Department Graduate Academic Committee (October 7, 2020), then the Education Policy Studies Department Council (February 2, 2021) and finally was approved at the Graduate Academic Affairs Council (GAAC) on March 1, 2021. GAAC is our faculty level approval body as delegated by Education Faculty Council). Please note that administration and academic oversight of the program remains the same as do supports for current and future students.

Cordially,

A handwritten signature in black ink, appearing to read 'Doug Gleddie'.

Doug Gleddie, PhD
Professor, Associate Dean Graduate Studies and
Chair of the Graduate Academic Affairs Council
Faculty of Education
eddean.gradstudies@ualberta.ca

FINAL Item No. 11

Governance Executive Summary
Action Item

Agenda Title	Proposed Specializations in Food Safety and Quality, and Meat Quality for the Course-Based Master of Science Agricultural, Food and Nutritional Science, Faculty of Agricultural, Life, and Environmental Sciences, and Faculty of Graduate Studies and Research
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Motion I

THAT GFC Programs Committee approve, with delegated authority from General Faculties council, the Food Safety and Quality (FSQ) Specialization for the MSc in Agricultural, Food and Nutritional Science, to be published in the 2022-2023 *University Calendar*.

Motion II

THAT GFC Programs Committee approve, with delegated authority from General Faculties council, the Meat Quality (MQ) Specialization for the MSc in Agricultural, Food and Nutritional Science, to be published in the 2022-2023 *University Calendar*.

Item

Action Requested	X Approval <input type="checkbox"/> Recommendation
Proposed by	Ben Willing, Grad Coordinator, Agricultural, Food & Nutritional Science
Presenter(s)	Ben Willing, Grad Coordinator, Agricultural, Food & Nutritional Science Brooke Milne, Vice-Provost and Dean, FGSR

Details

Office of Administrative Responsibility	Agricultural, Food & Nutritional Science
The Purpose of the Proposal is <i>(please be specific)</i>	This proposal is to establish two new course-based MSc Specializations – Food Safety and Quality (FSQ) and Meat Quality (MQ) under the current course-based MSc in Agricultural, Food and Nutritional Science.
Executive Summary <i>(outline the specific item – and remember your audience)</i>	Food Safety and Quality (FSQ): A structured course based MSc program with defined program outcomes is needed to satisfy the demand for highly qualified personnel in the area, and to satisfy the demand of applicants for professional training in the area. The demand for HQP is difficult to quantify; the demand by applicants can be quantified by the large amount of rejected applications for graduate training in the area of Food Science and Technology – more than 200 declined requests each year – and by the substantial proportion of our BSc in Nutrition and Food Science graduates that apply to course-based professional programs at the School of Public Health, the University of Guelph and the University of British Columbia. Past efforts to establish a course-based MSc program in Food Safety as a revenue generating program were approved by AFNS, ALES and Central, but stalled because the provincial government of the day rejected any revenue-generating program. It is anticipated that this will be a revenue-generating effort. The calendar change will establish a specialization under the current course-based M.Sc. program; the specializations “Food Safety and Quality” with defined learning

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outcomes that are met with specific course requirements. We expect that this may become a “template” for additional structured course-based specializations in AFNS / ALES. The delivery of the specialization with 20 students per year can be ensured with existing courses and resources without compromising the delivery of other graduate or undergraduate programs administered by AFNS. Incremental cost for teaching and marking assistants are recovered only if the incremental tuition payments from the specialization are available for its delivery; without a mechanism that allocates incremental revenue for ALES to the specialization, it is not viable. The calendar change will also require establishment of a Course-based MSc Specialization Committee. The Committee for the Food Safety and Quality specialization will be the same one as that for the Meat Quality specialization, which will be set up at the Department level as a sub-committee of the Graduate Program Committee. The Chair of the Graduate Program Committee or their designate will serve as the chair of the Course-based MSc Specialization Committee. We anticipate that students from our Nutrition and Food Science program could take this specialization. If students have taken required courses in their undergraduate program, the Committee will provide alternatives to ensure that students enhance their learning through courses that build upon competencies that they acquired during their undergraduate program.

Proposed by Michael Gänzle with Division Director FS/BRT and Associate Chair Graduate Studies AFNS.

Meat Quality (MQ): A structured course-based MSc specialization with defined learning outcomes is needed to satisfy the demand for highly qualified personnel in the meat industry, and to satisfy the demand of applicants for professional training in the area. The demand for HQP in the meat industry was determined during the NSERC CREATE Meat Education and Training Network (MEaTnet) for Meat Safety and Quality. Demand for interns and for graduates is sufficient to ensure that any graduate of this specialization that wishes to work in the meat industry is hired immediately upon graduation. Industry partners within MEaTnet consistently indicated that MSc students regardless of whether they had research or course-based training were sought and acceptable. The course-based MSc in Meat Quality also will enable personnel already engaged in meat industry employment to gain additional expertise and formal education in their industry, which will facilitate career progress and the transfer of knowledge to the industry. This specialization will complement that of the new course-based MSc specialization in Food Safety and Quality as a revenue generating specialization, and additionally leverages that specialization through its added emphasis on the meat industry, which is a very large industry in Alberta and Canada with a national revenue of about \$15 billion per year. The delivery of between 5 and 10 students per year will complement the 20 students anticipated through the course-based MSc in FSQ, as the new specialization incorporates existing courses and resources without compromising the delivery of other graduate or undergraduate programs administered by AFNS. Incremental costs for teaching and marking assistants are recovered if the

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	<p>incremental tuition payments from the specialization are available for its delivery. The calendar change will also require establishment of a Course-based MSc Specialization Committee. The Committee for the Meat Quality specialization will be the same one as that for the Food Safety and Quality specialization, which will be set up at the Department level as a sub-committee of the Graduate Program Committee. We anticipate that students from our Animal Science program could take this specialization. If students have taken required courses in their undergraduate program, the Course-based MSc Specialization Committee will provide alternatives to ensure that students enhance their learning through courses that build upon competencies that they acquired during their undergraduate program. Proposed by Heather Bruce as Division Director of Animal Science and Health and the Associate Chair Graduate Studies AFNS.</p>
<p>Supplementary Notes and context</p>	<p><This section is for use by University Governance only to outline governance process.></p>

Engagement and Routing (Include meeting dates)

<p>Consultation and Stakeholder Participation (parties who have seen the proposal and in what capacity)</p> <p><For information on the protocol see the Governance Resources section Student Participation Protocol></p>	<p><u>Those who are actively participating:</u></p> <ul style="list-style-type: none"> ● Active with the 15 members of the Division of Food Science and Bioresource Technology in AFNS; the last discussion prior to assembly and formal approval of the proposal was at the annual retreat of the Division on April 8 / 9 2020 but there were several additional discussions at the monthly Division meetings or the annual Division retreat at previous date. ● Active discussion with AFNS Department Council, the AFNS Graduate Program Committee and the ALES Associate Dean research to ensure that the proposed Specializations align with existing programs and current policies. The most relevant discussion in preparation of the calendar entry was on Dec. 9, 2020 but these discussions were ongoing as the calendar proposal moved through the approval path described below. ● Active discussions with Drs. Norm Neumann and Byeong Hwa Jeon, both from the School of Public Health, in relation to joint teaching of two complementary course-based MSc / MPH programs in the area of Food Safety. These discussions ensured that the MSc specialization in AFNS and the MPH specialization in Public Health complement each other without redundancy. The discussions started on March 25, 2014 but continued since then to discuss the Public Health proposal (e.g. 25 Nov 2014 and 12 June 2015) that has been approved in 2015 and has been taught jointly by the SPH and AFNS since 2016
	<p><u>Those who have been consulted:</u></p> <ul style="list-style-type: none"> ● See below for the approval route for all formal consultations.

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<p>Approval Route (Governance) (including meeting dates)</p>	<p>FSQ: Approval process: AFNS GPC Dec. 11, 2020, approved in principle; Division of FSBT, Jan 12 2021; Endorsed by Department Council on Feb 5th, 2021; approved by ALES Faculty Council June 10, 2021.</p> <p>MQ: Approved in principle by Division of Food Science and Bioresource Technology as of February 9, 2021; Division of Animal Science and Health on February 24, 2021; AFNS GPC on March 2, 2021; and Department of Agricultural, Food and Nutritional Science March 12, 2021; approved by ALES Faculty Council June 10, 2021.</p> <p>GPST - April 22, 2021 PRC - September 29, 2021 PRC - November 10, 2021 FGSR Council - November 24, 2021 Programs Committee - December 9, 2021</p>
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Strategic Alignment

<p>Alignment with <i>For the Public Good</i></p>	<p>Please note the Institutional Strategic Plan objective(s)/strategies the proposal supports.</p>			
<p>Alignment with Core Risk Area</p>	<p>Please note below the specific institutional risk(s) this proposal is addressing.</p> <table border="0"> <tr> <td> <input checked="" type="checkbox"/> Enrolment Management <input checked="" type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure </td> <td> <input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success </td> </tr> </table>		<input checked="" type="checkbox"/> Enrolment Management <input checked="" type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success
<input checked="" type="checkbox"/> Enrolment Management <input checked="" type="checkbox"/> Faculty and Staff <input type="checkbox"/> Funding and Resource Management <input type="checkbox"/> IT Services, Software and Hardware <input type="checkbox"/> Leadership and Change <input type="checkbox"/> Physical Infrastructure	<input type="checkbox"/> Relationship with Stakeholders <input type="checkbox"/> Reputation <input type="checkbox"/> Research Enterprise <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Student Success			
<p>Legislative Compliance and jurisdiction</p>	<p>Cite reference to relevant legislation, policy, and governance committee(s) [title only is required].</p> <p><i>Post-Secondary Learning Act</i> UofA Calendar General Faculties Council GFC Programs Committee Faculty of Graduate Studies & Research ALES Faculty Council</p>			

Attachments:

1. Internal Template_ AFNS 2nd Level Specializations
2. AFNS Calendar Change proposed 2021
3. AFNS: Course Based MSc (FSQ & MQ) Letter of Support 2021

Prepared by: Ben Willing, Grad Coordinator, Agricultural, Food & Nutritional Science [willing@ualberta.ca]

University of Alberta Internal Program Approval Template

This template is used for the vetting and approval of proposals to create or modify programs when such proposals do not require approval by the Minister of Advanced Education. Proposals using this template should be accompanied by appropriate supporting documentation including draft calendar changes, letters of support, etc.

Faculties and Departments pursuing program proposals must consult with the Portfolio Initiatives Manager in the Office of the Provost and Vice-President (Academic) (carley.roth@ualberta.ca) on the appropriate template and process. Graduate proposers must also consult with the Faculty of Graduate Studies and Research (fgsrgov@ualberta.ca).

This template is used for the following:

- Creation of a new second-level specialization**
 - Elimination of an existing second-level specialization
 - The addition of an Honours stream to an existing undergraduate program
 - Name change of a second-level specialization OR embedded certificate
 - Creation of a combined degree program where both degrees have been approved by the Ministry
 - Substantive program changes that do not require Ministry approval

Basic Information

1. Title of the Program/Specialization:

- NEW 2nd level specialization in Meat Quality (Course-based MSc)
- NEW 2nd level specialization in Food Safety (Course-based MSc)

2. Proposed effective date:

Effective September 1, 2022

3. Length of the program (years):

1 year

4. Faculty and Department:

Faculty of Agricultural, Life and Environmental Science
Department of Agricultural, Food and Nutritional Science

5. Contact person, with telephone number and e-mail address:

FSQ: Lynn McMullen, cell- 780-886-7111, email: lmcmulle@ualberta.ca or Michael Gänzle, 780-492-0774
MQ: Heather L. Bruce, cell: 780-257-4705, e-mail: hbruce@ualberta.ca

6. Details of completed Departmental and/or Faculty approval processes, including dates

FSQ: Approval process: AFNS GPC Dec. 11, 2020, approved in principle; Division of FSBT, Jan 12 2021; Endorsed by Department Council on Feb 5th, 2021; approved by ALES Faculty Council June 10, 2021.

MQ: Approved in principle by Division of Food Science and Bioresource Technology as of February 9, 2021; Division of Animal Science and Health on February 24, 2021; AFNS GPC on March 2, 2021; and Department of Agricultural, Food and Nutritional Science March 12, 2021; approved by ALES Faculty Council June 10, 2021.

GPST - April 22, 2021
PRC - September 29, 2021
PRC - November 10, 2021
FGSR Council - November 24, 2021
Programs Committee - December 9, 2021

7. Details of completed student consultation, including dates

FSQ: Students were consulted as members of the Graduate Program Committee in the Department of Agricultural, Food and Nutritional Science Dec 11, 2020. Discussions with students in the current course-based MSc program in the years 2015 to 2019 supports the need for a structured course-based program that provides education in Food Safety and Quality. Several past students in the course-based MSc program in Food Science and Technology aimed at careers in quality assurance or product development in the Food Industry but were lacking a structured program that prepares students for such careers.

MQ: Students were consulted as members of the Graduate Program Committee in the Department of Agricultural, Food and Nutritional Science on March 2, 2021.

8. Attach proposed Calendar changes (note that the Registrar's Office must be consulted in advance, or FGSR for graduate programs) and/or course changes (approved via circulation – please see the [Governance website](#) for details)
Included in Package

9. Attach letter of support from the Dean of the Faculty
Included in Package

Program Impact and Rationale

10. What is the rationale for the program proposal?

The two new 2nd level specializations complement each other and will generate revenue for the University of Alberta. They each provide a professional specialization to meet the demands of the food and meat processing industries in Alberta. The food processing industry is the second largest manufacturing industry in Alberta, of which 56% relates the meat sector. In 2019, food and beverage manufacturing sales in Alberta were \$15,8 billion. This is a growing sector of the Alberta economy and needs specialized highly qualified personnel to support the growth. The two proposed 2nd level specializations support the food processing and meat processing industries as each employ 50% of the total food processing workers. The Food Safety and Quality specialization focuses on learning outcomes for the food processing industry including food safety, quality assurance and product development. The Meat Quality specialization includes learning outcomes for production of animals and meat safety and quality assurance. The two specializations complement each other while providing unique learning experiences for students.

Food Safety and Quality (FSQ): A structured course based MSc program with defined program outcomes is needed to satisfy the demand for highly qualified personnel in the area, and to satisfy the demand of applicants for professional training in the area. The demand for HQP is difficult to quantify; the demand by applicants can be quantified by the large amount of rejected applications for graduate training in the area of Food Science and Technology – more than 200 declined requests each year – and by the substantial proportion of our BSc in Nutrition and Food Science graduates that apply to course-based professional programs at the School of Public Health, the University of Guelph and the University of British Columbia. Past efforts to establish a course-based MSc program in Food Safety as a revenue generating program were approved by AFNS, ALES and Central, but stalled because the provincial government of the day rejected any revenue-generating program. It is anticipated that this will be a revenue-generating effort. The calendar change will establish a specialization under the current course-based M.Sc. program; the specializations “Food Safety and Quality” with defined learning outcomes that are met with specific course requirements. We expect that this may become a “template” for additional structured course-based specializations in AFNS / ALES. The delivery of the specialization with 20 students per year can be ensured with existing courses and resources without

compromising the delivery of other graduate or undergraduate programs administered by AFNS. Incremental cost for teaching and marking assistants are recovered only if the incremental tuition payments from the specialization are available for its delivery; without a mechanism that allocates incremental revenue for ALES to the specialization, it is not viable. The calendar change will also require establishment of a Course-based MSc Specialization Committee. The Committee for the Food Safety and Quality specialization will be the same one as that for the Meat Quality specialization, which will be set up at the Department level as a sub-committee of the Graduate Program Committee. The Chair of the Graduate Program Committee or their designate will serve as the chair of the Course-based MSc Specialization Committee. We anticipate that students from our Nutrition and Food Science program could take this specialization. If students have taken required courses in their undergraduate program, the Committee will provide alternatives to ensure that students enhance their learning through courses that build upon competencies that they acquired during their undergraduate program.

Proposed by Michael Gänzle with Division Director FS/BRT and Associate Chair Graduate Studies AFNS.
Approval process: AFNS GPC Dec. 11, 2020, approved in principle; Division of FSBT, Jan 12 2021; Endorsed by Department Council on Feb 5th, 2021; approved by ALES Faculty Council June 10, 2021.

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Proposed by Heather Bruce as Division Director of Animal Science and Health and the Associate Chair Graduate Studies AFNS.

11. Provide the expected enrolment (or other) impact on the academic unit(s) offering the program and other affected units if applicable. Include information on the current enrolment (sample enrolment table included on following page).

FSQ: The delivery of the 2nd level specialization with 20 students per year can be ensured with existing courses and resources without compromising the delivery of other graduate or undergraduate programs administered by AFNS. Incremental cost for teaching and marking assistants are recovered only if the incremental tuition payments from the program are available for its delivery.

MQ: The delivery of between 5 and 10 students per year in the course-based MSc in Meat Quality will complement the 20 students anticipated through the course-based MSc in Food Safety and Quality, as the new program incorporates existing courses and resources without compromising the delivery of other graduate or undergraduate programs administered by AFNS. Incremental costs for teaching and marking assistants are recovered if the incremental tuition payments from the program are available for its delivery. Enrolment of students in a comparably designed program prior to this proposal has been profoundly compromised by COVID restrictions, with the 6 students registered for courses in an MSc course-based program focused on meat quality all deferring their entry because they were international students. Of these students, 4 are considered likely to enter their program in September 2021, as 2 have found placements in other educational institutions in their home countries.

12. Are there any resource implications (budget, information technology (IT), library (Library Impact Statement), laboratory, space, student services, administrative services (eg, FGSR, Registrar's Office, or IST), as applicable) for the proposed change? If so, please provide detail and evidence of consultation with affected unit(s) and/or appropriate University officers/committees.

No infrastructure or resource implications are anticipated, although it is hoped that enrolment in these program specializations will increase as they become well-known and established. Additional TA/marker support for specialized courses will be required but the costs for these should be covered by the increased tuition coming to the University. Technical staff that currently support the courses required as part of this proposed program have been consulted to ensure that the extra students can be accommodated in the laboratories.

The calendar change will also require establishment of a Specialization Committee for the course-based professional specializations. The Specialization Committee for the Meat Quality program will be the same one as that for the Food Safety and Quality program, which will be set up at the Department level as sub-committee of the Graduate Program Committee and will consist of the Division Director, a Program Chair that is appointed by the Division Director in consultation with the AFNS Chair and the Associate Chair Graduate studies, and two Committee Members (one internal to AFNS, one external to AFNS) that are also appointed by the Division Director in consultation with the AFNS Chair and the Associate Chair Graduate studies. The draft Terms of Reference for the Specialization Committee are appended.

Appendix – Food Safety and Quality Enrolment Table

Proposed Enrolment	2022-23	2023-24	2024-25	2025-26	Annual Ongoing
● Total Full-Time head count	15	20	20	20	20
● Full-Time Year 1	15	20	20	20	20
● Full-Time Year 2					
● Full-Time Year 3					
● Full-Time Year 4					
● Full-Time Year 5					
● Total Part-Time head count	0	0	0	0	0
● Part-Time Year 1					
● Part-Time Year 2					
● Part-Time Year 3					
● Part-Time Year 4					
● Part-Time Year 5					
● Total Work Experience hc	0	0	0	0	0
● Work Experience Year 1	15	20	20	20	20
● Work Experience Year 2					
● Work Experience Year 3					
● Work Experience Year 4					
● Work Experience Year 5					
● Anticipated Number of Graduates	15	20	20	20	20

Appendix – Meat Quality Enrolment Table

Proposed Enrolment	2022-23	2023-24	2024-25	2025-26	Annual Ongoing
● Total Full-Time head count	5	7	10	10	10
● Full-Time Year 1	5	7	10	10	
● Full-Time Year 2					
● Full-Time Year 3					
● Full-Time Year 4					
● Full-Time Year 5					
● Total Part-Time head count	0	0	0	0	0
● Part-Time Year 1					
● Part-Time Year 2					
● Part-Time Year 3					
● Part-Time Year 4					
● Part-Time Year 5					
● Total Work Experience hc	5	7	10	10	10
● Work Experience Year 1					
● Work Experience Year 2					
● Work Experience Year 3					
● Work Experience Year 4					
● Work Experience Year 5					
● Anticipated Number of Graduates	5	7	10	10	10

Course-Based MSc Specialization Committee - Terms of Reference - Draft

The Food Science and Bioresource Technology representative on the AFNS Graduate Program Committee is the Program Chair.

- One or two additional academics are appointed as Specialization Committee members by the Division Director Food Science and Bioresource Technology in consultation with the AFNS Associate Chair Graduate Studies and the Program Chair.
- One ALES Graduate Student administrator, who is appointed to the committee by the Associate Dean Graduate Studies.

The Specialization committee is responsible for the following:

- The eligibility of applicants is determined by the ALES Graduate Student team. The Specialization Committee ranks eligible applicants based on the following criteria: (i) Area of prior training, (ii) GPA, (iii) Language skills, (iv) Criteria related to equity, diversity and inclusion to ensure a diverse composition of each cohort and (v) The motivation letter provided with the application.
- Provide advice and mentorship for current graduate students, and act as first point of contact for program content, in case difficulties arise, or in case of conflict.
- Decide on course substitutions in cases where required courses of the MSc Food Safety and Quality were already completed in the prior training.
- Review Specialization outcomes, program content and program administration and initiate and implement improvements where necessary.
- Propose and forward course and Specialization changes to the AFNS Graduate Program Committee
- Represent the program to industry, professional associations and the community.
- Upon request, advise the Associate Chair Graduate Studies on admission decisions
- Upon request, advise the Associate Chair Graduate Studies on course and Specialization transfer decisions
- Work with the ALES Graduate Student Administrators and the ALES Associate Dean Graduate Studies to provide a comprehensive student advising service.

AFNS - Proposal for Course-Based MSc specializations in Food Safety and Quality and in Meat Quality

October 2021: Updates for FGSR PRC Committee:

A new proposal (below) has been created that

- a) Provides a side-by-side comparison with the 2022-23 calendar with new language and strikeouts as appropriate.

- b) Clearly delineates that these are two specializations within our existing course-based program. We are not proposing a new program but providing students with specializations within our current program. The language has been revised to clarify this.

Other feedback from GPST/PRC and responses have been added to the bottom of the revised proposed calendar change below.

FACULTY OF AGRICULTURAL, LIFE AND ENVIRONMENTAL SCIENCES

CALENDAR SUBMISSION FORM

Submit changes to the ALES Grad team (grad.ales@ualberta.ca).

Department Name: Agricultural, Food and Nutritional Science

Please fill in the following sections. The column will expand as you type; highlight changes in **yellow**.

- Proposed Changes to the AFNS Graduate Program Calendar Entry

Current Calendar Content (2022-23)	Revised Calendar Content
<p>Graduate Programs</p> <p>Agricultural, Food, and Nutritional Science [Graduate] Department of Agricultural, Food, and Nutritional Science 4-10 Agriculture/Forestry Centre University of Alberta Edmonton, Alberta T6G 2P5 E-mail: afns.grad@ualberta.ca</p> <p>General Information</p> <hr/> <p>The Department of Agricultural, Food, and Nutritional Science offers thesis programs leading to Master of Science and Doctor of Philosophy degrees, as well as course-based programs leading to Master of Agriculture, Master of Engineering and Master of Science degrees. Departmental graduate program guidelines exist and are summarized in the Agricultural, Food, and Nutritional Science Program Handbook.</p> <p>The Department has active research programs in the following areas of specialization:</p> <ol style="list-style-type: none"> Animal Science: Research on basic animal biology and livestock management with applications in the fields of animal physiology and metabolism, immunology, microbiology, reproduction, animal housing, health and welfare, as well as genomics, bioinformatics and proteomics. Plant Science: Studies in plant biology, applied ecology and agronomy within cereal, oilseed, forage and specialty crop production, incorporating plant biochemistry and proteomics, biotechnology, plant breeding and genomics, integrated pest management, as well as plant and field crop physiology. Food Science and Technology: Food research encompassing chemistry, microbiology, physics, processing and sensory science with areas of excellence in cereal utilization, dairy science, food safety, functional foods and nutraceuticals, lipid utilization, and pre- and probiotics. Nutrition and Metabolism: Clinical, community, metabolic and public health nutrition, as they relate to nutrition policy, infant and child health, and to chronic diseases such as diabetes, obesity, and cancer. Animal based programs include livestock nutrition, feed evaluation and processing. Bioresource and Food Engineering: Engineering applications related to bioresource utilization including food processing, bioproducts, bioenergy, biorefining, and agri-waste management. Rangeland and Wildlife Resources: Examination of rangeland ecosystems, emphasizing applications in livestock or wildlife productivity, applied plant ecology, 	<p>Graduate Programs</p> <p>Agricultural, Food, and Nutritional Science [Graduate] Department of Agricultural, Food, and Nutritional Science 4-10 Agriculture/Forestry Centre University of Alberta Edmonton, Alberta T6G 2P5 E-mail: afns.grad@ualberta.ca</p> <p>General Information</p> <hr/> <p>The Department of Agricultural, Food, and Nutritional Science offers thesis programs leading to Master of Science and Doctor of Philosophy degrees, as well as course-based programs leading to Master of Agriculture, Master of Engineering and Master of Science degrees. Departmental graduate program guidelines exist and are summarized in the Agricultural, Food, and Nutritional Science Program Handbook.</p> <p>The Department has active research programs in the following areas of specialization:</p> <ol style="list-style-type: none"> Animal Science: Research on basic animal biology and livestock management with applications in the fields of animal physiology and metabolism, immunology, microbiology, reproduction, animal housing, health and welfare, as well as genomics, bioinformatics and proteomics. Plant Science: Studies in plant biology, applied ecology and agronomy within cereal, oilseed, forage and specialty crop production, incorporating plant biochemistry and proteomics, biotechnology, plant breeding and genomics, integrated pest management, as well as plant and field crop physiology. Food Science and Technology: Food research encompassing chemistry, microbiology, physics, processing and sensory science with areas of excellence in cereal utilization, dairy science, food safety, functional foods and nutraceuticals, lipid utilization, and pre- and probiotics. Nutrition and Metabolism: Clinical, community, metabolic and public health nutrition, as they relate to nutrition policy, infant and child health, and to chronic diseases such as diabetes, obesity, and cancer. Animal based programs include livestock nutrition, feed evaluation and processing. Bioresource and Food Engineering: Engineering applications related to bioresource utilization including food processing, bioproducts, bioenergy, biorefining, and agri-waste management. Rangeland and Wildlife Resources: Examination of rangeland ecosystems, emphasizing applications in livestock or wildlife productivity, applied plant ecology,

and rangeland or wildlife resources management.

7. **Bioresource Technology:** Application of chemical, thermal, mechanical and biological processes for the conversion of agricultural and forestry feedstocks into bio-based materials, biofuels, platform chemicals, and other value-added commodities of industrial relevance. Research is multidisciplinary in nature, and includes chemistry, enzymology, engineering, materials science, and other areas of specialization.

The Department research facilities at the Edmonton Research Station include: Crops and Land Resources, Alberta Poultry Research Centre, Swine Research and Technology Centre, Dairy Research and Technology Centre, Composting and Feedmill Facilities, the Laird McElroy Metabolism and Environmental Research Centre and Agri-Food Discovery Place. Additional Research Stations an hour drive from campus include the Ministik Wildlife Field Station and the Kinsella Research Ranch used for extensive beef cattle research.

On the main campus the Department is home to laboratory space and equipment including greenhouses, plant growth facilities, a Human Nutrition Research Unit, an Agri-Food Materials Science Lab, an Agriculture Genomics and Proteomics lab, a Food Microbiology lab, and extensive sensory and consumer science facilities.

Entrance Requirements

For an MAg or a course-based MSc degree, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution.

For a thesis-based MSc degree, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution.

For the PhD program, the Department's minimum admission requirements are a Master's degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. Exceptional students may be admitted directly from a bachelor's degree.

The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must meet the minimum [English Language Requirement](#).

Applicants for **both** course-based and thesis-based programs are required to have a faculty member agree to supervise their program prior to applying to their program. See [Admission Process](#) on the Department website for further information.

All applicants are also required to submit

- a Curriculum Vitae,
- a Research Statement Form (available in the application portal),
- names and contact information of three references.

and rangeland or wildlife resources management.

7. **Bioresource Technology:** Application of chemical, thermal, mechanical and biological processes for the conversion of agricultural and forestry feedstocks into bio-based materials, biofuels, platform chemicals, and other value-added commodities of industrial relevance. Research is multidisciplinary in nature, and includes chemistry, enzymology, engineering, materials science, and other areas of specialization.

The Department research facilities at the Edmonton Research Station include: Crops and Land Resources, Alberta Poultry Research Centre, Swine Research and Technology Centre, Dairy Research and Technology Centre, Composting and Feedmill Facilities, the Laird McElroy Metabolism and Environmental Research Centre and Agri-Food Discovery Place. Additional Research Stations an hour drive from campus include the Ministik Wildlife Field Station and the Kinsella Research Ranch used for extensive beef cattle research.

On the main campus the Department is home to laboratory space and equipment including greenhouses, plant growth facilities, a Human Nutrition Research Unit, an Agri-Food Materials Science Lab, an Agriculture Genomics and Proteomics lab, a Food Microbiology lab, and extensive sensory and consumer science facilities.

Entrance Requirements

For a MAg or a course-based MSc degree, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.0 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution.

For a thesis-based MSc degree, the Department's minimum admission requirements are an undergraduate degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution.

For the PhD program, the Department's minimum admission requirements are a Master's degree with an admission GPA of at least 3.3 on the 4-point scale from the University of Alberta, or an equivalent qualification and standing from a recognized institution. Exceptional students may be admitted directly from a bachelor's degree.

The admission GPA will be calculated on the last ★60 of graded coursework completed, or on the equivalent of the last two years of full-time graded coursework.

Where applicable, applicants must meet the minimum [English Language Requirement](#).

Applicants for the course-based Specializations in Food Safety and Quality or in Meat Quality apply to the Specialization Committee and are not required to have a supervisor.

Applicants for **all other** course-based and thesis-based programs are required to have a faculty member agree to supervise their program prior to applying to their program. See [Admission Process](#) on the Department website for further information.

All applicants are also required to submit

8. a Curriculum Vitae,
9. a Motivation Letter Form (course-based MSc Specializations in Food Safety and Quality or Meat Quality) or a Research Statement Form (**all other**

Application deadlines for all programs in Agricultural, Food, & Nutritional Science are as follows:

- May 15 for Fall term (September) — all programs
- July 31 for Winter term (January) — thesis-based programs only
- December 1 for Spring term (May) — thesis-based programs only
- March 15 for Summer Term (July) — thesis-based programs only

Financial Assistance

A limited number of assistantships in teaching and research are available to highly-qualified candidates. Most students are either on scholarship or funded by research grants obtained by professors in the Department.

For further information on the graduate programs and financial assistance, prospective students should direct their inquiries to the Department Graduate Student Support Office.

Graduate Program Requirements

- [Master of Agriculture \(Agricultural, Food, and Nutritional Science\)](#)
- [Master of Business Administration / Master of Agriculture Combined Program \(Agricultural, Food, and Nutritional Science\)](#)
- [Master of Science \(Agricultural, Food, and Nutritional Science\)](#)
- [Doctor of Philosophy \(Agricultural, Food, and Nutritional Science\)](#)

[graduate degrees](#)) (available in the application portal),
10. names and contact information of three references.

Application deadlines for all programs in Agricultural, Food, & Nutritional Science are as follows:

- Course-based MSc with specialization in Food Safety and Quality or Meat Quality**
- March 15 for Fall Term (September)
- Course-based MSc/Mag/MEng**
- May 15 for Fall term (September)
- Thesis based programs**
- May 15 for Fall term (September)
- July 31 for Winter term (January)
- December 1 for Spring term (May)
- March 15 for Summer Term (July)

Financial Assistance

A limited number of assistantships in teaching and research are available to highly-qualified candidates. Most students are either on scholarship or funded by research grants obtained by professors in the Department.

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Graduate Program Requirements

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- [Doctor of Philosophy \(Agricultural, Food, and Nutritional Science\)](#)

Master of Science (Agricultural, Food, and Nutritional Science)

Program Requirements

The Department offers a thesis-based MSc and a course-based MSc.

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Master of Science (Agricultural, Food, and Nutritional Science)

Program Requirements

The Department offers a thesis-based MSc and a course-based MSc. In addition to the general course-based MSc, two specializations are available:

1. **Food Safety and Quality.** The specialization in Food Safety and Quality is structured to deliver competencies that are required for positions in food safety and quality assurance in the food industry.

Courses are related to assessment, detection and mitigation to risks pertaining to food safety; development and use of tools to determine food quality and to improve food quality through selection and improvement of raw materials, processing, and packaging. The requirements for the specialization in Food Safety and Quality can be completed in one calendar year.

2. **Meat Quality.** The specialization in Meat Quality is structured to deliver competencies required for positions in the meat industry. Courses are related to meat science, assessment, detection and mitigation of risks pertaining to meat safety, methods to determine eating quality through selection and improvement of raw materials, processing and packaging, communication skills, and animal production. The requirements for the specialization in Meat Quality be completed in one calendar year.

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General Course-based MSc

Students are required to complete a minimum of 28 units in graduate-level coursework, including 24 units in required courses, a 1-unit seminar course, and a 3-unit capping project.

Required Courses

- Courses will be recommended by the supervisor and supervisory committee.
- Course requirements are based on the student's previous training and anticipated needs in the student's area of focus.

Seminar Course

- [AFNS 601](#) – Seminar. Students are required to present one seminar and maintain at least 75% attendance.

Course-based MSc

Students are required to complete a minimum of 28 units in graduate-level coursework, including 24 units in required courses, a 1-unit seminar course, and a 3-unit capping project.

Required Courses

- Courses will be recommended by the supervisor and supervisory committee.
- Course requirements are based on the student's previous training and anticipated needs in the student's area of focus.

Seminar Course

- [AFNS 601](#) – Seminar. Students are required to present one seminar and maintain at least 75% attendance.

Capping Project

- [AFNS 900](#) – Directed Research Project. Course-based MSc students are required to present a formal public seminar (outlining their project paper) and successfully complete an oral examination by the Supervisor plus one additional faculty member.

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Capping Project

- [AFNS 900](#) – Directed Research Project. Course-based MSc students who **do not opt for a Specialization** are required to present a formal public seminar (outlining their project paper) and successfully complete an oral examination by the Supervisor plus one additional faculty member.

Additional Course Requirements for the Specialization in Food Safety and Quality

Students who opt for a specialization in Food Safety and Quality must meet the requirements listed in the general MSc program above as well as the specialization-specific requirements as outlined below.

Courses can be adjusted by the Specialization Committee based on the student's previous training.

Academic advice for students in the specialization in Food Safety and Quality is provided by the Specialization Committee.

Required Courses (24 units)

All of the following *3 courses

- AFNS 512 – Quality Assurance
- AFNS 527 – Food Safety
- AFNS 580 - Advanced Study of Microbial Food Safety
- AFNS 581 – Advanced Foods
- AFNS 599 - Advanced Agri-Chemical Analysis
- AFNS 660 - Communication in Science

and 6 units selected from the following *3 courses

- AFNS 502 - Advanced Study of Food Fermentations
- AFNS 503 - Processing of Milk and Dairy Products
- AFNS 507 - Science and Technology of Cereal and Oilseed Processing
- AFNS 521 - Meat Science
- AFNS 530 - Principles of Sensory Evaluation of Foods
- AFNS 532 - Advanced Food Protein Chemistry and Technology
- AFNS 542 - Sustainability of Food and Bio-

based Products

- AFNS 554 - Unit Operations in Food Preservation
- AFNS 566 - Advanced Food Microbiology

Capping Project

Instead of AFNS 900, students who opt for a Course-based MSc with Specialization in Food Safety and Quality must select 3 units from either

- AFNS 598 – Capping project
- WKEXP 986 - Food Science and Technology Work Experience

Additional Course Requirements for the Specialization in Meat Quality

Students who opt for a specialization in Meat Quality must meet the requirements listed in the general MSc program above as well as the specialization-specific requirements as outlined below.

Courses can be adjusted by the Specialization Committee based on the student's previous training.

Academic advice for students in the specialization in Meat Quality is provided by the Specialization Committee.

Required Courses (24 units)

All of the following *3 courses

- AFNS 512 – Quality Assurance
- AFNS 521 – Meat Science (or AFNS 602 Graduate Reading Course with the instructor of AFNS 521 if credit has been received for AN SC 420)
- AFNS 527 – Food Safety
- AFNS 540 – Applied Biostatistics
- AFNS 580 - Advanced Study of Microbial Food Safety
- AFNS 660 - Communication in Science

and 6 units selected from the following *3 courses

- AFNS 530 - Principles of Sensory Evaluation of Foods
- AFNS 532 - Advanced Food Protein Chemistry and Technology
- AFNS 542 - Sustainability of Food and Bio-based Products
- AFNS 554 - Unit Operations in Food Preservation
- AFNS 566 - Advanced Food Microbiology

- AFNS 571 – Applied Poultry Science
- AFNS 574 – Applied Beef Cattle Science
- AFNS 576 – Applied Swine Science

Capping Project

Instead of AFNS 900, students who opt for a Course-based MSc with Specialization in Meat Quality must select 3 units from either

- AFNS 598 – Capping project
- WKEXP 986 - Food Science and Technology Work Experience

Residence Requirement

For the thesis-based MSc the minimum period of residence is two, four-month terms of full-time attendance at the University of Alberta. There is no residence requirement for the course-based MSc.

Length of Program

For the thesis-based MSc, the time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally two years of study and research are needed to complete the degree program.

The time required to complete the course-based MSc will vary; the program can be completed in two years. Full-time students in course-based MSc specializations can complete the programs within 12 calendar months, and part-time students will normally complete within three years. Students aiming to complete the course-based MSc specializations in one academic year should take four 3-unit courses in each of the fall and winter semesters.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

The maximum time to complete the course-based MSc program as set by the Faculty of Graduate Studies and Research is six years.

Residence Requirement

For the thesis-based MSc the minimum period of residence is two, four-month terms of full-time attendance at the University of Alberta. There is no residence requirement for the course-based MSc.

Length of Program

For the thesis-based MSc, the time required to complete the program will vary according to the previous training of the applicant and the nature of the research undertaken. Normally two years of study and research are needed to complete the degree program.

The time required to complete the course-based MSc will vary; the program can be completed in two years.

The maximum time to complete the thesis-based MSc program as set by the Faculty of Graduate Studies and Research is four years.

The maximum time to complete the course-based MSc program as set by the Faculty of Graduate Studies and Research is six years.

Rationale for change (e.g., typo, clarify instructions)

This calendar change is to establish two new course-based MSc Specializations – Food Safety and Quality (FSQ) and Meat Quality (MQ). The template document has been shared with the Graduate Program Support Team and their feedback has been incorporated.

FSQ:

A structured course-based MSc specialization with defined outcomes is needed to satisfy the demand for highly qualified personnel in the area, and to satisfy the demand of applicants for professional training in the area. The demand for HQP is difficult to quantify; the demand by applicants can be quantified by the large amount of rejected applications for graduate training in the area of Food Science and Technology – about 200 declined requests each year – and by the substantial

proportion of our BSc in Nutrition and Food Science graduates that apply to course-based professional programs at the School of Public Health, the University of Guelph and the University of British Columbia.

The calendar change will establish a course-based M.Sc. Specialization in "Food Safety and Quality". We expect that this may become a "template" for additional structured course-based specializations in AFNS / ALES.

The delivery of the specialization with 20 students per year can be ensured with existing courses and resources without compromising the delivery of other graduate or undergraduate programs administered by AFNS. Incremental cost for teaching and marking assistants are recovered only if the incremental tuition payments from the specialization are available for its delivery; without a mechanism that allocates incremental revenue for AFNS to the specialization, it is not viable.

The calendar change will also require establishment of a Course-based MSc Specialization Committee. The Committee for the Food Safety and Quality specialization will be the same one as that for the Meat Quality specialization, which will be set up at the Department level as a sub-committee of the Graduate Program Committee. The Chair of the Graduate Program Committee or their designate will serve as the chair of the Course-based MSc Specialization Committee.

We anticipate that students from our Nutrition and Food Science program will take this program. If students have taken required courses in their undergraduate program, the Committee will provide alternatives to ensure that students enhance their learning through courses that build upon competencies that they acquired during their undergraduate program.

Proposed by Michael Gänzle with Division Director FS/BRT and Associate Chair Graduate Studies AFNS.

Approval process: AFNS GPC Dec. 11, 2020, approved in principle; Division of FSBT, Jan 12 2021; Endorsed by Department Council on Feb 5th, 2021; approved by ALES Faculty Council June 10, 2021.

MQ:

A structured course-based MSc specialization with defined outcomes is needed to satisfy the demand for highly qualified personnel in the meat industry, and to satisfy the demand of applicants for professional training in the area. The demand for HQP in the meat industry was determined during the NSERC CREATE Meat Education and Training Network (MEaTnet) for Meat Safety and Quality. Demand for interns and for graduates is sufficient to ensure that any graduate of this program that wishes to work in the meat industry is hired immediately upon graduation. Industry partners within MEaTnet consistently indicated that MSc students regardless of whether they had research or course-based training were sought and acceptable. The course-based MSc specialization in Meat Quality also will enable personnel already engaged in meat industry employment to gain additional expertise and formal education in their industry, which will facilitate career progress and the transfer of knowledge to the industry.

This specialization will complement that of the new course-based MSc program in Food Safety and Quality as a revenue generating specialization, and additionally leverages that specialization through its added emphasis on the meat industry, which is a very large industry in Alberta and Canada with a national revenue of about \$15 billion per year.

The delivery of between 5 and 10 students per year will complement the 20 students anticipated through the course-based MSc in FSQ, as the new specialization incorporates existing courses and resources without compromising the delivery of other graduate or undergraduate programs administered by AFNS. Incremental costs for teaching and marking assistants are recovered if the incremental tuition payments from the specialization are available for its delivery.

The calendar change will also require establishment of a Course-based MSc Specialization Committee. The Committee for the Meat Quality specialization will be the same one as that for the Food Safety and Quality specialization, which will be set up at the Department level as a sub-committee of the Graduate Program Committee.

We anticipate that students from our Animal Science program could take this program. If students have taken required courses in their undergraduate program, the Course-based MSc Specialization Committee will provide alternatives to ensure that students enhance their learning through courses that build upon competencies that they acquired during their undergraduate program.

Proposed by Heather Bruce as Division Director of Animal Science and Health and the Associate Chair Graduate Studies AFNS.

Approval process: Approved in principle by Division of Food Science and Bioresource Technology as of February 9, 2021; Division of Animal Science and Health on February 24, 2021; AFNS GPC on March 2, 2021; and Department of Agricultural, Food and Nutritional Science March 12, 2021; approved by ALES Faculty Council June 10, 2021.

Additional Consultation for both the FSQ and MQ Specializations:

Consultation with the Graduate Program Support Team occurred on April 22, 2021 and feedback from the GPST has been incorporated into the calendar change.

October 2021: Feedback from PRC asked that:

- we show/explain how many of the core courses will be the same. (It currently looks like the required courses don't fit within the parameters of the base MSc. If there is a justification for why this is different, it needs to be included).

The course load for the proposed specializations are identical to that of the current course-based MSc degree. The two proposed specializations include 4 required courses that are the same. This includes AFNS 512, 527, 580 and 660. AFNS 512, 527 and 580 cover key concepts in food microbiology and quality assurance that are needed in both programs for students to be successful in their careers in either the food industry or the meat industry. Both also require AFNS 660 – communications in science as this course is key to the development of our students as professionals. In AFNS 660 they learn about communication in a variety of settings and develop their “soft skills” associated with professionalism. This course is key to their future success as professionals in the food or meat industries.

- The calendar document needs to articulate the relationship between the base MSc and the new specializations.

The revised calendar document clearly articulates the difference between the general course-based MSc and the course-based MSc with specialization.

- The language throughout (including in the Dean's letter) needs to be consistent to say specializations if that's what it is.

We have revised the calendar document to reflect this and the revised letter of support from our Dean now reflects that these are new specializations to be added to our general course-based MSc.

Revised Support letter from the Dean is attached.



**UNIVERSITY
OF ALBERTA**

October 26, 2021

To Whom it may concern,

**Re: Course-based Master of Science in Food Safety and Quality (FSQ) &
Course-based Master of Science in Meat Quality (MQ)**

The Faculty of Agricultural, Life and Environmental Sciences (ALES) strongly supports the proposal by the Department of Agricultural, Life & Nutritional Science (AFNS) to create two specializations within the existing course-based Master of Science. With these specializations in Food Safety and Quality (FSQ) and Meat Quality (MQ), Masters level scholars will be recognized for their in-depth study and knowledge in these critical areas.

The two specializations proposed complement each other by providing professional specialization to meet the demands of the food and meat processing industries in Alberta. These are growing sectors of the Alberta economy and specialized highly qualified personnel are required to support this growth. The Faculty of ALES is uniquely prepared to tackle this challenge through an interdisciplinary approach incorporating natural, applied and social sciences in research and teaching to support key areas in agriculture and food. By providing exceptional learning experiences for students ALES will participate in the facilitation of innovation, career progress and the transfer of critical knowledge to multiple stakeholders including government, business, industry and academe. Their current and future activities will require leaders who can contribute to knowledge production and policy making. These two specializations within the already existing course-based MSc program will also build upon the outstanding multidisciplinary BSc degrees currently offered by the Faculty of ALES, allowing students to engage in important research questions, innovation, and professional skills at a higher level, thus increasing Alberta and Canada's capacity in these areas.

The Faculty of ALES is committed to ensuring the specializations can be executed with existing resources without comprising other existing ALES programs. The Faculty of ALES confirms that a specialization committee is established and maintained to ensure student and curricula quality. The Faculty of ALES is fully confident in the ability of the Department of AFNS, both academic and technical staff, to deliver very high quality, rigorous specializations within the existing M.Sc. course-based program that will benefit a significant number of students and train graduates to address issues of major social and scientific importance.

I look forward to acceptance of this proposal. We believe the specializations are needed; the proposal is strong and comprehensive and has every likelihood of success.

Sincerely,

A handwritten signature in blue ink, appearing to read 'S. Blade'.

Stanford F. Blade, PhD, P.Ag.
Dean